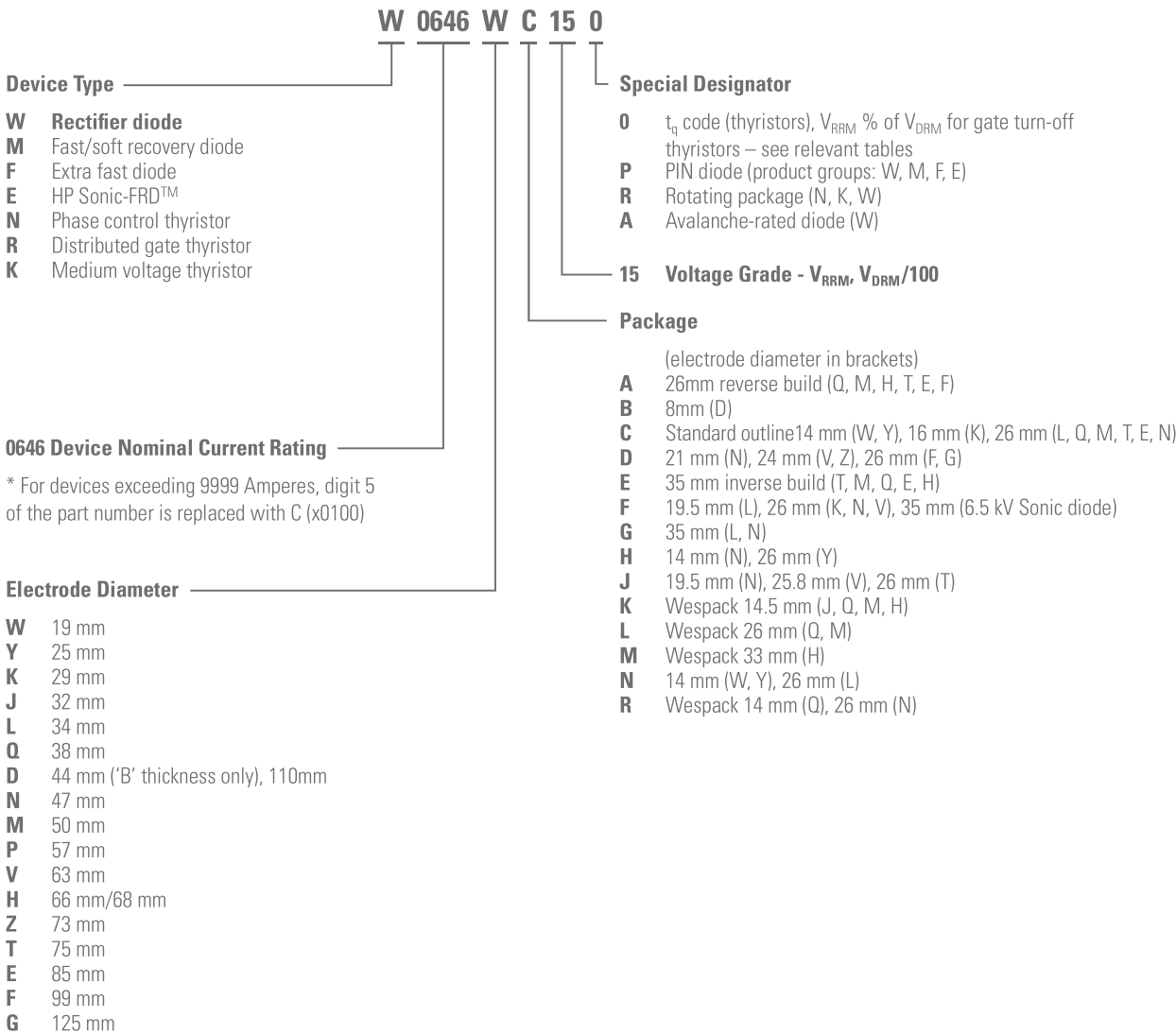


High-Power Devices

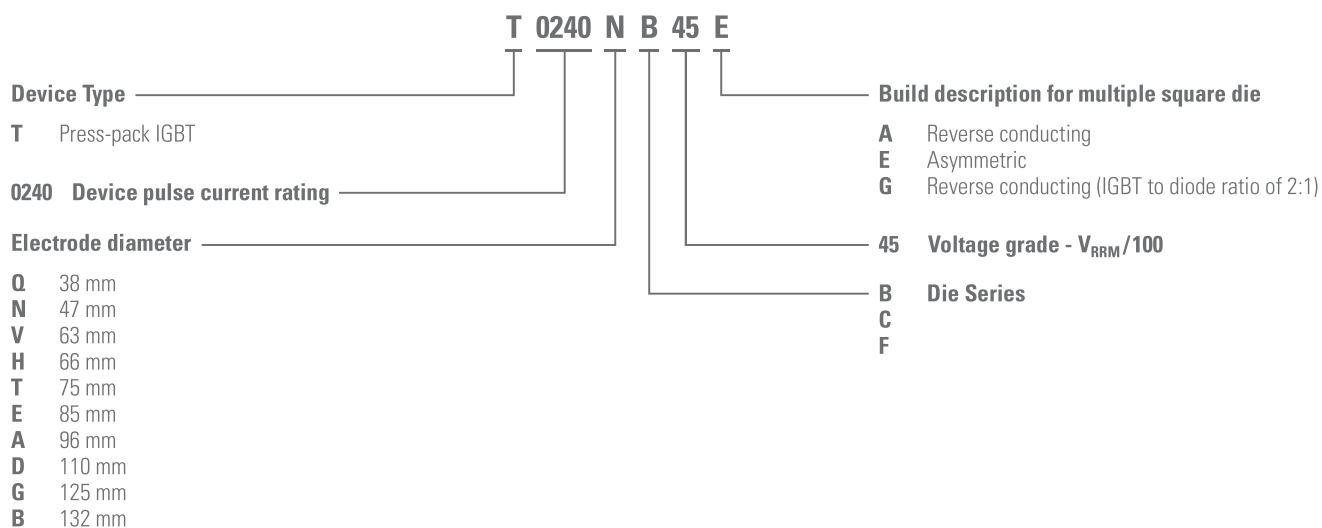
Capsule Devices – Excluding IGBT's



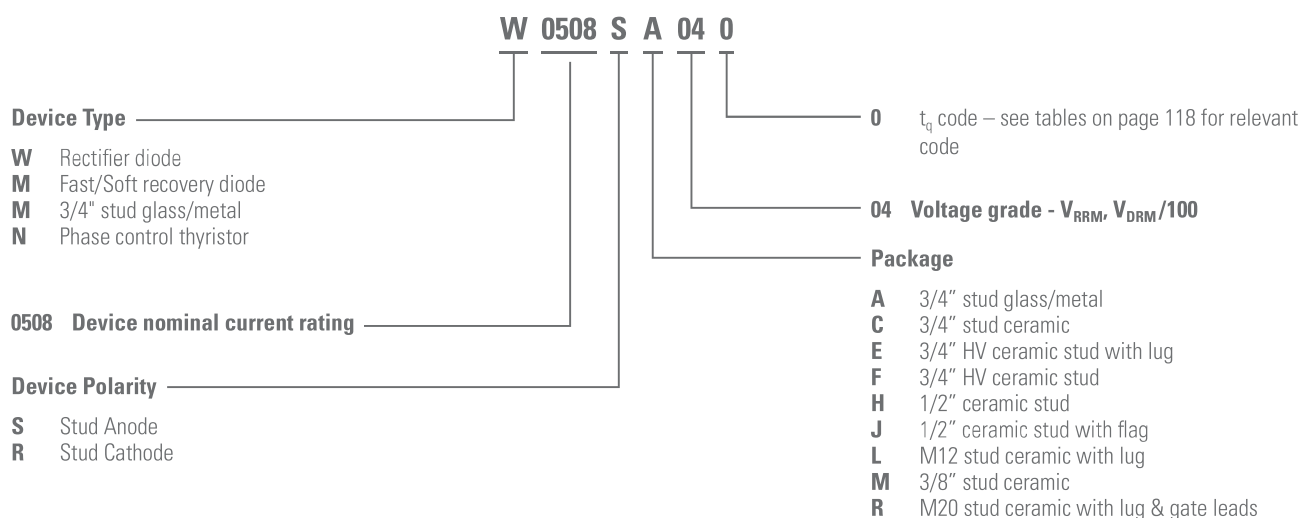
t _q Code			
v	No Code		
A	10	M	70
B	12	N	100
C	15	P	120
D	20	R	140
E	25	S	160
F	30	T	200
G	35	V	250
H	40	W	300
J	50	X	400
K	60	Y	500
L	65	Z	1000

Nomenclature

Press-Pack IGBT Capsule Devices



Stud Devices



All Littelfuse Technology stud devices are available with or without leads, sleeving, nuts, and washers.

Please add one of the following three-letter codes (based on the options required) to the end of the part number when ordering:

- 000** Ledged stud, no sleeving, no nuts and washers supplied
- SOL** Ledged stud with standard* sleeving, nuts and washers supplied loose
- 00L** Ledged stud, no sleeving, nuts and washers supplied loose
- NLL** Non-ledged stud, nuts and washers supplied loose (also applies to devices with flag/tag terminals)
- SOF** Ledged stud with standard* sleeving, fitted nuts and washers
- 00F** Ledged stud, no sleeving, nuts and washers fitted
- NLF** Non-ledged stud, nuts and washers fitted (also applies to devices with flag/tag terminals)
- S00** Ledged stud with standard* sleeving, no nuts and washers supplied
- NLS** Non-ledged stud, no nuts and washers fitted (also applies to devices with flag/tag terminals)

* Standard sleeving means the following:

- Red for all thyristor studs
- Blue for "S" polarity diode studs
- Red for "R" polarity diode studs

High-Power Devices



W1
Weight 70 g



W6
Weight 1 kg



W94
Weight 1.6 kg



W2
Weight 80 g



W37
Weight 510 g



W120
Weight 450 g



W3
Weight 140 g



W43
Weight 800 g



W121
Weight 330 g



W4
Weight 340 g



W54
Weight 530 g



W123
Weight 330 g



W5
Weight 510 g



W89
Weight 1.3 kg



Rectifier Diodes—Capsule Types

Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJK}		Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			180° Sine	120° Rect.	
	V	A	A	A ² s	V	mΩ	°C	K/W	K/W	
W0507YH420	4200	505	7600	289 × 10 ³	0.970	0.880	160	0.1000	0.1170	W3
W0507YH450	4500	505	7600	289 × 10 ³	0.970	0.880	160	0.1000	0.1170	W3
W0642WC160	1600	680	5500	151 × 10 ³	1.070	0.676	190	0.0900	0.0980	W1
W0642WC200	2000	680	5500	151 × 10 ³	1.070	0.676	190	0.0900	0.0980	W1
W0642WC240	2400	680	5500	151 × 10 ³	1.070	0.676	190	0.0900	0.0980	W1
W0790LG650	6500	790	6000	180 × 10 ³	0.919	1.249	150	0.0394	0.0445	W120
W0880LC620	6200	880	6000	180 × 10 ³	0.919	1.249	150	0.033	0.04	W4
W0880LC650	6500	880	6000	180 × 10 ³	0.919	1.249	150	0.033	0.04	W4
W0880LC680	6800	880	6000	180 × 10 ³	0.919	1.249	150	0.033	0.04	W4
W0925LG500	5000	925	7200	259 × 10 ³	1.000	0.702	150	0.0394	0.0445	W120
W0925LG560	5600	925	7200	259 × 10 ³	1.000	0.702	150	0.0394	0.0445	W120
W0925LG600	6000	925	7200	259 × 10 ³	1.000	0.702	150	0.0394	0.0445	W120
W0944WC120	1200	944	9000	405 × 10 ³	0.790	0.342	190	0.0900	0.0980	W1
W0944WC150	1500	944	9000	405 × 10 ³	0.790	0.342	190	0.0900	0.0980	W1
W1032LC500	5000	1032	7200	259 × 10 ³	1.000	0.702	150	0.0330	0.0400	W4
W1032LC560	5600	1032	7200	259 × 10 ³	1.000	0.702	150	0.0330	0.0400	W4
W1032LC600	6000	1032	7200	259 × 10 ³	1.000	0.702	150	0.0330	0.0400	W4
W1060LG420	4200	1060	9200	423 × 10 ³	1.000	0.575	160	0.0394	0.0445	W120
W1060LG450	4500	1060	9200	423 × 10 ³	1.000	0.575	160	0.0394	0.0445	W120
W1074YC200	2000	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W2
W1074YC260	2600	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W2
W1074YC320	3200	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W2
W1074YH200	2000	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W3
W1074YH260	2600	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W3
W1074YH320	3200	1074	10800	583 × 10 ³	0.920	0.390	160	0.0500	0.0610	W3
W1185LC420	4200	1185	9200	423 × 10 ³	1.000	0.575	160	0.0330	0.0393	W4
W1185LC450	4500	1185	9200	423 × 10 ³	1.000	0.575	160	0.0330	0.0393	W4
W1260LG320	3200	1260	10600	562 × 10 ³	0.900	0.388	160	0.0394	0.0445	W120
W1260LG360	3600	1260	10600	562 × 10 ³	0.900	0.388	160	0.0394	0.0445	W120
W1263YC160	1600	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W2
W1263YC220	2200	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W2
W1263YC250	2500	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W2
W1263YH160	1600	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W3
W1263YH200	2000	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W3

Rectifier Diodes—Capsule Types

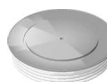
Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJK}		Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			180° Sine	120° Rect.	
	V	A	A	A ² s	V	mΩ	°C	K/W	K/W	
W1263YH250	2500	1263	11700	684 × 10 ³	0.870	0.330	175	0.0500	0.0610	W3
W1360LG240	2400	1360	12700	800 × 10 ³	0.870	0.323	160	0.0394	0.0445	W120
W1360LG300	3000	1360	12700	800 × 10 ³	0.870	0.323	160	0.0394	0.0445	W120
W1748LC180	1800	1748	15400	118 × 10 ³	0.870	0.280	175	0.0330	0.0393	W4
W1748LC250	2500	1748	15400	118 × 10 ³	0.870	0.280	175	0.0330	0.0393	W4
W1856NC400	4000	1856	16000	128 × 10 ³	0.975	0.348	160	0.0220	0.0255	W5
W1856NC500	5000	1856	16000	128 × 10 ³	0.975	0.348	160	0.0220	0.0255	W5
W1975MC620	6200	1975	18000	1.62 × 10 ⁶	0.95	0.51	150	0.014	0.0158	W54
W1975MC650	6500	1975	18000	1.62 × 10 ⁶	0.950	0.510	150	0.0140	0.0158	W54
W1975MC680	6800	1975	18000	1.62 × 10 ⁶	0.950	0.510	150	0.0140	0.0158	W54
W2054NC420	4200	2054	19000	1.81 × 10 ⁶	0.800	0.300	160	0.0220	0.0274	W5
W2054NC450	4500	2054	19000	1.81 × 10 ⁶	0.800	0.300	160	0.0220	0.0274	W5
W2058LC100	1000	2058	19500	1.90 × 10 ⁶	0.790	0.192	175	0.0330	0.0393	W4
W2058LC120	1200	2058	19500	1.90 × 10 ⁶	0.790	0.192	175	0.0330	0.0393	W4
W2058LC140	1400	2058	19500	1.90 × 10 ⁶	0.790	0.192	175	0.0330	0.0393	W4
W2115MC520	5200	2122	19000	1.81 × 10 ⁶	1.074	0.405	150	0.0140	0.0158	W54
W2115MC560	5600	2122	19000	1.81 × 10 ⁶	1.074	0.405	150	0.0140	0.0158	W54
W2115MC600	6000	2122	19000	1.81 × 10 ⁶	1.074	0.405	150	0.0140	0.0158	W54
W2134NC360	3600	2134	20000	2.00 × 10 ⁶	0.865	0.260	160	0.0220	0.0255	W5
W2134NC400	4000	2134	20000	2.00 × 10 ⁶	0.865	0.260	160	0.0220	0.0255	W5
W2624NC240	2400	2624	28000	3.92 × 10 ⁶	0.780	0.160	160	0.0220	0.0255	W5
W2624NC280	2800	2624	28000	3.92 × 10 ⁶	0.780	0.160	160	0.0220	0.0255	W5
W2624ND240	2400	2624	28000	3.92 × 10 ⁶	0.780	0.160	160	0.0220	0.0255	W37
W2624ND280	2800	2624	28000	3.92 × 10 ⁶	0.780	0.160	160	0.0220	0.0255	W37
W2820VC420	4200	2820	26200	3.43 × 10 ⁶	1.300	0.147	160	0.0160	0.0190	W6
W2820VC450	4500	2820	26200	3.43 × 10 ⁶	1.300	0.147	160	0.0160	0.0190	W6
W2820VF420	4200	2820	26200	3.43 × 10 ⁶	1.300	0.147	160	0.0160	0.0190	W43
W2820VF450	4500	2820	26200	3.43 × 10 ⁶	1.300	0.147	160	0.0160	0.0190	W43
W2830HE520	5200	2830	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0123	0.0133	W123
W2830HE560	5600	2830	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0123	0.0133	W123
W2830HE600	6000	2830	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0123	0.0133	W123
W2865HA620	6200	2862	32400	5.25 × 10 ⁶	0.982	0.308	150	0.0105	0.0116	W121
W2865HA650	6500	2862	32400	5.25 × 10 ⁶	0.982	0.308	150	0.0105	0.0116	W121
W2865HA680	6800	2862	32400	5.25 × 10 ⁶	0.982	0.308	150	0.0105	0.0116	W121
W2899MC460	4600	2899	25400	3.23 × 10 ⁶	0.996	0.222	160	0.0140	0.0158	W54
W2899MC480	4800	2899	25400	3.23 × 10 ⁶	0.996	0.222	160	0.0140	0.0158	W54
W3082MC420	4200	3120	26000	3.23 × 10 ⁶	0.923	0.192	160	0.0140	0.0160	W54
W3082MC450	4500	3120	26000	3.23 × 10 ⁶	0.923	0.192	160	0.0140	0.0160	W54
W3090HA520	5200	3110	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0105	0.0116	W121
W3090HA560	5600	3110	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0105	0.0116	W121
W3090HA600	6000	3110	32000	5.12 × 10 ⁶	0.910	0.260	150	0.0105	0.0116	W121
W3128VC360	3600	3128	30000	5.12 × 10 ⁶	0.875	0.158	160	0.0160	0.0190	W6
W3128VC400	4000	3128	30000	5.12 × 10 ⁶	0.875	0.158	160	0.0160	0.0190	W6
W3128VF360	3600	3128	30000	4.50 × 10 ⁶	0.875	0.158	160	0.0160	0.0190	W43
W3128VF400	4000	3128	30000	4.50 × 10 ⁶	0.875	0.158	160	0.0160	0.0190	W43
W3270NC200	2000	3270	28000	3.92 × 10 ⁶	0.826	0.104	175	0.0220	0.0255	W5
W3270NC220	2200	3270	28000	3.92 × 10 ⁶	0.826	0.104	175	0.0220	0.0255	W5
W3270NC22A ¹	2200	3239	27600	3.81 × 10 ⁶	0.818	0.108	175	0.0220	0.0255	W5
W3455QK200	2000	3455	20000	2.00 × 10 ⁶	0.940	0.139	180	0.0170	0.0207	WD2
W3455QK220	2200	3455	20000	2.00 × 10 ⁶	0.940	0.139	180	0.0170	0.0207	WD2
W3477MC360	3600	3470	28200	3.98 × 10 ⁶	0.908	0.146	160	0.0140	0.0158	W54
W3477MC400	4000	3470	28200	3.98 × 10 ⁶	0.908	0.146	160	0.0140	0.0158	W54
W3630TJ650	6500	3630	35000	6.125 × 10 ⁶	0.916	0.262	150	0.0080	0.0085	W89
W3630TE650	6500	3630	35000	6.125 × 10 ⁶	0.916	0.262	150	0.0080	0.0085	W94
W3697VC220	2200	3697	40000	8.00 × 10 ⁶	0.860	0.100	160	0.0160	0.0190	W6
W3697VC280	2800	3697	40000	8.00 × 10 ⁶	0.860	0.100	160	0.0160	0.0190	W6
W3697VF220	2200	3697	40000	8.00 × 10 ⁶	0.860	0.100	160	0.0160	0.0190	W43
W3697VF280	2800	3697	40000	8.00 × 10 ⁶	0.860	0.100	160	0.0160	0.0190	W43
W3708MC320	3200	3753	30000	4.50 × 10 ⁶	0.958	0.112	160	0.0140	0.0158	W54

¹ Avalanche Rated Diode

High-Power Devices



W5
Weight 510 g



W42
Weight 1.2 kg



W94
Weight 1.6 kg



WD7
Weight 200 g



W6
Weight 1 kg



W43
Weight 800 g



WD2
Weight 200 g



W111
Weight 1.6 kg



W7
Weight 1.7 kg



W54
Weight 530 g



WD3
Weight 270 g



W112
Weight 2.1 kg



W37
Weight 510 g



W89
Weight 1.3 kg



WD5
Weight 1.2 kg



WD6
Weight 1.5 kg

Rectifier Diodes—Capsule Types



Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJK}		Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			180° Sine	120° Rect.	
			A	A ² s	V	mΩ		°C	K/W	
W3708MC350	3500	3753	30000	4.50 × 10 ⁶	0.958	0.112	160	0.0140	0.0158	W54
W3743ZC400	4000	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W7
W3743ZC450	4500	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W7
W3743ZC500	5000	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W7
W3743ZD400	4000	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W42
W3743ZD450	4500	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W42
W3743ZD500	5000	3750	35000	6.13 × 10 ⁶	0.976	0.170	160	0.0110	0.0132	W42
W3841VC300	3000	3841	39800	7.92 × 10 ⁶	0.860	0.115	175	0.0160	0.0190	W6
W3841VC340	3400	3841	39800	7.92 × 10 ⁶	0.860	0.115	175	0.0160	0.0190	W6
W3841VF300	3000	3841	39800	7.92 × 10 ⁶	0.860	0.115	175	0.0160	0.0190	W43
W3841VF340	3400	3841	39800	7.92 × 10 ⁶	0.860	0.115	175	0.0160	0.0190	W43
W3842MC240	2400	3842	35100	6.16 × 10 ⁶	0.831	0.118	160	0.0140	0.0158	W54
W3842MC280	2800	3842	35100	6.16 × 10 ⁶	0.831	0.118	160	0.0140	0.0158	W54
W3842MC28A ¹	2800	3842	35100	6.16 × 10 ⁶	0.831	0.118	160	0.0140	0.0158	W54
W3864QK120	1200	3864	22200	2.46 × 10 ⁶	0.861	0.109	180	0.0170	0.0210	WD2
W3864QK150	1500	3864	22200	2.46 × 10 ⁶	0.861	0.109	180	0.0170	0.0210	WD2
W3864QK180	1800	3864	22200	2.46 × 10 ⁶	0.861	0.109	180	0.0170	0.0210	WD2
W4096ZC420	4200	4096	41700	8.70 × 10 ⁶	0.730	0.158	160	0.0110	0.0132	W7
W4096ZC450	4500	4096	41700	8.70 × 10 ⁶	0.730	0.158	160	0.0110	0.0132	W7
W4096ZD420	4200	4096	41700	8.70 × 10 ⁶	0.730	0.158	160	0.0110	0.0132	W42
W4096ZD450	4500	4096	41700	8.70 × 10 ⁶	0.730	0.158	160	0.0110	0.0132	W42
W4205TJ520	5200	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W89
W4205TJ560	5600	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W89
W4205TJ600	6000	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W89
W4205TE520	5200	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W94
W4205TE560	5600	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W94
W4205TE600	6000	4205	45000	10.1 × 10 ⁶	0.850	0.190	150	0.0080	0.0085	W94
W4534NC030	300	4534	40000	8.00 × 10 ⁶	0.765	0.052	190	0.0220	0.0255	W5
W4534NC060	600	4534	40000	8.00 × 10 ⁶	0.765	0.052	190	0.0220	0.0255	W5
W4534ND030	300	4534	40000	8.00 × 10 ⁶	0.765	0.052	190	0.0220	0.0255	W37
W4534ND060	600	4534	40000	8.00 × 10 ⁶	0.765	0.052	190	0.0220	0.0255	W37
W4693QK050	500	4693	31500	4.98 × 10 ⁶	0.904	0.057	180	0.0170	0.0207	WD2
W4693QK080	800	4693	31500	4.98 × 10 ⁶	0.904	0.057	180	0.0170	0.0207	WD2
W4693QR050	500	4693	31500	4.98 × 10 ⁶	0.904	0.057	180	0.0170	0.0207	WD7
W4693QR080	800	4693	31500	4.98 × 10 ⁶	0.904	0.057	180	0.0170	0.0207	WD7

¹ Avalanche Rated Diode

Rectifier Diodes—Capsule Types

Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJK}		Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			180° Sine	120° Rect.	
			V	A	A	A ² s		V	mΩ	
W4713HL300	3000	4713	56000	15.70 × 10 ⁶	0.807	0.090	160	0.0120	0.0132	WD5
W4713HL350	3500	4713	56000	15.70 × 10 ⁶	0.807	0.090	160	0.0120	0.0132	WD5
W4713HM300	3000	4713	56000	15.70 × 10 ⁶	0.807	0.090	160	0.0120	0.0132	WD6
W4713HM350	3500	4713	56000	15.70 × 10 ⁶	0.807	0.090	160	0.0120	0.0132	WD6
W4767MC180	1800	4755	38000	7.22 × 10 ⁶	0.827	0.083	175	0.0140	0.0158	W54
W4767MC220	2200	4755	38000	7.22 × 10 ⁶	0.827	0.083	175	0.0140	0.0158	W54
W5092ZC320	3200	5092	58000	16.8 × 10 ⁶	0.874	0.079	160	0.0110	0.0132	W7
W5092ZC350	3500	5092	58000	16.8 × 10 ⁶	0.874	0.079	160	0.0110	0.0132	W7
W5092ZD320	3200	5092	58000	16.8 × 10 ⁶	0.874	0.079	160	0.0110	0.0132	W42
W5092ZD350	3500	5092	58000	16.8 × 10 ⁶	0.874	0.079	160	0.0110	0.0132	W42
W5130MK240	2400	5130	42000	8.82 × 10 ⁶	0.910	0.070	175	0.0130	0.0149	WD3
W5130MK280	2800	5130	42000	8.82 × 10 ⁶	0.910	0.070	175	0.0130	0.0149	WD3
W5139TJ450	4500	5139	55000	15.10 × 10 ⁶	0.826	0.136	160	0.0080	0.0085	W89
W5139TJ480	4800	5139	55000	15.10 × 10 ⁶	0.826	0.136	160	0.0080	0.0085	W89
W5139TE450	4500	5139	55000	15.10 × 10 ⁶	0.826	0.136	160	0.0080	0.0085	W94
W5139TE480	4800	5139	55000	15.10 × 10 ⁶	0.826	0.136	160	0.0080	0.0085	W94
W5282ZC240	2400	5282	60000	18.00 × 10 ⁶	0.970	0.064	160	0.0110	0.0132	W7
W5282ZC300	3000	5282	60000	18.00 × 10 ⁶	0.970	0.064	160	0.0110	0.0132	W7
W5282ZD240	2400	5282	60000	18.00 × 10 ⁶	0.970	0.064	160	0.0110	0.0132	W42
W5282ZD300	3000	5282	60000	18.00 × 10 ⁶	0.970	0.064	160	0.0110	0.0132	W42
W5334MK200	2000	5334	46800	10.95 × 10 ⁶	0.892	0.069	180	0.0130	0.0149	WD3
W5334MK220	2200	5334	46800	10.95 × 10 ⁶	0.892	0.069	180	0.0130	0.0149	WD3
W5636MC120	1200	5636	46000	10.58 × 10 ⁶	0.698	0.059	175	0.0140	0.0160	W54
W5636MC150	1500	5636	46000	10.58 × 10 ⁶	0.698	0.059	175	0.0140	0.0160	W54
W5696VC100	1000	5696	53000	14.00 × 10 ⁶	0.650	0.059	190	0.0160	0.0190	W6
W5696VC140	1400	5696	53000	14.00 × 10 ⁶	0.650	0.059	190	0.0160	0.0190	W6
W5696VF100	1000	5696	53000	14.00 × 10 ⁶	0.650	0.059	190	0.0160	0.0190	W43
W5696VF140	1400	5696	53000	14.00 × 10 ⁶	0.650	0.059	190	0.0160	0.0190	W43
W5715ED520	5200	5715	60600	18.36 × 10 ⁶	0.863	0.135	150	0.0060	0.0063	W112
W5715ED560	5600	5715	60600	18.36 × 10 ⁶	0.863	0.135	150	0.0060	0.0063	W112
W5715ED600	6000	5715	66000	18.36 × 10 ⁶	0.863	0.135	150	0.0060	0.0063	W112
W5838ZC180	1800	5838	64000	20.50 × 10 ⁶	0.800	0.074	175	0.0110	0.0132	W7
W5838ZC220	2200	5838	64000	20.50 × 10 ⁶	0.800	0.074	175	0.0110	0.0132	W7
W5838ZD180	1800	5838	64000	20.50 × 10 ⁶	0.800	0.074	175	0.0110	0.0132	W42
W5838ZD220	2200	5838	64000	20.50 × 10 ⁶	0.800	0.074	175	0.0110	0.0132	W42
W5984TJ360	3600	5984	62000	19.20 × 10 ⁶	0.758	0.097	160	0.0080	0.0085	W89
W5984TJ400	4000	5984	62000	19.20 × 10 ⁶	0.758	0.097	160	0.0080	0.0085	W89
W5984TE360	3600	5984	62000	19.20 × 10 ⁶	0.758	0.097	160	0.0080	0.0085	W94
W5984TE400	4000	5984	62000	19.20 × 10 ⁶	0.758	0.097	160	0.0080	0.0085	W94
W6262ZC200	2000	6262	67000	22.40 × 10 ⁶	0.730	0.064	175	0.0110	0.0132	W7
W6262ZC240	2400	6262	67000	22.40 × 10 ⁶	0.730	0.064	175	0.0110	0.0132	W7
W6262ZD200	2000	6262	67000	22.40 × 10 ⁶	0.730	0.064	175	0.0110	0.0132	W42
W6262ZD240	2400	6262	67000	22.40 × 10 ⁶	0.730	0.064	175	0.0110	0.0132	W42
W6360EC520	5200	6360	60600	18.36 × 10 ⁶	0.863	0.135	150	0.0050	0.0054	W111
W6360EC560	5600	6360	60600	18.36 × 10 ⁶	0.863	0.135	150	0.0050	0.0054	W111
W6360EC600	6000	6360	66000	18.36 × 10 ⁶	0.863	0.135	150	0.0050	0.0054	W111
W6672TE320	3200	6672	65700	21.58 × 10 ⁶	0.864	0.067	160	0.0080	0.0085	W94
W6672TE350	3500	6672	65700	21.58 × 10 ⁶	0.864	0.067	160	0.0080	0.0085	W94
W6672TJ320	3200	6672	65700	21.58 × 10 ⁶	0.864	0.067	160	0.0080	0.0085	W89
W6672TJ350	3500	6672	65700	21.58 × 10 ⁶	0.864	0.067	160	0.0080	0.0085	W89
W7045MC030	300	7045	54000	14.60 × 10 ⁶	0.793	0.033	190	0.0140	0.0158	W54
W7045MC060	600	7045	54000	14.60 × 10 ⁶	0.793	0.033	190	0.0140	0.0158	W54
W8405ZC100	1000	8405	72000	25.90 × 10 ⁶	0.670	0.038	190	0.0110	0.0132	W7
W8405ZC140	1400	8405	72000	25.90 × 10 ⁶	0.670	0.038	190	0.0110	0.0132	W7
W8405ZD100	1000	8405	72000	25.90 × 10 ⁶	0.670	0.038	190	0.0110	0.0132	W42
W8405ZD140	1400	8405	72000	25.90 × 10 ⁶	0.670	0.038	190	0.0110	0.0132	W42
W8570TJ180	1800	8570	70200	24.60 × 10 ⁶	0.690	0.050	175	0.0080	0.0085	W89
W8570TJ220	2200	8570	70200	24.60 × 10 ⁶	0.690	0.050	175	0.0080	0.0085	W89

High-Power Devices



W89
Weight 1.3 kg



W94
Weight 1.6 kg



W111
Weight 1.6 kg



W112
Weight 2.1 kg



Rectifier Diodes—Capsule Types

Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJK}		Fig. No.
			10 ms ½ sine V _R ≤ 60% V _{RRM}		@ T _{JM}			180° Sine	120° Rect.	
	V	A	A	A ² s	V	mΩ	°C	K/W	K/W	
W8570TE180	1800	8570	70200	24.60 × 10 ⁶	0.690	0.050	175	0.0080	0.0085	W94
W8570TE220	2200	8570	70200	24.60 × 10 ⁶	0.690	0.050	175	0.0080	0.0085	W94
W9830TJ120	1200	9830	72000	25.90 × 10 ⁶	0.670	0.043	190	0.0080	0.0085	W89
W9830TJ150	1500	9830	72000	25.90 × 10 ⁶	0.670	0.043	190	0.0080	0.0085	W89
W9830TE120	1200	9830	72000	25.90 × 10 ⁶	0.670	0.043	190	0.0080	0.0085	W94
W9830TE150	1500	9830	72000	25.90 × 10 ⁶	0.670	0.043	190	0.0080	0.0085	W94
W106CEC240	2400	10650	92000	42.32 × 10 ⁶	0.734	0.047	160	0.0050	0.0054	W111
W106CEC280	2800	10650	92000	42.32 × 10 ⁶	0.734	0.047	160	0.0050	0.0054	W111
W108CED180	1800	11300	94500	44.65 × 10 ⁶	0.678	0.039	175	0.0060	0.0063	W112
W108CED220	2200	11300	94500	44.65 × 10 ⁶	0.678	0.039	175	0.0060	0.0063	W112
W121CEC180	1800	12650	94500	44.65 × 10 ⁶	0.678	0.039	175	0.0050	0.0054	W111
W121CEC220	2200	12650	94500	44.65 × 10 ⁶	0.678	0.039	175	0.0050	0.0054	W111



W23
Weight 250 g



W24
Weight 250 g



W39
Weight 250 g



S



R

Rectifier Diodes—Stud Types

Part Number	V _{RRM}	I _{FAV} TC = 55°C	I _{FSM}	I ² t	V _{TO}	r _T	T _{JM}	R _{thJC}		Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		@T _{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A²s	V	mΩ	°C	K/W	K/W	
LW0428RE250	2500	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428RE280	2800	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428RE320	3200	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428RF250	2500	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0428RF280	2800	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0428RF320	3200	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0428SE250	2500	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428SE280	2800	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428SE320	3200	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W39
W0428SF250	2500	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0428SF280	2800	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0428SF320	3200	428	5500	151 × 10³	0.926	0.739	150	0.1300	0.1530	W24
W0503RC160	1600	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0503RC200	2000	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0503RC240	2400	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0503SC160	1600	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0503SC200	2000	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0503SC240	2400	503	5500	151 × 10³	0.990	0.740	180	0.1300	0.1530	W24
W0735RA120	1200	735	9000	405 × 10³	0.790	0.342	190	0.1300	0.1530	W23
W0735RA150	1500	735	9000	405 × 10³	0.790	0.342	190	0.1300	0.1530	W23
W0735SA120	1200	735	9000	405 × 10³	0.790	0.342	190	0.1300	0.1530	W23
W0735SA150	1500	735	9000	405 × 10³	0.790	0.342	190	0.1300	0.1530	W23

Fast Recovery Diodes

Fast recovery diodes are an essential component of any switching device and often represent a limiting factor in the design and performance of modern power converters. To address broad market requirements, we have developed a comprehensive range of fast recovery diodes. These diodes are available with blocking voltages of up to 6.5 kV, making them suitable for operation with DC link voltages up to 3.3 kV. Depending on the device type, they provide average current ratings to 4305 A. The devices utilize both alloyed and floating silicon technologies to deliver robust and reliable operation in demanding applications. For easier selection, the products are categorized into: Fast Recovery, Soft Recovery, Extra Fast Recovery Diodes, and HP Sonic-FRDs.



W2
Weight 80 g



W3
Weight 140 g



W4
Weight 340 g



W5
Weight 510 g



W6
Weight 1 kg



W37
Weight 510 g



W43
Weight 800 g

Standard Fast Recovery–Capsule Types

These parts are well suited for use as anti-parallel diodes in Gate Turn-Off thyristors, Fast Thyristor inverters, and diodes for choppers.

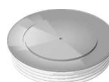


Part Number	V _{RRM}	I _{FAV}	I _{FSM}	I ² t	Typ. Reverse Recovery				V _{TO}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
		T _K = 55 °C	10 ms ½ sine V _R * ≤60% V _{RRM}	T _J = 150 °C				@T _{JM} = 150 °C					
				t _{rr}	Q _{rr}	@I _{FM}	@-di/dt						
	V	A	A	A ² s	µs	µC	A	A/µs	V	mΩ			
M0588LC400	4000	588	3955	78.2 × 10 ³	3.50	450	1000	60	2.320	1.770	150	0.0330	W4
M0588LC450	4500	588	3955	78.2 × 10 ³	3.50	450	1000	60	2.320	1.770	150	0.0330	W4
M0790YC200	2000	790	9000	405 × 10 ³	4.00	425	1000	60	1.272	0.584	150	0.0500	W2
M0790YC250	2500	790	9000	405 × 10 ³	4.00	425	1000	60	1.272	0.584	150	0.0500	W2
M0790YH200	2000	790	9000	405 × 10 ³	4.00	425	1000	60	1.272	0.584	150	0.0500	W3
M0790YH250	2500	790	9000	405 × 10 ³	4.00	425	1000	60	1.272	0.584	150	0.0500	W3
M0914LC200	2000	914	8500	361 × 10 ³	3.20	300	1000	60	1.768	0.653	150	0.0320	W4
M0914LC250	2500	914	8500	361 × 10 ³	3.20	300	1000	60	1.768	0.653	150	0.0320	W4
M1010NC400	4000	1010	9600	461 × 10 ³	3.20	1450	1000	200	1.700	1.030	150	0.0220	W5
M1010NC450	4500	1010	9600	461 × 10 ³	3.20	1450	1000	200	1.700	1.030	150	0.0220	W5
M1010ND400	4000	1010	9600	461 × 10 ³	3.20	1450	1000	200	1.700	1.030	150	0.0220	W37
M1010ND450	4500	1010	9600	461 × 10 ³	3.20	1450	1000	200	1.700	1.030	150	0.0220	W37
M1163NC400	4000	1163	10800	583 × 10 ³	6.40	1200	1000	60	1.500	0.770	150	0.0220	W5
M1163NC450	4500	1163	10800	583 × 10 ³	6.40	1200	1000	60	1.500	0.770	150	0.0220	W5
M1163ND400	4000	1163	10800	583 × 10 ³	6.40	1200	1000	60	1.500	0.770	150	0.0220	W37
M1163ND450	4500	1163	10800	583 × 10 ³	6.40	1200	1000	60	1.500	0.770	150	0.0220	W37
M1502NC200	2000	1502	17000	1.45 × 10 ⁶	3.50	350	1000	60	1.240	0.440	150	0.0220	W5
M1502NC250	2500	1502	17000	1.45 × 10 ⁶	3.50	350	1000	60	1.240	0.440	150	0.0220	W5
M1502ND200	2000	1502	17000	1.45 × 10 ⁶	3.50	350	1000	60	1.240	0.440	150	0.0220	W37
M1502ND250	2500	1502	17000	1.45 × 10 ⁶	3.50	350	1000	60	1.240	0.440	150	0.0220	W37
M1583VC400	4000	1583	24800	3.08 × 10 ⁶	5.00	2000	1000	200	1.693	0.525	150	0.0160	W6
M1583VC450	4500	1583	24800	3.08 × 10 ⁶	5.00	2000	1000	200	1.693	0.525	150	0.0160	W6
M1583VF400	4000	1583	24800	3.08 × 10 ⁶	5.00	2000	1000	200	1.693	0.525	150	0.0160	W43
M1583VF450	4500	1583	24800	3.08 × 10 ⁶	5.00	2000	1000	200	1.693	0.525	150	0.0160	W43

High-Power Devices



W5
Weight 510 g



W42
Weight 1.2 kg



W20
Weight 85 g



W23
Weight 250 g



W6
Weight 1 kg



W43
Weight 800 g



W21
Weight 85 g



W24
Weight 250 g



W7
Weight 1.7 kg



W121
Weight 330 g



W22
Weight 200 g



W37
Weight 510 g

Standard Fast Recovery–Capsule Types

These parts are well suited for use as anti-parallel diodes in Gate Turn-Off thyristors, Fast Thyristor inverters, and diodes for choppers.



Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	Typ. Reverse Recovery				V _{T0}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
			10 ms ½ sine V _R ≤ 60% V _{RRM}		T _J = 150 °C				@T _{JM} = 150 °C				
			t _{rr}	Q _{rr}	@ I _{FM}	@ -di _F /dt							
	V	A	A	A ² s	µs	µC	A	A/µs	V	mΩ	°C	K/W	
M1609NC200	2000	1609	17500	1.53 × 10 ⁶	3.20	800	1000	200	1.310	0.345	150	0.0220	W5
M1609NC260	2600	1609	17500	1.53 × 10 ⁶	3.20	800	1000	200	1.310	0.345	150	0.0220	W5
M1609ND200	2000	1609	17500	1.53 × 10 ⁶	3.20	800	1000	200	1.310	0.345	150	0.0220	W37
M1609ND260	2600	1609	17500	1.53 × 10 ⁶	3.20	800	1000	200	1.310	0.345	150	0.0220	W37
M2273VC300	3000	2273	28000	3.92 × 10 ⁶	8.50	2500	1000	60	1.239	0.244	150	0.0160	W6
M2273VC360	3600	2273	28000	3.92 × 10 ⁶	8.50	2500	1000	60	1.239	0.244	150	0.0160	W6
M2273VF300	3000	2273	28000	3.92 × 10 ⁶	8.50	2500	1000	60	1.239	0.244	150	0.0160	W43
M2273VF360	3600	2273	28000	3.92 × 10 ⁶	8.50	2500	1000	60	1.239	0.244	150	0.0160	W43
M2325HA400	4000	2325	28000	3.92 × 10 ⁶	5.40	2300	1000	200	1.581	0.402	150	0.0105	W121
M2325HA450	4500	2325	28000	3.92 × 10 ⁶	5.40	2300	1000	200	1.581	0.402	150	0.0105	W121
M2408NC020	200	2408	24000	2.88 × 10 ⁶	1.90	250	1000	200	1.065	0.122	150	0.0220	W5
M2408NC060	600	2408	24000	2.88 × 10 ⁶	1.90	250	1000	200	1.065	0.122	150	0.0220	W5
M2408ND020	200	2408	24000	2.88 × 10 ⁶	1.90	250	1000	200	1.065	0.122	150	0.0220	W37
M2408ND060	600	2408	24000	2.88 × 10 ⁶	1.90	250	1000	200	1.065	0.122	150	0.0220	W37
M2639ZC360	3600	2639	27520	3.79 × 10 ⁶	8.50	2300	1000	60	1.380	0.290	150	0.0110	W7
M2639ZC420	4200	2639	27520	3.79 × 10 ⁶	8.50	2300	1000	60	1.380	0.290	150	0.0110	W7
M2639ZD360	3600	2639	27520	3.79 × 10 ⁶	8.50	2300	1000	60	1.380	0.290	150	0.0110	W42
M2639ZD420	4200	2639	27520	3.79 × 10 ⁶	8.50	2300	1000	60	1.380	0.290	150	0.0110	W42
M2698ZC250	2500	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W7
M2698ZC280	2800	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W7
M2698ZC350	3500	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W7
M2698ZD250	2500	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W42
M2698ZD280	2800	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W42
M2698ZD350	3500	2698	27800	3.86 × 10 ⁶	6.20	1200	1000	60	1.000	0.330	150	0.0110	W42
M2837VC180	1800	2837	31800	5.10 × 10 ⁶	7.00	2100	1000	60	0.900	0.170	150	0.0160	W6
M2837VC250	2500	2837	31800	5.10 × 10 ⁶	7.00	2100	1000	60	0.900	0.170	150	0.0160	W6
M2837VF180	1800	2837	31800	5.10 × 10 ⁶	7.00	2100	1000	60	0.900	0.170	150	0.0160	W43
M2837VF250	2500	2837	31800	5.10 × 10 ⁶	7.00	2100	1000	60	0.900	0.170	150	0.0160	W43
M3770ZC200	2000	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W7
M3770ZC240	2400	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W7
M3770ZC300	3000	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W7
M3770ZD200	2000	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W7
M3770ZD240	2400	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W42
M3770ZD300	3000	3770	44000	9.68 × 10 ⁶	7.00	2000	1000	60	1.190	0.118	150	0.0110	W42

Soft Recovery Diodes

Our soft recovery diodes are available in a range of reverse recovery characteristics tailored to meet the requirements of both freewheeling and snubber applications. These devices are available with blocking voltages up to 6 kV and average currents up to 4305 A in 24 mm to 75 mm diameter silicon die. These parts are well suited for applications requiring soft recovery, such as in RCD snubbers, voltage clamping, and snubberless applications.

Soft Recovery Diodes—Stud Types



S



R

Part Number	V _{RRM}	I _{FAV} T _C = 55 °C	I _{FSM}	I ² t	Typ. Reverse Recovery				V _{T0}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		T _J = 150 °C			@T _{JM}					
					t _{rr}	Q _{rr}	@ I _{FM}			@ -di _F /dt			
	V	A	A	A²s	µs	µC	A	A/µs	V	mΩ	°C	K/W	
M0130RL200	2000	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W20
M0130RL250	2500	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W20
M0130SL200	2000	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W20
M0130SL250	2500	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W20
M0130RM200	2000	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W21
M0130RM250	2500	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W21
M0130SM200	2000	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W21
M0130SM250	2500	130	2240	25.0 × 10³	2.60	430	1000	150	1.290	1.540	125	0.3000	W21
M0139RL120	1200	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W20
M0139RL180	1800	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W20
M0139SL120	1200	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W20
M0139SL180	1800	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W20
M0139RM120	1200	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W21
M0139RM180	1800	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W21
M0139SM120	1200	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W21
M0139SM180	1800	139	2450	30.0 × 10³	1.00	125	1000	100	1.240	1.280	125	0.3000	W21
M0268RC200	2000	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W24
M0268RC250	2500	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W24
M0268SC200	2000	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W24
M0268SC250	2500	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W24
M0268RJ200	2000	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W22
M0268RJ250	2500	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W22
M0268SJ200	2000	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W22
M0268SJ250	2500	268	4250	90.3 × 10³	2.80	300	1000	150	1.210	1.200	125	0.1300	W22
M0280RC200	2000	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W24
M0280RC250	2500	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W24
M0280SC200	2000	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W24
M0280SC250	2500	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W24
M0280RJ200	2000	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W22
M0280RJ250	2500	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W22
M0280SJ200	2000	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W22
M0280SJ250	2500	280	4500	100 × 10³	2.80	610	1000	150	1.280	0.920	125	0.1300	W22
M0334RC120	1200	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W24
M0334RC200	2000	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W24
M0334SC120	1200	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W24
M0334SC200	2000	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W24
M0334RJ120	1200	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W22
M0334RJ200	2000	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W22
M0334SJ120	1200	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W22
M0334SJ200	2000	334	4500	101 × 10³	3.50	160	550	40	1.000	0.740	125	0.1300	W22
M0336RA120	1200	336	4500	101 × 10³	3.00	140	550	40	1.020	0.700	125	0.1300	W23
M0336RA140	1400	336	4500	101 × 10³	3.00	140	550	40	1.020	0.700	125	0.1300	W23
M0336SA120	1200	336	4500	101 × 10³	3.00	140	550	40	1.020	0.700	125	0.1300	W23
M0336SA140	1400	336	4500	101 × 10³	3.00	140	550	40	1.020	0.700	125	0.1300	W23

High-Power Devices



W1
Weight 70 g



W5
Weight 510 g



W42
Weight 1.2 kg



WD8
Weight 250 g



W2
Weight 80 g



W6
Weight 1 kg



W43
Weight 800 g



W3
Weight 140 g



W7
Weight 1.7 kg



W54
Weight 530 g



W4
Weight 340 g



W37
Weight 510 g



W89
Weight 1.3 kg



Soft Recovery Diode–Capsule Types

Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	I ² t	Typ. Reverse Recovery				V _{T0}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		T _{JM}				@ T _{JM}				
					t _{rr}	Q _{rr}	@ I _{FM}	@ -di _F /dt					
V	A	A	A ² s	μs	μC	A	A/μs	V	mΩ	°C	K/W		
M0225YH300	3000	225	2000	20 × 10 ³	3.00	220	550	40	1.900	4.160	150	0.1000	W3
M0225YH360	3600	225	2000	20 × 10 ³	3.00	220	550	40	1.900	4.160	150	0.1000	W3
M0225YH450	4500	225	2000	20 × 10 ³	3.00	220	550	40	1.900	4.160	150	0.1000	W3
M0310YH300	3000	310	4590	105 × 10 ³	2.80	275	1000	100	1.490	2.060	150	0.1000	W3
M0310YH350	3500	310	4590	105 × 10 ³	2.80	275	1000	100	1.490	2.060	150	0.1000	W3
M0347WC160	1600	347	4250	90.3 × 10 ³	2.80	210	550	40	1.210	1.200	125	0.0900	W1
M0347WC200	2000	347	4250	90.3 × 10 ³	2.80	210	550	40	1.210	1.200	125	0.0900	W1
M0347WC250	2500	347	4250	90.3 × 10 ³	2.80	210	550	40	1.210	1.200	125	0.0900	W1
M0358WC120	1200	358	2450	30 × 10 ³	1.40	125	1000	100	1.460	0.800	125	0.0900	W1
M0358WC180	1800	358	2450	30 × 10 ³	1.40	125	1000	100	1.460	0.800	125	0.0900	W1
M0367WC140	1400	367	4500	101 × 10 ³	3.30	300	550	40	1.280	0.920	125	0.0900	W1
M0367WC220	2200	367	4500	101 × 10 ³	3.30	300	550	40	1.280	0.920	125	0.0900	W1
M0367WC280	2800	367	4500	101 × 10 ³	3.30	300	550	40	1.280	0.920	125	0.0900	W1
M0371YH350	3500	371	4900	120 × 10 ³	3.20	1260	1000	200	1.050	1.650	150	0.1000	W3
M0371YH450	4500	371	4900	120 × 10 ³	3.20	1260	1000	200	1.050	1.650	150	0.1000	W3
M0433WC120	1200	433	4500	101 × 10 ³	3.50	270	550	40	1.000	0.740	125	0.0900	W1
M0433WC160	1600	433	4500	101 × 10 ³	3.50	270	550	40	1.000	0.740	125	0.0900	W1
M0433WC200	2000	433	4500	101 × 10 ³	3.50	270	550	40	1.000	0.740	125	0.0900	W1
M0437WC080	800	437	4500	101 × 10 ³	3.00	75	550	40	1.020	0.700	125	0.0900	W1
M0437WC140	1400	437	4500	101 × 10 ³	3.00	75	550	40	1.020	0.700	125	0.0900	W1
M0451YC120	1200	451	4500	101 × 10 ³	2.80	120	550	40	1.000	0.740	125	0.0850	W2
M0451YC160	1600	451	4500	101 × 10 ³	2.80	120	550	40	1.000	0.740	125	0.0850	W2
M0451YC200	2000	451	4500	101 × 10 ³	2.80	120	550	40	1.000	0.740	125	0.0850	W2
M0659LC400	4000	659	7620	290 × 10 ³	4.20	800	1000	60	1.710	0.925	125	0.0330	W4
M0659LC450	4500	659	7620	290 × 10 ³	4.20	800	1000	60	1.710	0.925	125	0.0330	W4
M0710LC560	5600	710	8400	353 × 10 ³	4.00	2100	1000	200	1.450	0.875	125	0.0330	W4
M0710LC600	6000	710	8400	353 × 10 ³	4.00	2100	1000	200	1.450	0.875	125	0.0330	W4
M0736LC400	4000	736	9000	405 × 10 ³	5.20	1250	1000	60	1.606	0.700	125	0.0330	W4
M0736LC450	4500	736	9000	405 × 10 ³	5.20	1250	1000	60	1.606	0.700	125	0.0330	W4
M0759YC120	1200	759	9500	450 × 10 ³	2.00	80	550	50	1.130	0.380	125	0.0500	W2
M0759YC160	1600	759	9500	450 × 10 ³	2.00	80	550	50	1.130	0.380	125	0.0500	W2
M0759YH120	1200	759	9500	450 × 10 ³	2.00	80	550	50	1.130	0.380	125	0.0500	W3
M0759YH160	1600	759	9500	450 × 10 ³	2.00	80	550	50	1.130	0.380	125	0.0500	W3
M0859LC140	1400	859	10000	500 × 10 ³	3.00	280	800	50	1.170	0.320	125	0.0440	W4
M0859LC160	1600	859	10000	500 × 10 ³	3.00	280	800	50	1.170	0.320	125	0.0440	W4
M0859LC180	1800	859	10000	500 × 10 ³	3.00	280	800	50	1.170	0.320	125	0.0440	W4

Soft Recovery Diode—Capsule Types



Part Number	V _{RRM}	I _{FAV} T _K = 55 °C	I _{FSM}	P ² t	Typ. Reverse Recovery				V _{T0}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
			10 ms ½ sine V _R - ≤60% V _{RRM}		T _{JM}			@ T _{JM}					
	V	A	A	A ² s	t _{rr} μs	Q _{rr} μC	@I _{FM} A	@ -di _F /dt A/μs	V	mΩ			
M0863LC260	2600	863	10000	500 × 10 ³	4.80	950	1000	60	1.308	0.538	125	0.0330	W4
M0863LC300	3000	863	10000	500 × 10 ³	4.80	950	1000	60	1.308	0.538	125	0.0330	W4
M0863LC360	3600	863	10000	500 × 10 ³	4.80	950	1000	60	1.308	0.538	125	0.0330	W4
M0872LC140	1400	872	10000	500 × 10 ³	4.00	700	1000	60	1.090	0.340	125	0.0440	W4
M0872LC180	1800	872	10000	500 × 10 ³	4.00	700	1000	60	1.090	0.340	125	0.0440	W4
M0872LC210	2100	872	10000	500 × 10 ³	4.00	700	1000	60	1.090	0.340	125	0.0440	W4
M0955LC200	2000	955	11700	684 × 10 ³	3.40	500	1000	60	1.440	0.330	125	0.0330	W4
M0955LC250	2500	955	11700	684 × 10 ³	3.40	500	1000	60	1.440	0.330	125	0.0330	W4
M1022LC120	1200	1022	14000	980 × 10 ³	3.00	375	1000	60	1.240	0.330	125	0.0330	W4
M1022LC160	1600	1022	14000	980 × 10 ³	3.00	375	1000	60	1.240	0.330	125	0.0330	W4
M1022LC200	2000	1022	14000	980 × 10 ³	3.00	375	1000	60	1.240	0.330	125	0.0330	W4
M1080LC100	1000	1080	13500	910 × 10 ³	1.90	85	1000	60	1.125	0.314	125	0.0330	W4
M1080LC120	1200	1080	13500	910 × 10 ³	1.90	85	1000	60	1.125	0.314	125	0.0330	W4
M1102NC500	5000	1102	13000	845 × 10 ³	5.50	3300	1000	200	1.360	0.557	125	0.0220	W5
M1102NC600	6000	1102	13000	845 × 10 ³	5.50	3300	1000	200	1.360	0.557	125	0.0220	W5
M1102ND500	5000	1102	13000	845 × 10 ³	5.50	3300	1000	200	1.360	0.557	125	0.0220	W37
M1102ND600	6000	1102	13000	845 × 10 ³	5.50	3300	1000	200	1.360	0.557	125	0.0220	W37
M1104NC400	4000	1104	13000	845 × 10 ³	6.00	2100	1000	60	1.370	0.553	125	0.0220	W5
M1104NC450	4500	1104	13000	845 × 10 ³	6.00	2100	1000	60	1.370	0.553	125	0.0220	W5
M1104ND400	4000	1104	13000	845 × 10 ³	6.00	2100	1000	60	1.370	0.553	125	0.0220	W37
M1104ND450	4500	1104	13000	845 × 10 ³	6.00	2100	1000	60	1.370	0.553	125	0.0220	W37
M1242NC260	2600	1242	16400	1.34 × 10 ⁶	6.00	1500	1000	60	1.270	0.420	125	0.0220	W5
M1242NC360	3600	1242	16400	1.34 × 10 ⁶	6.00	1500	1000	60	1.270	0.420	125	0.0220	W5
M1242ND260	2600	1242	16400	1.34 × 10 ⁶	6.00	1500	1000	60	1.270	0.420	125	0.0220	W37
M1242ND360	3600	1242	16400	1.34 × 10 ⁶	6.00	1500	1000	60	1.270	0.420	125	0.0220	W37
M1494NC160	1600	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0220	W5
M1494NC250	2500	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0220	W5
M1494ND160	1600	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0220	W37
M1494ND250	2500	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0220	W37
M1494NK160	1600	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0145	WD8
M1494NK250	2500	1494	19600	1.92 × 10 ⁶	3.90	815	1000	60	1.150	0.265	125	0.0145	WD8
M1565VC400	4000	1565	19700	1.94 × 10 ⁶	5.00	4000	1000	200	1.090	0.360	125	0.0180	W6
M1565VC450	4500	1565	19700	1.94 × 10 ⁶	5.00	4000	1000	200	1.090	0.360	125	0.0180	W6
M1565VF400	4000	1565	19700	1.94 × 10 ⁶	5.00	4000	1000	200	1.090	0.360	125	0.0180	W43
M1565VF450	4500	1565	19700	1.94 × 10 ⁶	5.00	4000	1000	200	1.090	0.360	125	0.0180	W43
M1858NC100	1000	1858	25000	3.25 × 10 ⁶	2.50	120	1000	60	1.127	0.127	125	0.0220	W5
M1858NC120	1200	1858	25000	3.25 × 10 ⁶	2.50	120	1000	60	1.127	0.127	125	0.0220	W5
M1858ND120	1200	1858	25000	3.25 × 10 ⁶	2.50	120	1000	60	1.127	0.127	125	0.0220	W37
M1858ND100	1000	1858	25000	3.25 × 10 ⁶	2.50	120	1000	60	1.127	0.127	125	0.0220	W37
M2322ZC300	3000	2322	23000	2.64 × 10 ⁶	6.50	3200	1000	150	1.670	0.186	125	0.0110	W7
M2322ZC400	4000	2322	23000	2.64 × 10 ⁶	6.50	3200	1000	150	1.670	0.186	125	0.0110	W7
M2322ZD300	3000	2322	23000	2.64 × 10 ⁶	6.50	3200	1000	150	1.670	0.186	125	0.0110	W42
M2322ZD400	4000	2322	23000	2.64 × 10 ⁶	6.50	3200	1000	150	1.670	0.186	125	0.0110	W42
M2413VC200	2000	2413	32000	5.12 × 10 ⁶	5.00	2500	1000	200	1.090	0.121	125	0.0160	W6
M2413VC250	2500	2413	32000	5.12 × 10 ⁶	5.00	2500	1000	200	1.090	0.121	125	0.0160	W6
M2413VF200	2000	2413	32000	5.12 × 10 ⁶	5.00	2500	1000	200	1.090	0.121	125	0.0160	W43
M2413VF250	2500	2413	32000	5.12 × 10 ⁶	5.00	2500	1000	200	1.090	0.121	125	0.0160	W43
M2505MC220	2200	2505	27000	3.65 × 10 ⁶	7.60	1950	2000	60	0.991	0.162	125	0.0140	W54
M2505MC250	2500	2505	27000	3.65 × 10 ⁶	7.60	1950	2000	60	0.991	0.162	125	0.0140	W54
M3560TJ420	4200	3560	36000	6.48 × 10 ⁶	7.00	4100	1000	150	1.253	0.137	125	0.0080	W89
M3560TJ450	4500	3560	36000	6.48 × 10 ⁶	7.00	4100	1000	150	1.253	0.137	125	0.0080	W89
M4305TJ240	2400	4305	49000	12.0 × 10 ⁶	5.00	2500	1000	150	1.104	0.087	125	0.0080	W89
M4305TJ280	2800	4305	49000	12.0 × 10 ⁶	5.00	2500	1000	150	1.104	0.087	125	0.0080	W89

High-Power Devices

Extra Fast Recovery Diodes

These products are engineered to minimize the the lowest practical values of reverse recovery current while maintaining a wide safe operating area and high di/dt capability required by modern switching parts.



W1
Weight 70 g



W6
Weight 1 kg



W89
Weight 1.3 kg



W2
Weight 80 g



W43
Weight 800 g



W111
Weight 1.6 kg



W3
Weight 140 g



W47
Weight 250 g



W117
Weight 330 g



W4
Weight 340 g



W54
Weight 530 g



W122
Weight 1.2 kg



W5
Weight 510 g



W59
Weight 2.25 kg



W126
Weight 1.15 kg

Extra Fast Recovery Diodes—Capsule Types

Part Number	V _{RRM}	I _{FAV}	I _{FSM}	I ² t	Typ. Reverse Recovery					V _{T0}	r _T	T _{JM}	R _{thJK} d.c. 180° sine	Fig. No.
		T _K = 55 °C	10 ms ½ sine V _R ≤ 60% V _{RRM}	T _{JM}					@ T _{JM}					
				I _{rm}	t _{rr}	Q _{rr}	@ I _{FM}	@ -di _F /dt						
	V	A	A	A ² s	A	µs	µC	A	A/µs	V	mΩ	°C	K/W	
F0240YC250	2500	240	3100	48.1 × 10 ³	40	2.00	100	550	40	2.271	2.853	150	0.1000	W2
F0240YC300	3000	240	3100	48.1 × 10 ³	40	2.00	100	550	40	2.271	2.853	150	0.1000	W2
F0240YH250	2500	240	3100	48.1 × 10 ³	40	2.00	100	550	40	2.271	2.853	150	0.1000	W3
F0240YH300	3000	240	3100	48.1 × 10 ³	40	2.00	100	550	40	2.271	2.853	150	0.1000	W3
F0300WC140	1400	240	2700	36.5 × 10 ³	530	3.00	70	550	40	1.760	2.210	125	0.0950	W1
F0300WC180	1800	240	2700	36.5 × 10 ³	530	3.00	70	550	40	1.760	2.210	125	0.0950	W1
F0800LC140	1400	775	7630	291 × 10 ³	380	1.10	200	1000	200	1.494	0.692	125	0.0320	W4
F0800LC180	1800	775	7630	291 × 10 ³	380	1.10	200	1000	200	1.494	0.692	125	0.0320	W4
F0900VC450	4500	816	10450	546 × 10 ³	120	3.80	230	1000	60	2.024	1.274	115	0.0160	W6
F0900VC520	5200	816	10450	546 × 10 ³	120	3.80	230	1000	60	2.024	1.274	115	0.0160	W6
F0900VF450	4500	816	10450	546 × 10 ³	120	3.80	230	1000	60	2.024	1.274	115	0.0160	W43
F0900VF520	5200	816	10450	546 × 10 ³	120	3.80	230	1000	60	2.024	1.274	115	0.0160	W43
F1000LC080	800	826	8500	361 × 10 ³	320	1.60	250	1000	800	1.530	0.547	125	0.0320	W4
F1000LC120	1200	826	8500	361 × 10 ³	320	1.60	250	1000	800	1.530	0.547	125	0.0320	W4
F1300NC45P	4500	1346	20800	2.16 × 10 ⁶	470	4.30	2150	1000	200	1.569	0.318	140	0.0240	W5
F1300NC50P	5000	1346	20800	2.16 × 10 ⁶	470	4.30	2150	1000	200	1.569	0.318	140	0.0240	W5
F1300NC55P	5500	1346	20800	2.16 × 10 ⁶	470	4.30	2150	1000	200	1.569	0.318	140	0.0240	W5
F1400NC140	1400	1093	17250	1.49 × 10 ⁶	800	1.50	1000	1400	1000	1.618	0.388	125	0.0240	W5
F1400NC180	1800	1093	17250	1.49 × 10 ⁶	800	1.50	1000	1400	1000	1.618	0.388	125	0.0240	W5
F1500NC200	2000	1054	13750	950 × 10 ³	1065	1.50	1500	1500	2000	1.372	0.535	125	0.0240	W5
F1500NC250	2500	1054	13750	950 × 10 ³	1065	1.50	1500	1500	2000	1.372	0.535	125	0.0240	W5
F1600NC080	800	1326	20000	2.0 × 10 ⁶	480	2.30	700	1600	800	1.320	0.268	125	0.0240	W5
F1600NC120	1200	1326	20000	2.0 × 10 ⁶	480	2.30	700	1600	800	1.320	0.268	125	0.0240	W5

High-Power Sonic FRDs

Littelfuse brings you a world-leading class of ultra fast and ultra soft recovery diode available from 4.5 kV to 6.5 kV in current ratings from 500 A to 4000 A. These diodes incorporate a unique manufacturing process and lifetime control to offer an optimal balance between conduction and switching losses. The wide safe operating area (SOA) makes them ideal as freewheeling diodes for snubberless IGBT and IGCT applications or any application that requires a fast, low loss diode (e.g., traction, medium voltage drives, induction heating, and pulsed power applications).

High-Power Sonic FRD's – Capsule Type

Part Number	V _{RRM}	I _{FAV}	I _{FSM}	I ² t	Typ. Reverse Recovery					V _{T0}	r _T	T _{JM}	R _{thJK} 180° sine	Fig. No.
		T _K = 55 °C	10 ms ½ sine V _R ≤ 60% V _{RRM}	T _{JM}					@T _{JM}					
				I _{rm}	t _{rr}	Q _{rr}	@I _{FM}	@ -di _F /dt						
	V	A	A	A ² s	A	µs	µC	A	A/µs	V	mΩ	°C	K/W	
E0460QC45E	4500	533	6800	231 × 10 ³	460	1.15	685	500	1000	2.246	2.716	140	0.0274	W117
E0660NC45E	4500	760	9160	420 × 10 ³	700	1.10	1050	660	1500	2.194	1.814	140	0.0200	W5
E0660NH45E	4500	760	9160	420 × 10 ³	700	1.10	1050	660	1500	2.194	1.814	140	0.0200	W47
E1250HC45E	4500	1355	20500	2.11 × 10 ⁶	1000	1.20	1850	1250	2000	2.072	1.166	140	0.0105	W122
E1500NC42P	4200	1280	17050	1.45 × 10 ⁶	1425	2.80	2750	1000	1000	1.417	0.656	140	0.0190	W5
E1500NC48P	4800	1280	17050	1.45 × 10 ⁶	1425	2.80	2750	1000	1000	1.417	0.656	140	0.0190	W5
E1500NH42P	4200	1280	17050	1.45 × 10 ⁶	1425	2.80	2750	1000	1000	1.417	0.656	140	0.0190	W47
E1500NH48P	4800	1280	17050	1.45 × 10 ⁶	1425	2.80	2750	1000	1000	1.417	0.656	140	0.0190	W47
E1780TG65E	6500	1780	25600	3.29 × 10 ⁶	1590	1.22	3500	1375	3500	2.200	0.917	140	0.0770	W126
E1800TC45E	4500	2215	29050	4.22 × 10 ⁶	1490	1.15	2800	1800	3000	2.171	0.634	140	0.0068	W89
E2400EC45E	4500	2490	32100	5.15 × 10 ⁶	2130	1.22	3900	2400	4000	2.114	0.646	140	0.0056	W111
E3000EC45E	4500	3410	45700	10.5 × 10 ⁶	3050	1.25	5000	3000	5000	2.124	0.339	140	0.0050	W111
E4000FD45E	4500	4210	54800	15.0 × 10 ⁶	3650	1.50	5750	4000	5000	2.117	0.351	140	0.0035	W59

High-Power Devices

Phase Control Thyristors

Littelfuse provides one of the most comprehensive ranges of standard phase control thyristors in the industry. Devices are available with voltage ratings from 200 V to 5200 V, making them suitable for applications with line voltages from 230 V to over 1000 V (For applications requiring voltages above 5.2 kV, please refer to our Medium Voltage Thyristor range). Littelfuse is a leading supplier of phase control products for markets such as industrial DC drives, controlled rectifiers, marine/rail propulsion systems, wind power converters, electrochemical power supplies, and soft starters. These devices are optimized for low conduction losses and are primarily intended for applications with line frequencies of up to 400 Hz.

The Wespack outline (WPxx) is an innovative concept in phase control thyristors for applications requiring devices rated up to 2200 V. It delivers the maximum power density without compromising on reliability, while also providing the maximum current rating and lowest thermal resistance for the package size.

The newest additions to the Littelfuse phase control thyristor portfolio are the 96 mm diameter die capsules. These devices are constructed using low temperature sintering technology offering better thermal and electromechanical capability. Devices are available with current ratings up to 6405 A and voltage ratings up to 4500 V.



W8
Weight 70 g



W12
Weight 1 kg



W70
Weight 550 g



WP6
Weight 330 g



W10
Weight 340 g



W58
Weight 90 g



WP1
Weight 180 g



W17
Weight 130 g



W11
Weight 510 g



W62
Weight 1 kg



WP2
Weight 200 g



W18
Weight 280 g

Phase Control Thyristors—Stud Types

Part Number	V_{DRM} V_{RRM}	I_{TAV}	I_{TSM}	I^2t	V_{T0}	r_T	T_{JM}	R_{thJC}		Fig. No.
		$T_C = 55^\circ C$	10 ms $\frac{1}{2}$ sine $V_R \leq 60\% V_{RRM}$		@ T_{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ	°C	K/W	K/W	
N0180SH120	1200	180	2450	30.0×10^3	0.900	1.790	125	0.2300	0.2800	W17
N0180SH160	1600	180	2450	30.0×10^3	0.900	1.790	125	0.2300	0.2800	W17
N0335SC120	1200	335	4650	108×10^3	0.920	0.990	125	0.1200	0.1400	W18
N0335SC160	1600	335	4650	108×10^3	0.920	0.990	125	0.1200	0.1400	W18
N0416SC040	400	416	6000	180×10^3	0.850	0.535	125	0.1200	0.1400	W18
N0416SC080	800	416	6000	180×10^3	0.850	0.535	125	0.1200	0.1400	W18

Phase Control Thyristors—Capsule Types



Part Number	V_{DRM} V_{RRM}	I_{TAV}	I_{TSM}	I^2t	V_{T0}	r_T	T_{JM}	R_{thJC}		Fig. No.
		$T_k = 55^\circ C$	10 ms $\frac{1}{2}$ sine $V_R - \leq 60\% V_{RRM}$		@ T_{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ	°C	K/W	K/W	
N0392WC120	1200	392	4650	108×10^3	0.920	0.990	125	0.0950	0.1100	W8
N0392WC160	1600	392	4650	108×10^3	0.920	0.990	125	0.0950	0.1100	W8
N0606YC200	2000	606	7100	252×10^3	1.103	0.804	125	0.0500	0.0580	W58
N0606YC250	2500	606	7100	252×10^3	1.103	0.804	125	0.0500	0.0580	W58
N0616LC400	4000	616	5250	138×10^3	1.220	1.530	125	0.0320	0.0393	W10
N0616LC450	4500	616	5250	138×10^3	1.220	1.530	125	0.0320	0.0393	W10
N0634LC380	3800	634	7000	245×10^3	1.100	1.500	125	0.0320	0.0393	W10
N0634LC420	4200	634	7000	245×10^3	1.100	1.500	125	0.0320	0.0393	W10
N0646LC300	3000	646	5700	162×10^3	1.210	1.360	125	0.0320	0.0393	W10
N0646LC360	3600	646	5700	162×10^3	1.210	1.360	125	0.0320	0.0393	W10

Phase Control Thyristors—Capsule Types



Part Number	V_{DRM}	I_{TAV}	I_{TSM}	I^2t	V_{T0}	r_T	T_{JM}	R_{thJC}		Fig. No.
	V_{RRM}	$T_k = 55^\circ C$	10 ms $\frac{1}{2}$ sine $V_R \leq 60\% V_{RRM}$		@ T_{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ		°C	K/W	
N0676YC120	1200	676	7500	281×10^3	1.090	0.587	125	0.0500	0.0580	W58
N0676YC180	1800	676	7500	281×10^3	1.090	0.587	125	0.0500	0.0580	W58
N0734YC120	1200	734	8400	353×10^3	1.03	0.483	125	0.0500	0.0580	W58
N0734YC160	1600	734	8400	353×10^3	1.03	0.483	125	0.0500	0.0580	W58
N0882NC400	4000	882	7700	296×10^3	1.300	0.920	125	0.0240	0.0273	W11
N0882NC450	4500	882	7700	296×10^3	1.300	0.920	125	0.0240	0.0273	W11
N0910LC200	2000	910	9200	423×10^3	1.040	0.606	125	0.0320	0.0393	W10
N0910LC260	2600	910	9200	423×10^3	1.040	0.606	125	0.0320	0.0393	W10
N0910LC280	2800	910	9200	423×10^3	1.040	0.606	125	0.0320	0.0393	W10
N1010NC300	3000	1010	12100	732×10^3	1.170	0.687	125	0.0240	0.0273	W11
N1010NC380	3800	1010	12100	732×10^3	1.170	0.687	125	0.0240	0.0273	W11
N1052LC200	2000	1052	13200	870×10^3	1.000	0.416	125	0.0320	0.0393	W10
N1052LC220	2200	1052	13200	870×10^3	1.000	0.416	125	0.0320	0.0393	W10
N1114LC120	1200	1114	12700	806×10^3	1.000	0.349	125	0.0320	0.0393	W10
N1114LC180	1800	1114	12700	806×10^3	1.000	0.349	125	0.0320	0.0393	W10
N1132NC300	3000	1132	14300	1.02×10^6	1.150	0.510	125	0.0240	0.0271	W11
N1132NC340	3400	1132	14300	1.02×10^6	1.150	0.510	125	0.0240	0.0271	W11
N1132NC360	3600	1132	14300	1.02×10^6	1.150	0.510	125	0.0240	0.0271	W11
N1159NC380	3800	1159	14500	1.05×10^6	1.100	0.574	125	0.0220	0.0255	W11
N1159NC420	4200	1159	14500	1.05×10^6	1.100	0.574	125	0.0220	0.0255	W11
N1174JK200	2000	1174	13200	870×10^3	1.000	0.416	125	0.0270	0.0314	WP1
N1174JK220	2200	1174	13200	870×10^3	1.000	0.416	125	0.0270	0.0314	WP1
N1263JK160	1600	1263	15000	1.13×10^6	1.015	0.332	125	0.0270	0.0314	WP1
N1263JK180	1800	1263	15000	1.13×10^6	1.015	0.332	125	0.0270	0.0314	WP1
N1351VC400	4000	1351	17500	1.53×10^6	1.200	0.553	125	0.0170	0.0206	W12
N1351VC450	4500	1351	17500	1.53×10^6	1.200	0.553	125	0.0170	0.0206	W12
N1351VF400	4000	1351	17500	1.53×10^6	1.200	0.553	125	0.0170	0.0206	W62
N1351VF450	4500	1351	17500	1.53×10^6	1.200	0.553	125	0.0170	0.0206	W62
N1366JK080	800	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	0.0314	WP1
N1366JK120	1200	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	0.0314	WP1
N1366JK140	1400	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	0.0314	WP1
N1449QL200	2000	1410	17300	1.50×10^6	1.060	0.317	125	0.0230	0.0272	WP6
N1467NC200	2000	1467	21500	2.31×10^6	1.000	0.272	125	0.0240	0.0271	W11
N1467NC220	2200	1410	17300	1.50×10^6	1.060	0.317	125	0.0230	0.0272	W11
N1467NC260	2600	1467	21500	2.31×10^6	1.000	0.272	125	0.0240	0.0271	W11
N1547NC160	1600	1547	23300	2.71×10^6	0.920	0.252	125	0.0240	0.0271	W11
N1547NC200	2000	1547	23300	2.71×10^6	0.920	0.252	125	0.0240	0.0271	W11
N1581QL160	1600	1535	19100	1.82×10^6	1.022	0.253	125	0.0230	0.0270	WP6
N1581QL180	1800	1535	19100	1.82×10^6	1.022	0.253	125	0.0230	0.0270	WP6
N1651QK200	2000	1651	17300	1.50×10^6	1.060	0.317	125	0.0180	0.0217	WP2
N1651QK220	2200	1651	17300	1.50×10^6	1.060	0.317	125	0.0180	0.0217	WP2
N1661VC300	3000	1661	23000	2.65×10^6	1.040	0.350	125	0.0170	0.0206	W12
N1661VC360	3600	1661	23000	2.65×10^6	1.040	0.350	125	0.0170	0.0206	W12
N1661VF300	3000	1661	23000	2.65×10^6	1.040	0.350	125	0.0170	0.0206	W62
N1661VF360	3600	1661	23000	2.65×10^6	1.040	0.350	125	0.0170	0.0206	W62
N1718NC120	1200	1718	27200	3.70×10^6	0.979	0.169	125	0.0240	0.0271	W11
N1718NC180	1800	1718	27200	3.70×10^6	0.979	0.169	125	0.0240	0.0271	W11
N1718NC200	2000	1718	27200	3.70×10^6	0.979	0.169	125	0.0240	0.0271	W11
N1725MC320	3200	1725	20000	2.00×10^6	1.022	0.396	125	0.0150	0.0165	W70

High-Power Devices



W11
Weight 510 g



W62
Weight 1 kg



W81
Weight 1.2 kg



WP3
Weight 260 g



W12
Weight 1 kg



W70
Weight 550 g



W82
Weight 1.65 kg



WP5
Weight 500 g



W13
Weight 1.7 kg



W79
Weight 890 g



WP1
Weight 180 g



WP6
Weight 330 g



W46
Weight 1.2 kg



W80
Weight 1.2 kg



WP2
Weight 200 g



Phase Control Thyristors—Capsule Types

Part Number	V _{DRM} V _{RRM}	I _{TAV}	I _{TSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJC}		Fig. No.
		T _k = 55 °C	10 ms ½ sine V _R ≤ 60% V _{RRM}		@ T _{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ	°C	K/W	K/W	
N1725MC360	3600	1725	20000	2.00 × 10 ⁶	1.022	0.396	125	0.0150	0.0165	W70
N1802NC120	1200	1802	29600	4.38 × 10 ⁶	0.855	0.171	125	0.0240	0.0271	W11
N1802NC160	1600	1802	29600	4.38 × 10 ⁶	0.855	0.171	125	0.0240	0.0271	W11
N1806QK160	1600	1806	19100	1.82 × 10 ⁶	1.022	0.253	125	0.0180	0.0217	WP2
N1806QK180	1800	1806	19100	1.82 × 10 ⁶	1.022	0.253	125	0.0180	0.0217	WP2
N1817QL080	800	1760	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0230	0.0272	WP6
N1817QL120	1200	1760	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0230	0.0272	WP6
N1817QL140	1400	1760	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0230	0.0272	WP6
N2015ML200	2000	2015	32400	5.25 × 10 ⁶	0.883	0.210	125	0.0180	0.0201	WP5
N2015ML220	2200	2015	32400	5.25 × 10 ⁶	0.883	0.210	125	0.0180	0.0201	WP5
N2055MC260	2600	2105	25800	3.33 × 10 ⁶	0.970	0.240	125	0.0150	0.0165	W70
N2055MC280	2800	2105	25800	3.33 × 10 ⁶	0.970	0.240	125	0.0150	0.0165	W70
N2055HE420	4200	2055	24000	2.88 × 10 ⁶	0.977	0.342	125	0.0125	0.0138	W80
N2055HE450	4500	2055	24000	2.88 × 10 ⁶	0.977	0.342	125	0.0125	0.0138	W80
N2083QK080	800	2083	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0180	0.0217	WP2
N2083QK120	1200	2083	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0180	0.0217	WP2
N2083QK140	1400	2083	22000	2.42 × 10 ⁶	0.955	0.177	125	0.0180	0.0217	WP2
N2086NC060	600	2086	35000	6.13 × 10 ⁶	0.840	0.108	125	0.0240	0.0271	W11
N2086NC100	1000	2086	35000	6.13 × 10 ⁶	0.840	0.108	125	0.0240	0.0271	W11
N2154JK020	200	2154	22700	2.58 × 10 ⁶	0.890	0.107	140	0.0270	0.0314	WP1
N2154JK040	400	2154	22700	2.58 × 10 ⁶	0.890	0.107	140	0.0270	0.0314	WP1
N2154JK060	600	2154	22700	2.58 × 10 ⁶	0.890	0.107	140	0.0270	0.0314	WP1
N2172ZC420	4200	2172	28000	3.92 × 10 ⁶	1.350	0.294	125	0.0110	0.0119	W13
N2172ZC450	4500	2172	28000	3.92 × 10 ⁶	1.350	0.294	125	0.0110	0.0119	W13
N2172ZD420	4200	2172	28000	3.92 × 10 ⁶	1.350	0.294	125	0.0110	0.0119	W46
N2172ZD450	4500	2172	28000	3.92 × 10 ⁶	1.350	0.294	125	0.0110	0.0119	W46
N2191ML160	1600	2191	34500	5.95 × 10 ⁶	0.940	0.154	125	0.0180	0.0201	WP5
N2191ML180	1800	2191	34500	5.95 × 10 ⁶	0.940	0.154	125	0.0180	0.0201	WP5
N2293VC180	1800	2293	33800	5.70 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W12
N2293VC220	2200	2293	33800	5.70 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W12
N2293VF180	1800	2293	33800	5.70 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W62
N2293VF220	2200	2293	33800	5.70 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W62
N2367MK200	2000	2367	32400	5.25 × 10 ⁶	0.883	0.210	125	0.0140	0.0157	WP3
N2367MK220	2200	2367	32400	5.25 × 10 ⁶	0.883	0.210	125	0.0140	0.0157	WP3
N2418ZC300	3000	2418	30000	4.50 × 10 ⁶	1.160	0.246	125	0.0110	0.0119	W13
N2418ZC360	3600	2418	30000	4.50 × 10 ⁶	1.160	0.246	125	0.0110	0.0119	W13
N2418ZD300	3000	2418	30000	4.50 × 10 ⁶	1.160	0.246	125	0.0110	0.0119	W46
N2418ZD360	3600	2418	30000	4.50 × 10 ⁶	1.160	0.246	125	0.0110	0.0119	W46

Phase Control Thyristors—Capsule Types



Part Number	V_{DRM}	I_{TAV}	I_{TSM}	I^2t	V_{T0}	r_T	T_{JM}	R_{thJC}		Fig. No.
	V_{RRM}	$T_k = 55\text{ }^{\circ}\text{C}$	10 ms $\frac{1}{2}$ sine $V_R - \leq 60\% V_{RRM}$		@ T_{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A²S	V	mΩ		°C	K/W	
N2500VC120	1200	2500	37000	6.85×10^6	0.880	0.124	125	0.0170	0.0206	W12
N2500VC160	1600	2500	37000	6.85×10^6	0.880	0.124	125	0.0170	0.0206	W12
N2500VF120	1200	2500	37000	6.85×10^6	0.880	0.124	125	0.0170	0.0206	W62
N2500VF160	1600	2500	37000	6.85×10^6	0.880	0.124	125	0.0170	0.0206	W62
N2520ML080	800	2520	38200	7.30×10^6	0.980	0.090	125	0.0180	0.0201	WP5
N2520ML120	1200	2520	38200	7.30×10^6	0.980	0.090	125	0.0180	0.0201	WP5
N2520ML140	1400	2520	38200	7.30×10^6	0.980	0.090	125	0.0180	0.0201	WP5
N2543ZC240	2400	2543	32000	5.12×10^6	0.780	0.274	125	0.0110	0.0119	W13
N2543ZC300	3000	2543	32000	5.12×10^6	0.780	0.274	125	0.0110	0.0119	W13
N2543ZD240	2400	2543	32000	5.12×10^6	0.780	0.274	125	0.0110	0.0119	W46
N2543ZD300	3000	2543	32000	5.12×10^6	0.780	0.274	125	0.0110	0.0119	W46
N2593MK160	1600	2593	34500	5.95×10^6	0.940	0.154	125	0.0140	0.0157	WP3
N2593MK180	1800	2593	34500	5.95×10^6	0.940	0.154	125	0.0140	0.0157	WP3
N2600MC160	1600	2600	30000	4.50×10^6	0.950	0.130	125	0.0150	0.0165	W70
N2600MC180	1800	2600	30000	4.50×10^6	0.950	0.130	125	0.0150	0.0165	W70
N2825TE420	4200	2825	36900	6.81×10^6	1.210	0.270	125	0.0080	0.0085	W82
N2825TE450	4500	2825	36900	6.81×10^6	1.210	0.270	125	0.0080	0.0085	W82
N2825TJ420	4200	2825	36900	6.81×10^6	1.210	0.270	125	0.0080	0.0085	W81
N2825TJ450	4500	2825	36900	6.81×10^6	1.210	0.270	125	0.0080	0.0085	W81
N2830HE260	2600	2830	36000	6.48×10^6	0.930	0.150	125	0.0125	0.0138	W80
N2830HE280	2800	2830	36000	6.48×10^6	0.930	0.150	125	0.0125	0.0138	W80
N2900QL020	200	2900	28000	3.92×10^6	0.850	0.080	150	0.0230	0.0272	WP6
N2900QL040	400	2900	28000	3.92×10^6	0.850	0.080	150	0.0230	0.0272	WP6
N2900QL060	600	2900	28000	3.92×10^6	0.850	0.080	150	0.0230	0.0272	WP6
N3012ZC200	2000	3012	45100	10.2×10^6	0.920	0.160	125	0.0110	0.0119	W13
N3012ZC260	2600	3012	45100	10.2×10^6	0.920	0.160	125	0.0110	0.0119	W13
N3012ZD200	2000	3012	45100	10.2×10^6	0.920	0.160	125	0.0110	0.0119	W46
N3012ZD260	2600	3012	45100	10.2×10^6	0.920	0.160	125	0.0110	0.0119	W46
N3022MK080	800	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	0.0157	WP3
N3022MK120	1200	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	0.0157	WP3
N3022MK140	1400	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	0.0157	WP3
N3029ZC240	2400	3029	38200	7.30×10^6	0.947	0.154	125	0.0110	0.0119	W13
N3029ZC280	2800	3029	38200	7.30×10^6	0.947	0.154	125	0.0110	0.0119	W13
N3029ZD240	2400	3029	38200	7.30×10^6	0.947	0.154	125	0.0110	0.0119	W46
N3029ZD280	2800	3029	38200	7.30×10^6	0.947	0.154	125	0.0110	0.0119	W46
N3165HA260	2600	3165	36000	6.48×10^6	0.930	0.150	125	0.0105	0.0118	W79
N3165HA280	2800	3165	36000	6.48×10^6	0.930	0.150	125	0.0105	0.0118	W79
N3175HE160	1600	3175	45500	10.40×10^6	0.900	0.110	125	0.0125	0.0138	W80
N3175HE180	1800	3175	45500	10.40×10^6	0.900	0.110	125	0.0125	0.0138	W80
N3229QK020	200	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	0.0217	WP2
N3229QK040	400	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	0.0217	WP2
N3229QK060	600	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	0.0217	WP2
N3533ZC140	1400	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W13
N3533ZC180	1800	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W13
N3533ZC220	2200	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W13
N3533ZD140	1400	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W46
N3533ZD180	1800	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W46
N3533ZD220	2200	3533	50000	12.5×10^6	0.970	0.095	125	0.0110	0.0120	W46
N3565HA160	1600	3565	45500	10.4×10^6	0.900	0.110	125	0.0105	0.0118	W79
N3565HA180	1800	3565	45500	10.4×10^6	0.900	0.110	125	0.0105	0.0118	W79
N3597ML020	200	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	0.0201	WP5
N3597ML040	400	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	0.0201	WP5
N3597ML060	600	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	0.0201	WP5
N3620TE320	3200	3620	52500	11.2×10^6	0.911	0.168	125	0.0080	0.0085	W82
N3620TE360	3600	3620	52500	11.2×10^6	0.911	0.168	125	0.0080	0.0085	W82
N3620TJ320	3200	3620	52500	11.2×10^6	0.911	0.168	125	0.0080	0.0085	W81
N3620TJ360	3600	3620	52500	11.2×10^6	0.911	0.168	125	0.0080	0.0085	W81
N3790TE240	2400	3790	49500	12.3×10^6	0.900	0.150	125	0.0080	0.0085	W82
N3790TE280	2800	3790	49500	12.3×10^6	0.900	0.150	125	0.0080	0.0085	W82

High-Power Devices



W13
Weight 1.7 kg



W82
Weight 1.65 kg



W118
Weight 2.2 kg



WP3
Weight 260 g



W46
Weight 1.2 kg



W107
Weight 1.6 kg



W119
Weight 2.9 kg



WP4
Weight 550 g



W81
Weight 1.2 kg



W108
Weight 2.1 kg



Phase Control Thyristors—Capsule Types

Part Number	V _{DRM} V _{RRM}	I _{TAV}	I _{TSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJC}		Fig. No.
		T _k = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			d.c. 180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ	°C	K/W	K/W	
N3790TJ240	2400	3790	49500	12.3 × 10 ⁶	0.900	0.150	125	0.0080	0.0085	W81
N3790TJ280	2800	3790	49500	12.3 × 10 ⁶	0.900	0.150	125	0.0080	0.0085	W81
N3880ZD160	1600	3880	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0110	0.0119	W46
N3880ZD180	1800	3880	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0110	0.0119	W46
N3904HK200	2000	3904	50900	12.95 × 10 ⁶	0.920	0.111	125	0.0090	0.0099	WP4
N3904HK220	2200	3904	50900	12.95 × 10 ⁶	0.920	0.111	125	0.0090	0.0099	WP4
N3930ZC120	1200	3930	54000	14.6 × 10 ⁶	0.841	0.080	125	0.0110	0.0119	W13
N3930ZC160	1600	3930	54000	14.6 × 10 ⁶	0.841	0.080	125	0.0110	0.0119	W13
N3930ZD120	1200	3930	54000	14.6 × 10 ⁶	0.841	0.080	125	0.0110	0.0119	W46
N3930ZD160	1600	3930	54000	14.6 × 10 ⁶	0.841	0.080	125	0.0110	0.0119	W46
N4085ZC080	800	4085	64000	20.5 × 10 ⁶	0.850	0.070	125	0.0110	0.0119	W13
N4085ZC120	1200	4085	64000	20.5 × 10 ⁶	0.850	0.070	125	0.0110	0.0119	W13
N4085ZD080	800	4085	64000	20.5 × 10 ⁶	0.850	0.070	125	0.0110	0.0119	W46
N4085ZD120	1200	4085	64000	20.5 × 10 ⁶	0.850	0.070	125	0.0110	0.0119	W46
N4165EE420	4200	4165	56000	15.7 × 10 ⁶	0.977	0.177	125	0.0060	0.0064	W108
N4165EE450	4500	4165	56000	15.7 × 10 ⁶	0.977	0.177	125	0.0060	0.0064	W108
N4316MK020	200	4316	45400	10.3 × 10 ⁶	0.840	0.053	140	0.0140	0.0157	WP3
N4316MK040	400	4316	45400	10.3 × 10 ⁶	0.840	0.053	140	0.0140	0.0157	WP3
N4316MK060	600	4316	45400	10.3 × 10 ⁶	0.840	0.053	140	0.0140	0.0157	WP3
N4340TE180	1800	4340	55000	15.1 × 10 ⁶	0.886	0.105	125	0.0080	0.0085	W82
N4340TE220	2200	4340	55000	15.1 × 10 ⁶	0.886	0.105	125	0.0080	0.0085	W82
N4340TJ180	1800	4340	55000	15.1 × 10 ⁶	0.886	0.105	125	0.0080	0.0085	W81
N4340TJ220	2200	4340	55000	15.1 × 10 ⁶	0.886	0.105	125	0.0080	0.0085	W81
N4472HK160	1600	4472	59000	17.40 × 10 ⁶	0.986	0.068	125	0.0090	0.0099	WP4
N4472HK180	1800	4472	59000	17.40 × 10 ⁶	0.986	0.068	125	0.0090	0.0099	WP4
N4650EA420	4200	4650	56000	15.7 × 10 ⁶	0.977	0.177	125	0.0050	0.0054	W107
N4650EA450	4500	4650	56000	15.7 × 10 ⁶	0.977	0.177	125	0.0050	0.0054	W107
N4845EE320	3200	4845	65000	21.1 × 10 ⁶	0.913	0.125	125	0.0060	0.0065	W108
N4845EE360	3600	4845	65000	21.1 × 10 ⁶	0.913	0.125	125	0.0060	0.0065	W108
N4940HK120	1200	4940	62000	19.0 × 10 ⁶	0.939	0.520	125	0.0090	0.0099	WP4
N4940HK140	1400	4940	62000	19.0 × 10 ⁶	0.939	0.520	125	0.0090	0.0099	WP4
N5320FE420	4200	5320	78000	30.42 × 10 ⁶	1.060	0.130	125	0.0048	0.0051	W119
N5320FE450	4500	5320	78000	30.42 × 10 ⁶	1.060	0.130	125	0.0048	0.0051	W119

Phase Control Thyristors—Capsule Types

Part Number	V_{DRM} V_{RRM}	I_{TAV}	I_{TSM}	I^2t	V_{T0}	r_T	T_{JM}	R_{thJC}		Fig. No.
	V	$T_k = 55\text{ }^{\circ}\text{C}$	10 ms ½ sine $V_R \leq 60\% V_{RRM}$		@ T_{JM}			d.c. 180° sine	120° Rect.	
		A	A	A ² S	V	mΩ		°C	K/W	
N5715EE240	2400	5715	80000	32.0×10^6	0.840	0.085	125	0.0060	0.0065	W108
N5715EE280	2800	5715	80000	32.0×10^6	0.840	0.085	125	0.0060	0.0065	W108
N5910FA420	4200	5910	78000	30.42×10^6	1.060	0.130	125	0.0040	0.0044	W118
N5910FA450	4500	5910	78000	30.42×10^6	1.060	0.130	125	0.0040	0.0044	W118
N6012ZD020	200	6012	65000	21.13×10^6	0.853	0.029	140	0.0110	0.0119	W46
N6012ZD040	400	6012	65000	21.13×10^6	0.853	0.029	140	0.0110	0.0119	W46
N6012ZD060	600	6012	65000	21.13×10^6	0.853	0.029	140	0.0110	0.0119	W46
N6405EA240	2400	6405	80000	32.0×10^6	0.840	0.085	125	0.0050	0.0054	W107
N6405EA280	2800	6405	80000	32.0×10^6	0.840	0.085	125	0.0050	0.0054	W107
N6974HK020	200	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	0.0099	WP4
N6974HK040	400	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	0.0099	WP4
N6974HK060	600	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	0.0099	WP4
N7585FE240	2400	7535	110000	60.50×10^6	0.780	0.062	125	0.0048	0.0051	W119
N7585FE280	2800	7535	110000	60.50×10^6	0.780	0.062	125	0.0048	0.0051	W119
N7905FE180	1800	7905	117000	68.44×10^6	0.770	0.056	125	0.0048	0.0051	W119
N7905FE220	2200	7905	117000	68.44×10^6	0.770	0.056	125	0.0048	0.0051	W119
N8440FA240	2400	8440	110000	60.50×10^6	0.780	0.062	125	0.0040	0.0044	W118
N8440FA280	2800	8440	110000	60.50×10^6	0.780	0.062	125	0.0040	0.0044	W118
N8800FA180	1800	8800	117000	68.44×10^6	0.770	0.056	125	0.0040	0.0044	W118
N8800FA220	2200	8800	117000	68.44×10^6	0.770	0.056	125	0.0040	0.0044	W118

High-Power Devices



W8
Weight 70 g



W12
Weight 1 kg



W58
Weight 90 g



WP4
Weight 550 g



W10
Weight 340 g



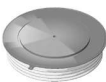
W13
Weight 1.7 kg



W79
Weight 890 g



W11
Weight 510 g



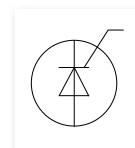
W46
Weight 1.2 kg



WP1
Weight 180 g

Phase Control Thyristors—Capsule Types, B-Series

Littelfuse introduces the new family of phase control thyristors for industrial applications. Devices are available with voltage ranges from 400V to 2500V, making them suitable for systems operating with line voltages from 230V to over 600V.



Part Number	V _{DRM} V _{RRM}	I _{TAV}	I _{TSM}	P _t	V _{T0}	r _T	T _{JM}	R _{thJC}		Fig. No.
		T _k = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}		@ T _{JM}			180° sine	120° Rect.	
	V	A	A	A²S	V	mΩ	°C	K/W	K/W	
B0470WC120	1200	470	4650	108 x 10³	0.92	0.99	125	0.0722	0.0891	W8
B0470WC160	1600	470	4650	108 x 10³	0.92	0.99	125	0.0722	0.0891	W8
B0713YC200	2000	713	7100	252 x 10³	1.103	0.804	125	0.039	0.046	W58
B0713YC220	2200	713	7100	252 x 10³	1.103	0.804	125	0.039	0.046	W58
B0713YC240	2400	713	7100	252 x 10³	1.103	0.804	125	0.039	0.046	W58
B0713YC250	2500	713	7100	252 x 10³	1.103	0.804	125	0.039	0.046	W58
B0800YC120	1200	800	7500	281 x 10³	1.08	0.596	125	0.0389	0.046	W58
B0800YC140	1400	800	7500	281 x 10³	1.08	0.596	125	0.0389	0.046	W58
B0800YC160	1600	800	7500	281 x 10³	1.08	0.596	125	0.0389	0.046	W58
B0800YC180	1800	800	7500	281 x 10³	1.08	0.596	125	0.0389	0.046	W58
B0870YC120	1200	870	8400	353 x 10³	1.03	0.48	125	0.0389	0.0461	W58
B0870YC140	1400	870	8400	353 x 10³	1.03	0.48	125	0.0389	0.0461	W58
B0870YC160	1600	870	8400	353 x 10³	1.03	0.48	125	0.0389	0.0461	W58
B0915LC240	2400	915	9200	423×103	1.04	0.606	125	0.032	0.0388	W10
B0915LC280	2800	915	9200	423×103	1.04	0.606	125	0.032	0.0388	W10
B1050LC180	1800	1050	13200	870 x 10³	1	0.416	125	0.032	0.0388	W10
B1050LC220	2200	1050	13200	870 x 10³	1	0.416	125	0.032	0.0388	W10
B1115LC160	1600	1157	12700	806 x 10³	0.973	0.369	125	0.032	0.0388	W10
B1115LC180	1800	1157	12700	806 x 10³	0.973	0.369	125	0.032	0.0388	W10
B1175JK200	2000	1175	13200	806 x 10³	1	0.416	125	0.0278	0.0314	WP1
B1175JK220	2200	1175	13200	806 x 10³	1	0.416	125	0.0278	0.0314	WP1
B1230LC120	1200	1226	15000	1.125 x 10⁶	0.883	0.297	125	0.032	0.0388	W10
B1230LC140	1400	1226	15000	1.125 x 10⁶	0.883	0.297	125	0.032	0.0388	W10
B1230LC160	1600	1226	15000	1.125 x 10⁶	0.883	0.297	125	0.032	0.0388	W10
B1265JK160	1600	1263	15000	1.13 x 10⁶	1.015	0.332	125	0.0278	0.0314	WP1
B1265JK180	1800	1263	15000	1.13 x 10⁶	1.015	0.332	125	0.0278	0.0314	WP1
B1370JK120	1200	1366	15900	1.26 x 10⁶	0.985	0.27	125	0.0278	0.0314	WP1
B1370JK140	1400	1366	15900	1.26 x 10⁶	0.985	0.27	125	0.0278	0.0314	WP1
B1370JK160	1600	1366	15900	1.26 x 10⁶	0.985	0.27	125	0.0278	0.0314	WP1
B1450QL180	1800	1450	17300	1.50×106	1.06	0.317	125	0.023	0.0272	WP6
B1450QL220	2200	1450	17300	1.50×106	1.06	0.317	125	0.023	0.0272	WP6
B1545NC160	1600	1545	23300	2.71 x 10⁶	0.92	0.252	125	0.0248	0.0271	W11
B1545NC180	1800	1545	23300	2.71 x 10⁶	0.92	0.252	125	0.0248	0.0271	W11
B1545NC200	2000	1545	23300	2.71 x 10⁶	0.92	0.252	125	0.0248	0.0271	W11
B1650QK180	1800	1650	17300	1.50×106	1.06	0.317	125	0.018	0.0202	WP2
B1650QK220	2200	1650	17300	1.50×106	1.06	0.317	125	0.018	0.0202	WP2

Part Number	V _{DRM} V _{RRM}	I _{TAV}	I _{TSM}	I ² t	V _{T0}	r _T	T _{JM}	R _{thJC}		Fig. No.
		T _k = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}		@T _{JM}			180° sine	120° Rect.	
	V	A	A	A ² S	V	mΩ	°C	K/W	K/W	
B1725NC120	1200	1725	27200	3.70 × 10 ⁶	0.972	0.169	125	0.0248	0.0271	W11
B1725NC140	1400	1725	27200	3.70 × 10 ⁶	0.972	0.169	125	0.0248	0.0271	W11
B1725NC160	1600	1725	27200	3.70 × 10 ⁶	0.972	0.169	125	0.0248	0.0271	W11
B1725NC180	1800	1725	27200	3.70 × 10 ⁶	0.972	0.169	125	0.0248	0.0271	W11
B1815NC120	1200	1815	29600	4.38 × 10 ⁶	0.847	0.17	125	0.0248	0.0271	W11
B1815NC140	1400	1815	29600	4.38 × 10 ⁶	0.847	0.17	125	0.0248	0.0271	W11
B1815NC160	1600	1815	29600	4.38 × 10 ⁶	0.847	0.17	125	0.0248	0.0271	W11
B2200ML180	1800	2191	34500	5.95×106	0.94	0.3194	125	0.018	0.0193	WP5
B2295VC180	1800	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W12
B2295VC200	2000	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W12
B2295VC220	2200	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W12
B2295VF180	1800	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W62
B2295VF200	2000	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W62
B2295VF220	2200	2295	33800	5.7 × 10 ⁶	0.956	0.148	125	0.017	0.0206	W62
B2505VC140	1400	2505	37000	6.85 × 10 ⁶	0.88	0.124	125	0.0169	0.0207	W12
B2505VC160	1600	2505	37000	6.85 × 10 ⁶	0.88	0.124	125	0.0169	0.0207	W12
B2505VF140	1400	2505	37000	6.85 × 10 ⁶	0.88	0.124	125	0.0169	0.0207	W62
B2505VF160	1600	2505	37000	6.85 × 10 ⁶	0.88	0.124	125	0.0169	0.0207	W62
B3420ZC180	1800	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W13
B3420ZC200	2000	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W13
B3420ZC220	2200	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W13
B3420ZD180	1800	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W46
B3420ZD200	2000	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W46
B2525ML120	1200	2525	38200	7.3×106	0.98	0.09	125	0.018	0.0193	WP5
B2525ML140	1400	2525	38200	7.3×106	0.98	0.09	125	0.018	0.0193	WP5
B2615MC160	1600	2615	34300	5.88×106	0.95	0.313	125	0.015	0.0161	W70
B2615MC180	1800	2615	34300	5.88×106	0.95	0.313	125	0.015	0.0161	W70
B2905QL040	400	2905	28000	3.92×106	0.85	0.08	150	0.023	0.0255	WP6
B2905QL060	600	2905	28000	3.92×106	0.85	0.08	150	0.023	0.0255	WP6
B3025MK120	1200	3025	38200	7.30×106	0.981	0.09	125	0.014	0.015	WP3
B3025MK140	1400	3025	38200	7.30×106	0.981	0.09	125	0.014	0.015	WP3
B3230QK040	400	3230	28000	3.92×106	0.926	0.067	140	0.018	0.0202	WP2
B3230QK060	600	3230	28000	3.92×106	0.926	0.067	140	0.018	0.0202	WP2
B3420ZD220	2200	3420	50000	12.5 × 10 ⁶	0.93	0.11	125	0.0112	0.0119	W46
B3570HA160	1600	3570	45500	10.4 × 10 ⁶	0.9	0.11	125	0.0108	0.0118	W79
B3570HA180	1800	3570	45500	10.4 × 10 ⁶	0.9	0.11	125	0.0108	0.0118	W79
B3885ZC160	1600	3885	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0112	0.0119	W13
B3885ZC180	1800	3885	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0112	0.0119	W13
B3885ZD160	1600	3885	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0112	0.0119	W46
B3885ZD180	1800	3885	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0112	0.0119	W46
B3910HK180	1800	3910	50900	12.95 × 10 ⁶	0.92	0.111	125	0.0091	0.0099	WP4
B3910HK200	2000	3910	50900	12.95 × 10 ⁶	0.92	0.111	125	0.0091	0.0099	WP4
B3910HK220	2200	3910	50900	12.95 × 10 ⁶	0.92	0.111	125	0.0091	0.0099	WP4
B3935ZC120	1200	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W13
B3935ZC140	1400	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W13
B3935ZC160	1600	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W13
B3935ZD120	1200	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W46
B3935ZD140	1400	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W46
B3935ZD160	1600	3935	54000	14.6 × 10 ⁶	0.841	0.08	125	0.0112	0.0119	W46
B4350TJ180	1800	4350	55000	15.1×106	0.886	0.105	125	0.008	0.0085	W81
B4350TJ220	2200	4350	55000	15.1×106	0.886	0.105	125	0.008	0.0085	W81
B4475HK160	1600	4475	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0091	0.0099	WP4
B4475HK180	1800	4475	59000	17.4 × 10 ⁶	0.986	0.068	125	0.0091	0.0099	WP4
B4945HK120	1200	4945	62000	19 × 10 ⁶	0.939	0.052	125	0.0091	0.0099	WP4
B4945HK140	1400	4945	62000	19 × 10 ⁶	0.939	0.052	125	0.0091	0.0099	WP4
B6975HK040	400	6975	65000	21.13 × 10 ⁶	0.853	0.029	125	0.0091	0.0099	WP4
B6975HK060	600	6975	65000	21.13 × 10 ⁶	0.853	0.029	125	0.0091	0.0099	WP4

High-Power Devices

Medium Voltage Thyristors

Medium voltage applications place additional demands on phase-controlled thyristors. To address these requirements, a comprehensive range of thyristors has been developed that are optimized for medium voltage applications and series connection. As operating voltages increase, switching losses and turn-off times become more significant in line-frequency applications. Our patented distributed gate architecture ensures consistent switching performance over a wide range of voltage, current, and di/dt. Medium Voltage Thyristors are engineered to achieve an optimum balance between conduction losses, commutation losses, and turn-off time to give maximum power handling from line frequency to 400 Hz. Their design also supports operation in series and parallel configurations. Medium Voltage Thyristors are available from 2.8 kV to 6.5 kV with current ratings from 400 A to 2000 A with silicon diameters from 38 mm to 96 mm. These devices are well suited for applications such as high-power converters such as medium voltage DC drives, medium voltage soft starts, and utility applications such as HVDC, static VAr compensators, excitation, and transfer switches.

To ensure long-term reliability in critical, high-investment applications, these devices are subjected to extensive routine and type testing, providing dependable performance over extended service lifetimes.



W10
Weight 340 g



W62
Weight 1 kg



W82
Weight 1.65 kg



W11
Weight 510 g



W79
Weight 890 g



W107
Weight 1.6 kg



W13
Weight 1.7 kg



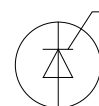
W80
Weight 1.2 kg



W46
Weight 1.2 kg



W81
Weight 1.2 kg



Medium Voltage Thyristors—Capsule Types

Part Number	V_{DRM} V_{RRM}	I_{TAV}	I_{TSM}	I^2t	t_q @ 200 V/ μ s	Typ. Reverse Recovery Charge			V_{TO}	r_T	T_{JM}	R_{thJK}		Fig. No.
		$T_K = 55^\circ\text{C}$	10 ms $\frac{1}{2}$ sine $V_R \leq 60\% V_{RRM}$	T_{JM}			@ T_{JM}	180° sine	120° Rect.					
				Q_{rr}		@ I_{TM}				@ -di/dt				
V	A	A	A ² S	μ s	μ C	A	A/ μ s	V	m Ω	°C	K/W	K/W		
K0443LC600	6000	443	4800	115×10^3	1100	3100	1000	10	1.57	2.43	125	0.032	0.039	W10
K0443LC650	6500	443	4800	115×10^3	1100	3100	1000	10	1.57	2.43	125	0.032	0.039	W10
K0769NC600	6000	769	8600	370×10^3	1200	3100	1000	10	1.57	1.77	125	0.025	0.027	W11
K0769NC650	6500	769	8600	370×10^3	1200	3100	1000	10	1.57	1.77	125	0.025	0.027	W11
K0890NC360	3600	890	10900	594×10^3	350 - 550	4000	1000	10	1.516	0.800	125	0.0240	0.0270	W11
K0890NC420	4200	890	10900	594×10^3	350 - 550	4000	1000	10	1.516	0.800	125	0.0240	0.0270	W11
K1121NC320	3200	1121	15000	1.13×10^6	200 - 300	2000	1000	10	1.098	0.542	125	0.0240	0.0270	W11
K1121NC360	3600	1121	15000	1.13×10^6	200 - 300	2000	1000	10	1.098	0.542	125	0.0240	0.0270	W11
K1197NC280	2800	1197	10650	567×10^3	200 - 300	2700	1000	10	1.335	0.372	125	0.0240	0.0270	W11
K1197NC320	3200	1197	10650	567×10^3	200 - 300	2700	1000	10	1.335	0.372	125	0.0240	0.0270	W11
K1351VF600	6000	1351	14300	1.02×10^6	1000	7200	2000	10	1.41	0.6	125	0.013	0.0145	W62
K1351VF620	6200	1351	14300	1.02×10^6	1000	7200	2000	10	1.41	0.6	125	0.013	0.0145	W62
K1351VF640	6400	1351	14300	1.02×10^6	1000	7200	2000	10	1.41	0.6	125	0.013	0.0145	W62
K1351VF650	6500	1351	14300	1.02×10^6	1000	7200	2000	10	1.41	0.6	125	0.013	0.0145	W62
K1947ZC400	4000	1947	25000	3.13×10^6	600 - 700	8800	1000	10	1.221	0.425	125	0.0110	0.0119	W13

Medium Voltage Thyristors—Capsule Types



Part Number	V _{DRM} V _{RRM}	I _{TAV}	I _{TSM}	I ² t	t _q @ 200 V/μs	Typ. Reverse Recovery Charge			V _{TO}	r _T	T _{JM}	R _{thJK}		Fig. No.
		T _K = 55°C	10 ms ½ sine V _R ≤ 60% V _{RRM}			T _{JM}			@ T _{JM}			180° sine	120° Rect.	
	Q _{rr}		@ I _{TM}	@ -di/dt										
	V	A	A	A ² S	μs	μC	A	A/μs	V	mΩ	°C	K/W	K/W	
K1947ZC450	4500	1947	25000	3.13 × 10 ⁶	600-700	8800	1000	10	1.221	0.425	125	0.0110	0.0119	W13
K1947ZD400	4000	1947	25000	3.13 × 10 ⁶	600-700	8800	1000	10	1.221	0.425	125	0.0110	0.0119	W46
K1947ZD450	4500	1947	25000	3.13 × 10 ⁶	600-700	8800	1000	10	1.221	0.425	125	0.0110	0.0119	W46
K2095ZC360	3600	2095	18200	1.66 × 10 ⁶	400-500	4550	2000	10	1.502	0.296	125	0.0110	0.0119	W13
K2095ZC420	4200	2095	18200	1.66 × 10 ⁶	400-500	4550	2000	10	1.502	0.296	125	0.0110	0.0119	W13
K2095ZD360	3600	2095	18200	1.66 × 10 ⁶	400-500	4550	2000	10	1.502	0.296	125	0.0110	0.0119	W46
K2095ZD420	4200	2095	18200	1.66 × 10 ⁶	400-500	4550	2000	10	1.502	0.296	125	0.0110	0.0119	W46

High-Power Devices

Distributed Gate Thyristors

Littelfuse is recognized as the world leader in distributed gate technology. These devices are available with blocking voltages of up to 4.5 kV and average currents in excess of 5 kA, with t_q ratings as low as 10 μ s. This unique distributed gate design and these lifetime control features provides both high di/dt capability and fast, low-recovery turn-off while maintaining a low on-state voltage drop. They are ideally suited to applications such as: induction power supplies, high frequency inverters/converters, UPS, and pulse power.



W10
Weight 340 g

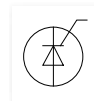


W11
Weight 510 g



W58
Weight 90 g

Distributed Gate Thyristors—Capsule Types



Part Number	V _{DRM}	V _{RRM}	I _{TAV}	I _{TSM}	I ² t	t _q @ 200 V/μs	Typ. Reverse Recovery Charge @ T _{JM}			V _{TO}	r _T	R _{thJK} 180° sine	Fig. No.
			T _K = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}			Q _{rr}	@ I _{TM}	@ -di/dt	@ T _{JM}			
				A	A					A ² S	μs		
R0472YC12E	1200	1200	472	4300	92.5 × 10 ³	25	155	550	40	1.648	1.125	0.0500	W58
R0472YC12F	1200	1200	472	4300	92.5 × 10 ³	30	155	550	40	1.648	1.125	0.0500	W58
R0472YC16E	1600	1600	472	4300	92.5 × 10 ³	25	155	550	40	1.648	1.125	0.0500	W58
R0472YC16F	1600	1600	472	4300	92.5 × 10 ³	30	155	550	40	1.648	1.125	0.0500	W58
R0487YC12D	1200	1200	487	4300	92.5 × 10 ³	20	90	550	40	1.738	0.943	0.0500	W58
R0487YC12E	1200	1200	487	4300	92.5 × 10 ³	25	90	550	40	1.738	0.943	0.0500	W58
R0487YC14D	1400	1400	487	4300	92.5 × 10 ³	20	90	550	40	1.738	0.943	0.0500	W58
R0487YC14E	1400	1400	487	4300	92.5 × 10 ³	25	90	550	40	1.738	0.943	0.0500	W58
R0577YC12C	1200	1200	577	6000	180 × 10 ³	15	150	550	40	1.510	0.640	0.0500	W58
R0577YC12D	1200	1200	577	6000	180 × 10 ³	20	150	550	40	1.510	0.640	0.0500	W58
R0577YC12E	1200	1200	577	6000	180 × 10 ³	25	150	550	40	1.510	0.640	0.0500	W58
R0633YC12D	1200	1200	633	6300	200 × 10 ³	20	125	550	40	1.250	0.614	0.0500	W58
R0633YC12E	1200	1200	633	6300	200 × 10 ³	25	125	550	40	1.250	0.614	0.0500	W58
R0633YC12F	1200	1200	633	6300	200 × 10 ³	30	125	550	40	1.250	0.614	0.0500	W58
R0717LC14G	1400	1400	717	7050	248.5 × 10 ³	35	425	1000	60	1.752	0.732	0.0320	W10
R0717LC14H	1400	1400	717	7050	248.5 × 10 ³	40	425	1000	60	1.752	0.732	0.0320	W10
R0717LC16G	1600	1600	717	7050	248.5 × 10 ³	35	425	1000	60	1.752	0.732	0.0320	W10
R0717LC16H	1600	1600	717	7050	248.5 × 10 ³	40	425	1000	60	1.752	0.732	0.0320	W10
R0736LC20J	2000	2000	736	6800	231 × 10 ³	50	640	1000	60	1.842	0.619	0.0320	W10
R0736LC20K	2000	2000	736	6800	231 × 10 ³	60	640	1000	60	1.842	0.619	0.0320	W10
R0736LC22J	2200	2000	736	6800	231 × 10 ³	50	640	1000	60	1.842	0.619	0.0320	W10
R0736LC22K	2200	2000	736	6800	231 × 10 ³	60	640	1000	60	1.842	0.619	0.0320	W10
R0736LC25J	2500	2000	736	6800	231 × 10 ³	50	640	1000	60	1.842	0.619	0.0320	W10
R0736LC25K	2500	2000	736	6800	231 × 10 ³	60	640	1000	60	1.842	0.619	0.0320	W10
R0736LC25L	2500	2000	736	6800	231 × 10 ³	65	640	1000	60	1.842	0.619	0.0320	W10
R0736LC25M	2500	2000	736	6800	231 × 10 ³	70	640	1000	60	1.842	0.619	0.0320	W10
R0809LC10A	1000	1000	809	8000	320 × 10 ³	10	120	1000	60	2.100	0.300	0.0320	W10
R0809LC10B	1000	1000	809	8000	320 × 10 ³	12	120	1000	60	2.100	0.300	0.0320	W10
R0830LC12C	1200	1200	830	8500	361 × 10 ³	15	285	1000	60	1.900	0.357	0.0320	W10
R0830LC12D	1200	1200	830	8500	361 × 10 ³	20	285	1000	60	1.900	0.357	0.0320	W10
R0830LC12E	1200	1200	830	8500	361 × 10 ³	25	285	1000	60	1.900	0.357	0.0320	W10
R0830LC12F	1200	1200	830	8500	361 × 10 ³	30	285	1000	60	1.900	0.357	0.0320	W10
R0830LC14C	1400	1400	830	8500	361 × 10 ³	15	285	1000	60	1.900	0.357	0.0320	W10
R0830LC14D	1400	1400	830	8500	361 × 10 ³	20	285	1000	60	1.900	0.357	0.0320	W10
R0830LC14E	1400	1400	830	8500	361 × 10 ³	25	285	1000	60	1.900	0.357	0.0320	W10
R0830LC14F	1400	1400	830	8500	361 × 10 ³	30	285	1000	60	1.900	0.357	0.0320	W10
R0878LC18K	1800	1800	878	7500	281 × 10 ³	60	720	1000	60	1.447	0.480	0.0320	W10
R0878LC18L	1800	1800	878	7500	281 × 10 ³	65	720	1000	60	1.447	0.480	0.0320	W10
R0878LC18M	1800	1800	878	7500	281 × 10 ³	70	720	1000	60	1.447	0.480	0.0320	W10
R0878LC20K	2000	1800	878	7500	281 × 10 ³	60	720	1000	60	1.447	0.480	0.0320	W10
R0878LC20L	2000	1800	878	7500	281 × 10 ³	65	720	1000	60	1.447	0.480	0.0320	W10
R0878LC20M	2000	1800	878	7500	281 × 10 ³	70	720	1000	60	1.447	0.480	0.0320	W10
R0878LC21K	2100	1800	878	7500	281 × 10 ³	60	720	1000	60	1.447	0.480	0.0320	W10
R0878LC21L	2100	1800	878	7500	281 × 10 ³	65	720	1000	60	1.447	0.480	0.0320	W10
R0878LC21M	2100	1800	878	7500	281 × 10 ³	70	720	1000	60	1.447	0.480	0.0320	W10
R0929LC12A	1200	1200	929	9000	405 × 10 ³	10	150	1000	60	1.549	0.350	0.0320	W10
R0929LC12B	1200	1200	929	9000	405 × 10 ³	12	150	1000	60	1.549	0.350	0.0320	W10
R0929LC12C	1200	1200	929	9000	405 × 10 ³	15	150	1000	60	1.549	0.350	0.0320	W10

Distributed Gate Thyristors—Capsule Types



Part Number	V _{DRM}	V _{RRM}	I _{TAV}	I _{TSM}	I ² t	t _q @ 200 V/μs	Typ. Reverse Recovery Charge @ T _{JM}			V _{TO}	r _T	R _{thJK} 180° sine	Fig. No.	
			T _K = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}	A ² S		Q _{rr}	@ I _{TM}	@ -di/dt	@ T _{JM}				
	V	V	A	A	A ² S	μs	μC	A	A/μs	V	mΩ	K/W		
R0964LC10C	1000	1000	964	9400	442 × 10 ³	15	170	1000	60	1.530	0.309	0.0320	W10	
R0964LC10D	1000	1000	964	9400	442 × 10 ³	20	170	1000	60	1.530	0.309	0.0320	W10	
R0964LC10E	1000	1000	964	9400	442 × 10 ³	25	170	1000	60	1.530	0.309	0.0320	W10	
R0964LC12C	1200	1200	964	9400	442 × 10 ³	15	170	1000	60	1.530	0.309	0.0320	W10	
R0964LC12D	1200	1200	964	9400	442 × 10 ³	20	170	1000	60	1.530	0.309	0.0320	W10	
R0964LC12E	1200	1200	964	9400	442 × 10 ³	25	170	1000	60	1.530	0.309	0.0320	W10	
R0990LC08A	800	800	990	11000	605 × 10 ³	10	90	1000	60	1.350	0.350	0.0320	W10	
R0990LC08B	800	800	990	11000	605 × 10 ³	12	90	1000	60	1.350	0.350	0.0320	W10	
R0990LC08C	800	800	990	11000	605 × 10 ³	15	90	1000	60	1.350	0.350	0.0320	W10	
R1045NC28L	2800	2800	1055	12500	781 × 10 ³	60	950	1000	60	1.640	0.430	0.0240	W11	
R1045NC28M	2800	2800	1055	12500	781 × 10 ³	70	950	1000	60	1.640	0.430	0.0240	W11	
R1045NC32L	3200	3200	1055	12500	781 × 10 ³	60	950	1000	60	1.640	0.430	0.0240	W11	
R1045NC32M	3200	3200	1055	12500	781 × 10 ³	70	950	1000	60	1.640	0.430	0.0240	W11	
R1124NC18J	1800	1800	1124	13500	0.91 × 10 ⁶	50	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC18K	1800	1800	1124	13500	0.91 × 10 ⁶	60	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC18L	1800	1800	1124	13500	0.91 × 10 ⁶	65	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC18M	1800	1800	1124	13500	0.91 × 10 ⁶	70	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC20J	2000	1800	1124	13500	0.91 × 10 ⁶	50	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC20K	2000	1800	1124	13500	0.91 × 10 ⁶	60	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC20L	2000	1800	1124	13500	0.91 × 10 ⁶	65	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC20M	2000	1800	1124	13500	0.91 × 10 ⁶	70	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC21J	2100	1800	1124	13500	0.91 × 10 ⁶	50	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC21K	2100	1800	1124	13500	0.91 × 10 ⁶	60	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC21L	2100	1800	1124	13500	0.91 × 10 ⁶	65	640	1000	60	1.540	0.379	0.0240	W11	
R1124NC21M	2100	1800	1124	13500	0.91 × 10 ⁶	70	640	1000	60	1.540	0.379	0.0240	W11	
R1127NC32P	3200	3200	1127	12800	819 × 10 ³	120	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC32R	3200	3200	1127	12800	819 × 10 ³	140	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC32S	3200	3200	1127	12800	819 × 10 ³	160	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC32T	3200	3200	1127	12800	819 × 10 ³	200	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC34R	3400	3400	1127	12800	819 × 10 ³	140	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC34S	3400	3400	1127	12800	819 × 10 ³	160	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC34T	3400	3400	1127	12800	819 × 10 ³	200	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC36R	3600	3600	1127	12800	819 × 10 ³	140	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC36S	3600	3600	1127	12800	819 × 10 ³	160	3500	1000	60	1.500	0.474	0.0220	W11	
R1127NC36T	3600	3600	1127	12800	819 × 10 ³	200	3500	1000	60	1.500	0.474	0.0220	W11	
R1158NC26N	2600	2600	1158	14500	1.05 × 10 ⁶	100	1600	1000	60	1.600	0.400	0.0220	W11	
R1158NC26P	2600	2600	1158	14500	1.05 × 10 ⁶	120	1600	1000	60	1.600	0.400	0.0220	W11	
R1158NC26T	2600	2600	1158	14500	1.05 × 10 ⁶	200	1600	1000	60	1.600	0.400	0.0220	W11	
R1178NC14E	1400	1400	1178	17000	1.45 × 10 ⁶	25	320	1000	60	1.600	0.300	0.0240	W11	
R1178NC14F	1400	1400	1178	17000	1.45 × 10 ⁶	30	320	1000	60	1.600	0.300	0.0240	W11	
R1178NC14G	1400	1400	1178	17000	1.45 × 10 ⁶	35	320	1000	60	1.600	0.300	0.0240	W11	
R1211NC12C	1200	1200	1211	17600	1.548 × 10 ⁶	15	230	1000	60	1.720	0.230	0.0240	W11	
R1211NC12D	1200	1200	1211	17600	1.548 × 10 ⁶	20	230	1000	60	1.720	0.230	0.0240	W11	
R1211NC12E	1200	1200	1211	17600	1.548 × 10 ⁶	25	230	1000	60	1.720	0.230	0.0240	W11	
R1271NC12B	1200	1200	1271	18000	1.62 × 10 ⁶	12	200	1000	60	1.547	0.237	0.0240	W11	
R1271NC12C	1200	1200	1271	18000	1.62 × 10 ⁶	15	200	1000	60	1.547	0.237	0.0240	W11	
R1271NC12D	1200	1200	1271	18000	1.62 × 10 ⁶	20	200	1000	60	1.547	0.237	0.0240	W11	
R1271NC12E	1200	1200	1271	18000	1.62 × 10 ⁶	25	200	1000	60	1.547	0.237	0.0240	W11	
R1275NC18L	1800	1800	1275	15500	1.20 × 10 ⁶	65	940	1000	60	1.207	0.342	0.0240	W11	
R1275NC18M	1800	1800	1275	15500	1.20 × 10 ⁶	70	940	1000	60	1.207	0.342	0.0240	W11	
R1275NC20L	2000	1800	1275	15500	1.20 × 10 ⁶	65	940	1000	60	1.207	0.342	0.0240	W11	
R1275NC20M	2000	1800	1275	15500	1.20 × 10 ⁶	70	940	1000	60	1.207	0.342	0.0240	W11	
R1275NC21L	2100	1800	1275	15500	1.20 × 10 ⁶	65	940	1000	60	1.207	0.342	0.0240	W11	
R1275NC21M	2100	1800	1275	15500	1.20 × 10 ⁶	70	940	1000	60	1.207	0.342	0.0240	W11	
R1279NC22J	2200	2200	1279	14800	1.10 × 10 ⁶	50	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC22K	2200	2200	1279	14800	1.10 × 10 ⁶	60	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC22L	2200	2200	1279	14800	1.10 × 10 ⁶	65	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC22M	2200	2200	1279	14800	1.10 × 10 ⁶	70	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC25J	2500	2500	1279	14800	1.10 × 10 ⁶	50	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC25K	2500	2500	1279	14800	1.10 × 10 ⁶	60	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC25L	2500	2500	1279	14800	1.10 × 10 ⁶	65	1250	1000	60	1.440	0.330	0.0220	W11	
R1279NC25M	2500	2500	1279	14800	1.10 × 10 ⁶	70	1250	1000	60	1.440	0.330	0.0220	W11	
R1280NC21J	2100	2100	1280	14800	1.10 × 10 ⁶	50	1200	1000	60	1.440	0.330	0.0220	W11	
R1280NC21K	2100	2100	1280	14800	1.10 × 10 ⁶	60	1200	1000	60	1.440	0.330	0.0220	W11	

High-Power Devices



W11
Weight 510 g



W46
Weight 1.2 kg



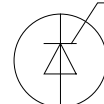
W79
Weight 890 g



W13
Weight 1.7 kg



W70
Weight 550 g



Distributed Gate Thyristors—Capsule Types

Part Number	V _{DRM}	V _{RRM}	I _{TAV}	I _{TSM}	I _{Pt}	t _q @ 200 V/μs	Typ. Reverse Recovery Charge @ T _{JM}			V _{TO}	r _T	R _{thJK} 180° sine	Fig. No.
			T _K = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}			Q _{rr}	@ I _{TM}	@ -di/dt	@ T _{JM}			
				A	A					A ² S	μC		
	V	V	A	A	A ² S	μs	μC	A	A/μs	V	mΩ	K/W	
R1280NC21L	2100	2100	1280	14800	1.10 × 10 ⁶	65	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC21M	2100	2100	1280	14800	1.10 × 10 ⁶	70	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC22J	2200	2100	1280	14800	1.10 × 10 ⁶	50	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC22K	2200	2100	1280	14800	1.10 × 10 ⁶	60	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC22L	2200	2100	1280	14800	1.10 × 10 ⁶	65	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC22M	2200	2100	1280	14800	1.10 × 10 ⁶	70	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC25J	2500	2100	1280	14800	1.10 × 10 ⁶	50	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC25K	2500	2100	1280	14800	1.10 × 10 ⁶	60	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC25L	2500	2100	1280	14800	1.10 × 10 ⁶	65	1200	1000	60	1.440	0.330	0.0220	W11
R1280NC25M	2500	2100	1280	14800	1.10 × 10 ⁶	70	1200	1000	60	1.440	0.330	0.0220	W11
R1331NC10B	1000	1000	1331	18200	1.66 × 10 ⁶	12	200	1000	60	1.450	0.285	0.0220	W11
R1331NC10C	1000	1000	1331	18200	1.66 × 10 ⁶	15	200	1000	60	1.450	0.285	0.0220	W11
R1331NC10D	1000	1000	1331	18200	1.66 × 10 ⁶	20	200	1000	60	1.450	0.285	0.0220	W11
R1331NC12B	1200	1200	1331	18200	1.66 × 10 ⁶	12	200	1000	60	1.450	0.285	0.0220	W11
R1331NC12C	1200	1200	1331	18200	1.66 × 10 ⁶	15	200	1000	60	1.450	0.285	0.0220	W11
R1331NC12D	1200	1200	1331	18200	1.66 × 10 ⁶	20	200	1000	60	1.450	0.285	0.0220	W11
R1446NC12C	1200	1200	1446	19500	1.90 × 10 ⁶	15	300	1000	60	1.304	0.199	0.0240	W11
R1446NC12D	1200	1200	1446	19500	1.90 × 10 ⁶	20	300	1000	60	1.304	0.199	0.0240	W11
R1446NC12E	1200	1200	1446	19500	1.90 × 10 ⁶	25	300	1000	60	1.304	0.199	0.0240	W11
R1446NC12F	1200	1200	1446	19500	1.90 × 10 ⁶	30	300	1000	60	1.304	0.199	0.0240	W11
R1448NC14H	1400	1400	1448	15500	1.20 × 10 ⁶	40	950	1000	60	1.300	0.250	0.0220	W11
R1448NC14J	1400	1400	1448	15500	1.20 × 10 ⁶	50	950	1000	60	1.300	0.250	0.0220	W11
R1448NC18H	1800	1800	1448	15500	1.20 × 10 ⁶	40	950	1000	60	1.300	0.250	0.0220	W11
R1448NC18J	1800	1800	1448	15500	1.20 × 10 ⁶	50	950	1000	60	1.300	0.250	0.0220	W11
R1448NC20H	2000	2000	1448	15500	1.20 × 10 ⁶	40	950	1000	60	1.300	0.250	0.0220	W11
R1448NC20J	2000	2000	1448	15500	1.20 × 10 ⁶	50	950	1000	60	1.300	0.250	0.0220	W11
R1448NC20K	2000	2000	1448	15500	1.20 × 10 ⁶	60	950	1000	60	1.300	0.250	0.0220	W11
R1448NC20L	2000	2000	1448	15500	1.20 × 10 ⁶	65	950	1000	60	1.300	0.250	0.0220	W11
R1448NC20M	2000	2000	1448	15500	1.20 × 10 ⁶	70	950	1000	60	1.300	0.250	0.0220	W11
R1605MC20E	2000	2000	1605	20700	2.14 × 10 ⁶	25	900	1000	60	2.100	0.200	0.0150	W70
R1605MC20F	2000	2000	1605	20700	2.14 × 10 ⁶	30	900	1000	60	2.100	0.200	0.0150	W70
R1605MC20G	2000	2000	1605	20700	2.14 × 10 ⁶	35	900	1000	60	2.100	0.200	0.0150	W70
R1605MC20H	2000	2000	1605	20700	2.14 × 10 ⁶	40	900	1000	60	2.100	0.200	0.0150	W70
R1605MC20J	2000	2000	1605	20700	2.14 × 10 ⁶	50	900	1000	60	2.100	0.200	0.0150	W70
R1605MC22E	2200	2200	1605	20700	2.14 × 10 ⁶	25	900	1000	60	2.100	0.200	0.0150	W70
R1605MC22F	2200	2200	1605	20700	2.14 × 10 ⁶	30	900	1000	60	2.100	0.200	0.0150	W70
R1605MC22G	2200	2200	1605	20700	2.14 × 10 ⁶	35	900	1000	60	2.100	0.200	0.0150	W70
R1605MC22H	2200	2200	1605	20700	2.14 × 10 ⁶	40	900	1000	60	2.100	0.200	0.0150	W70
R1605MC22J	2200	2200	1605	20700	2.14 × 10 ⁶	50	900	1000	60	2.100	0.200	0.0150	W70
R1700MC18E	1800	1800	1700	20000	2.0 × 10 ⁶	25	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC18F	1800	1800	1700	20000	2.0 × 10 ⁶	30	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC18G	1800	1800	1700	20000	2.0 × 10 ⁶	35	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC18H	1800	1800	1700	20000	2.0 × 10 ⁶	40	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC18J	1800	1800	1700	20000	2.0 × 10 ⁶	50	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC21E	2100	1800	1700	20000	2.0 × 10 ⁶	25	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC21F	2100	1800	1700	20000	2.0 × 10 ⁶	30	1400	1000	60	1.600	0.250	0.0150	W70
R1700MC21G	2100	1800	1700	20000	2.0 × 10 ⁶	35	1400	1000	60	1.600	0.250	0.0150	W70

Distributed Gate Thyristors—Capsule Types



Part Number	V _{DRM}	V _{RRM}	I _{TAV}	I _{TSM}	I ² t	t _q @ 200 V/μs	Typ. Reverse Recovery Charge @ T _{JM}			V _{TO}	r _T	R _{thJK} 180° sine	Fig. No.	
			T _K = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}	A ² S		Q _{rr}	@ I _{TM}	@ -di/dt	@ T _{JM}	mΩ			
V	V	A	A	A ² S	μs	μC	A	A/μs	V	mΩ	K/W			
R1700MC21H	2100	1800	1700	20000	2.0 × 10 ⁶	40	1400	1000	60	1.600	0.250	0.0150	W70	
R1700MC21J	2100	1800	1700	20000	2.0 × 10 ⁶	50	1400	1000	60	1.600	0.250	0.0150	W70	
R1955MC14D	1400	1400	1955	26500	3.51 × 10 ⁶	20	1000	1000	60	1.460	0.910	0.0150	W70	
R1955MC14E	1400	1400	1955	26500	3.51 × 10 ⁶	25	1000	1000	60	1.460	0.910	0.0150	W70	
R1955MC14F	1400	1400	1955	26500	3.51 × 10 ⁶	30	1000	1000	60	1.460	0.910	0.0150	W70	
R1955MC16D	1600	1600	1955	26500	3.51 × 10 ⁶	20	1000	1000	60	1.460	0.910	0.0150	W70	
R1955MC16E	1600	1600	1955	26500	3.51 × 10 ⁶	25	1000	1000	60	1.460	0.910	0.0150	W70	
R1955MC16F	1600	1600	1955	26500	3.51 × 10 ⁶	30	1000	1000	60	1.460	0.910	0.0150	W70	
R2075MC12A	1200	1200	2075	29000	4.21 × 10 ⁶	10	300	1000	60	1.390	0.167	0.0150	W70	
R2075MC12B	1200	1200	2075	29000	4.21 × 10 ⁶	12	300	1000	60	1.390	0.167	0.0150	W70	
R2075MC12C	1200	1200	2075	29000	4.21 × 10 ⁶	15	300	1000	60	1.390	0.167	0.0150	W70	
R2295HA22F	2200	2200	2295	30000	4.50 × 10 ⁶	30	875	1000	60	1.690	0.190	0.0110	W79	
R2295HA22H	2200	2200	2295	30000	4.50 × 10 ⁶	40	875	1000	60	1.690	0.190	0.0110	W79	
R2475ZC28M	2800	2800	2475	31000	4.81 × 10 ⁶	70	3900	4000	60	1.504	0.174	0.0110	W13	
R2475ZC28N	2800	2800	2475	31000	4.81 × 10 ⁶	100	3900	4000	60	1.504	0.174	0.0110	W13	
R2475ZC28R	2800	2800	2475	31000	4.81 × 10 ⁶	140	3900	4000	60	1.504	0.174	0.0110	W13	
R2475ZD28M	2800	2800	2475	31000	4.81 × 10 ⁶	70	3900	4000	60	1.504	0.174	0.0110	W46	
R2475ZD28N	2800	2800	2475	31000	4.81 × 10 ⁶	100	3900	4000	60	1.504	0.174	0.0110	W46	
R2475ZD28R	2800	2800	2475	31000	4.81 × 10 ⁶	140	3900	4000	60	1.504	0.174	0.0110	W46	
R2619ZC18J	1800	1800	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC18K	1800	1800	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC18L	1800	1800	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC20J	2000	2000	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC20K	2000	2000	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC20L	2000	2000	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC21J	2100	2100	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC21K	2100	2100	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC21L	2100	2100	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC25J	2500	2100	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC25K	2500	2100	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZC25L	2500	2100	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W13	
R2619ZD18J	1800	1800	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD18K	1800	1800	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD18L	1800	1800	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD20J	2000	2000	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD20K	2000	2000	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD20L	2000	2000	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD21J	2100	2100	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD21K	2100	2100	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD21L	2100	2100	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD25J	2500	2100	2619	33800	5.71 × 10 ⁶	50	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD25K	2500	2100	2619	33800	5.71 × 10 ⁶	60	1850	4000	60	1.308	0.173	0.0110	W46	
R2619ZD25L	2500	2100	2619	33800	5.71 × 10 ⁶	65	1850	4000	60	1.308	0.173	0.0110	W46	
R2620ZC22J	2200	2200	2620	33800	5.71 × 10 ⁶	50	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZC22K	2200	2200	2620	33800	5.71 × 10 ⁶	60	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZC22L	2200	2200	2620	33800	5.71 × 10 ⁶	65	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZC25J	2500	2500	2620	33800	5.71 × 10 ⁶	50	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZC25K	2500	2500	2620	33800	5.71 × 10 ⁶	60	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZC25L	2500	2500	2620	33800	5.71 × 10 ⁶	65	2100	4000	60	1.500	0.143	0.0110	W13	
R2620ZD22J	2200	2200	2620	33800	5.71 × 10 ⁶	50	2100	4000	60	1.500	0.143	0.0110	W46	
R2620ZD22K	2200	2200	2620	33800	5.71 × 10 ⁶	60	2100	4000	60	1.500	0.143	0.0110	W46	
R2620ZD22L	2200	2200	2620	33800	5.71 × 10 ⁶	65	2100	4000	60	1.500	0.143	0.0110	W46	
R2620ZD25J	2500	2500	2620	33800	5.71 × 10 ⁶	50	2100	4000	60	1.500	0.143	0.0110	W46	
R2620ZD25K	2500	2500	2620	33800	5.71 × 10 ⁶	60	2100	4000	60	1.500	0.143	0.0110	W46	
R2620ZD25L	2500	2500	2620	33800	5.71 × 10 ⁶	65	2100	4000	60	1.500	0.143	0.0110	W46	
R2714ZC14H	1400	1400	2714	35600	6.34 × 10 ⁶	40	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZC14J	1400	1400	2714	35600	6.34 × 10 ⁶	50	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZC14K	1400	1400	2714	35600	6.34 × 10 ⁶	60	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZC18H	1800	1800	2714	35600	6.34 × 10 ⁶	40	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZC18J	1800	1800	2714	35600	6.34 × 10 ⁶	50	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZC18K	1800	1800	2714	35600	6.34 × 10 ⁶	60	1400	4000	60	1.250	0.163	0.0110	W13	
R2714ZD14H	1400	1400	2714	35600	6.34 × 10 ⁶	40	1400	4000	60	1.250	0.163	0.0110	W46	
R2714ZD14J	1400	1400	2714	35600	6.34 × 10 ⁶	50	1400	4000	60	1.250	0.163	0.0110	W46	
R2714ZD14K	1400	1400	2714	35600	6.34 × 10 ⁶	60	1400	4000	60	1.250	0.163	0.0110	W46	

High-Power Devices



W11
Weight 510 g



W36
Weight 500 g



W81
Weight 1.2 kg



W13
Weight 1.7 kg



W46
Weight 1.2 kg



W107
Weight 1.6 kg



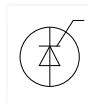
W34
Weight 120 g



W58
Weight 90 g

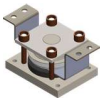


W118
Weight 2.2 kg



Distributed Gate Thyristors—Capsule Types

Part Number	V _{DRM}	V _{RRM}	I _{TAV}	I _{TSM}	I ² t	t _q @ 200 V/μs	Typ. Reverse Recovery Charge @ T _{JM}			V _{TO}	r _T	R _{thJK} 180° sine	Fig. No.
			T _K = 55 °C	10 ms ½ sine V _R - ≤60% V _{RRM}			Q _{rr}	@ I _{TM}	@ -di/dt	@ T _{JM}			
				A	A					A ² S	μC		
R2714ZD18H	1800	1800	2714	35600	6.34 × 10 ⁶	40	1400	4000	60	1.250	0.163	0.0110	W46
R2714ZD18J	1800	1800	2714	35600	6.34 × 10 ⁶	50	1400	4000	60	1.250	0.163	0.0110	W46
R2714ZD18K	1800	1800	2714	35600	6.34 × 10 ⁶	60	1400	4000	60	1.250	0.163	0.0110	W46
R3115TJ24J	2400	2400	3115	56000	15.68 × 10 ⁶	50	3350	2000	60	1.884	0.120	0.0080	W81
R3115TJ24K	2400	2400	3115	56000	15.68 × 10 ⁶	60	3350	2000	60	1.884	0.120	0.0080	W81
R3115TJ28J	2800	2800	3115	56000	15.68 × 10 ⁶	50	3350	2000	60	1.884	0.120	0.0080	W81
R3115TJ28K	2800	2800	3115	56000	15.68 × 10 ⁶	60	3350	2000	60	1.884	0.120	0.0080	W81
R3370ZC12C	1200	1200	3370	43900	9.64 × 10 ⁶	15	600	4000	60	1.353	0.064	0.0110	W13
R3370ZC12D	1200	1200	3370	43900	9.64 × 10 ⁶	20	600	4000	60	1.353	0.064	0.0110	W13
R3370ZC12E	1200	1200	3370	43900	9.64 × 10 ⁶	25	600	4000	60	1.353	0.064	0.0110	W13
R3370ZD12C	1200	1200	3370	43900	9.64 × 10 ⁶	15	600	4000	60	1.353	0.064	0.0110	W46
R3370ZD12D	1200	1200	3370	43900	9.64 × 10 ⁶	20	600	4000	60	1.353	0.064	0.0110	W46
R3370ZD12E	1200	1200	3370	43900	9.64 × 10 ⁶	25	600	4000	60	1.353	0.064	0.0110	W46
R3480TJ20J	2000	2000	3480	61000	18.61 × 10 ⁶	50	2930	2000	60	1.140	0.16	0.0080	W81
R3480TJ20K	2000	2000	3480	61000	18.61 × 10 ⁶	60	2930	2000	60	1.140	0.16	0.0080	W81
R3480TJ22J	2200	2200	3480	61000	18.61 × 10 ⁶	50	2930	2000	60	1.140	0.16	0.0080	W81
R3480TJ22K	2200	2200	3480	61000	18.61 × 10 ⁶	60	2930	2000	60	1.140	0.16	0.0080	W81
R4680EA24K	2400	2400	4680	67000	22.40 × 10 ⁶	60	3000	1000	60	1.509	0.128	0.0050	W107
R4680EA24L	2400	2400	4680	67000	22.40 × 10 ⁶	65	3000	1000	60	1.509	0.128	0.0050	W107
R4680EA24M	2400	2400	4680	67000	22.40 × 10 ⁶	70	3000	1000	60	1.509	0.128	0.0050	W107
R4680EA28K	2800	2800	4680	67000	22.40 × 10 ⁶	60	3000	1000	60	1.509	0.128	0.0050	W107
R4680EA28L	2800	2800	4680	67000	22.40 × 10 ⁶	65	3000	1000	60	1.509	0.128	0.0050	W107
R4680EA28M	2800	2800	4680	67000	22.40 × 10 ⁶	70	3000	1000	60	1.509	0.128	0.0050	W107
R5145FA42V	4200	4500	5145	66000	21.78 × 10 ⁶	250	12000	4000	60	1.659	0.107	0.0045	W118
R5145FA42W	4200	4500	5145	66000	21.78 × 10 ⁶	300	12000	4000	60	1.659	0.107	0.0045	W118
R5145FA45V	4500	4500	5145	66000	21.78 × 10 ⁶	250	12000	4000	60	1.659	0.107	0.0045	W118
R5145FA45W	4500	4500	5145	66000	21.78 × 10 ⁶	300	12000	4000	60	1.659	0.107	0.0045	W118
R5370EA18J	1800	1800	5370	70000	24.5 × 10 ⁶	50	3000	1000	60	1.661	0.071	0.0050	W107
R5370EA18K	1800	1800	5370	70000	24.5 × 10 ⁶	60	3000	1000	60	1.661	0.071	0.0050	W107
R5370EA22J	2200	2200	5370	70000	24.5 × 10 ⁶	50	3000	1000	60	1.661	0.071	0.0050	W107
R5370EA22K	2200	2200	5370	70000	24.5 × 10 ⁶	60	3000	1000	60	1.661	0.071	0.0050	W107



W116

Single Pre-Mounted Thyristors

Part Number	V_{RRM} V_{DRM}	I_{TAV}	@ T_C	I_{TRMS}	I_{TRMS} 125 °C 10 ms	V_{T0}	r_T	T_{VJM}	R_{thJC}	R_{thCH}	Isolation Voltage AC RMS, 50 Hz, 1 min	Package
	per Die											
	V	A	°C	A	A	V	mΩ	°C	K/W	K/W		
N4340TJ180MBR	1800	1110	85	3500	55000	0.886	0.105	125	0.031	0.0035	3000	W116
N4340TJ220MBR	2200	1110	85	3500	55000	0.886	0.105	125	0.031	0.0035	3000	W116

Single Pre-Mounted Diodes

Part Number	V_{RRM} V_{DRM}	I_{TAV}	@ T_C	I_{TRMS}	I_{TRMS} 150 °C 10 ms	V_{T0}	r_T	T_{VJM}	R_{thJC}	R_{thCH}	Isolation Voltage AC RMS, 50 Hz, 1 min V	Package
	per Die											
	V	A	°C	A	A	V	mΩ	°C	K/W	K/W		
W8570TJ180MBR	1800	2830	85	6435	70200	0.69	0.050	175	0.031	0.0035	3000	W116
W8570TJ220MBR	2200	2830	85	6435	70200	0.69	0.050	175	0.031	0.0035	3000	W116
W9830TJ120MBR	1200	3345	85	7280	72000	0.67	0.043	190	0.031	0.0035	3000	W116
W9830TJ150MBR	1500	3345	85	7280	72000	0.67	0.043	190	0.031	0.0035	3000	W116

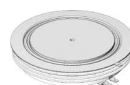
High-Power Devices



W40
Weight 430 g



W45
Weight 2 kg



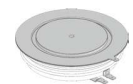
W96
Weight 1.5 kg



W109
Weight 360 g



W41
Weight 1.2 kg



W67
Weight 650 g



W98
Weight 1.7 kg



W110
Weight 2.8 kg



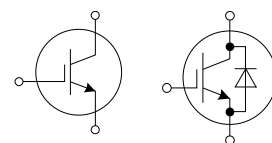
W44
Weight 1.2 kg



W95
Weight 825 g



W103
Weight 3.2 kg



IGBTs—Capsule Types

Part Number	V_{CES} V	I_C A	I_{CM} A	$V_{CE(sat)}$ @ I_C V	IGBT Switching Typical		V_F $I_F = I_C$ V	Diode Recovery Typical			T_{JM} °C	$R_{th,JK}$		Fig. No.
					E_{ON}	E_{OFF}		I_{rm}	t_{rr}	Q_r		IGBT	Diode	
					J	J		A	μs	μC		K/W	K/W	
T0115QB45G	4500	115	230	3.65	0.80	0.62	3.7	120	1.5	145	125	0.1080	0.172	W109
T0240NB45E	4500	240	480	3.6	1.50	1.00	N/A	N/A	N/A	N/A	125	0.0546	N/A	W40
T0340VB45G	4500	340	680	3.5	2.20	1.30	3.45	220	3.2	500	125	0.0364	0.0576	W67
T0510VB45E	4500	510	1020	3.5	3.30	2.20	N/A	N/A	N/A	N/A	125	0.0243	N/A	W67
T0600TB45A	4500	600	1200	3.7	3.60	2.50	3.7	640	1.2	700	125	0.0218	0.0432	W41
T0800TB45E	4500	800	1600	3.5	5.00	3.50	N/A	N/A	N/A	N/A	125	0.0156	N/A	W41
T0800EB45G	4500	800	1600	3.5	5.00	3.50	3.5	550	1.7	1020	125	0.0156	0.0247	W44
T0900EB45A	4500	900	1800	3.6	5.40	3.80	3.9	800	1.6	1000	125	0.0146	0.0288	W44
T1200EB45E	4500	1200	2400	3.6	7.00	5.50	N/A	N/A	N/A	N/A	125	0.0104	N/A	W44
T1600GB45G	4500	1600	3200	3.5	12.00	8.70	3.45	1270	1.75	1960	125	0.0078	0.0123	W45
T1800GB45A	4500	1800	3600	3.6	11.00	10.50	3.9	1600	1.6	2000	125	0.0073	0.0115	W45
T2000BB45G	4500	2000	4000	3.5	14.00	12.50	3.55	2050	1.6	2450	125	0.0064	0.0096	W110
T2400GB45E	4500	2400	4800	3.6	14.00	13.00	N/A	N/A	N/A	N/A	125	0.0052	N/A	W45
T2960BB45E	4500	3000	6000	3.6	11.50	17.50	N/A	N/A	N/A	N/A	125	0.0042	N/A	W110
T0258HF65G	6500	258	516	4.8	1.80	1.45	3.450	300	1.0	410	125	0.0328	0.0567	W95
T0385HF65E	6500	385	770	4.8	2.70	2.20	N/A	N/A	N/A	N/A	125	0.0219	N/A	W95
T0900AF65E	6500	900	1800	4.8	6.3	5.1	N/A	N/A	N/A	N/A	125	0.0094	N/A	W98
T0900DF65A	6500	900	1800	4.8	6.30	5.10	3.400	1050	1.0	1450	125	0.0094	0.0155	W96
T1290BF65A	6500	1290	2580	4.8	9.00	7.30	3.600	1400	1.0	1900	125	0.0066	0.0122	W103
T1375DF65E	6500	1375	2750	4.8	9.60	7.80	N/A	N/A	N/A	N/A	125	0.0062	N/A	W96
T1890BF65E	6500	1890	3780	4.8	13.20	10.60	N/A	N/A	N/A	N/A	125	0.0045	N/A	W103

Insulated Gate Bi-polar Transistors

As a pioneer of Press-Pack IGBT technology, Littelfuse offers a range of class-leading devices with voltage ratings of 4.5 kV (2.8 kV DC link) and 6.5 kV (3.6 kV DC link). These devices feature a wire-bond free and solder free construction, significantly improving the mechanical reliability compared to conventional modules. The device design minimizes internal stray inductance and incorporates direct emitter-side cooling, resulting in improved ruggedness and short circuit behavior.

These devices are based on a state-of-the-art soft punch through (SPT++) process, delivers low $V_{CE(sat)}$ and excellent soft switching behavior despite the high voltage ratings. A positive temperature coefficient enables reliable parallel operation. Devices are available with or without integral anti-parallel diode, and complimentary high-power sonic diodes are also offered.

Press-pack IGBTs exhibit exceptional power cycling performance, often an order of magnitude better than modules in other package configurations, making them ideal for applications with frequent load cycling, such as metal processing and traction drive systems. Their stable short circuit failure mode provides enhanced safety for medium- and high-voltage applications requiring series connection. This functionality allows system-level redundancy (n+1) eliminating the need for bypass switches and explosion proof enclosures. Typical applications include HVDC, FACTs, Active VAR controllers/compensators, and medium-voltage drives. For power levels exceeding 4 MW, press-pack IGBTs offer increased power density compared to multi-level/MMC-based designs using standard module packages.

These devices are largely backward-compatible with standard 4.5 kV GTO thyristors, providing a cost-effective solution for upgrading or refurbishing existing systems such as locomotives and medium-voltage drives.

They support a variety of cooling options, including direct liquid immersion and a complete range of associated parts is available, including gate drives, mounting clamps, and passive components.

Press-Pack IGBT Gate Drive Units

The C044BG400 IGBT Gate Driver is a low-power consumption driver with on board VCE desaturation detection for high-reliability applications.

The driver includes a fibre-optic communication interface for drive, status, and switching feedback signals. It also integrates a fully supervised DC/DC converter with EMI filtering, low coupling capacitance, and high partial discharge. The high-voltage collector sense and gate interface are implemented on a separate card, allowing close coupling to the IGBT for improved performance. A range of pre-configured boards is available to complement press-pack IGBTs, with additional options available upon request.

Gate Drive Part Number	IGBT Type
C0044BG400SBX	T0115QB45G
C0044BG400SBL	T0240NB45E
C0044BG400SBQ	T0340VB45G
C0044BG400SBE	T0510VB45E
C0044BG400SBM	T0600TB45A
C0044BG400SBG	T0800EB45G
C0044BG400SBN	T0800TB45E
C0044BG400SBP	T0900EB45A
C0044BG400SBR	T1200EB45E
C0044BG400SBJ	T1600GB45G
C0044BG400SBS	T1800GB45A
C0044BG400SBZ	T2000BB45G
C0044BG400SBT	T2400GB45E
C0044BG400SBW	T2960BB45E

Features

- High reliability topology
- Designed for ultra low-power consumption
- Build-in DC/DC-converter with soft start
- Integrated input filter for low EMI
- Separate low-impedance path for parasitic EMI currents
- PD-Voltage levels available up to 11 kV on request
- Low impedance from gate to emitter at start-up and power fail
- Monitoring of all secondary supply voltages
- Monitoring of IGBT switching status (VCE-de-sat detection)
- Soft switch-OFF at VCE-de-sat fault condition
- Fiber-optic links for switching commands and status control
- Low-light protection for input signals
- Short-pulse suppression (configurable)
- Balanced propagation delay time
- Gate current up to 44 A
- Optional gate-speed-up capacitors

Application

- Large and medium drives
- Renewable generation
- Utilities; scale converters



Stacks and Accessories

Power Semiconductor Accessories

With over 80 years of experience, our dedicated team of talented engineers delivers a wide variety of industry leading solutions ranging from simple standard sub-assemblies to complicated, multi-megawatt power systems.

The Power Electronic Stacks group has been an integral part of our core business since the early 1920s, when we began production on the first commercially available solid-state rectifiers.

Our dedicated global team of highly experienced specialists are on hand to provide our customers with first-class support on everything from a simple air-cooled rectifiers to highly integrated custom power converters.

IGBT Assemblies

Our catalogue of standard press-pack IGBT assemblies include a range of 3-level inverters. Three separate designs are available: a totally independent 3.3 kV system, a 6.6 kV system, and a 10 kV system. The 6.6 kV and 10 kV systems are based on the combination of two IGBT stacks and one diode stack. Each system benefits from direct water cooling to provide highly effective heat dissipation away from the devices and pre-loaded disc spring clamping to evenly distribute the applied force across the entire surface area of the device.

Pulsed Power

As a pioneer in the development of solid-state pulsed power components and systems, we deliver anything from discrete components to fully integrated energy transfer switches. With systems successfully delivering voltage ratings of over 50kV and pulsed currents of up to 140 kA, we have a wealth of experience at your disposal. Our modular design solutions based on either pulse thyristor or press-pack IGBT technology. Our integration of control and protection functions provides you with a flexible “black-box” approach to energy transfer problems.

Traction Applications

With over 40 years of experience, our dedicated team of engineers provides solutions to a wide range of design problems, ranging from simple trackside rectifiers to complex propulsion converters.

The Power Electronic Stacks group pioneered the early development of solid-state converters for traction systems in the late 1950s as part of the Westinghouse Brake & Signal Company. Over the years, we have gained an enviable reputation within the rail sector as a solution provider.

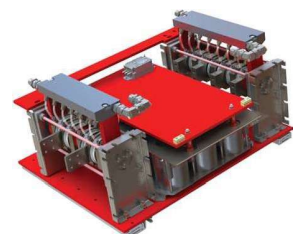
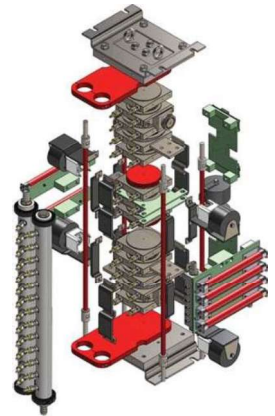
By leveraging our experience and broad network of contacts within the industry, we can offer assistance in tackling issues such as component obsolescence, improving power equipment reliability, contract maintenance of power modules, refurbishment of power electronics, upgrades to existing systems and, of course, subcontracting manufacturers for new projects.

Working systematically to the highest international standards, we can give your equipment a new lease on life and help protect your investments in these valuable assets.

Using the latest 3D modeling and simulation techniques, we can significantly reduce the cycle time from concept to fully developed design, minimizing risk and identifying opportunities for optimization early on in the project.

Our 300m² dedicated production facility in the UK is complemented by a well-equipped power lab. These facilities are supported by an expanded team of engineers and technicians as well as continued investment and growth in this strategic area of our business.

Also designed into each system are an integrated snubber circuit design and an isolated clamping rod system to limit the occurrence of Eddy currents within the unit.



Component obsolescence is becoming a significant problem for the rail sector, as equipment design life invariably exceeds that of the modern power electronics components. Our highly skilled team of engineers can re-engineer older equipment to incorporate the latest technology whilst maintaining compatibility.

As equipment reaches its half-life, many of its major power components will reach the end of their useful life, resulting in a sharp decline in its reliability and availability. In these circumstances, we can offer a full overhaul and refurbishment program for your power electronics, from engineering analyses, tests, and measurements through to delivery and validation of refurbished equipment.

For larger projects such as fleet-wide refits, we can work within a consortium of specialist international companies to ensure that you have the right skills on hand to deliver turnkey solutions to your requirements. This may include system analysis, project management, risk assessment, and safety cases.

Custom Assemblies—Our Design Philosophy

From concept through development and manufacturing to after sales support, we strongly believe in working closely with our customer every step of the way—extending our philosophy of teamwork beyond our own organization.

We understand that good communication and close collaboration help us provide the very best services to our customers.

Using the latest 3D modeling techniques, we can visualize concepts and check form, fit, and function with virtual prototypes. In addition, by utilizing advanced software packages, we can carry out simulation modeling to model

pressure drops through coolers/manifolds and heat flows through heatsinks.

Whether finding solutions to complex engineering problems or simply manufacturing to your designs, you will find the Power Electronic Stacks Group offers outstanding value for money, excellent quality, and first-class customer service.

By working closely together from the very start of our projects, we aim to provide the best solutions on time and within budget.

Silicon Assemblies

A wide range of units is available, incorporating international-standard outline silicon semiconductor devices. Our products have gained a global reputation for quality in military, industrial, and domestic applications.

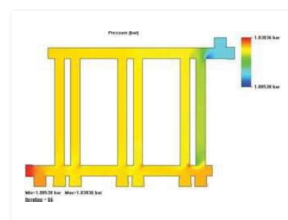
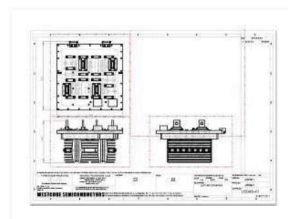
Standard extruded aluminum heatsink profiles are used for mounting discrete semiconductor devices in various configurations, for example:

- | | | | | | |
|---|------|-----|----|-------|----------|
| • Single-phase diode bridges with current ratings | from | 70 | to | 5710 | Amps DC |
| • Single-phase half or fully controlled bridges | from | 35 | to | 2200 | Amps DC |
| • Three-phase diode bridges with current ratings | from | 100 | to | 7190 | Amps DC |
| • Three-phase half or fully controlled bridges | from | 45 | to | 3790 | Amps DC |
| • Hexaphase single way diode assemblies | from | 200 | to | 14380 | Amps DC |
| • Hexaphase single way thyristor assemblies | from | 90 | to | 7580 | Amps DC |
| • AC regulators, single and three-phase | from | 40 | to | 2940 | Amps RMS |

Included in our standard range are solid-state, water-cooled AC regulators for resistance welding, with ratings from 315 to 3020 Amps RMS. Also available are water-cooled, single and three-phase assemblies from 1200 to 6000 Amps RMS. All the above ranges are suitable for 440 V_{RMS}, 50 Hz mains operation.

Beyond Semiconductors

Our flexible manufacturing facility can readily adapt to our customers' needs. In addition to power semiconductor assembly, we offer complementary sub-assemblies tailored to our customers' requirements, such as fuse panels and capacitor banks. Lastly, we can also contract manufacturers for your designs.



Stacks and Accessories

Application and engineering support

Our highly experienced technical team is on hand to provide our customers with first-class support for everything from the applications of our range of discrete devices to the design and development of complex systems. We can help you from concept through design, to manufacturing and tests, working closely with you every step of the way.

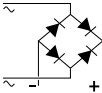
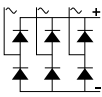
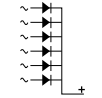
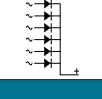
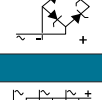
Components

To complement our range of power semiconductors and assemblies, we offer a range of supporting components, including:

- Heatsinks
- Coolers
- Mounting clamps
- Ultra-rapid semiconductor protection fuses
- Capacitors
 - Snubbers
 - Rectification
 - Specialist DC link
- Gate drive units



Westack—Modular Solutions

Assembly Part Number	I _{DC} amps Air Forced 2.5m/s			I _{FSM} amps I _{TSM} amps	I ² t A ² s	Dimensions (mm)				Mass kg	Device Type and Quantity	Heat Sink Type		
	T _a = 25°C	T _a = 35°C	T _a = 45°C			Fig.	W	H	D					
Single-Phase Diode Bridges						Approx. Total Loss 2 × I _{DC} @ 25°C								
SXB1375B	1375	1303	1230	19500	1.9 × 10 ⁶	1	382	325	405	20	W2058LC (4)	B (2 × 83.1 × 180)		
SXB2096B	2096	1987	1874	33000	5.45 × 10 ⁶	1	382	325	405	20	W3270NC (4)	B (2 × 83.1 × 180)		
SXB3442B	3442	3277	3109	53000	13.5 × 10 ⁶	2	382	593	405	40	W5696VC (4)	B (2 × 180)		
SXB4264B	4264	4051	3835	72000	22.5 × 10 ⁶	2	382	593	405	40	W8405ZC (4)	B (2 × 180)		
Three-Phase Diode Bridges						Approx. Total Loss 2.5 × I _{DC} @ 25°C								
SXB1920G	1920	1822	1721	19500	1.9 × 10 ⁶	3	548	325	405	30	W2058LC (6)	B (2 × 83.1 × 180)		
SXB2939G	2939	2788	2634	33000	5.45 × 10 ⁶	3	548	325	405	30	W3270NC (6)	B (2 × 83.1 × 180)		
SXB4869G	4869	4640	4407	53000	13.5 × 10 ⁶	4	548	593	405	60	W5696VC (6)	B(2 × 180)		
SXB5993G	5993	5701	5402	72000	22.5 × 10 ⁶	4	548	593	405	60	W8405ZC (6)	B(2 × 180)		
Six-Phase Diode. Single Way With IPT						Approx. Total Loss 1.25 × I _{DC} @ 25°C								
SXB3840HEX	3840	3644	3442	19500	1.9 × 10 ⁶	5	548	325	395	30	W2058LC (6)	B (2 × 83.1 × 180)		
SXB5877HEX	5877	5576	5268	33000	5.45 × 10 ⁶	5	548	325	395	30	W3270NC (6)	B (2 × 83.1 × 180)		
SXB9737HEX	9737	9281	8813	53000	13.5 × 10 ⁶	6	548	593	395	60	W5696VC (6)	B (2 × 180)		
SXB11987HEX	11987	11401	10804	72000	22.5 × 10 ⁶	6	548	593	395	60	W8405ZC (6)	B (2 × 180)		
Six-Phase Thyristor. Single Way With IPT						Approx. Total Loss 1.5 × I _{DC} @ 25°C								
SXB3529HEXT	3529	3244	2949	29600	4.38 × 10 ⁶	5	548	325	395	30	N1802LC (6)	B (2 × 83.1 × 180)		
SXB4649HEXT	4649	4270	3878	37000	6.85 × 10 ⁶	6	548	593	395	60	N2500VC (6)	B (2 × 180)		
SXB6240HEXT	6240	5714	5173	64000	20.5 × 10 ⁶	6	548	593	395	60	N4085ZC (6)	B (2 × 180)		
Single-Phase Fully Controlled Bridges						Approx. Total Loss 2.5 × I _{DC} @ 25°C								
SXB1265FB	1265	1161	1054	29600	4.38 × 10 ⁶	1	382	325	405	20	N1802NC (4)	B (2 × 83.1 × 180)		
SXB1645FB	1645	1508	1367	37000	6.85 × 10 ⁶	2	382	593	405	40	N2500VC (4)	B (2 × 180)		
SXB2167FB	2167	1981	1790	64000	20.5 × 10 ⁶	2	382	593	405	40	N4085ZC (4)	B (2 × 180)		
Three-Phase Fully Controlled Bridges						Approx. Total Loss 3 × I _{DC} @ 25°C								
SXB1764FG	1764	1622	1475	29600	4.38 × 10 ⁶	3	548	325	405	30	N1802NC (6)	B (2 × 83.1 × 180)		
SXB2324FG	2324	2135	1939	37000	6.85 × 10 ⁶	4	548	593	405	60	N2500VC (6)	B (2 × 180)		
SXB3120FG	3120	2857	2586	64000	20.5 × 10 ⁶	4	548	593	405	60	N4085ZC (6)	B (2 × 180)		

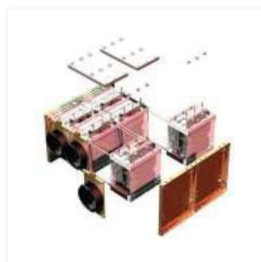
Westack—Modular Solutions

Cooling for each module section is provided using a low noise 115 / 230 V AC fan that is protected against overloading by an integral thermal cut-out.

Surge suppression and fusing provide reliable and safe operation. Surge suppression (which protects devices from voltage transients) and high-speed fuses (which protect against short circuits) are available.

All plastic components are UL-recognized and meet the requirements of the European Union Directive 2002 / 95 / EC covering the restricted use of certain hazardous substances in electrical and electronic equipment.

ISO 9000 provides the standard against which all our products and services are measured.



Westack—Modular Solutions are available in six standard configurations; others by request.

Figure 1
Weight 20 kg



Figure 2
Weight 40 kg



Figure 3
Weight 20 kg

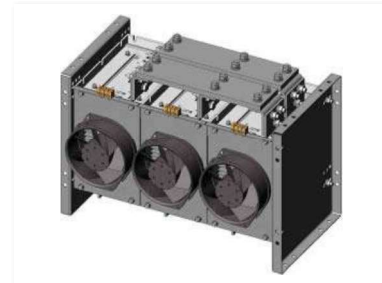


Figure 4
Weight 60 kg



Figure 5
Weight 30 kg



Figure 6
Weight 60 kg



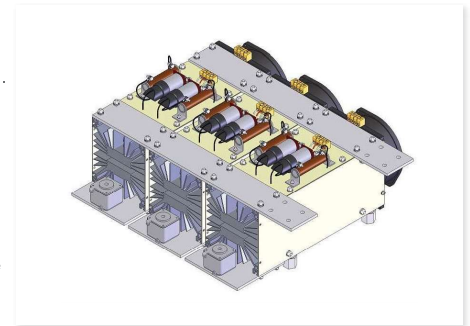
Stacks and Accessories

WestackLITE—Modular Solutions

A simple but highly efficient selection of stacks that incorporate the WESPACK range of phase control thyristors. Currently available in three standard configurations:

- AC voltage regulators
- Single-phase bridges
- Three-phase bridges

These stacks can easily be modified to meet individual customer requirements. Fully dimensioned drawings are available upon request from the Chippenham Factory.



Features and Benefits

WESPACK devices provide a maximum power rating for weight and volume without compromising on quality and reliability.

Cooling is provided by means of a low-noise, dual-voltage (230 V / 115 V) AC fan that is protected against overloading by an integral thermal cut-out.

Surge suppression and fusing can be added to protect the devices from voltage transients and short circuits.

ISO 9001:2015 provides the standard against which all our products and services are measured.

Figure 1
Weight 10 kg

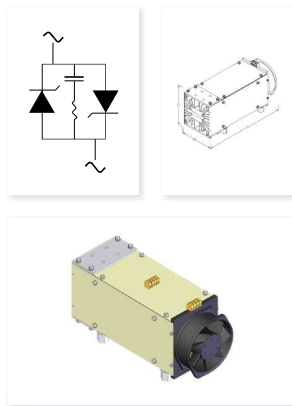


Figure 2
Weight 20 kg

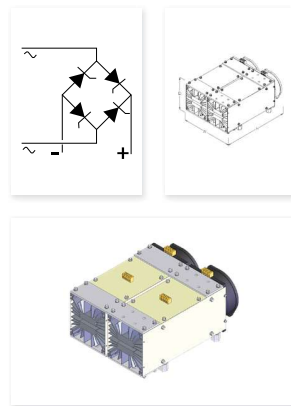
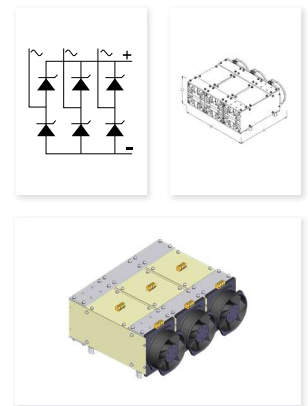


Figure 3
Weight 30 kg



WestackLITE—Modular Solutions

Assembly Part Number	I _{DC} amps Air Forced 2.5m/s			I _{FSM} amps I _{TSM} amps	I ² t A ² s	Dimensions (mm)				Mass kg	Device Type and Quantity	Heat Sink Type	
	T _a = 25°C	T _a = 35°C	T _a = 45°C			Fig.	W	H	D				
AC Regulators											Approx. Total Loss 1.3 × I _{RMS}		Figure 1
SXC1195FR	1195	1098	997	19100	1.82 × 10 ⁶	1	168	415	212	10	N1806QK (2)	(2 × 150.1 × 330)	
SXC1464FR	1464	1348	1227	32400	5.25 × 10 ⁶	1	168	415	212	10	N2367MK (2)	(2 × 150.1 × 330)	
SXC1788FR	1788	1636	1480	50900	12.95 × 10 ⁶	1	168	415	212	10	N3904HK (2)	(2 × 150.1 × 330)	
Single Phase Fully Controlled Bridges											Approx. Total Loss 2.5 × I _{DC}		Figure 2
SXC1076FB	1076	988	897	19100	1.82 × 10 ⁶	2	330	415	212	20	N1806QK (4)	(2 × 150.1 × 330)	
SXC1318FB	1318	1213	1104	32400	5.25 × 10 ⁶	2	330	415	212	20	N2367MK (4)	(2 × 150.1 × 330)	
SXC1609FB	1609	1473	1332	50900	12.95 × 10 ⁶	2	330	415	212	20	N3904HK (4)	(2 × 150.1 × 330)	
Three Phase Fully Controlled Bridges											Approx. Total Loss 3 × I _{DC}		Figure 3
SXC1517FG	1517	1396	1270	19100	1.82 × 10 ⁶	3	492	415	212	30	N1806QK (6)	(2 × 150.1 × 330)	
SXC1871FG	1871	1725	1573	32400	5.25 × 10 ⁶	3	492	415	212	30	N2367MK (6)	(2 × 150.1 × 330)	
SXC2319FG	2319	2125	1926	50900	12.95 × 10 ⁶	3	492	415	212	30	N3904HK (6)	(2 × 150.1 × 330)	

Power Semiconductor Accessories

As part of our continuing commitment to meet our customers' demands, we offer a range of products to support our high-power semiconductor devices and our silicon assembly business.

The following pages show a selection of accessories available to our customers, from heatsinks and coolers to bar or box clamps:

Part Number	Old Part Number	Accessory
XST1000M08P	PTFE1000M8	M8 PTFE tube × 1 m length insulation
XST1000M10P	PTFE1000M10	M10 PTFE tube × 1 m length insulation
XST1000M12P	PTFE1000M12	M12 PTFE tube × 1 m length insulation
XST1000M16P	PTFE1000M16	M16 PTFE tube × 1 m length insulation
L0001YC600XXX	n/a	30 mm diameter electrode Insulator Capsule
L0001QC600XXX	n/a	38 mm diameter electrode Insulator Capsule
L0001NC600XXX	n/a	47 mm diameter electrode Insulator Capsule
L0001HC600XXX	n/a	66 mm diameter electrode Insulator Capsule
L0001ZF600XXX	n/a	73 mm diameter electrode Insulator Capsule
L0001TC600XXX	n/a	75 mm diameter electrode Insulator Capsule

Part Number	Old Part Number	Accessory	Type
XSL200D8WRC	U9948	200 mm long single Co-Axial cable, Red /White, M5 ring terminal for Ø75 IGBT & below	IGBT
XSL200D8WRCP	U9947	200 mm long double Co-Axial cable, Red /White, M5 ring terminal for Ø85 IGBT & above	IGBT
XSL220C2WRT	–	220 mm long twisted pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL300C2WRP	U9900	300 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL300C2WS	U9900 (Gate Only)	300 mm long gate wire, Silicone sleeve cable 16 / 0.2, White, M4 ring terminal	Thyristor
XSL350C2WRP	U9723	350 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL400C2WRP	U9860	400 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL500C2WRP	U9855	500 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL600C2WRP	U9775	600 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL1000C2WRP	U9734 / U9801 / U9849	1000 mm long pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL1000C2WRT	U9952	1000 mm long twisted pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor
XSL1100C2WRT	U9779	1100 mm long twisted pair, Silicone sleeve cable 16 / 0.2, Red /White, M4 ring terminal	Thyristor

Stacks and Accessories



WC18



WC45



WC48/49



WC50

Standard Bar Clamps

Part Number	Fixing Centers	Rod Size	Outline	Mounting Surface Diameter	Nominal Thickness	T _J Max. °C	Outline No.
	mm			mm	mm		
XK0450DA056M	65	M8	DO-200AA / TO-200AB	19.0	13.8	190	WC2
XK0450DT056M	65	M8	DO-200AA / TO-200AB	19.0	13.8	190	WC3
XK0450SA056M	65	M8	DO-200AA / TO-200AB	19.0	13.8	190	WC1
XK0900DA056M	65	M8	Diode / Thyristor	25.1	14.6	190	WC7
XK0900DT056M	65	M8	Diode / Thyristor	25.1	14.6	190	WC8
XK0900SA056M	65	M8	Diode / Thyristor	25.1	14.6	190	WC6
XK0600DA074M	89	M10	Press-Pack IGBTs	47.0	27	190	WC10
XK0600SA074M	89	M10	Press-Pack IGBTs	47.0	27	190	WC9
XK1000DA074M	89	M10	Press-Pack IGBTs	47.0	27	190	WC12
XK1000SA074M	89	M10	Press-Pack IGBTs	47.0	27	190	WC11
XK1100DA076M	89	M10	DO-200AB / TO-200AC	34.0	26.2	190	WC13
XK1130DA076M	89	M10	DO-200AB / TO-200AC	34.0	26.2	190	WC15
XK1130DT076M	89	M10	DO-200AB / TO-200AC	34.0	26.2	190	WC16
XK1130SA076M	89	M10	DO-200AB / TO-200AC	34.0	26.2	190	WC14
XK1800DA076M	89	M10	Wespack PCT	38.0	14	190	WC18
XK1800DT076M	89	M10	Wespack PCT	38.0	14	190	WC19
XK1800SA076M	89	M10	Wespack PCT	38.0	14	190	WC17
XK2140DA076M	89	M10	DO-200	47.0	26.8	190	WC23
XK2140DA076ML	89	M10	DO-200 / Thyristor	47.0	26.8	125	WC23
XK2140DT076M	89	M10	DO-200	47.0	26.8	190	WC24
XK2140DT076ML	89	M10	DO-200 / Thyristor	47.0	26.8	125	WC24
XK2140SA076M	89	M10	DO-200	47.0	26.8	190	WC22
XK2140SA076ML	89	M10	DO-200 / Thyristor	47.0	26.8	125	WC22
XK2700DA076M	89	M10	Wespack PCT	50.0	14	190	WC26
XK2700DT076M	89	M10	Wespack PCT	50.0	14	190	WC27
XK2700SA076M	89	M10	Wespack PCT	50.0	14	190	WC25
XK2000DA114M	132	M12	Press-Pack IGBTs	75.0	26	190	WC29
XK2000SA114M	132	M12	Press-Pack IGBTs	75.0	26	190	WC28
XK2500DA114M	132	M12	Press-Pack IGBTs	75.0	26	190	WC31
XK2500SA114M	132	M12	Press-Pack IGBTs	75.0	26	190	WC30
XK2500DA116M	132	M12	GTO	63.0	26	190	WC33
XK2500DA116ML	132	M12	GTO	63.0	26	125	WC33

Standard Bar Clamps

Part Number	Fixing Centers	Rod Size	Outline	Mounting Surface Diameter	Nominal Thickness	T _J Max. °C	Outline No.
	mm			mm			
XK2500SA116M	132	M12	GTO	63.0	26	190	WC32
XK2500SA116ML	132	M12	GTO	63.0	26	125	WC32
XK3000DA116M	132	M12	DO-200AD	63.0	33	190	WC35
XK3000DA116ML	132	M12	DO-200AD / Thyristor	63.0	33	125	WC35
XK3000SA116M	132	M12	DO-200AD	63.0	33	190	WC34
XK3000SA116ML	132	M12	DO-200AD / Thyristor	63.0	33	125	WC34
XK3500DA116M	132	M12	GTO	75.0	26	190	WC37
XK3500DA116ML	132	M12	GTO	75.0	26	125	WC37
XK3500SA116M	132	M12	GTO	75.0	26	190	WC36
XK3500SA116ML	132	M12	GTO	75.0	26	125	WC36
XK4000DA116M	132	M12	Diode / Thyristor	73.0	36.8	190	WC39
XK4000DA116ML	132	M12	Thyristor	73.0	36.8	125	WC39
XK4000SA116M	132	M12	Diode / Thyristor	73.0	36.8	190	WC38
XK4000SA116ML	132	M12	Thyristor	73.0	36.8	125	WC38
XK5000DA128M	146	M16	GTO	75.0	26	190	WC40
XK5000DA128ML	146	M16	GTO	75.0	26	125	WC40
XK7000DA128M	146	M16	Diode / Thyristor	75.0	26.6	190	WC41
XK7000DA128ML	146	M16	Thyristor	75.0	26.6	125	WC41
XK3060DA140ML	154	M12	Press-Pack IGBTs	85.1	26	125	WC43
XK3060SA140ML	154	M12	Press-Pack IGBTs	85.1	26	125	WC42
XK9000SA160M	180	M16	Diode / Thyristor	99.3	35.8	190	WC44
XK9000SA160ML	180	M16	Thyristor	99.3	35.8	125	WC44
XK9000DA160M	180	M16	Diode / Thyristor	99.3	35.8	190	WC45
XK9000DA160ML	180	M16	Thyristor	99.3	35.8	125	WC45
XK6120DA180ML	196	M16	Press-Pack IGBTs	125.0	26	125	WC46
XK6120SA180ML	196	M16	Press-Pack IGBTs	125.0	26	125	WC47
XK8000DA180ML	196	M16	Press-Pack IGBTs	132.0	26	125	WC67
XK8000SA180ML	196	M16	Press-Pack IGBTs	132.0	26	125	WC68

Standard Bar Clamp Kits

These single-side cooled square base mounting clamps are for capsule type rectifier diodes & phase control thyristors. They are suitable for 34 mm to 50 mm diameter electrode devices with clamping forces that range from 1130 Kgf to 2140 Kgf. They are suitable for devices with blocking voltages from 400 V up to 6 KV.

Part Number	Electrode Diameter	Outline
XK1500CB034M	34 - 38	WC64
XK1130SB076M	34 - 38	WC65
XK2140SB076M	47 - 50	WC66

Standard part replacements for the obsolete flat-base power silicon diodes types KBN/R, KCN/R, and KDN/R. For other voltages and thyristor options, please consult the factory.

Stacks and Accessories



WC58



WC60



WC62



WC59



WC61



WC63

Standard Bar Clamps

Range	Part Number	#### = Force	Max cell dia.	T _{JMAX}	xxx = max Z - dim range	Outline No.
		kgf	mm	°C	mm	
XSK042	XSK####DA042xxx	0500 / 0900	42	190	025 - 076*	WC58
	XSK####DT042xxx	0500 / 0900	42	190	025 - 076*	WC59
	XSK####DF042xxx	0500 / 0900	42	190	025 - 076*	WC60
XSK054	XSK####DA054xxx	900	54	190	025 - 076*	WC58
	XSK####DT054xxx	900	54	190	025 - 076*	WC59
	XSK####DF054xxx	900	54	190	025 - 076*	WC60
XSK056	XSK####DA056xxx	0500 / 0900	56	190	038 - 120*	WC58
	XSK####DT056xxx	0500 / 0900	56	190	038 - 120*	WC59
	XSK####DF056xxx	0500 / 0900	56	190	038 - 120*	WC60
	XSK####DA056xxx	1500	56	190	038 - 120*	WC58/SP
	XSK####DT056xxx	1500	56	190	038 - 120*	WC59/SP
	XSK####DF056xxx	1500	56	190	038 - 120*	WC60/SP
XSK065	XSK####DA065xxx	0500 / 0900	65	190	038 - 120*	WC58
	XSK####DT065xxx	0500 / 0900	65	190	038 - 120*	WC59
	XSK####DF065xxx	0500 / 0900	65	190	038 - 120*	WC60
	XSK####DA065xxx	1500	65	190	038 - 120*	WC58/SP
	XSK####DT065xxx	1500	65	190	038 - 120*	WC59/SP
	XSK####DF065xxx	1500	65	190	038 - 120*	WC60/SP
XSK075	XSK####DA075xxx	0900 / 1500	75	190	038 - 120*	WC58
	XSK####DT075xxx	0900 / 1500	75	190	038 - 120*	WC59
	XSK####DF075xxx	0900 / 1500	75	190	038 - 120*	WC60
	XSK####DA075xxx	2200	75	190	038 - 120*	WC61
	XSK####DT075xxx	2200	75	190	038 - 120*	WC62
	XSK####DF075xxx	2200	75	190	038 - 120*	WC63
XSK087	XSK####DA087xxx	1500 / 2200	87	190	038 - 120*	WC61
	XSK####DT087xxx	1500 / 2200	87	190	038 - 120*	WC62
	XSK####DF087xxx	1500 / 2200	87	190	038 - 120*	WC63
	XSK####DA087xxx	3000	87	190	038 - 120*	WC61/SP
	XSK####DT087xxx	3000	87	190	038 - 120*	WC62/SP
	XSK####DF087xxx	3000	87	190	038 - 120*	WC63/SP
XSK103	XSK####DA103xxx	2200	103	190	038 - 120*	WC58/SP
	XSK####DF103xxx	2200	103	190	038 - 120*	WC60/SP
	XSK####DA103xxx	3200	103	190	038 - 120*	WC61/SP
	XSK####DF103xxx	3200	103	190	038 - 120*	WC63/SP
	XSK####DA103xxx	4000	103	190	038 - 120*	WC61/SP
	XSK####DF103xxx	4000	103	190	038 - 120*	WC63/SP
XSK112	XSK####DA112xxx	2800 / 3200 / 3800 / 4500	112	190	038 - 120*	WC61/SP
	XSK####DF112xxx	2800 / 3200 / 3800 / 4500	112	190	038 - 120*	WC63/SP
XSK120	XSK####DA120xxx	3800 / 4500 / 5000	120	190	050 - 120*	WC61/SP
	XSK####DF120xxx	3800 / 4500 / 5000	120	190	050 - 120*	WC63/SP
XSK126	XSK####DA126xxx	3800 / 4500 / 5000	126	190	050 - 120*	WC61/SP
	XSK####DF126xxx	3800 / 4500 / 5000	126	190	050 - 120*	WC63/SP
XSK160	XSK####DA160xxx	8000 / 9000	160	190	050 - 120*	WC61/SP
	XSK####DF160xxx	8000 / 9000	160	190	050 - 120*	WC63/SP



WC48/49



WC50



WC51



WC52



WC53



WC54



WC55



WC56



WC57

Bar Clamps

Range	A	A1	B	C	C1	D	E	F	G	H	Fixing
XSK042	69.85	74.89	54.00	15.88	21.04	42.00	8.64	PCF	PCF	12.70	M6
XSK054	82.55	86.04	65.00	15.88	21.04	54.00	8.62	34.93	PCF	12.70	M6
XSK056	95.25	–	70.00	25.40	–	56.00	12.19	PCF	PCF	9.53	M8
XSK065	104.39	–	79.00	25.40	–	65.00	12.19	PCF	PCF	12.70	M8
XSK075	112.78	–	89.00	25.40	–	75.00	12.19	PCF	PCF	12.70	M8
XSK087	127.00	–	102.00	25.40	–	87.00	12.19	PCF	PCF	19.05	M8
XSK103 (2200/3200)	144.78	–	118.00	25.40	36.00	103.00	12.19	PCF	PCF	19.05	M8
XSK103 (4000)	144.78	154.11	118.00	25.40	36.00	103.00	16.56	PCF	PCF	19.05	M10
XSK112	165.02	–	132.00	25.40	36.00	112.00	16.56	PCF	PCF	25.40	M10
XSK120	172.72	–	140.00	25.40	36.00	120.00	16.56	PCF	PCF	25.40	M10
XSK126	181.1	–	146	25.4	36	126	16.56	PCF	PCF	25.4	M10
XSK160	216.07	–	180	38.1	–	160	16.56	PCF	PCF	38.1	M12

Notes:

PCF = Dimension is dependent on clamp force and cell height. Please consult the factory.

"A1" dimension only shown where "A1" is larger than "A".

"C1" dimension only shown where "C1" is larger than "C".

All dimensions in mm.

Stacks and Accessories



WH1



WH2



WH3



WH4



WH5



WH6



WH7



WH8

Bar Clamps for WESPACK™

Part Number	Rod Size & Length	Insulator Size & Length	Fixing Centers	Electrode Diameter	Clamp Forces	"Z"	"D"	Fig. No.
	mm	mm				mm	mm	
XSK1500DA076038	M8 × 90	M8 × 60	89.0	32	10kN to 20 kN	38	27.5	WC51
XSK1500DA076076	M8 × 130	M8 × 95	89.0	32	10kN to 20 kN	76	62.5	WC51
XSK1500DA076101	M8 × 160	M8 × 120	89.0	32	10kN to 20 kN	101	87.6	WC51
XSK2000DA076038	M8 × 95	M8 × 60	89.0	38	13kN to 20 kN	38	25.9	WC52
XSK2000DA076076	M8 × 130	M8 × 95	89.0	38	13kN to 20 kN	76	61.0	WC52
XSK2000DA076101	M8 × 160	M8 × 120	89.0	38	13kN to 20 kN	101	85.9	WC52
XSK3000DA076038	M8 × 100	M8 × 65	89.0	50	25kN to 31 kN	38	26.2	WC53
XSK3000DA076076	M8 × 130	M8 × 100	89.0	50	25kN to 31 kN	76	56.1	WC53
XSK3000DA076101	M8 × 160	M8 × 125	89.0	50	25kN to 31 kN	101	86.1	WC53
XSK3400DA076038	M8 × 100	M8 × 65	89.0	50	27kN to 34 kN	38	24.6	WC54
XSK3400DA076076	M8 × 140	M8 × 105	89.0	50	27kN to 34 kN	76	64.5	WC54
XSK3400DA076101	M8 × 160	M8 × 130	89.0	50	27kN to 34 kN	101	89.7	WC54
XSK3800DA116M076	M10 × 150	M12 × 100	132.0	66	32kN to 38 kN	76	59.7	WC55
XSK3800DA116M101	M10 × 180	M12 × 125	132.0	66	32kN to 38 kN	101	84.6	WC55
XSK4400DA116M076	M10 × 150	M12 × 105	132.0	68	36kN to 44 kN	76	63.0	WC56
XSK4400DA116M101	M10 × 180	M12 × 130	132.0	68	36kN to 44 kN	101	87.9	WC56
XSK6000DA116M076	M10 × 150	M12 × 105	132.0	75	50kN to 60 kN	76	59.9	WC57
XSK6000DA116M101	M10 × 180	M12 × 130	132.0	75	50kN to 60 kN	101	84.8	WC57

Notes: 1 kgf = 9.8 Newtons

Box Clamps

Part Number	Moulded Box Style	Fixing Centers	Rod Size	Capsule Device			Outline Ref.
				Outline	Mounting Surface Ø	Normal Thickness	
					mm	mm	
XK0450BA019M	Injection	50 PCD	M5x50 Bolts	W1 / W8 / W90	19.0	13.8	WC48
XK0450BA025M	Injection	50 PCD	M5x50 Bolts	W2 / W58	25.1	14.6	WC49
XK1000BA025M	Injection	50 PCD	M5x50 Bolts	W91	25.1	14.0	WC49
XK1500BA034M	Injection	70 PCD	M6x50 Bolts	W4 / W10 / W92	34.0	26.2	WC50

Heatsinks

Part Number	Weight	Periphery	Area	Fig.
	kg/m	mm	mm²	
XSFGxxxxAN	8.1	1059	2979	WH1
XSFGAxxxxAN	15.6	1682	5867	WH2
XSFHxxxxAN	12.7	1684	4655	WH3
XSFTxxxxAN	20	2065	7573	WH4
XSFTBxxxxAN	29	2467	10905	WH5
XSFTCxxxxAN	28	2544	10561	WH6
XSFLPxxxxAN	30	6620	11172	WH7
XSF46xxxxAN	20	2822	7411	WH8
XSF30xxxxAN	Dimensions 125 mm × 125 mm × 4 vanes			



WCL1



WCL5



WCL11



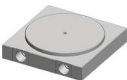
WCL12-WS71-1



WCL2



WCL6



WCL16



WCL13-WS71-2



WCL3



WCL7



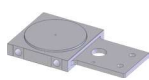
WCL17



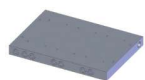
WCL14-WS72-1



WCL4



WCL10



WCL9-WS65



WCL15-WS72-2

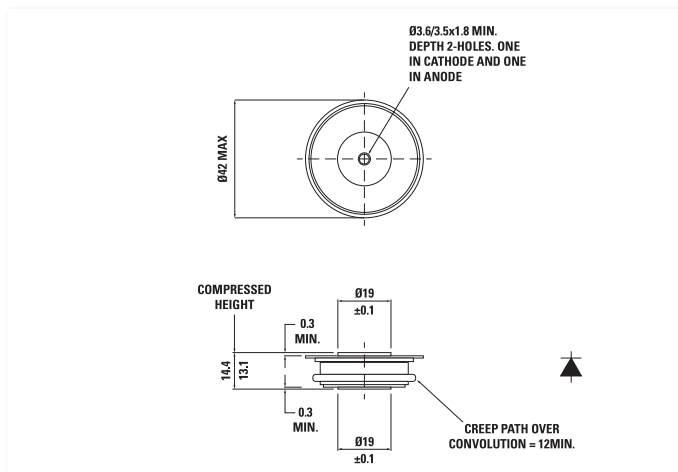
Coolers

Part Number	Weight	Cooler Thickness	Busbar Thickness	Description	Fig. No.
	kg	mm	mm		
XW076NC16A	0.418	16	N/A	47 mm WC Cu	WCL2
XW076NC16B	0.612	16	6,4	47 mm WC Cu with Busbar (10 mm Hose)	WCL1
XW076NC16BS	0.612	16	6,4	47 mm WC Cu with Busbar + spirol pins fitted (10 mm Hose)	WCL1
XW076NC16BT	0.612	16	6,4	47 mm WC Cu with Busbar + thermostat hole (10 mm Hose)	WCL1
XW076NC16C	0.612	16	6,4	47 mm WC Cu with Busbar (½" Hose)	WCL1
XW076NC16CT	0.612	16	6,4	47 mm WC Cu with Busbar + thermostat hole (½" Hose)	WCL1
XW076NC16R	0.581	16	6,35	47 mm WC Cu reversed with Busbar	WCL12
XW076NC16W	0.400	16	N/A	47 mm WC Cu reversed	WCL13
XW116ZC20A	1.300	20	N/A	73 mm WC Cu	WCL4
XW116ZC20B	1.750	20	10	73 mm WC Cu with Busbar	WCL3
XW116ZC20C	2.120	20	10	73 mm WC Cu with alt, Busbar	WCL5
XW116ZC20R	1.672	20	10	73 mm WC Cu reversed with Busbar	WCL14
XW116ZC20W	1.119	20	N/A	73 mm WC Cu reversed	WCL15
XW127EC25A	1.650	25	N/A	85 mm WC Cu Helix	WCL16
XW127EC25B	2.200	25	8	85 mm WC Cu with Busbar Helix	WCL17
XW127EA25A	0.500	25	N/A	85 mm WC Al Helix	WCL16
XW127EA25B	0.650	25	8	85 mm WC Al with Busbar Helix	WCL17
XW160FC25A	3.620	25	N/A	100 mm WC Cu	WCL6
XW160FC25B	4.520	25	10	100 mm WC Cu with Busbar	WCL7
XW180GC34A	4.920	34	N/A	125 mm WC Cu Helix	WCL11
XW180GC34B	5.950	34	10	125 mm WC Cu with Busbar Helix	WCL10
XW180GA34A	1.500	34	N/A	125 mm WC Al Helix	WCL11
XW180GA34B	1.800	34	10	125 mm WC Al with Busbar Helix	WCL10
XW180BA34E	1.550	34	N/A	132 mm WC Al Helix	WCL19
XW180BA34F	1.850	34	10	132 mm WC Al with Busbar Helix	WCL20
XW270QA25A	2.941	25	N/A	270 × 190 mm WC Al Cold Plate	WCL9

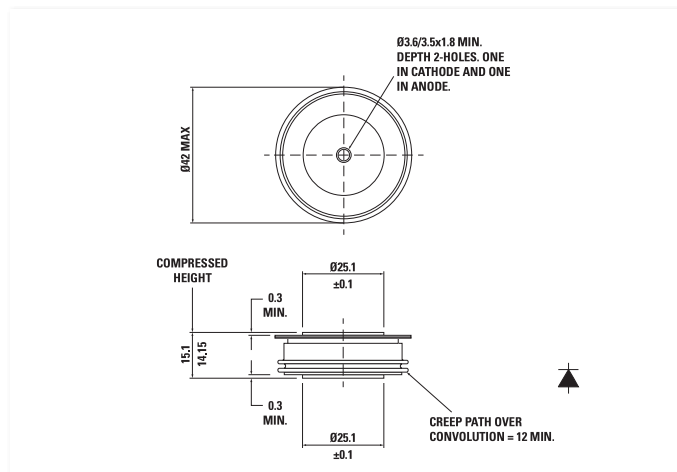
Part Number	Cooler Accessories
XSNM12H10S	M12 Cooler Connection, 10mm Hose & Stainless Steel material
XSNM12H12S	M12 Cooler Connection, 12mm Hose & Stainless Steel material

Outline Drawings

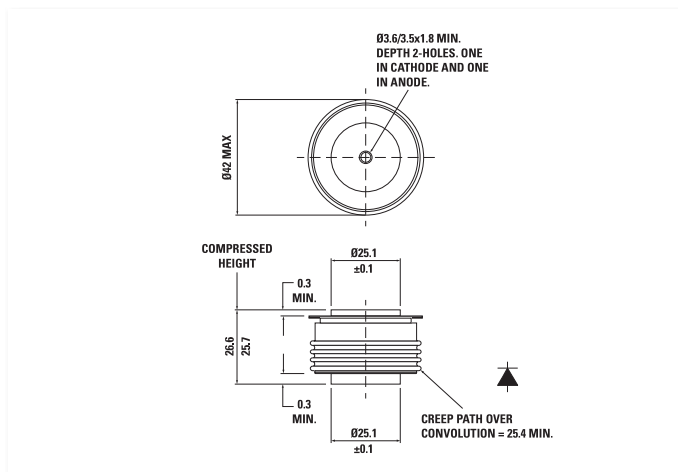
W1 - 100A241



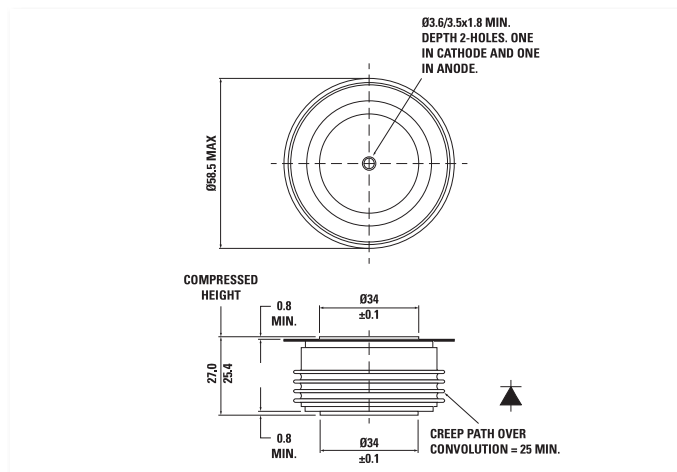
W2 - 100A291



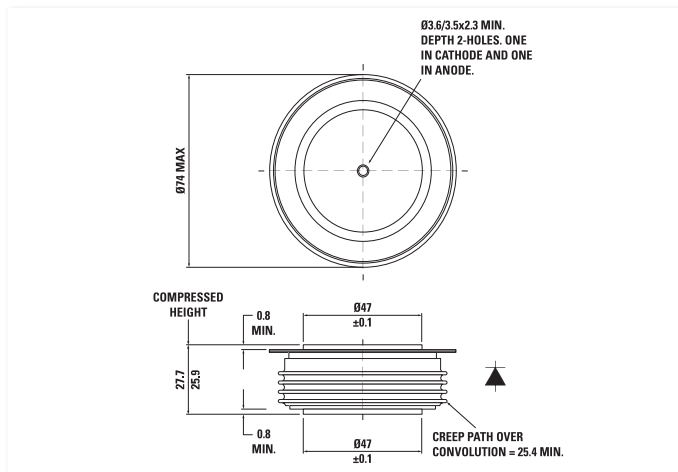
W3 - 100A317



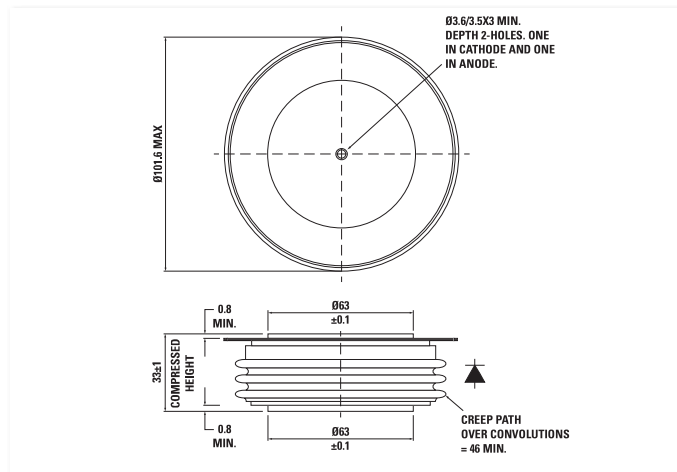
W4 - 100A243



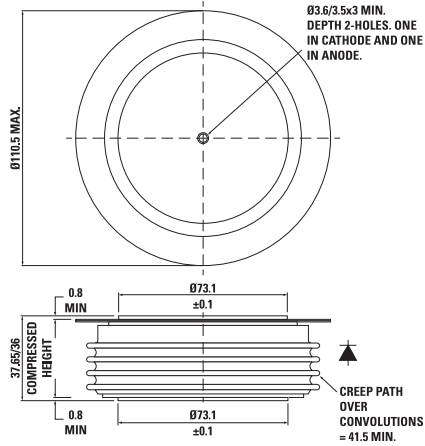
W5 - 100A249



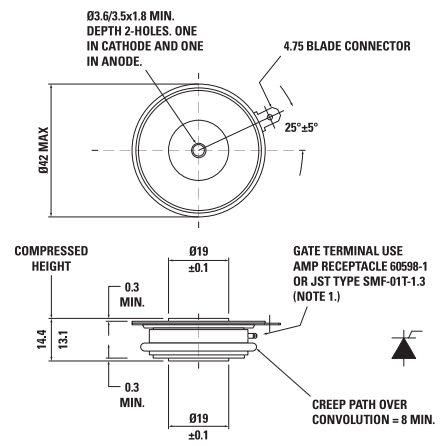
W6 - 100A270



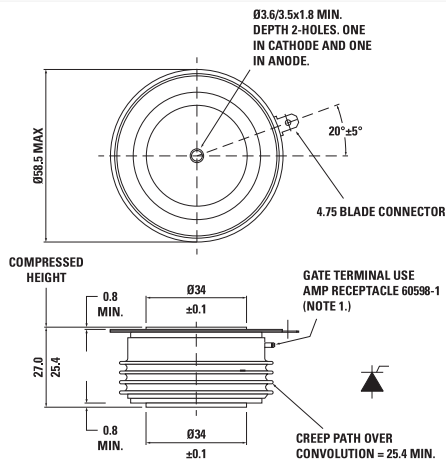
W7 - 100A293



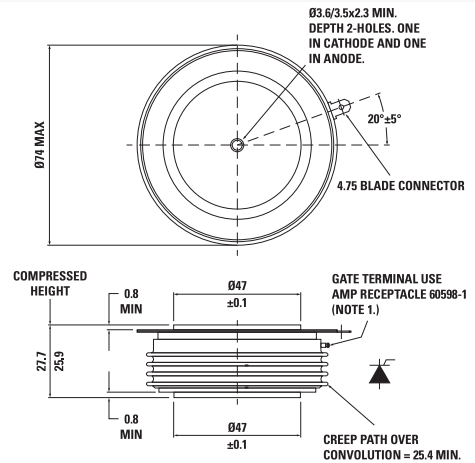
W8 - 101A212



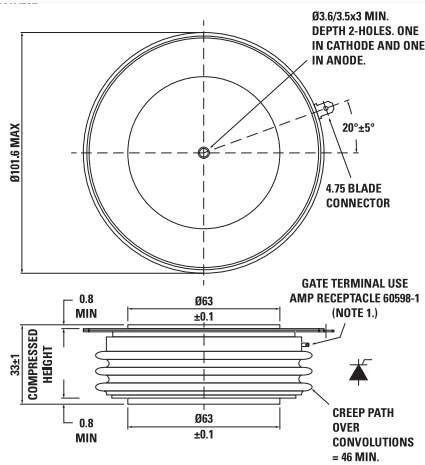
W10 - 101A216



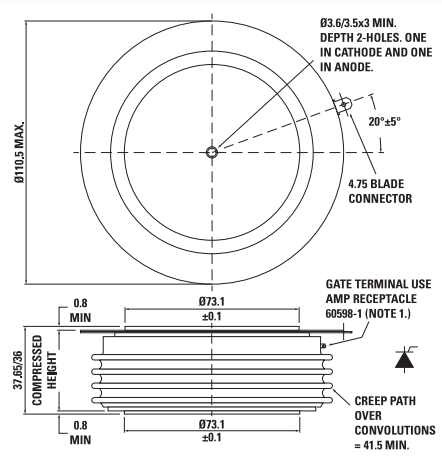
W11 - 101A223



W12 - 101A232

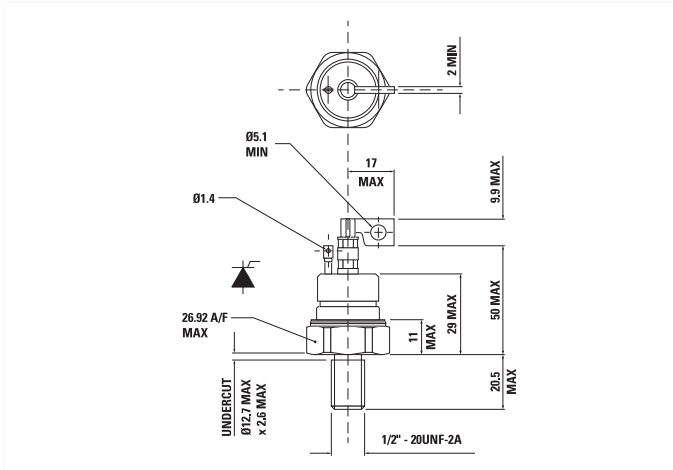


W13 - 101A281

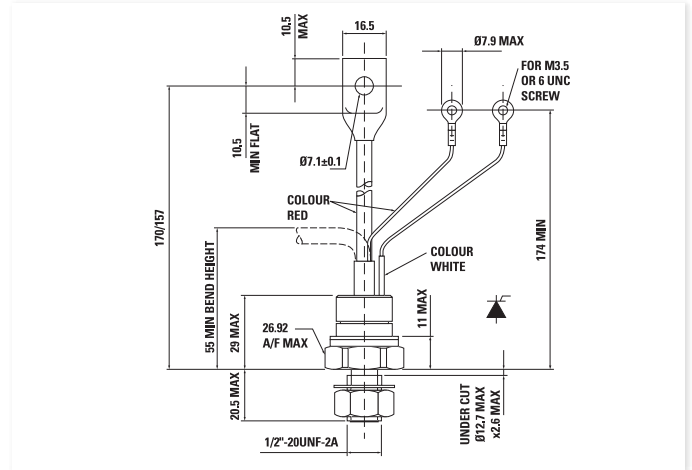


Outline Drawings

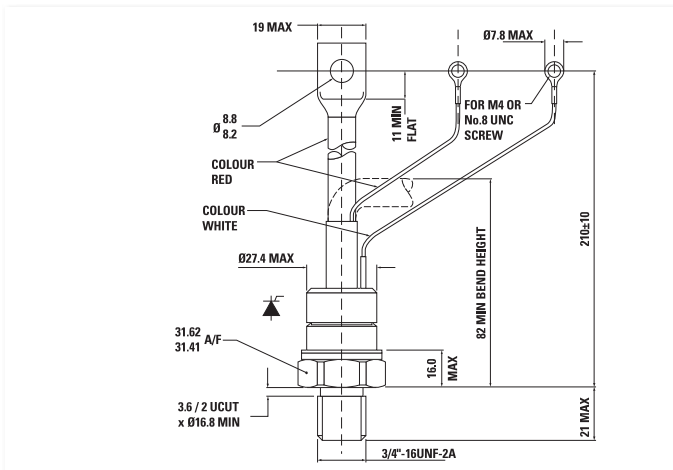
W16 - 101A235



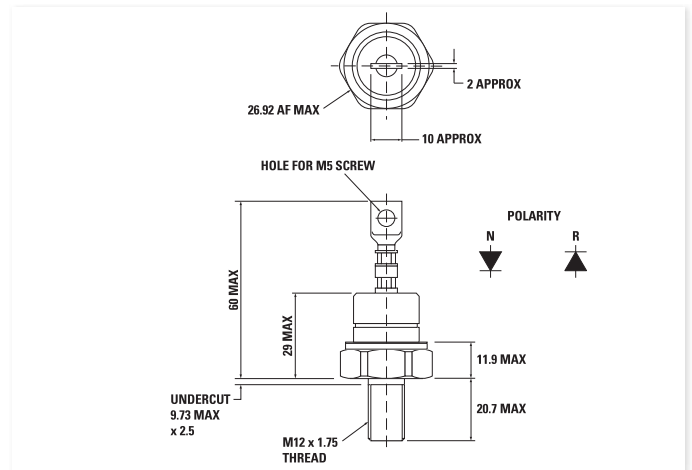
W17 - 101A231



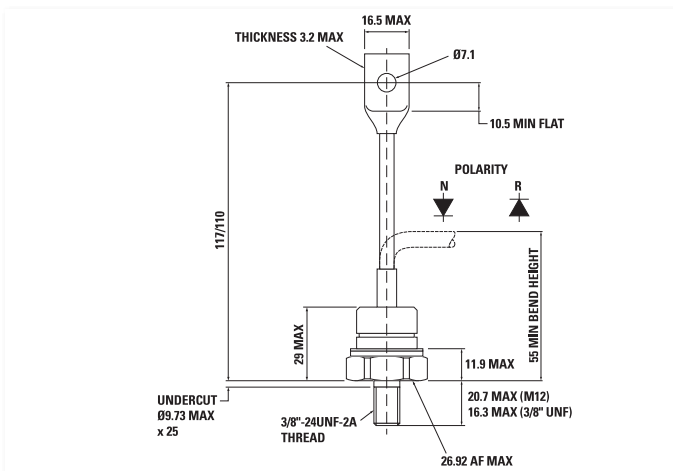
W18 - 101A225



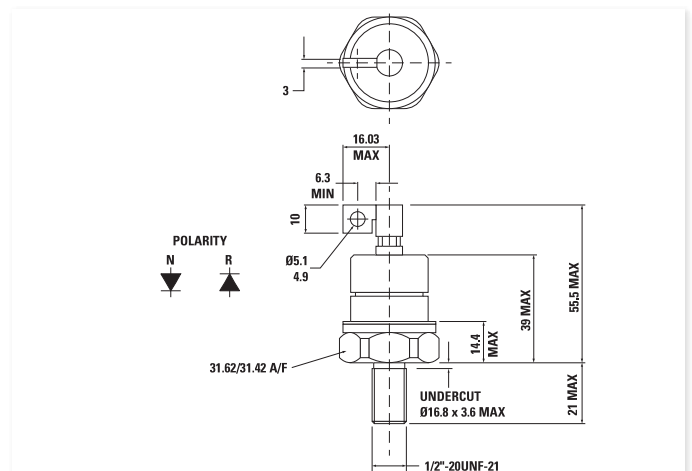
W20 - 100A303



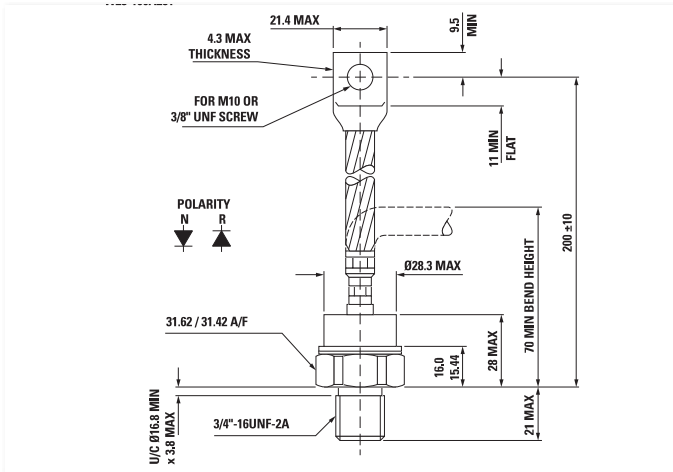
W21 - 100A294



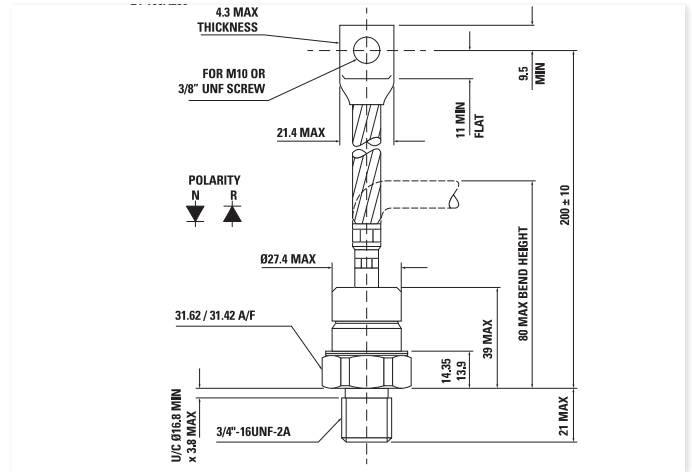
W22 - 100A297



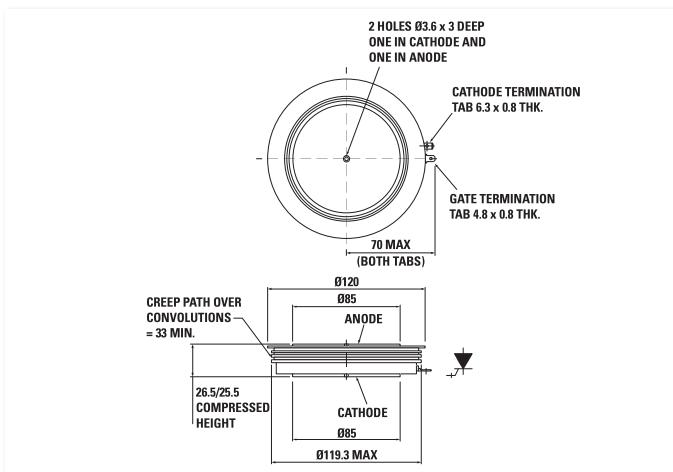
W23 - 100A281



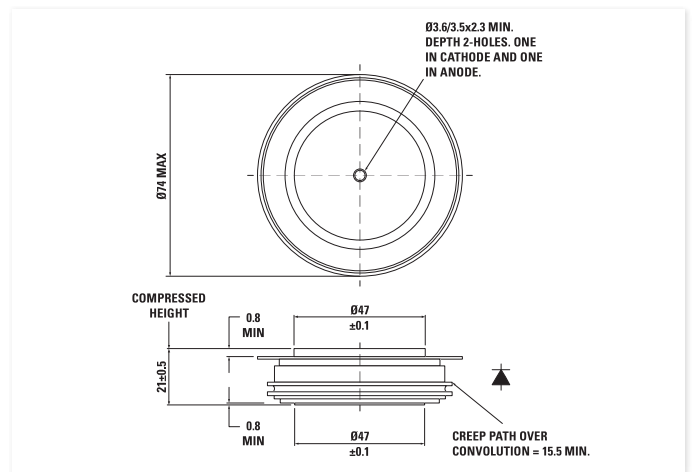
W24 - 100A280



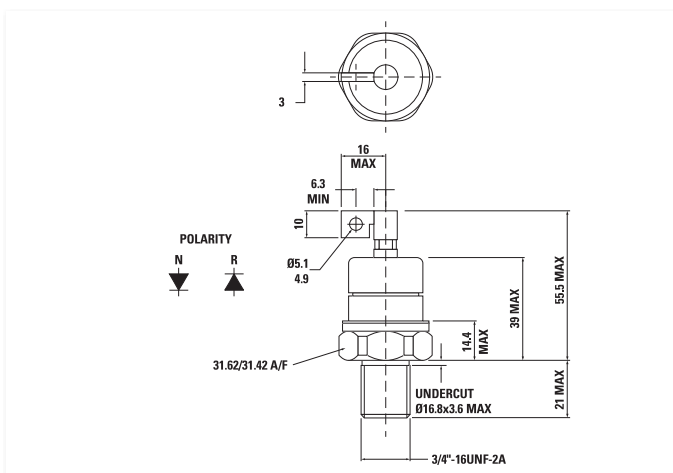
W33 - 101A346



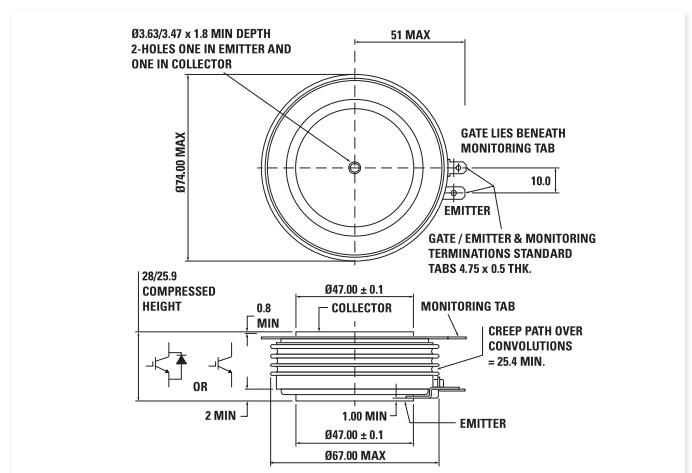
W37 - 100A325



W39 - 100A338

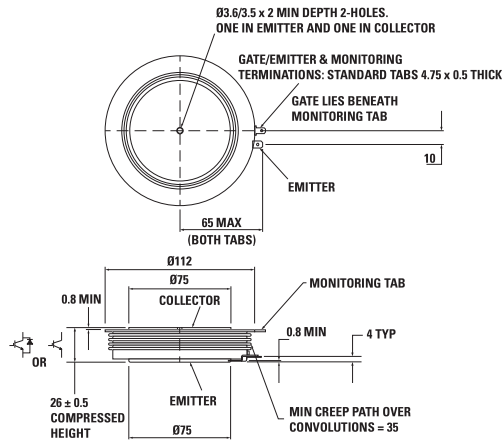


W40 - 171A107

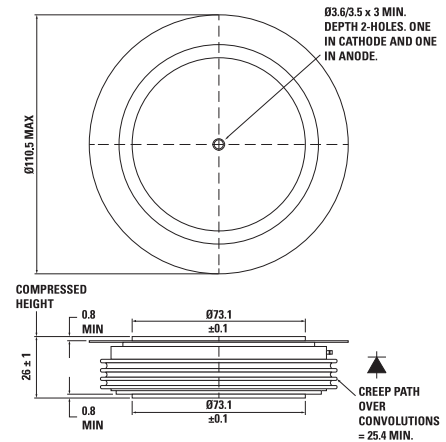


Outline Drawings

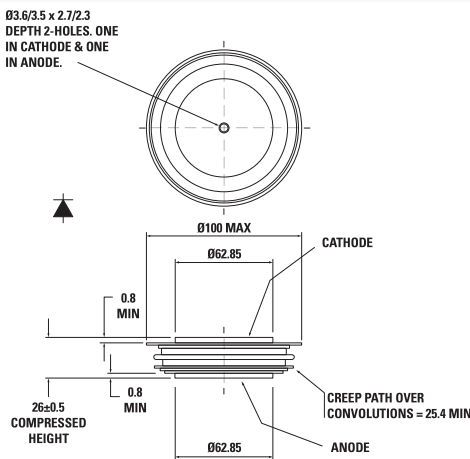
W41 - 171A108



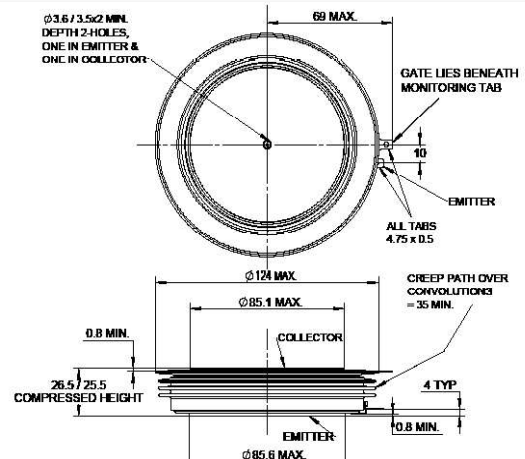
W42- 100A310



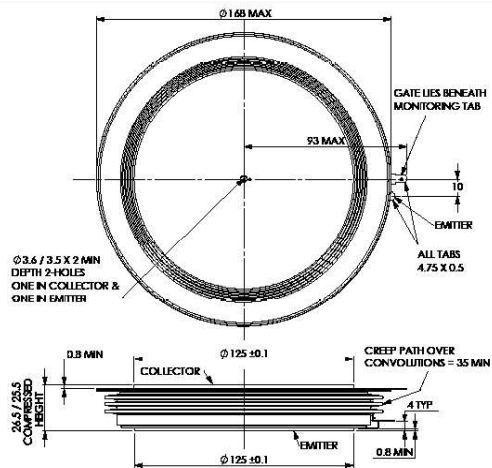
W43 - 100A320



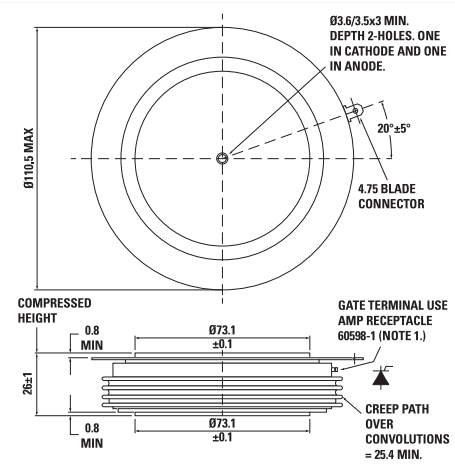
W44 - 101A340



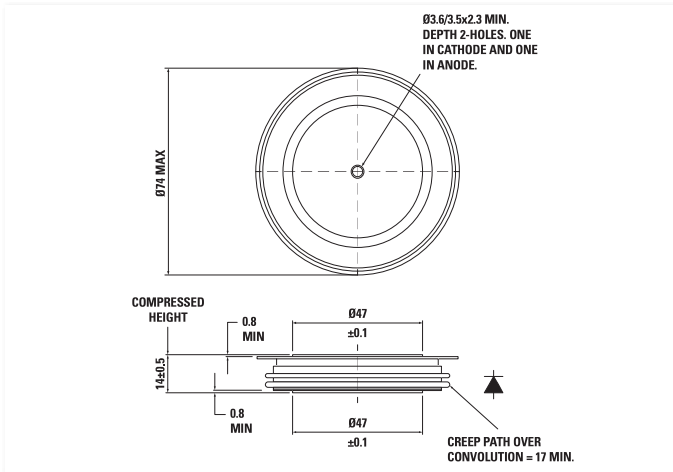
W45 - 101A359



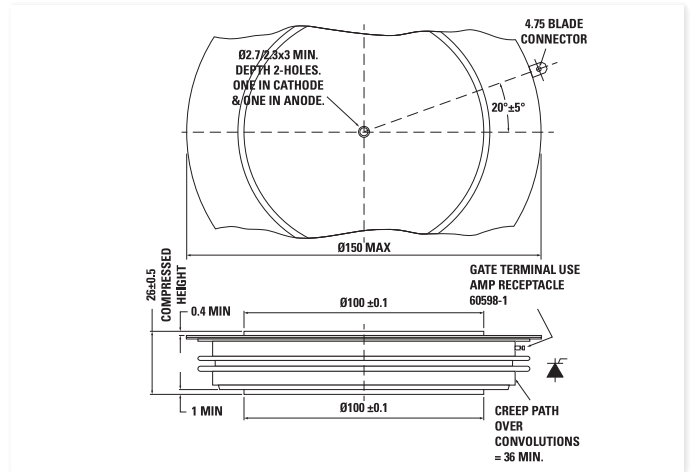
W46 - 101A305



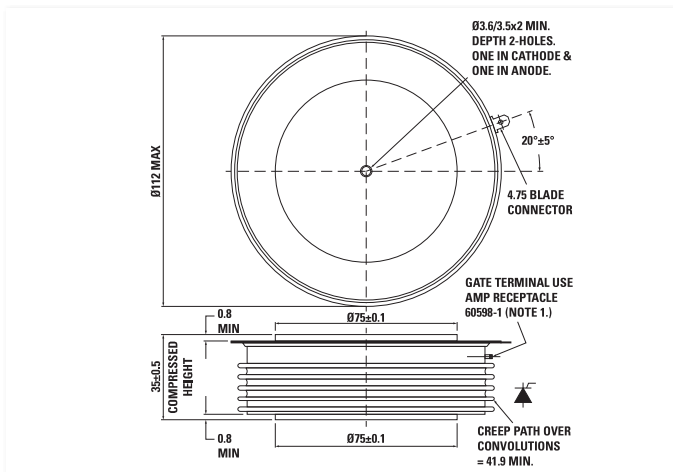
W47 - 100A322



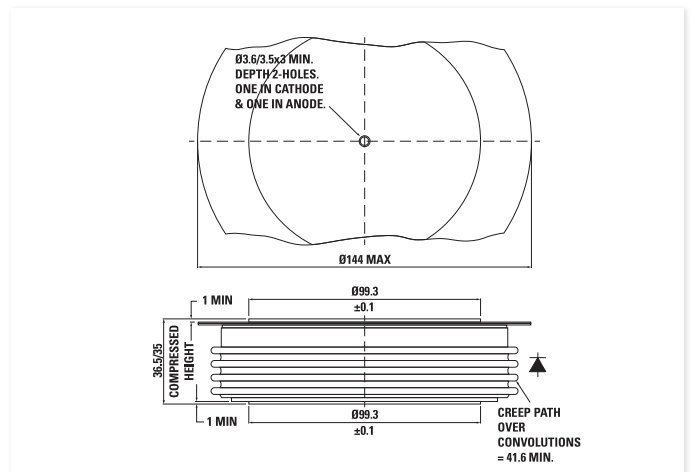
W48 - 101A347



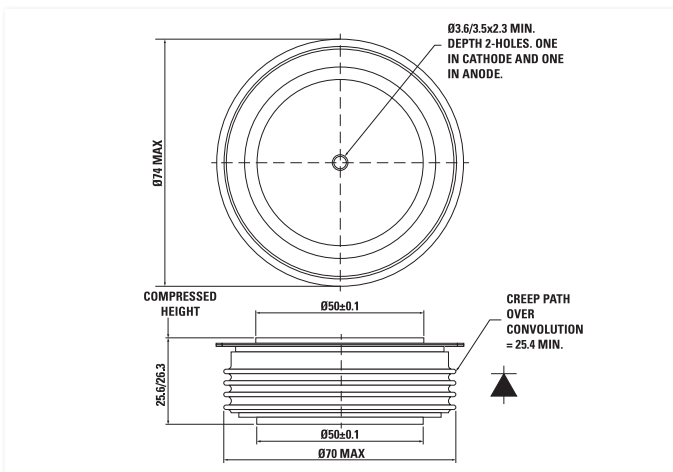
W51 - 101A334



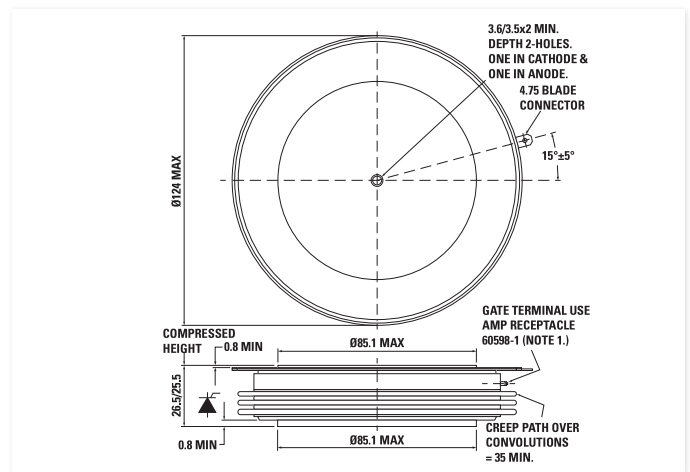
W52 - 100A328



W54 - 100A353

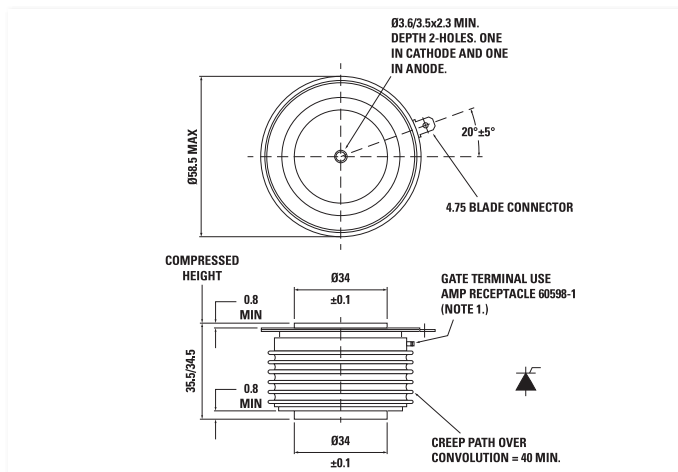


W55 - 101A352

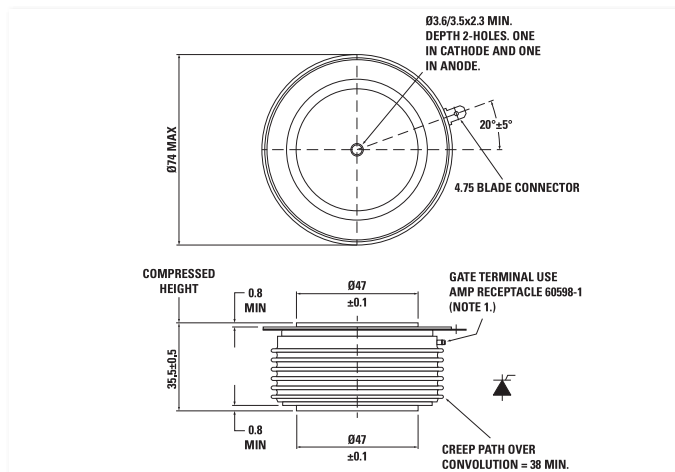


Outline Drawings

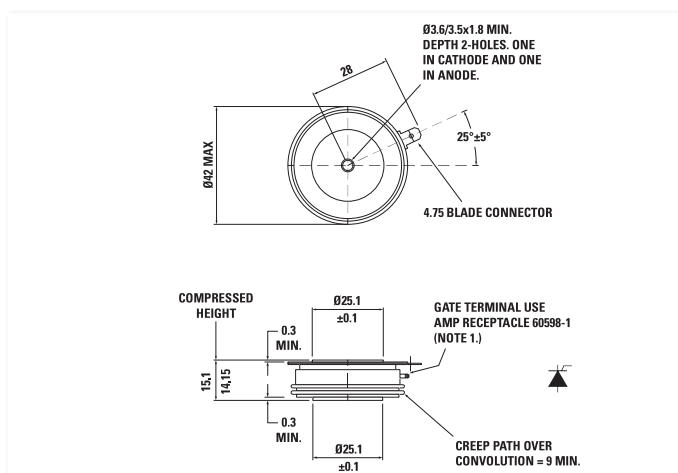
W56 - 101A365



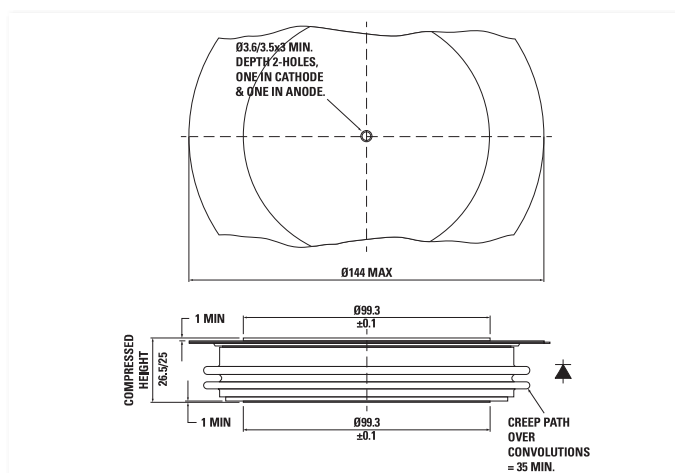
W57 - 101A363



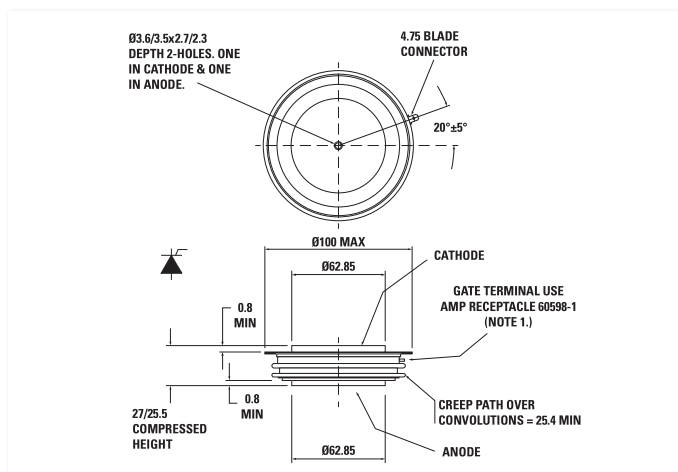
W58 - 101A237



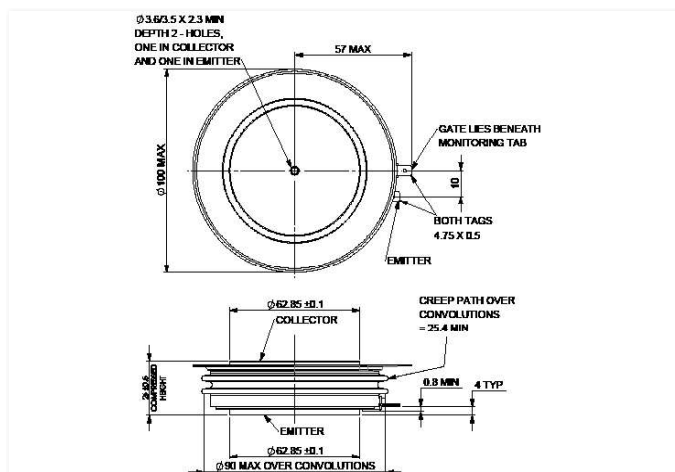
W59 - 100A359



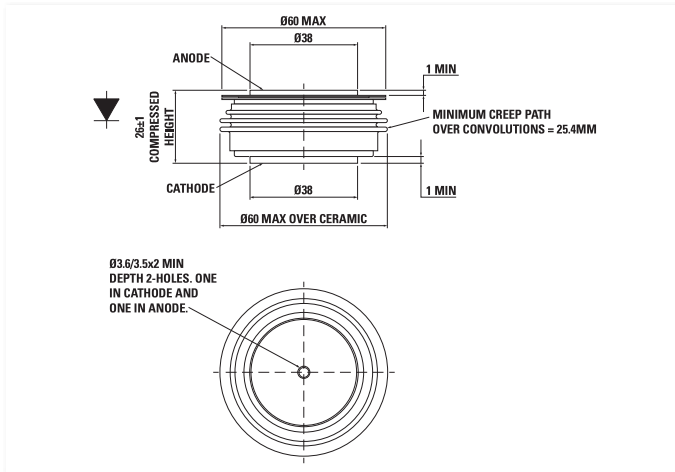
W62 - 101A314



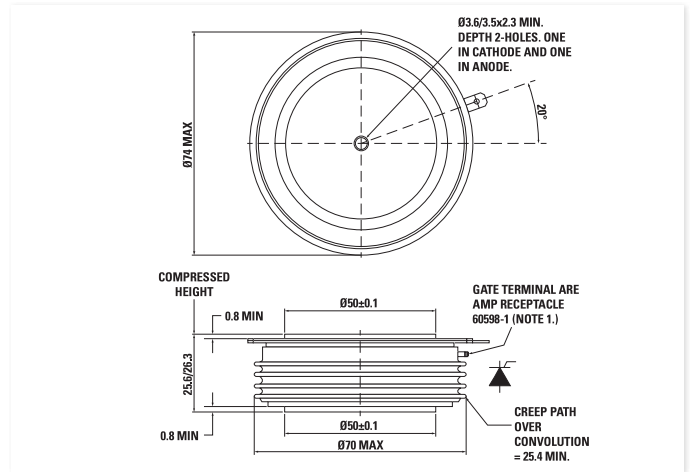
W67 - 101A366



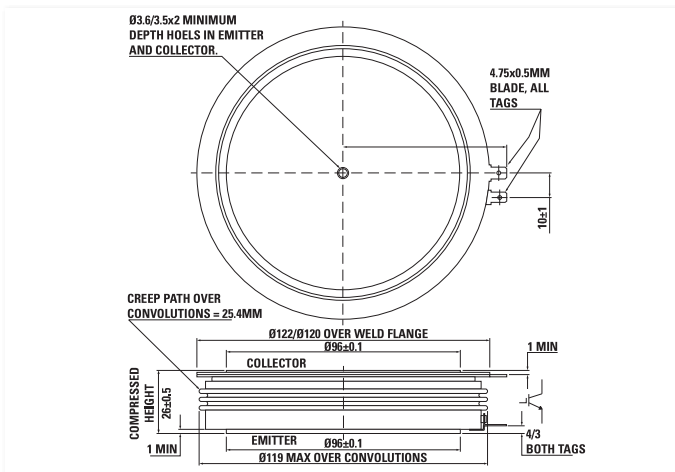
W68 - 100A367



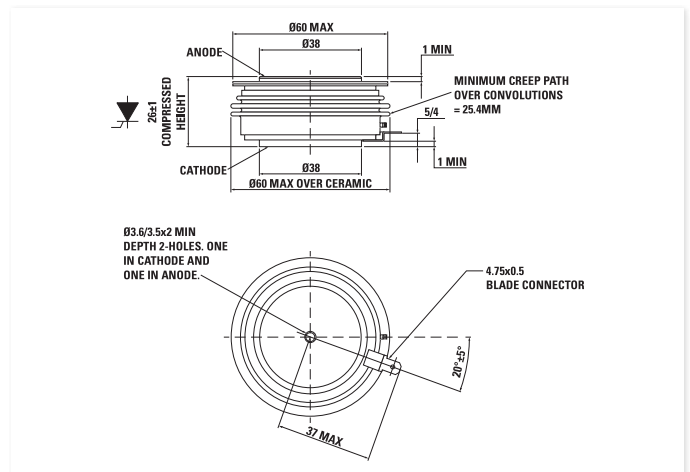
W70 - 101A357



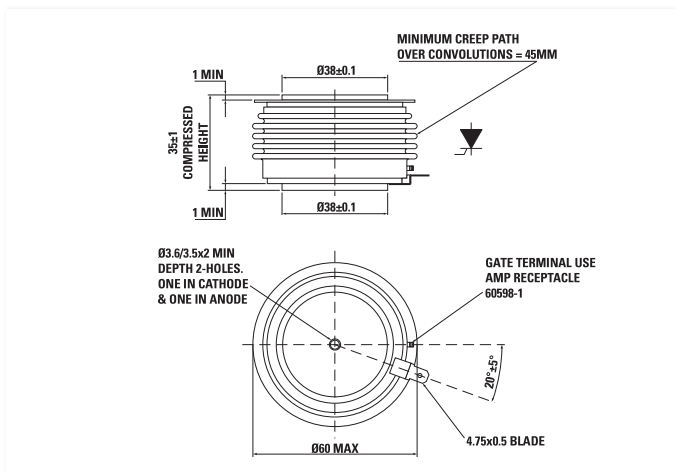
W71 - 101A375



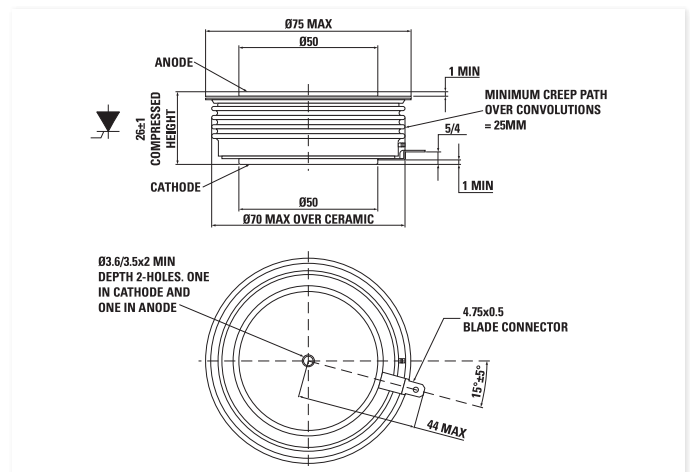
W75 - 101A377



W76 - 101A392

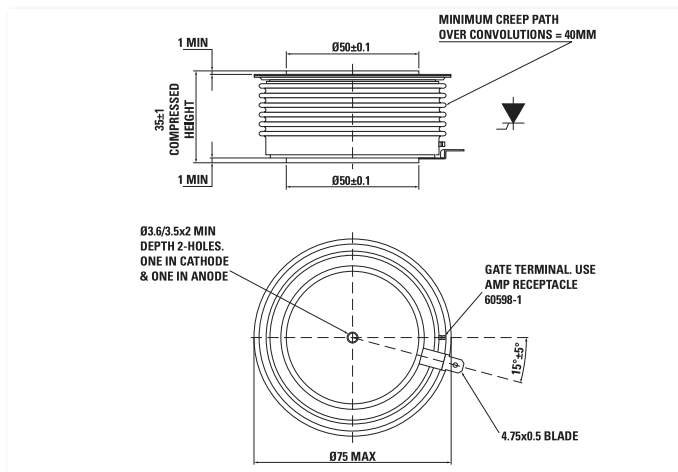


W77 - 101A372

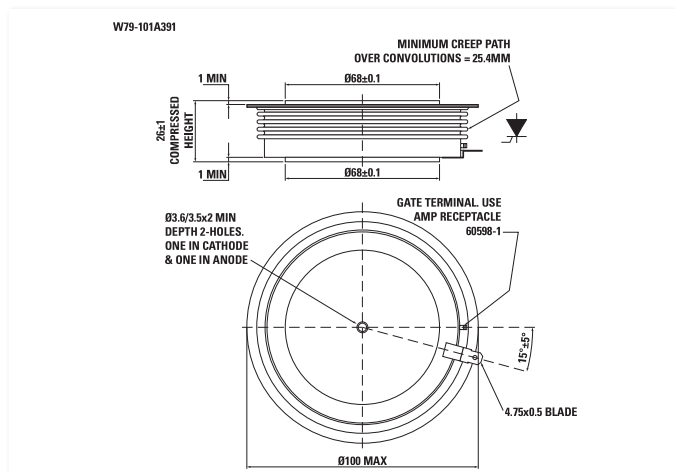


Outline Drawings

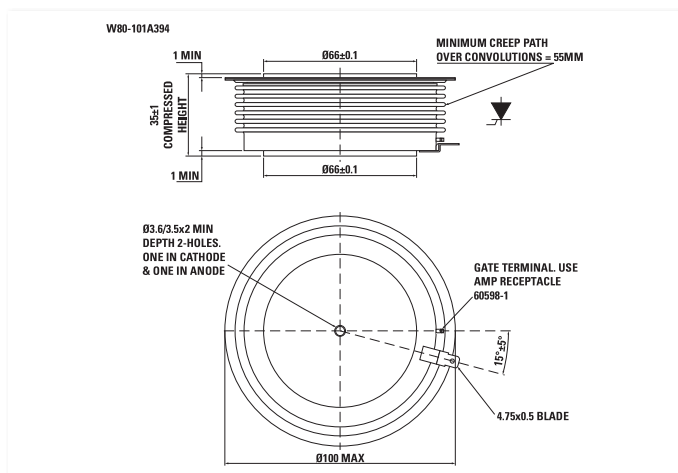
W78 - 101A393



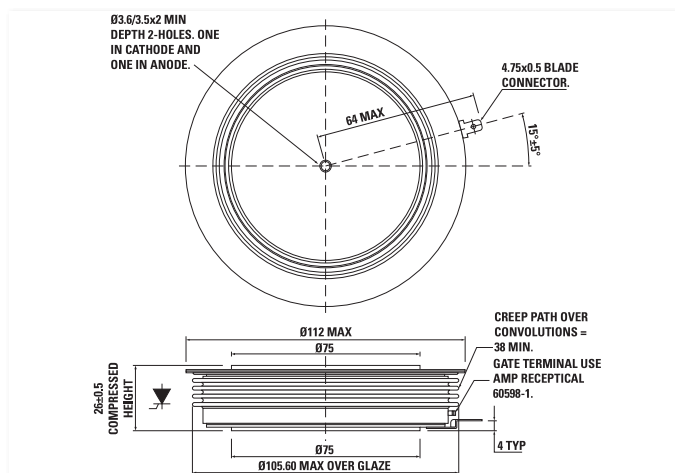
W79 - 101A391



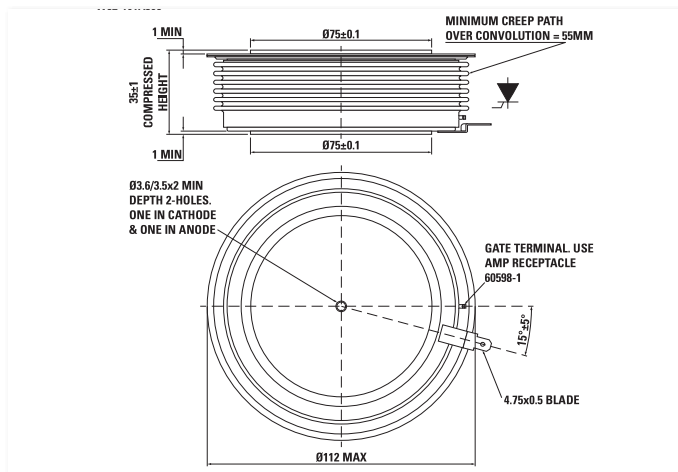
W80 - 101A394



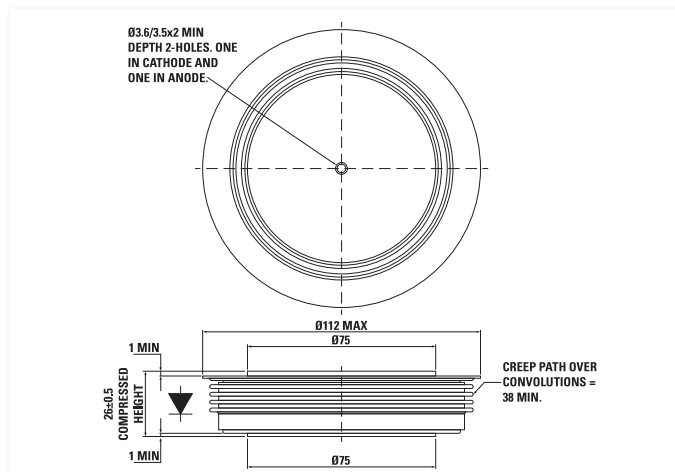
W81 - 101A373



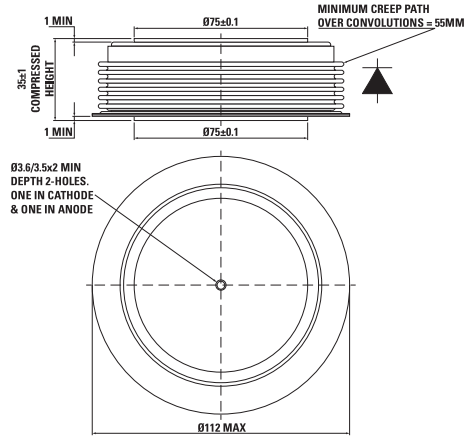
W82 - 101A395



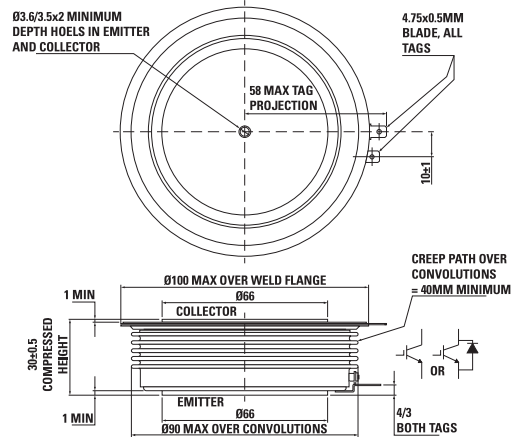
W89 - 100A368



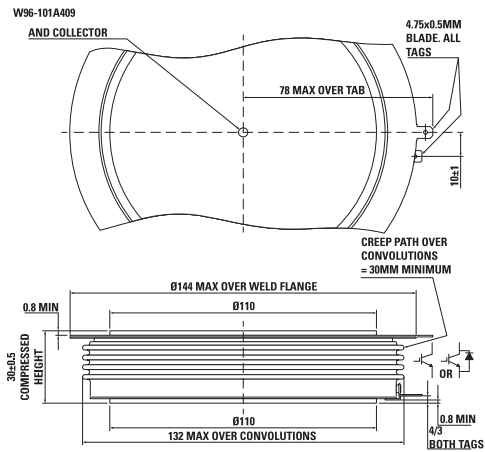
W94 - 100A372



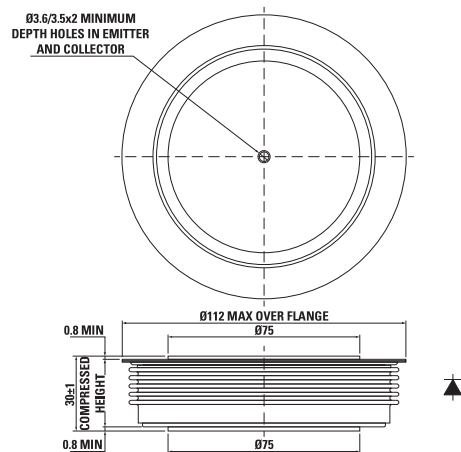
W95 - 101A403



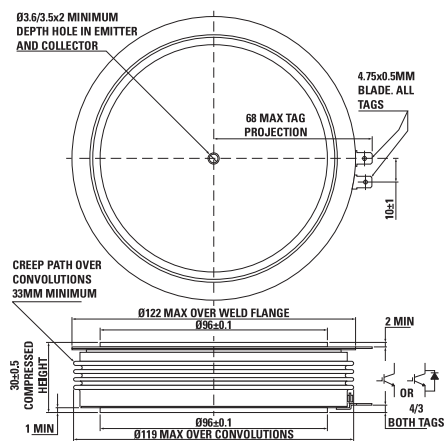
W96 - 101A409



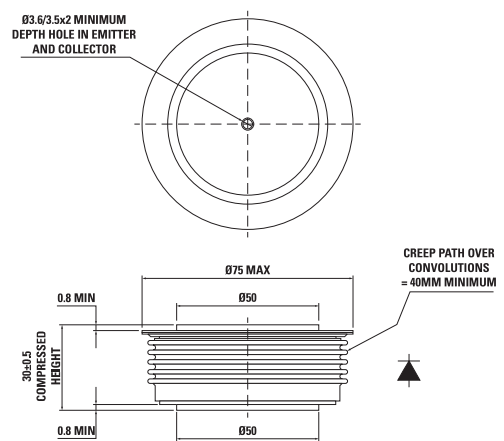
W97 - 100A379



W98 - 101A413

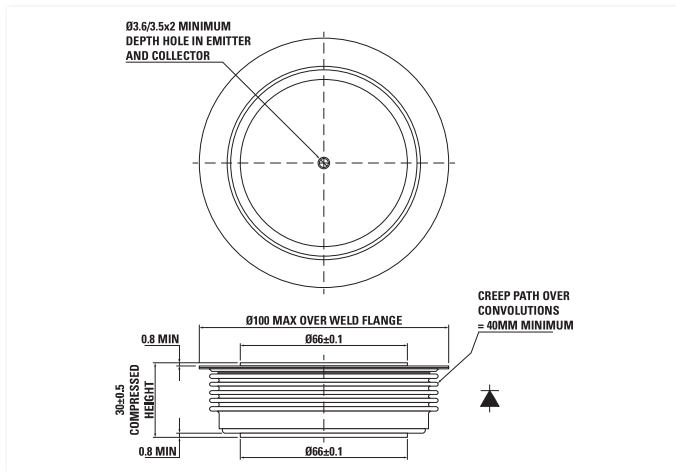


W99 - 100A383

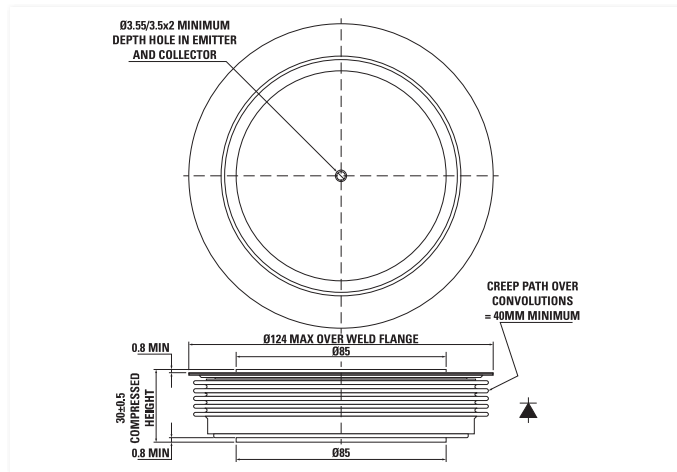


Outline Drawings

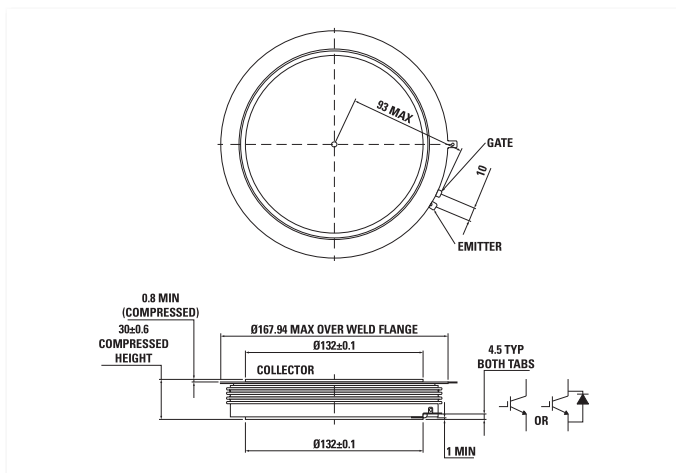
W100 - 100A384



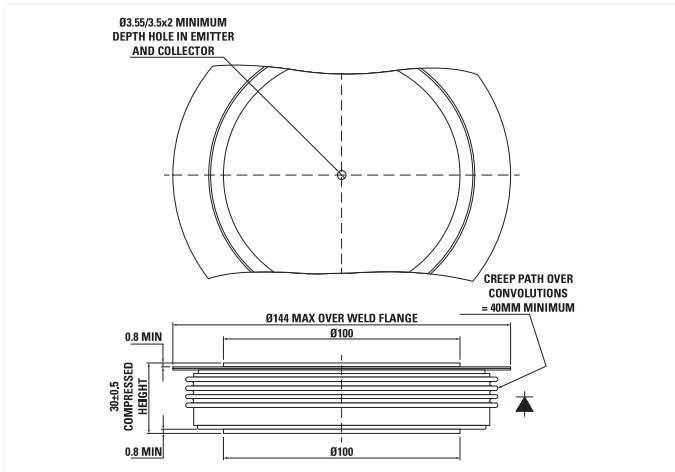
W101 - 100A380



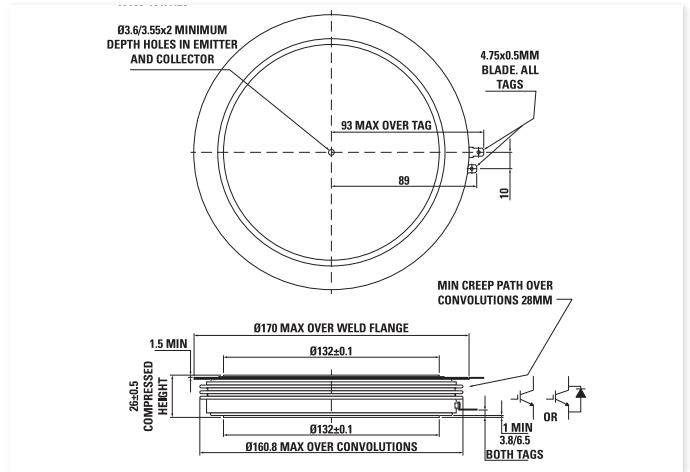
W103 - 101A401



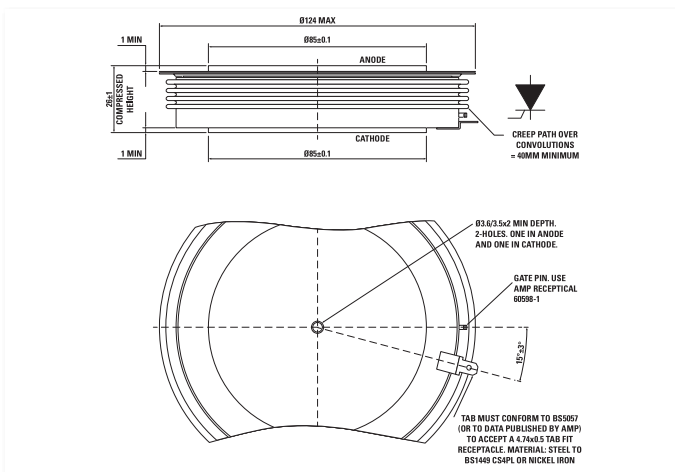
W105 - 100A385



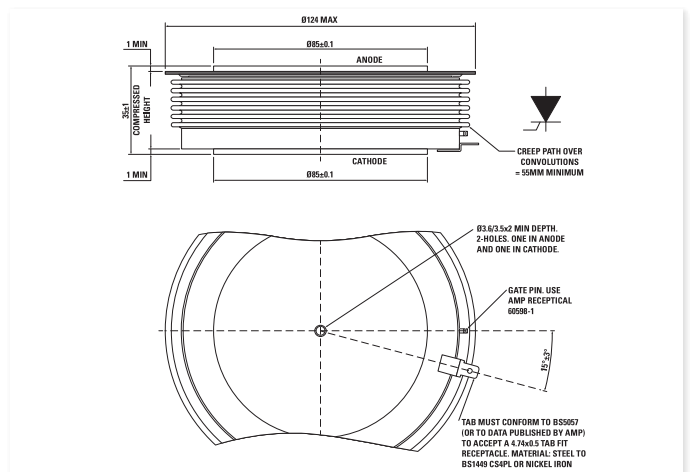
W106 - 101A420



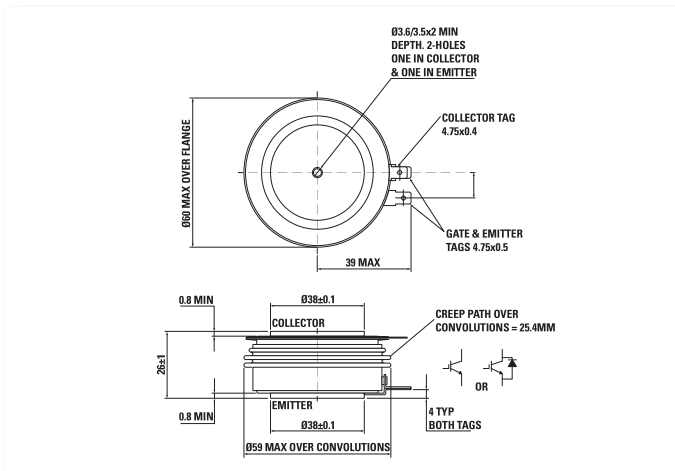
W107 - 101A411



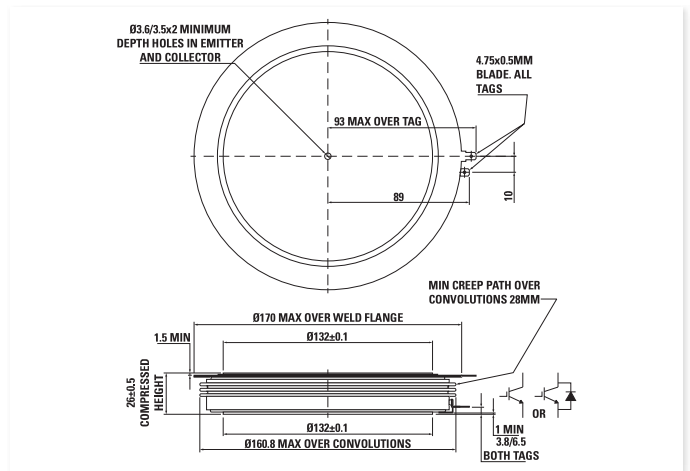
W108 - 101A410



W109 - 101A425

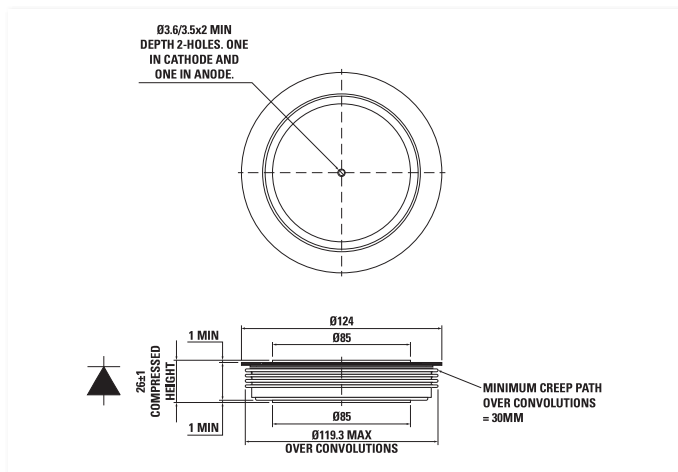


W110 - 101A418

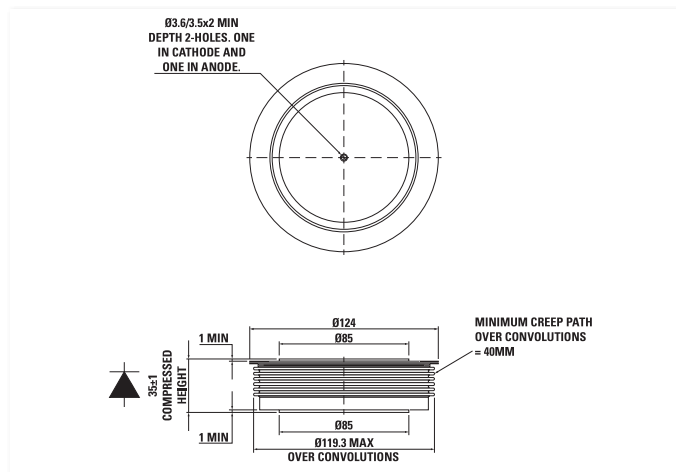


Outline Drawings

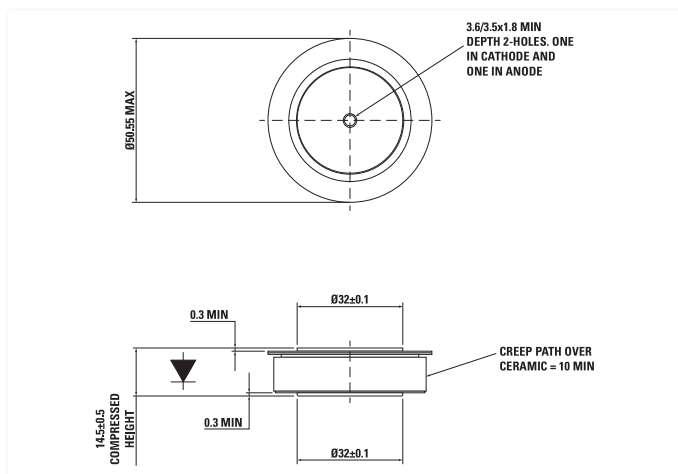
W111 - 100A378



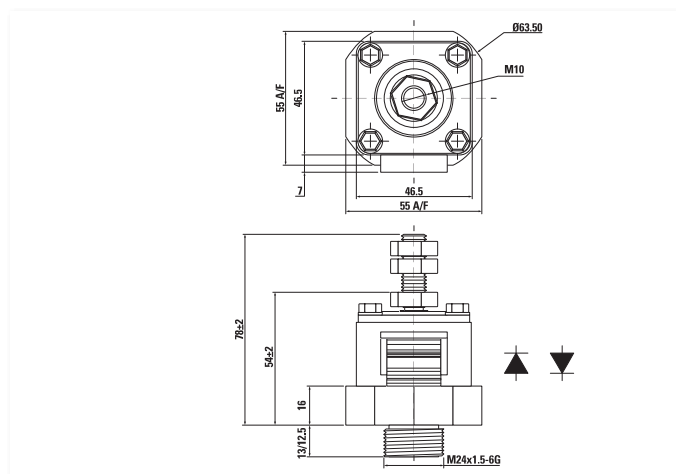
W112 - 100A377



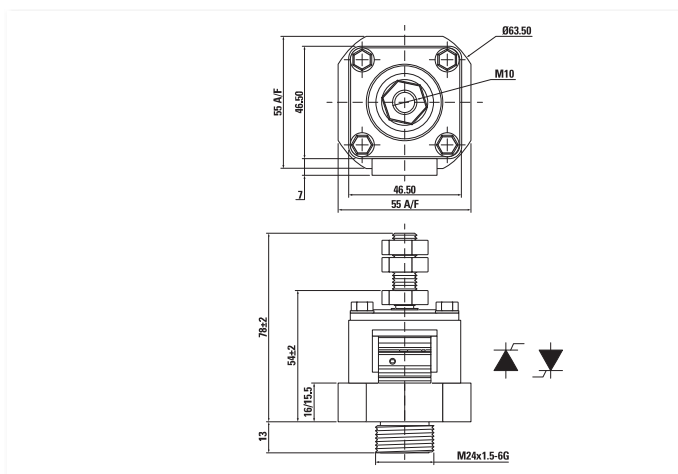
W113 - 100A393



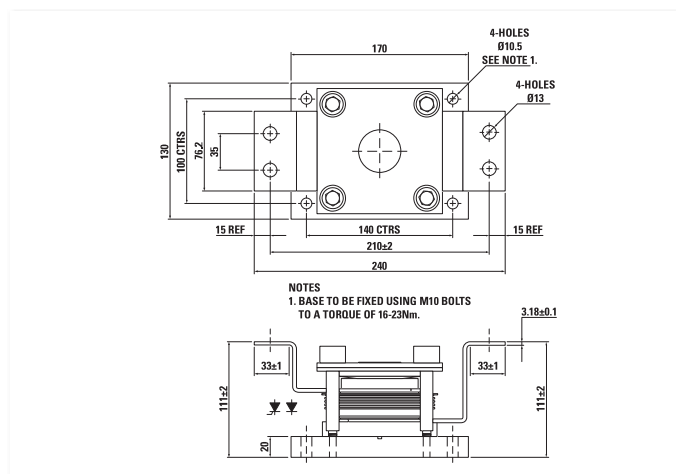
W114 - 100A394



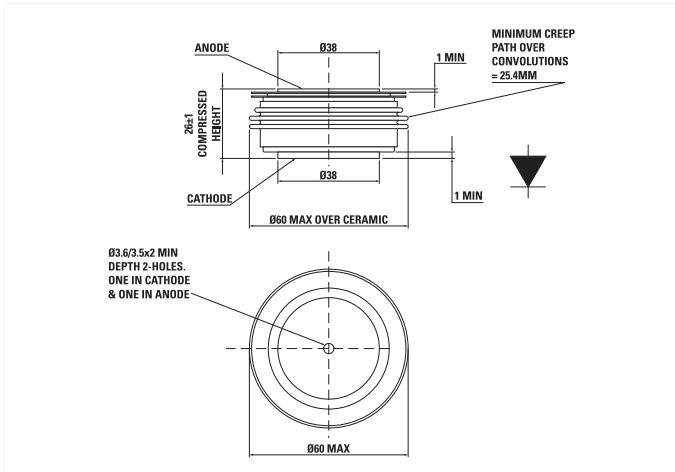
W115 - 101A427



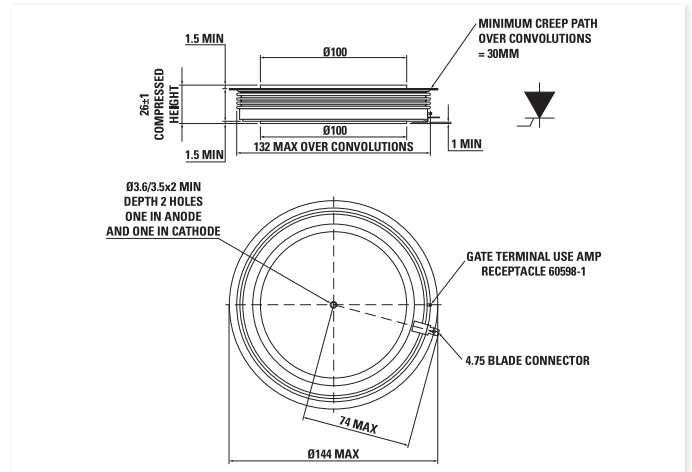
W116 - 150A132



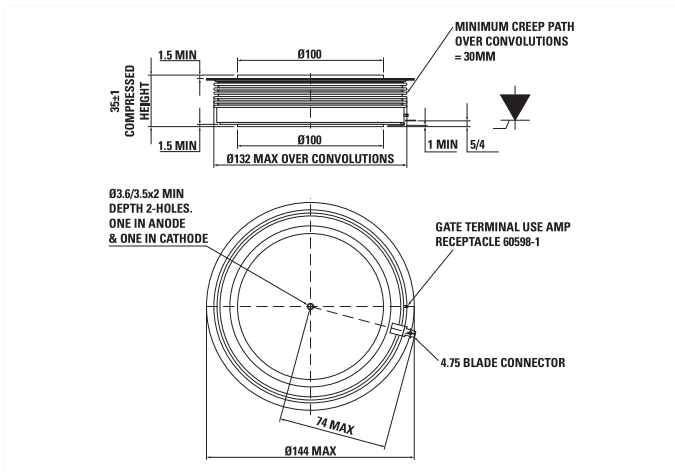
W117 - 100A375



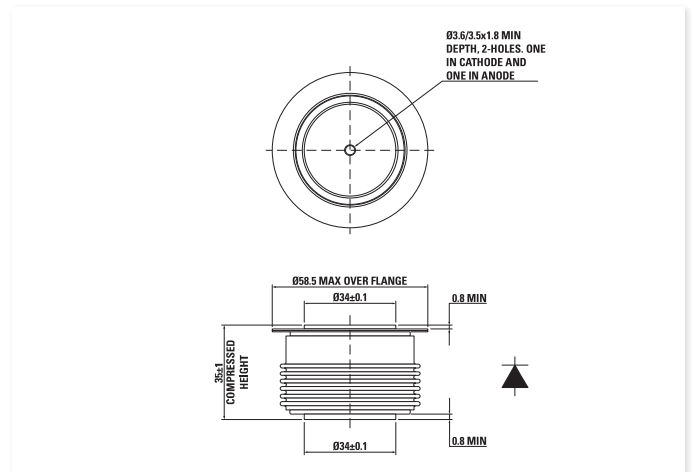
W118 - 101A428



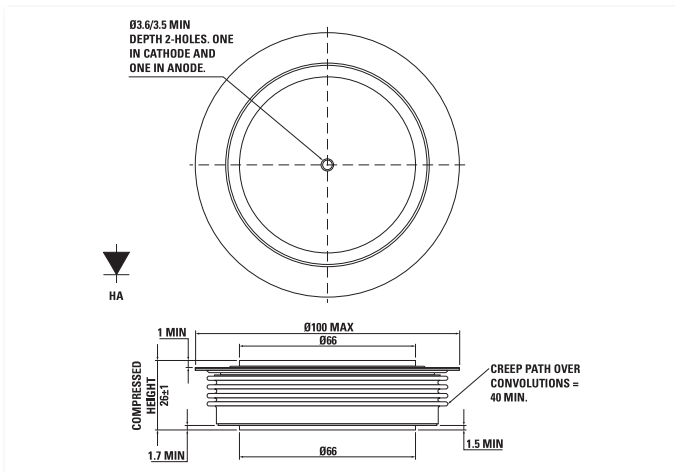
W119 - 101A421



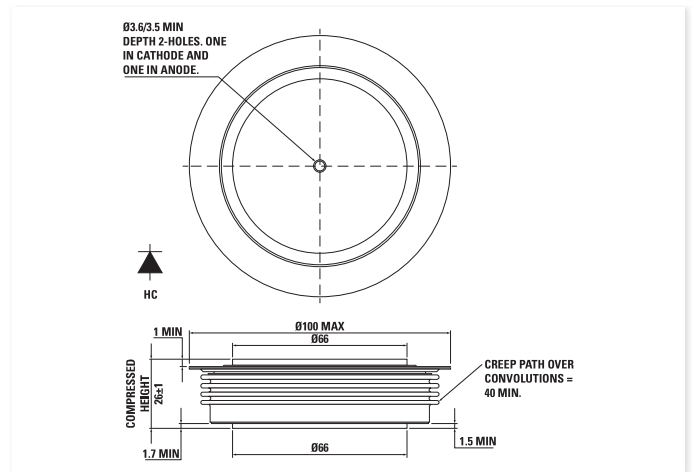
W120 - 100A395



W121 - 100A381

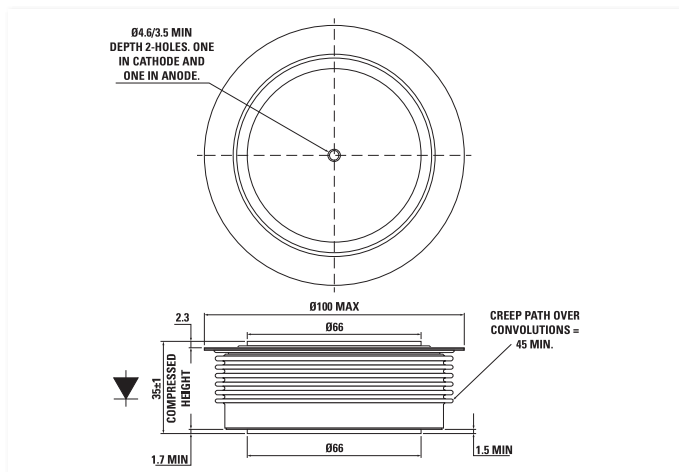


W122 - 100A396

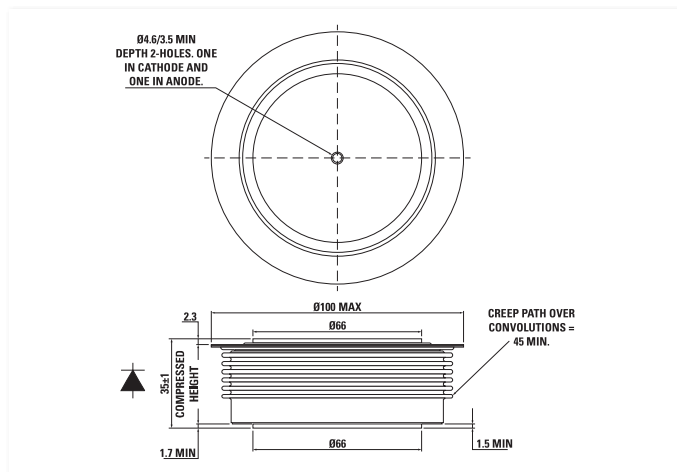


Outline Drawings

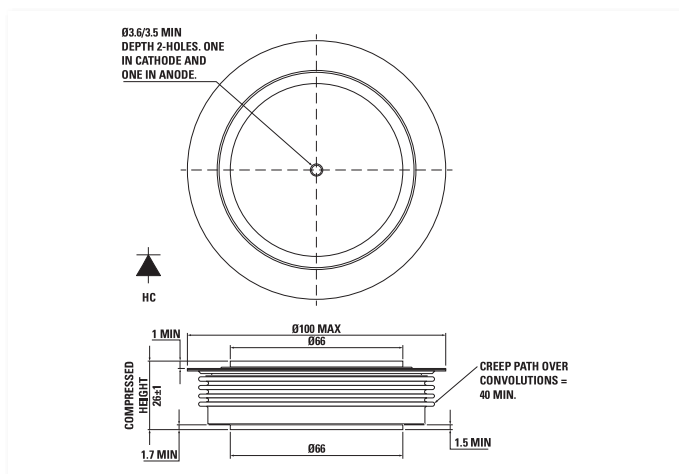
W123 - 100A382



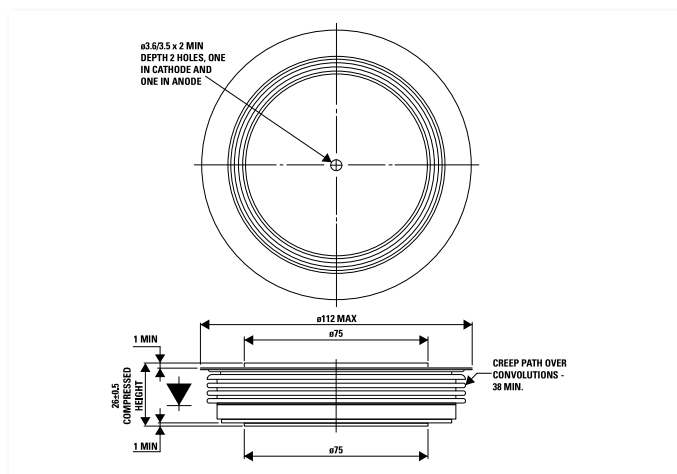
W124 - 100A397



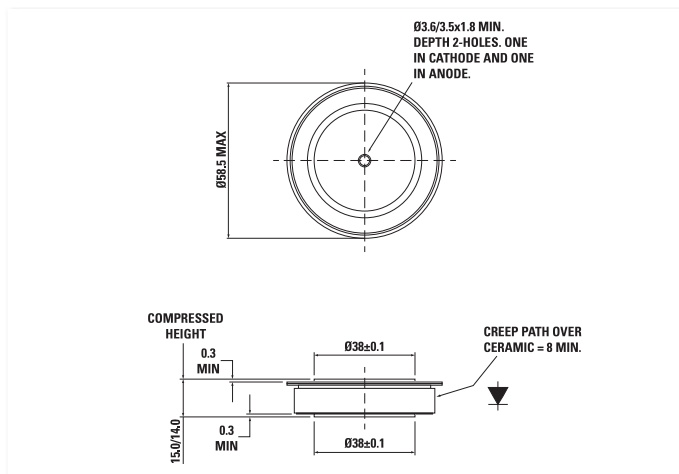
W126 - 100A368



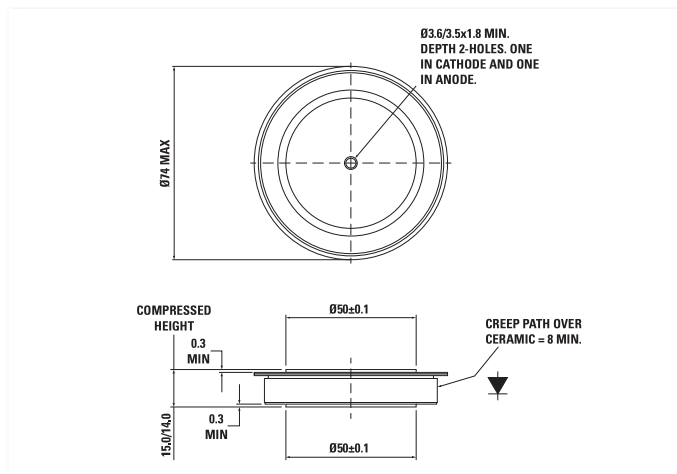
W127 - 100A368



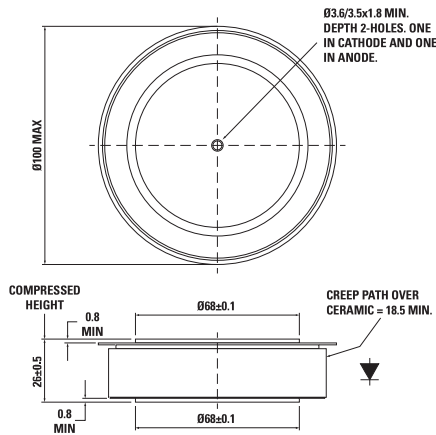
WD2 - 100A325



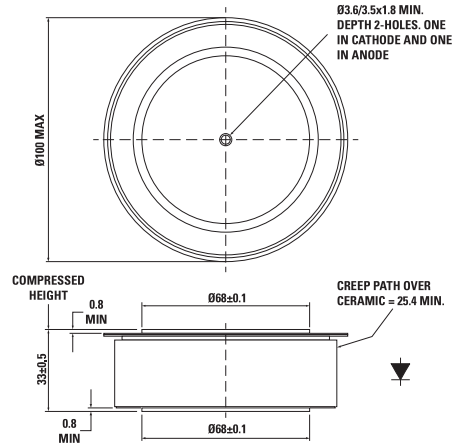
WD3 - 100A356



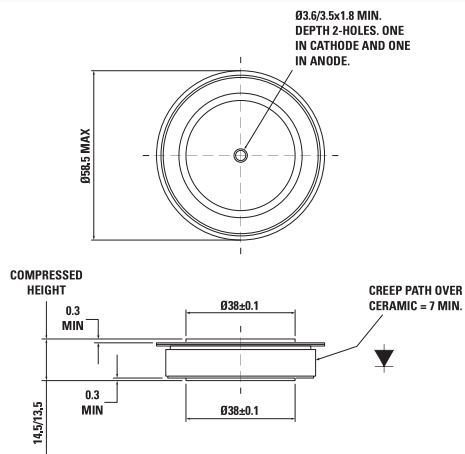
WD5 - 100A361 - 26 mm thick



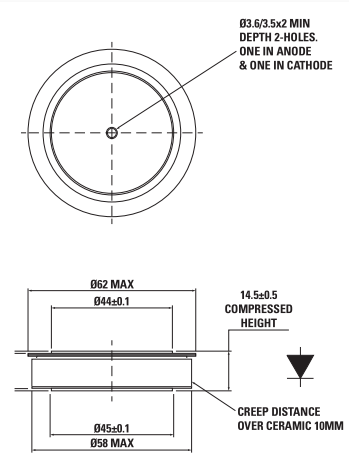
WD6 - 100A360 - 33 mm thick



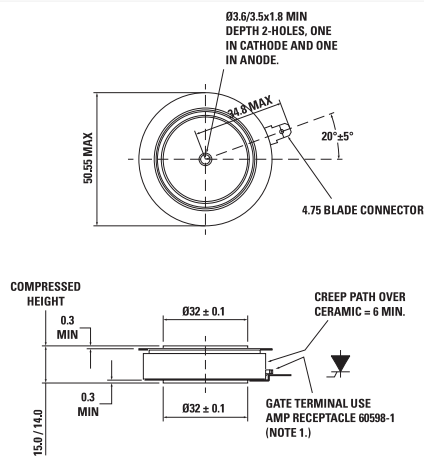
WD7 - 100A363



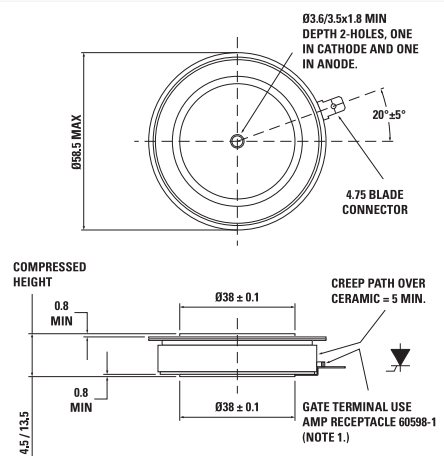
WD8 - 100A392



WP1 - 101A361

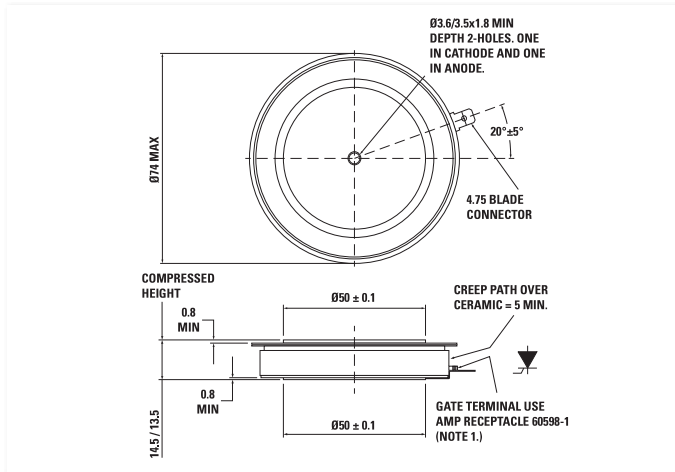


WP2 - 101A354

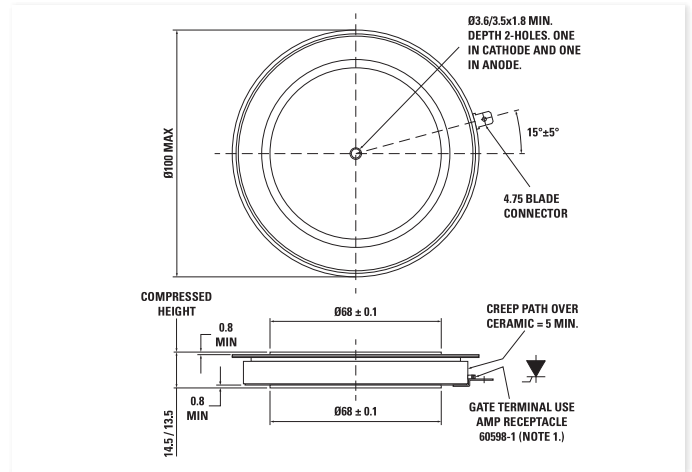


Outline Drawings

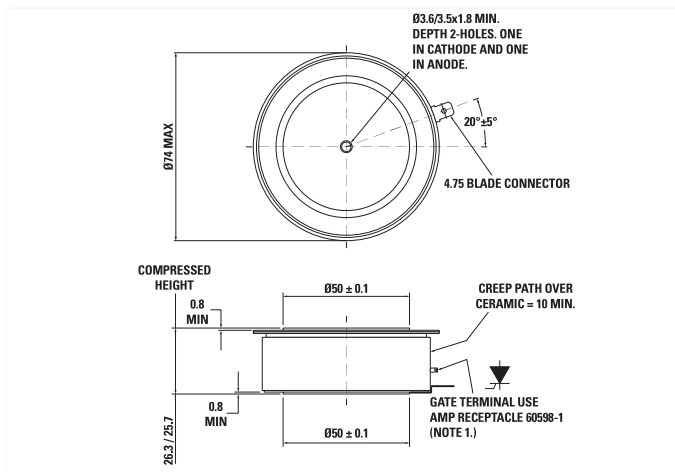
WP3 - 101A353



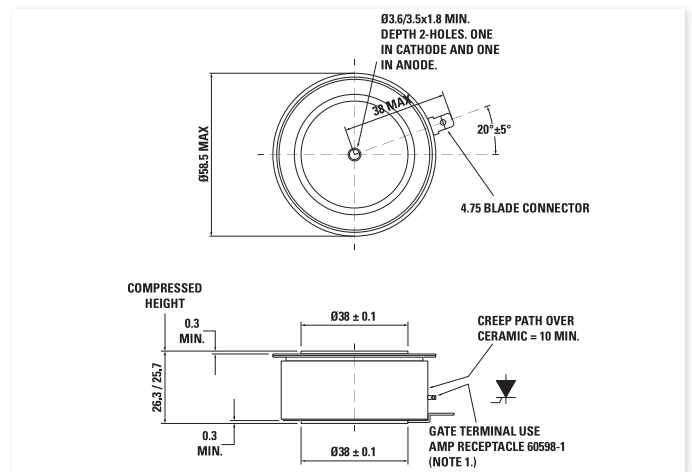
WP4 - 101A355



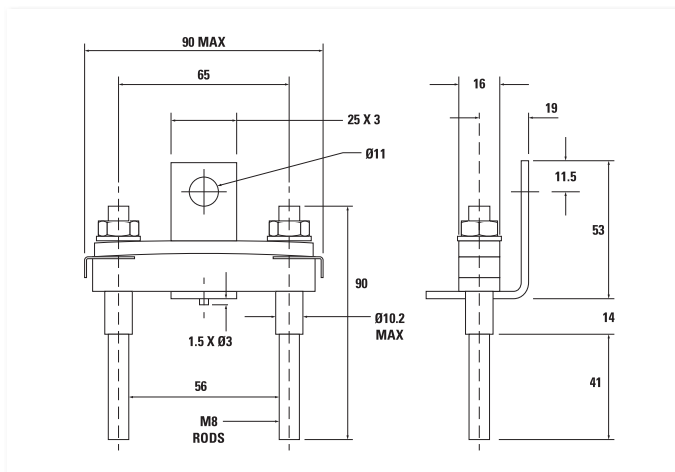
WP5 - 101A356



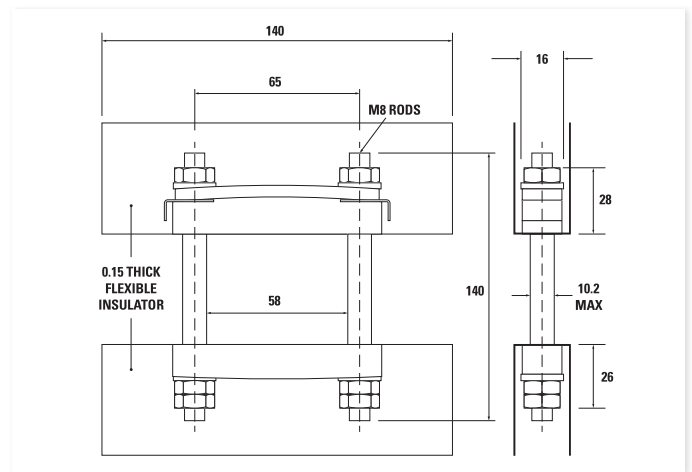
WP6 - 101A389



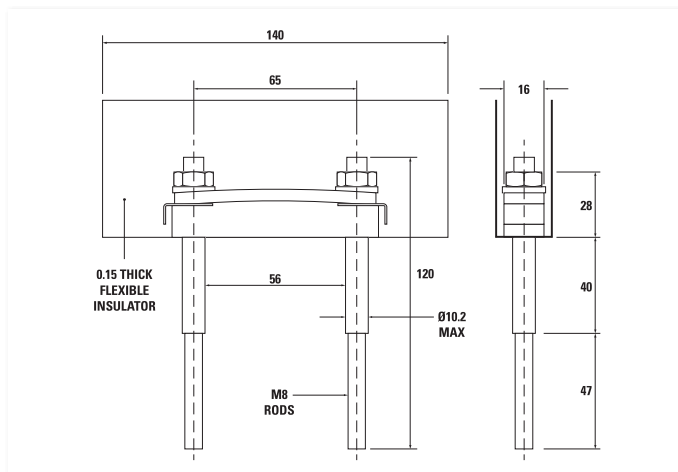
WC1 - XK0450SA056M



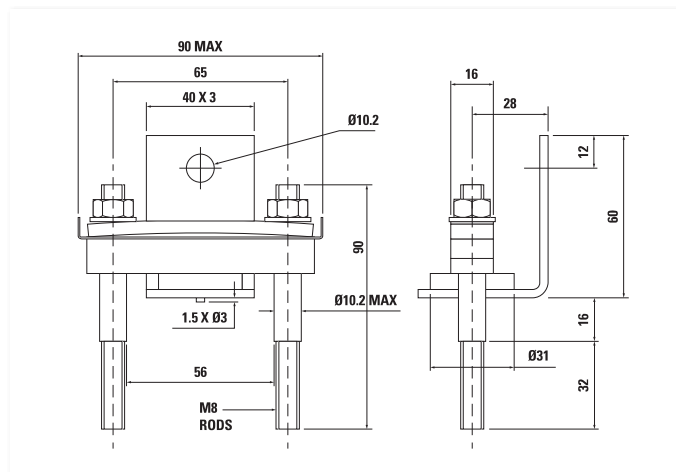
WC2 - XK0450DA056M



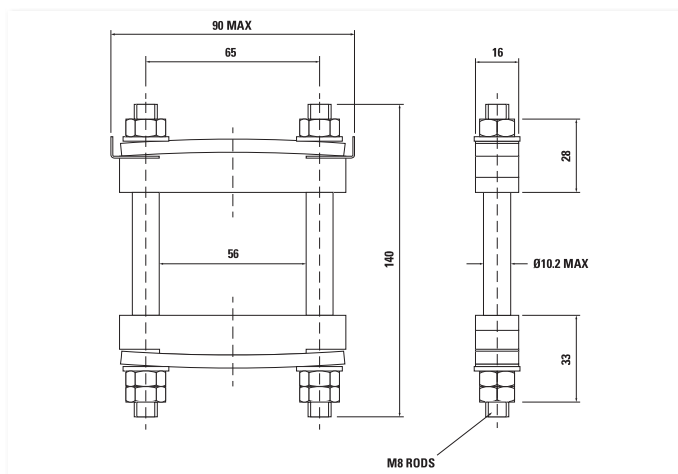
WC3 - XK0450DT056M



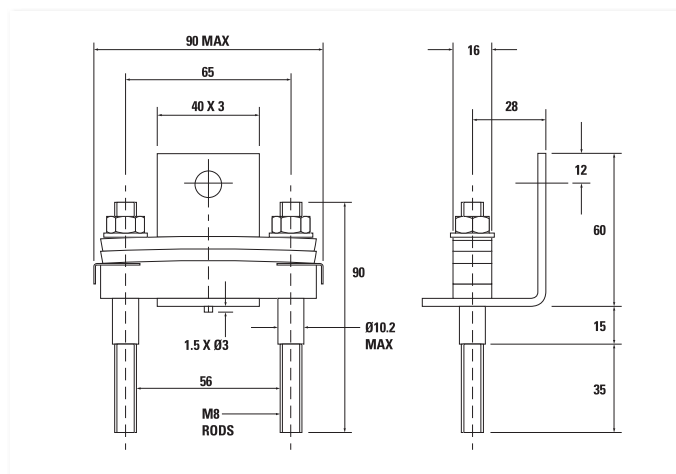
WC4 - XK0550SA056M



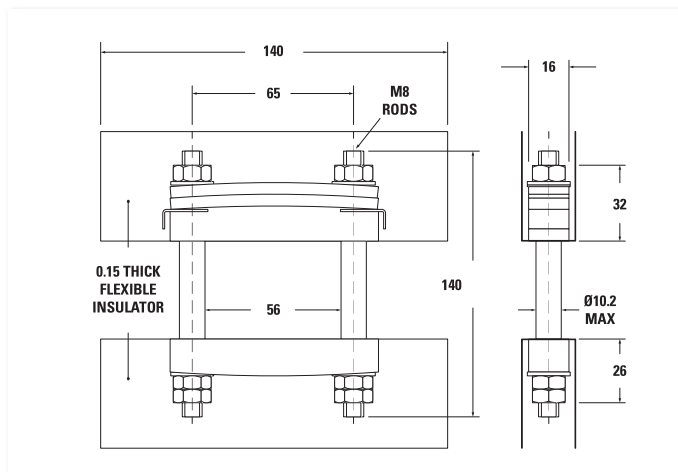
WC5 - XK0550DA056M



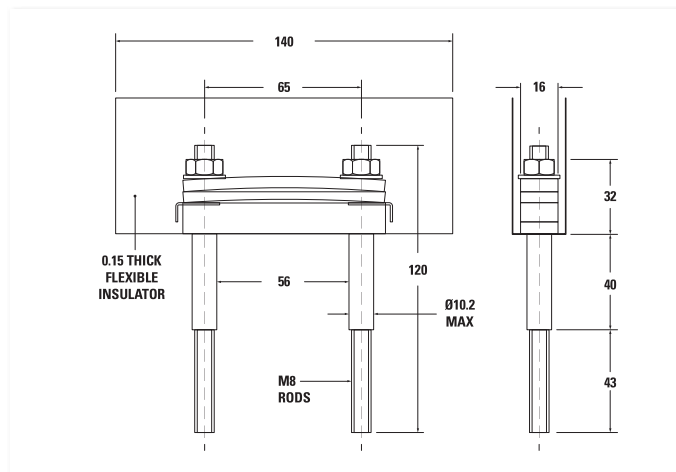
WC6 - XK0900SA056M



WC7 - XK0900DA056M

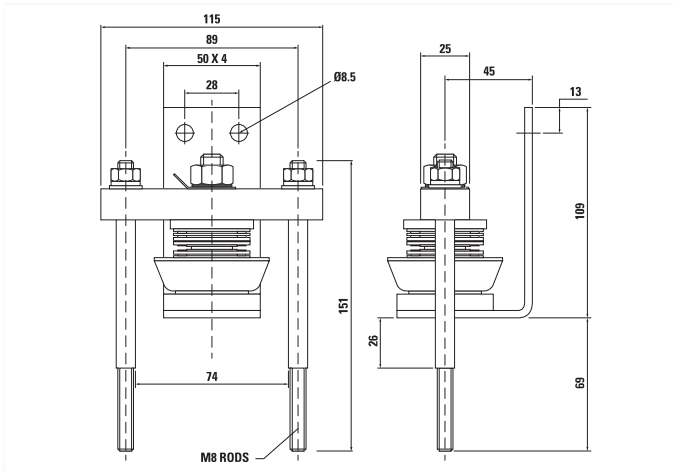


WC8 - XK0900DT056M

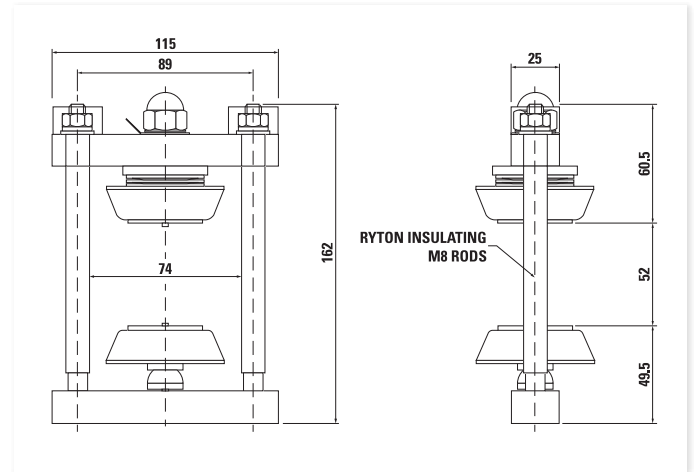


Outline Drawings

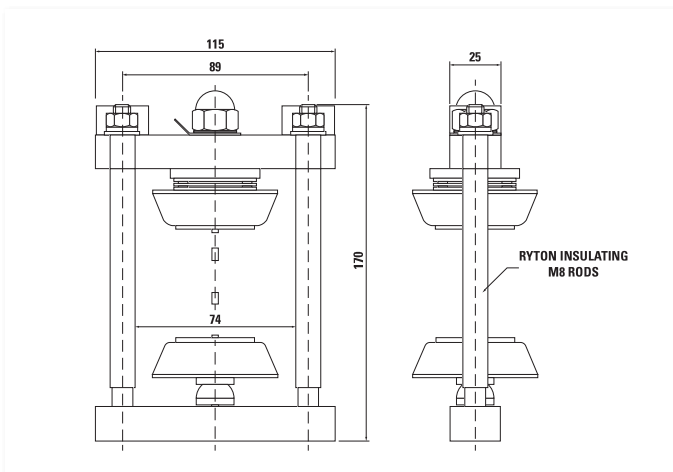
WC9 - XK0600SA074M



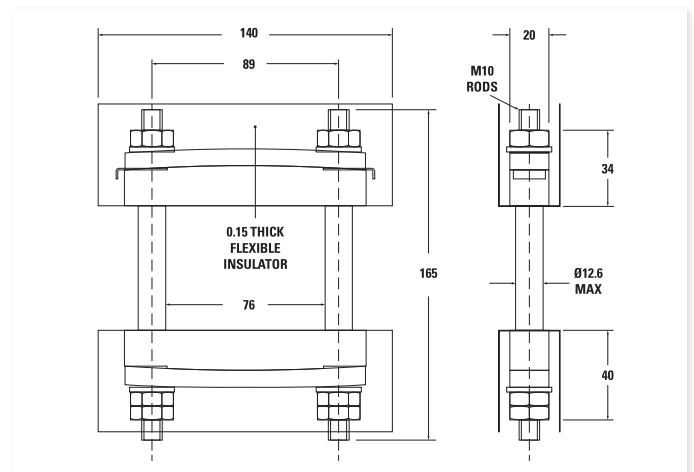
WC12 - XK1000DA074M



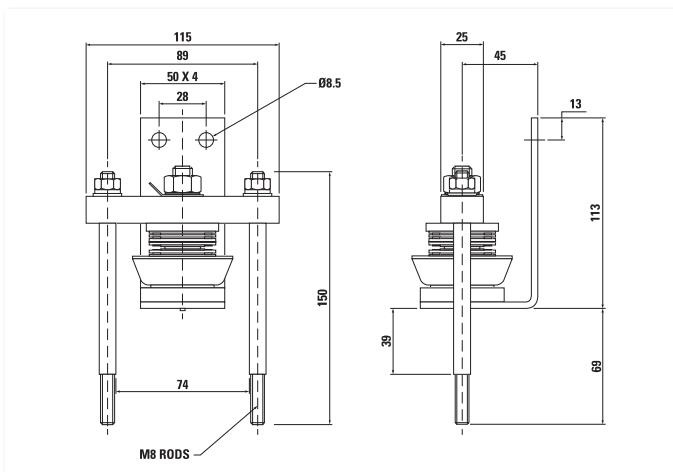
WC10 - XK0600DA074M



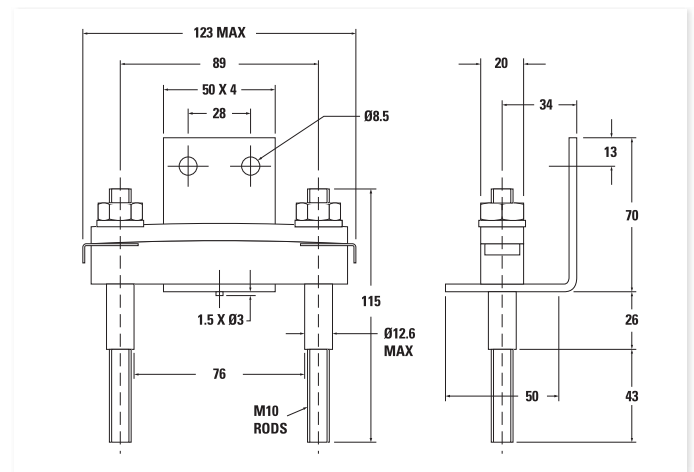
WC13 - XK1100DA076M



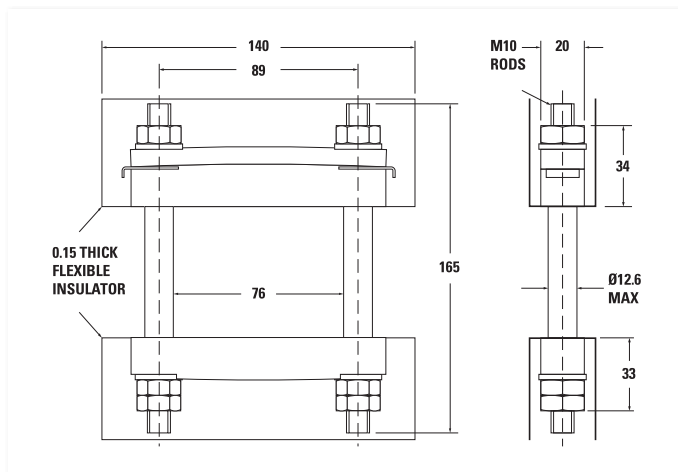
WC11 - XK1000SA074M



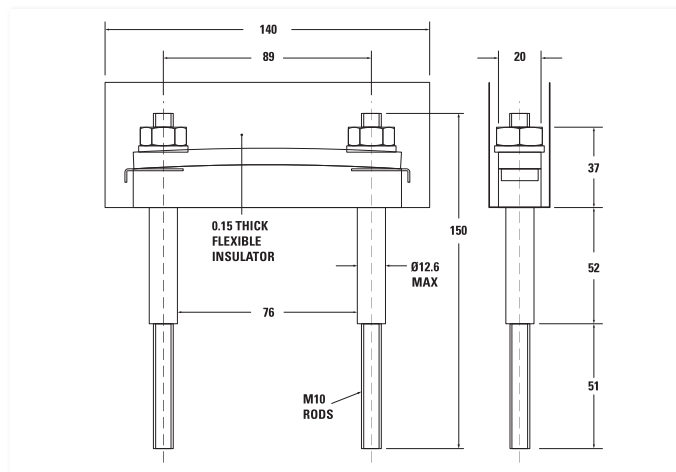
WC14 - XK1130SA076M



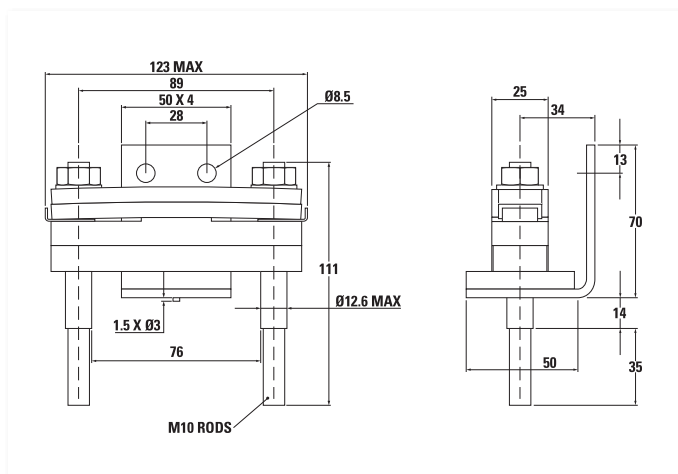
WC15 - XK1130DA076M



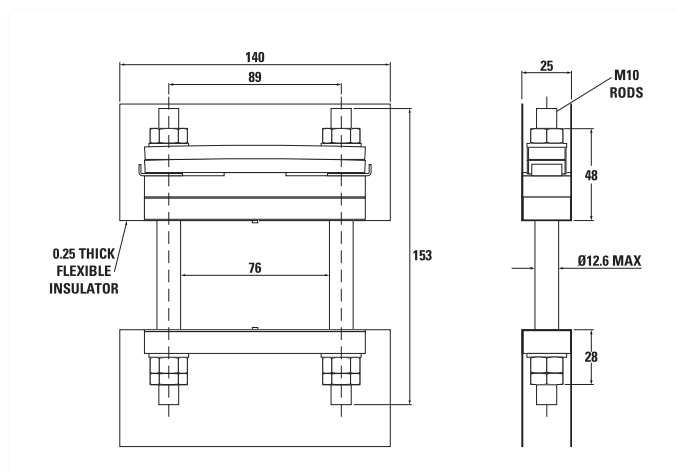
WC16 - XK1130DT076M



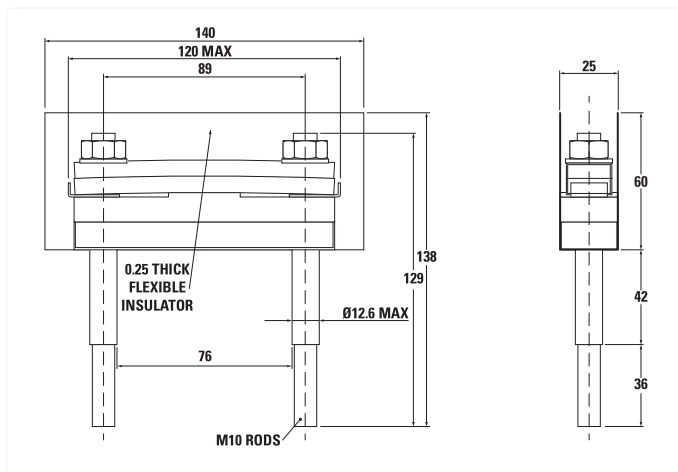
WC17 - XK1800SA076M



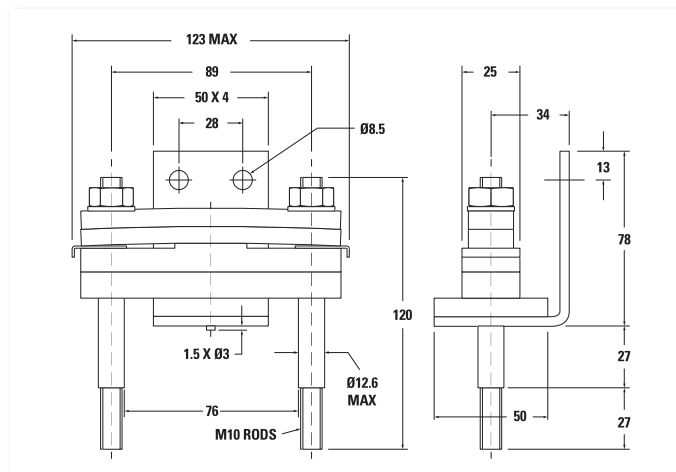
WC18 - XK1800DA076M



WC19 - XK1800DT076M

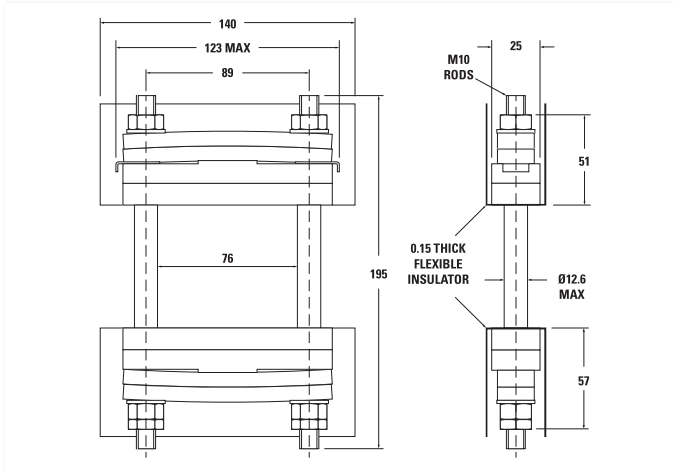


WC20 - XK2100SA076M/ML

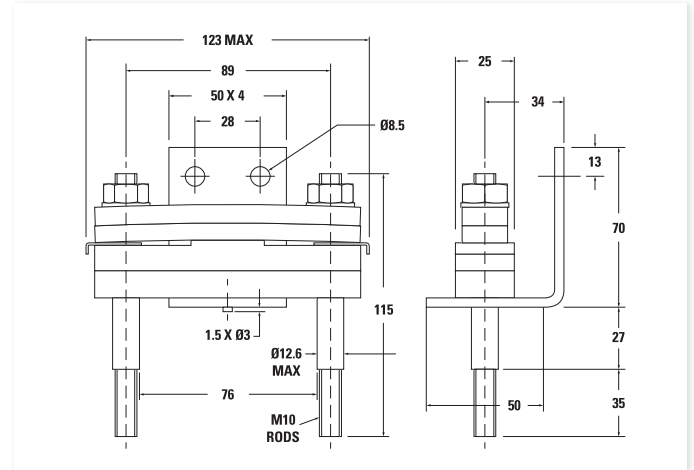


Outline Drawings

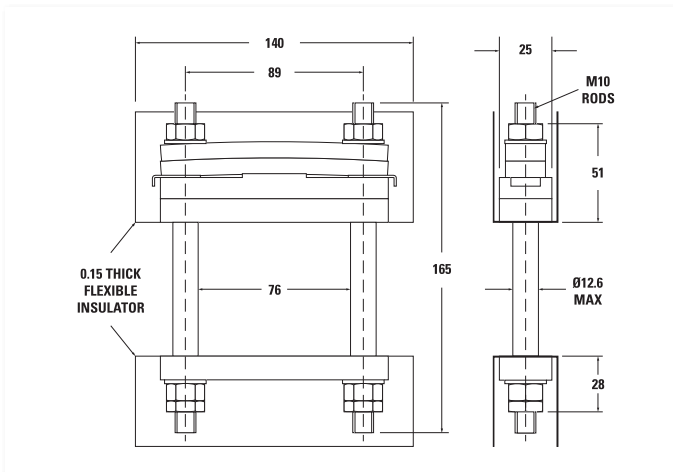
WC21 - XK2100DA076M/ML



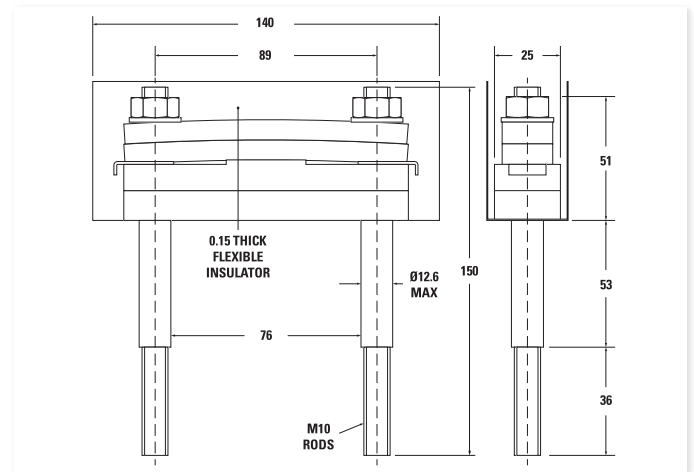
FPO WC22 - XK2140SA076M/ML



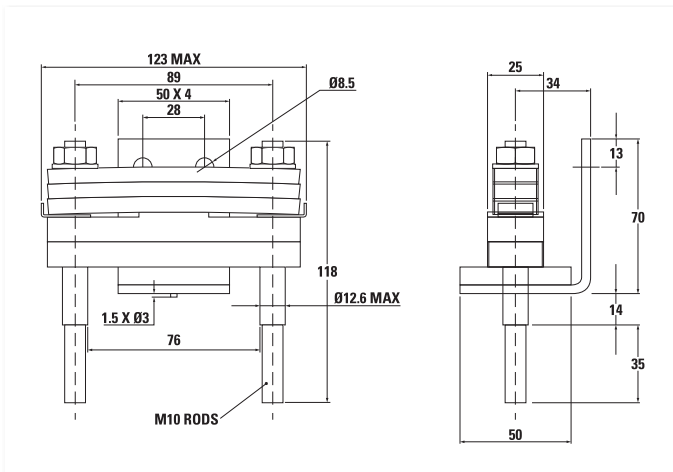
WC23 - XK2140DA076M/ML



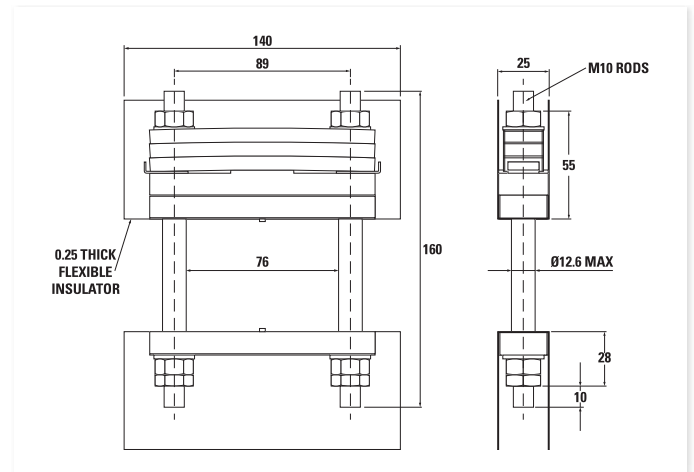
WC24 - XK2140DT076M/ML



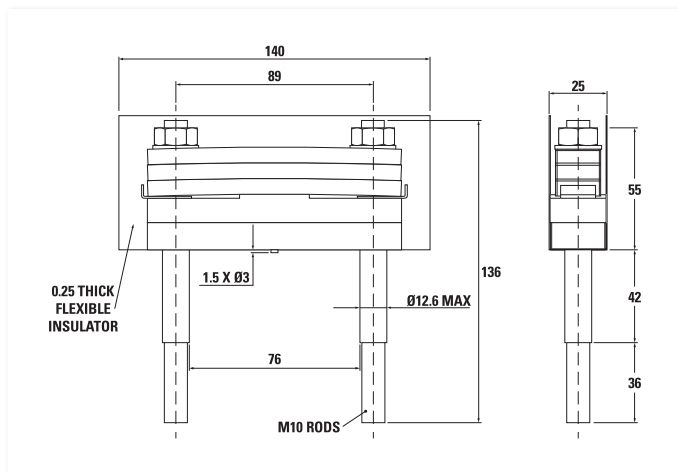
WC25 - XK2700SA076M



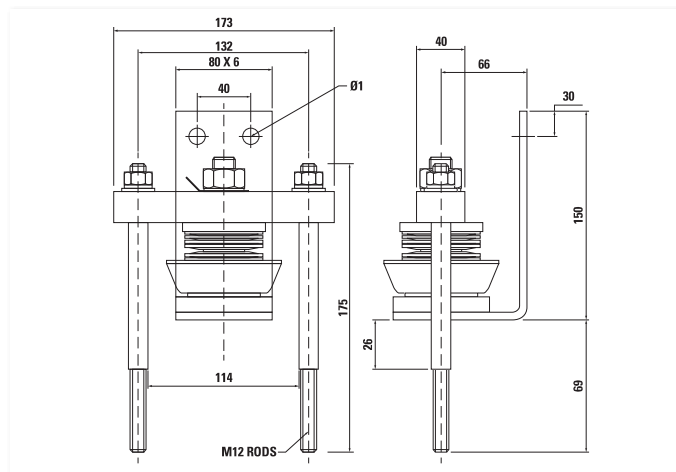
WC26 - XK2700DA076M



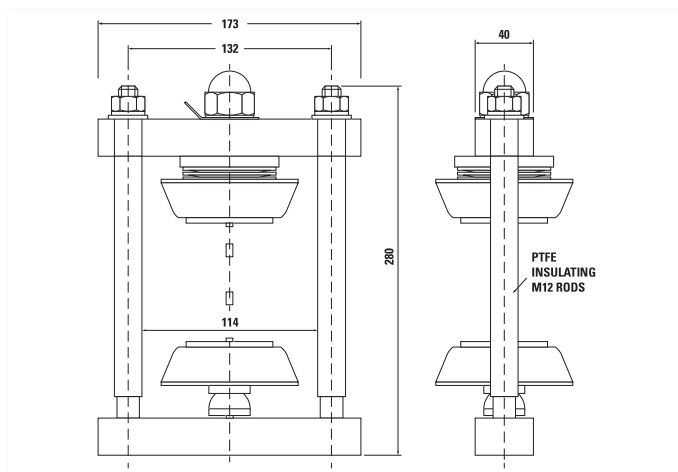
WC27 - XK2700DT076M



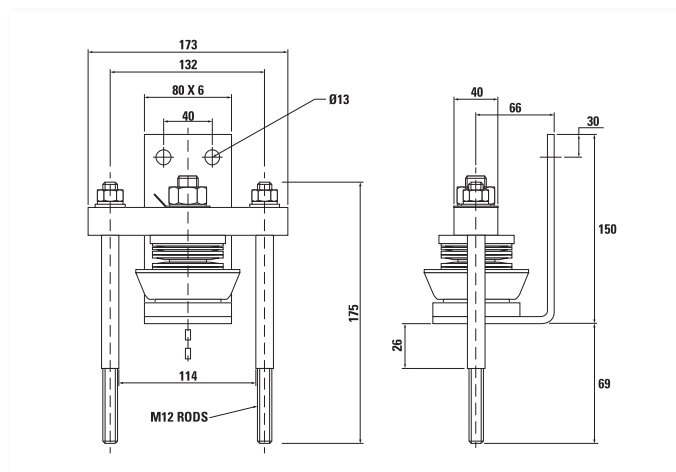
WC28 - XK2000SA114M



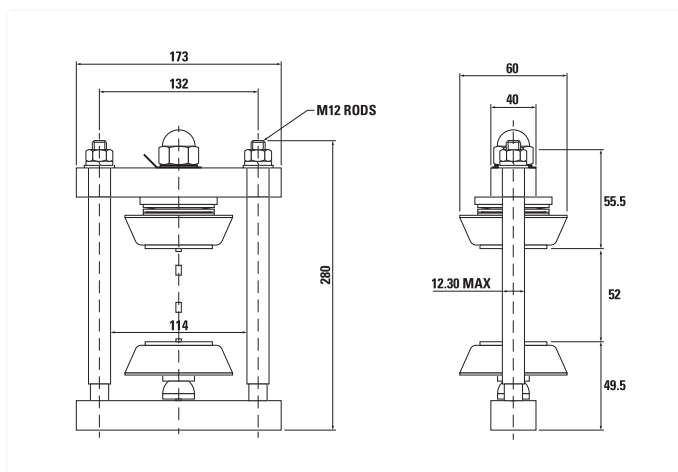
WC29 - XK2000DA114M



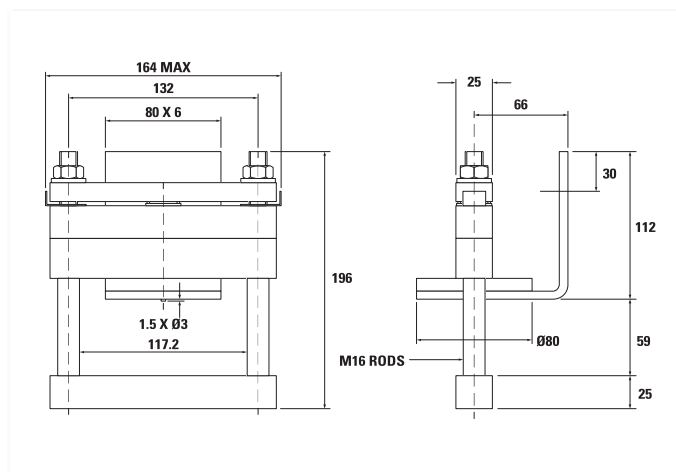
WC30 - XK2500SA114M



WC31 - XK2500DA114M

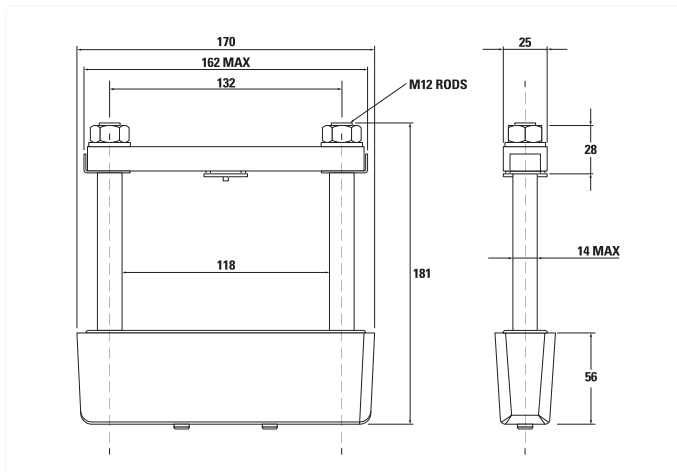


WC32 - XK2500SA116M/ML

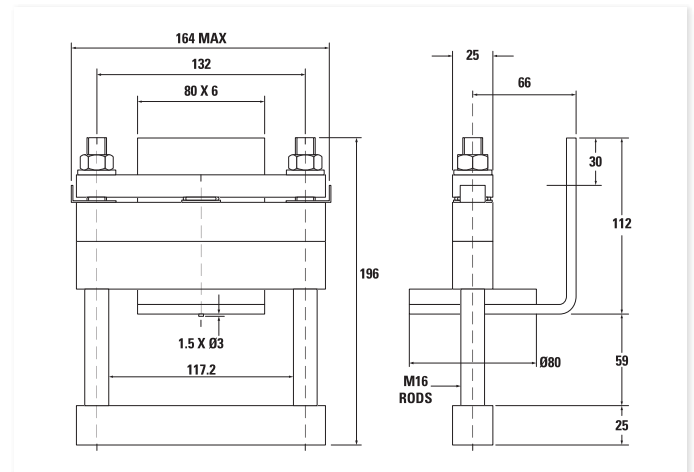


Outline Drawings

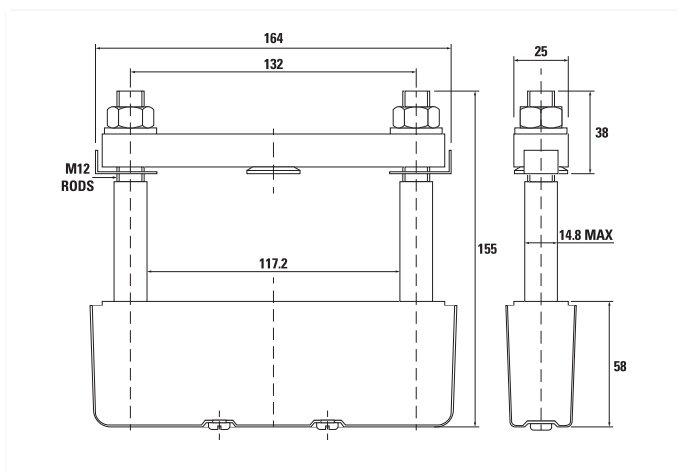
WC33 - XK2500DA116M/ML



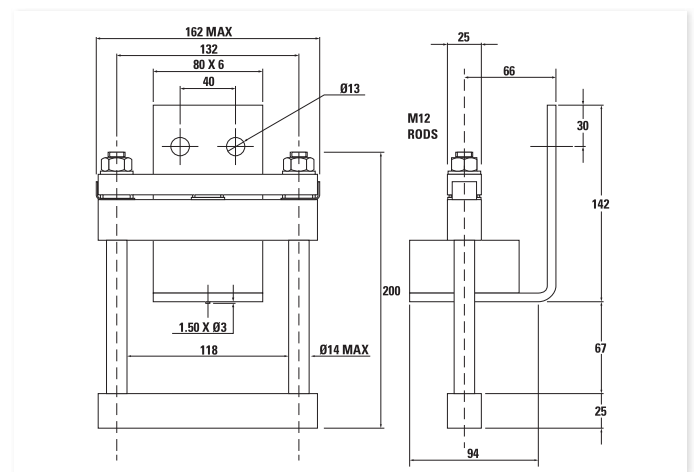
WC34 - XK3000SA116M/ML



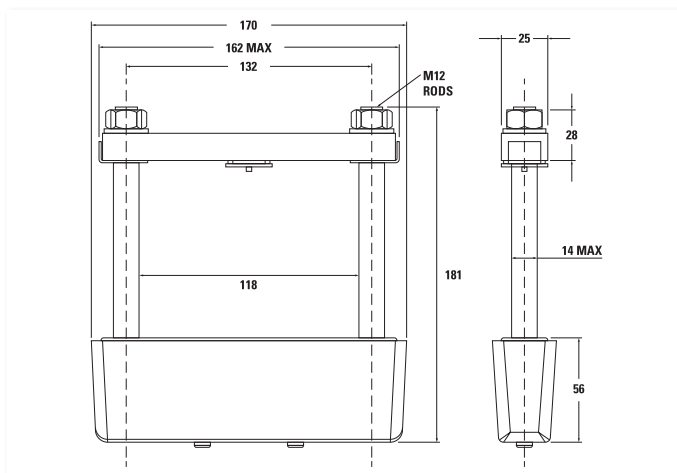
WC35 - XK3000DA116M/Mx



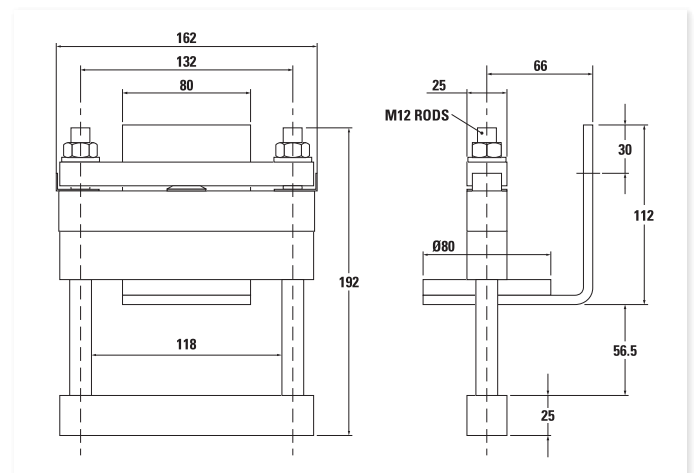
WC36 - XK3500SA116M/ML



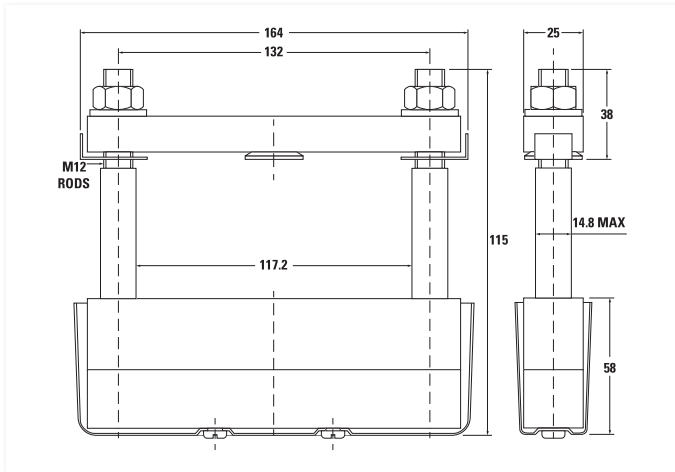
WC37 - XK3500DA116M/ML



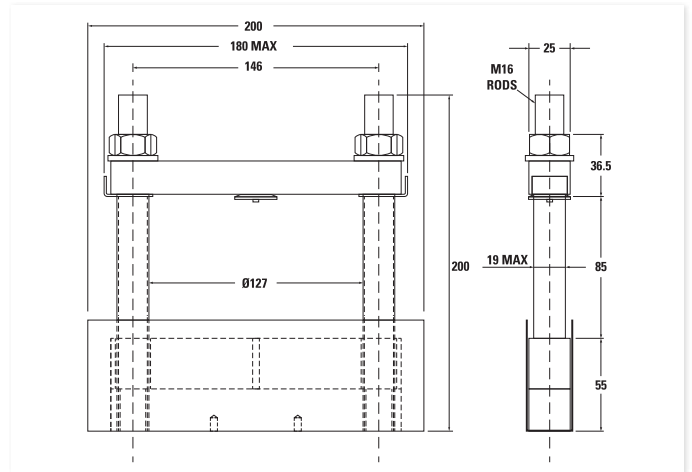
WC38 - XK4000SA116M/ML



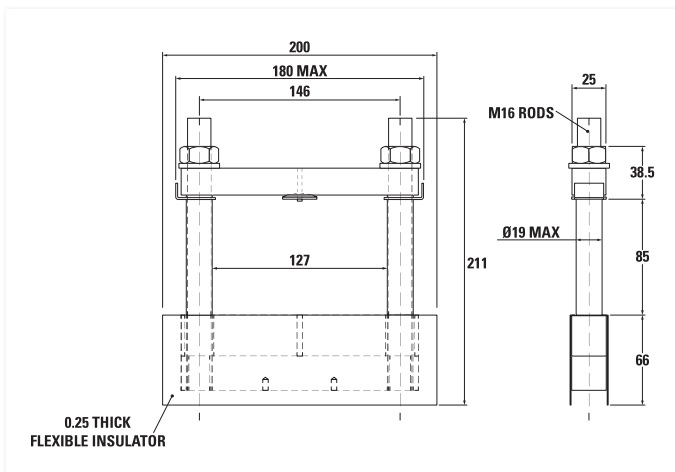
WC39 - XK4000DA116M/ML



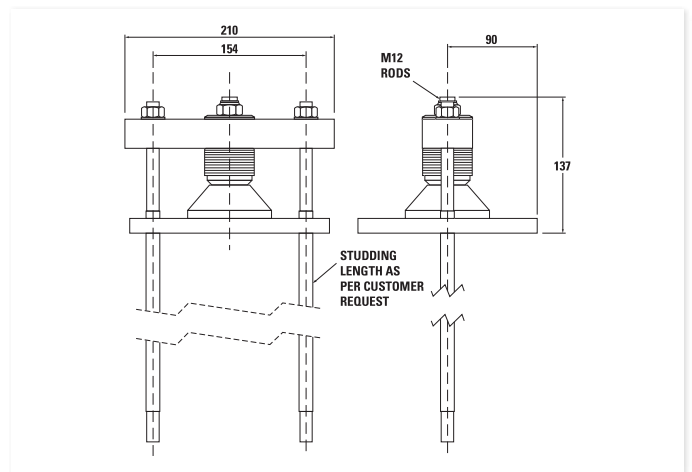
WC40 - XK5000DA128M/ML



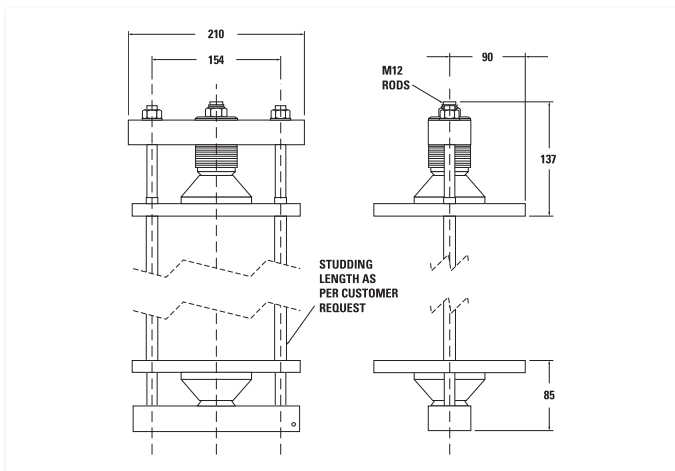
WC41 - XK7000DA128M/ML



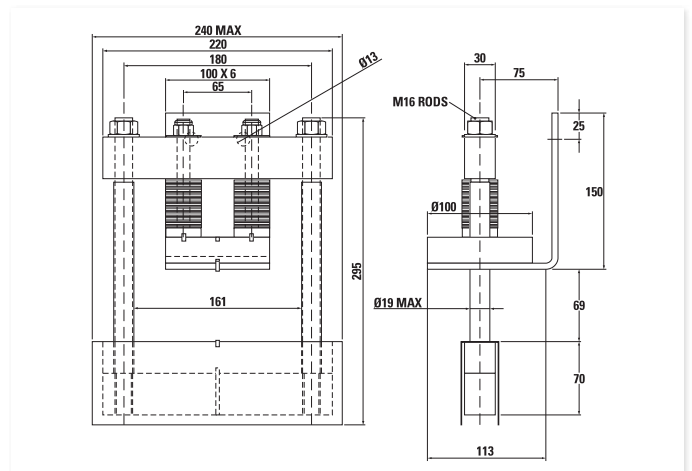
WC42 - XK3060SA140ML



WC43 - XK3060DA140ML

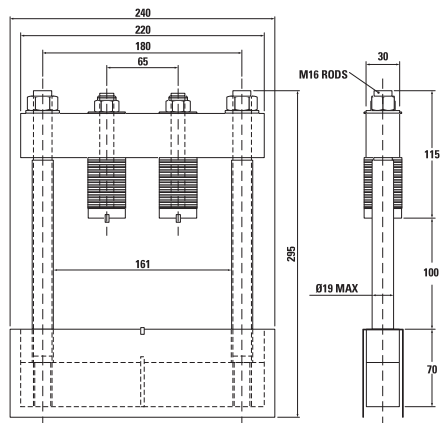


WC44 - XK9000SA160M/ML

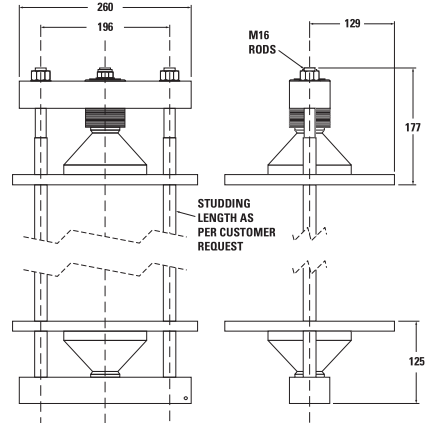


Outline Drawings

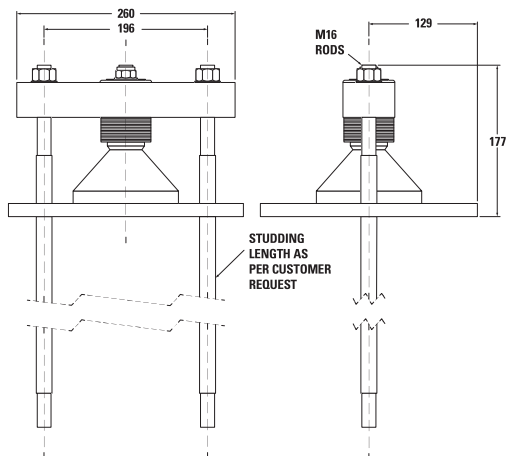
WC45 - XK9000DA160M/ML



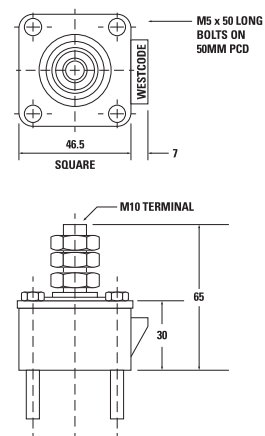
WC46 - XK6120DA180ML



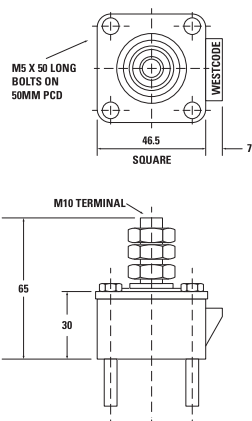
WC47 - XK6120SA180ML



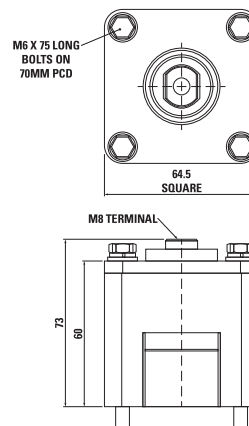
WC48 - XK0450xx019M



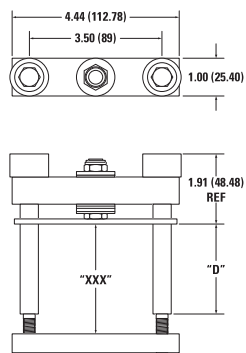
WC49 - XK####xx025M



WC50 - XK1500BA034M



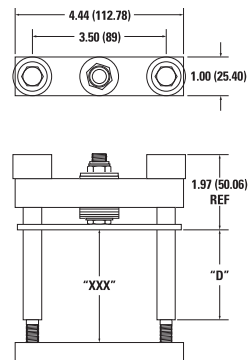
WC51 - XSK1500DA076xxx



Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

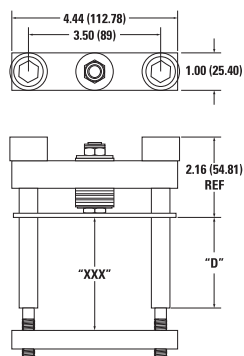
WC52 - XSK2000DA076xxx



Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

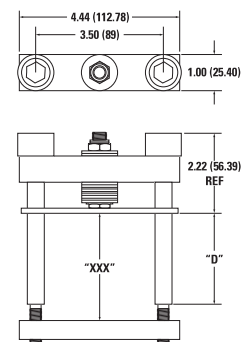
WC53 - XSK3000DA076xxx



Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

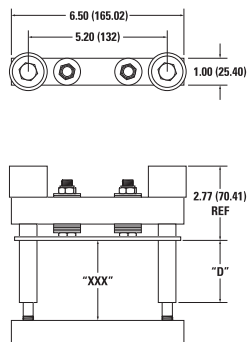
WC54 - XSK3400DA076xxx



Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

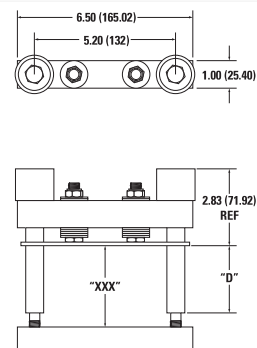
WC55 - SK3800DA116Mxxx



Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSIONS CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

WC56 - XSK4400DA116Mxxx

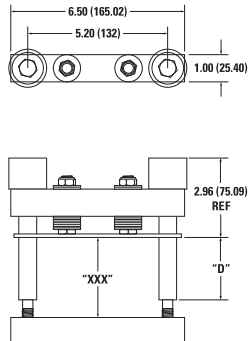


Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

Outline Drawings

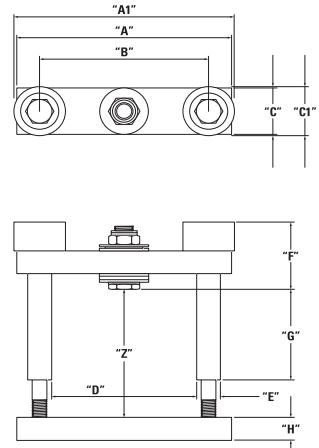
WC57 - XSK6000DA116Mxxx



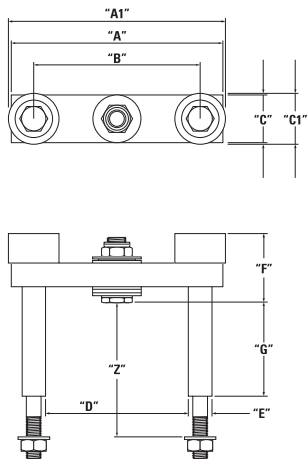
Notes:

1. DIMENSIONS IN INCHES (MILLIMETERS).
2. "Z" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. "D" DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

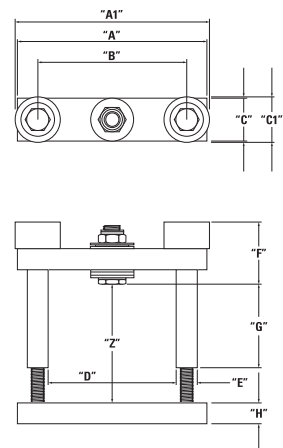
WC58- DA



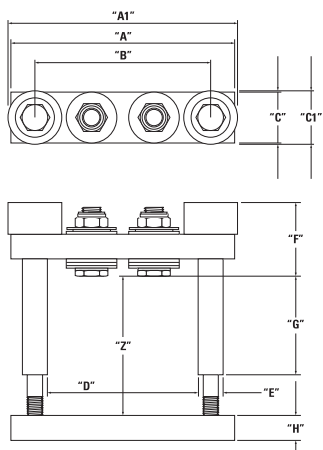
WC59 - DT



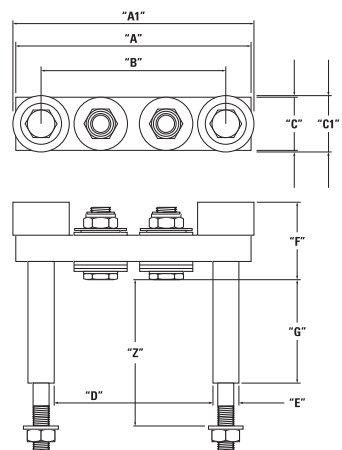
WC60 - DF



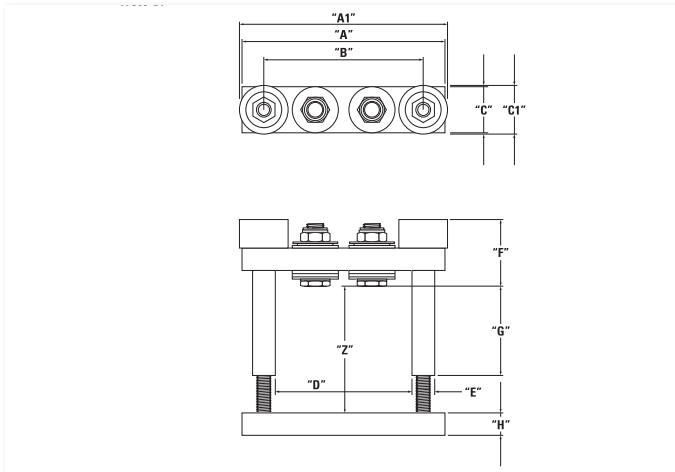
WC61 - DA



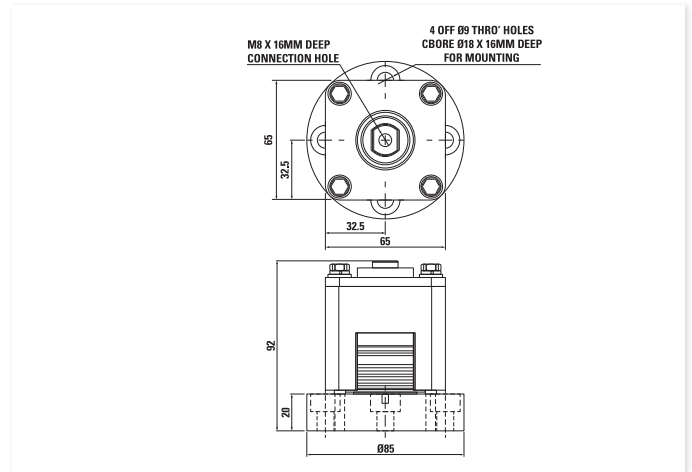
WC62 - DT



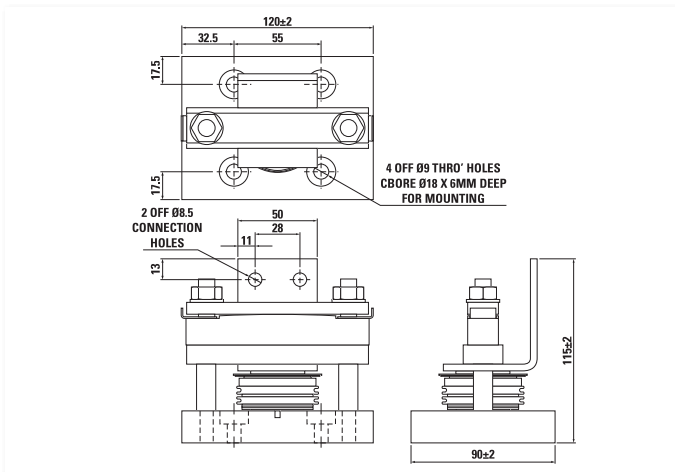
WC63 - DF



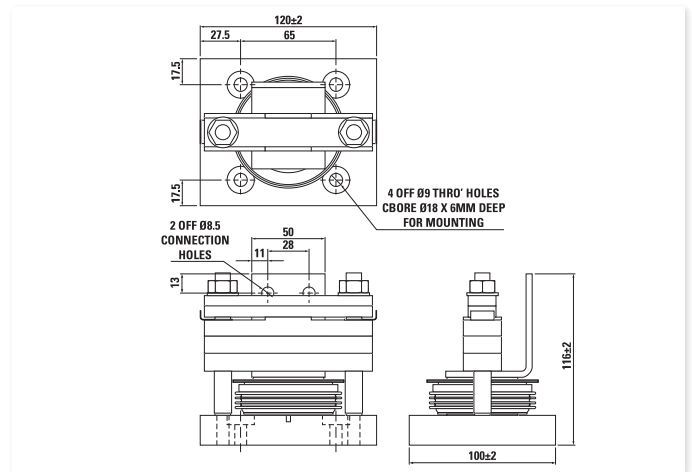
WC64 - XK1500CB034M



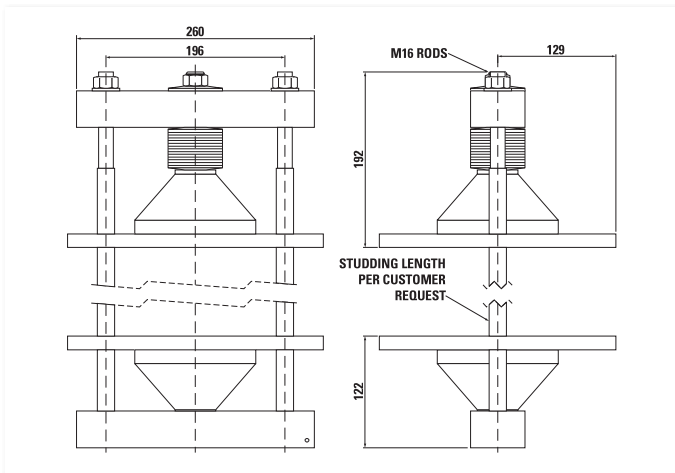
WC65 - XK1130SB076M



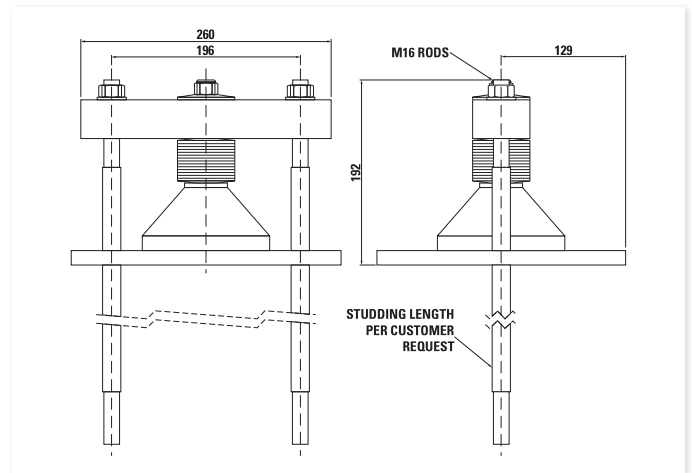
WC66 - XK2140SB076M



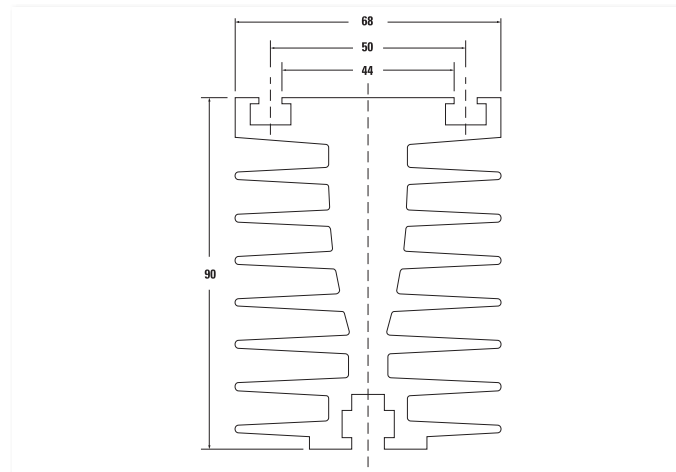
WC67 - XK8000DA180ML



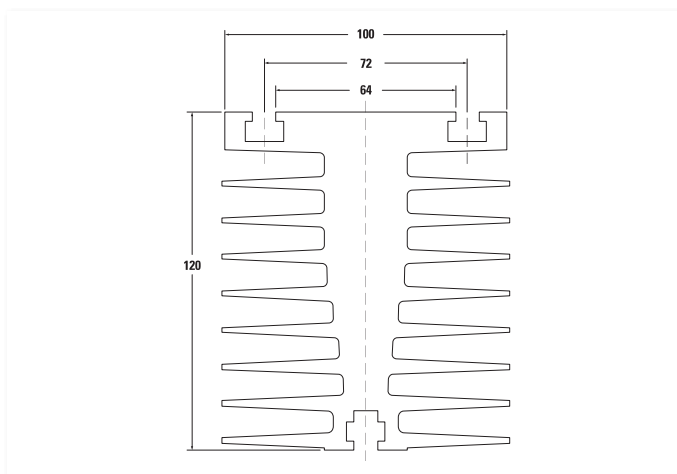
WC68 - XK8000SA180ML



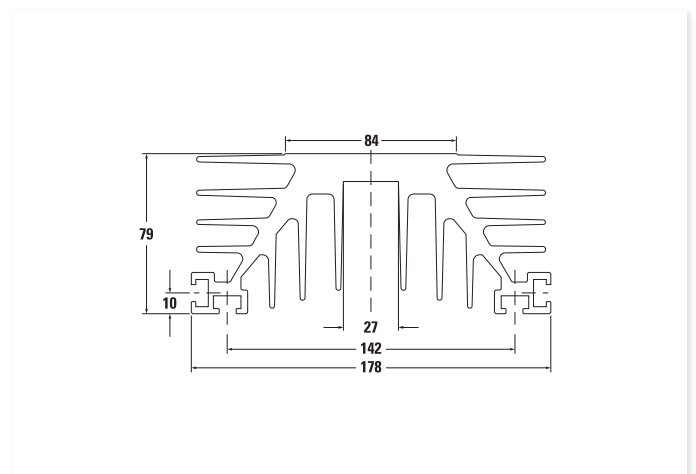
WH1 - G FIN



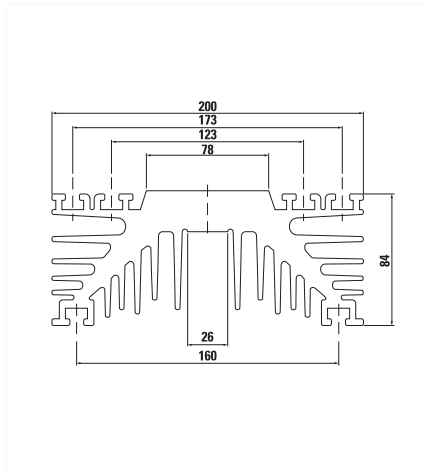
WH2 - GA FIN



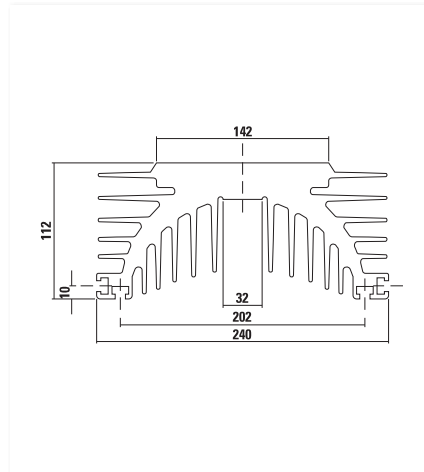
WH3 - H FIN



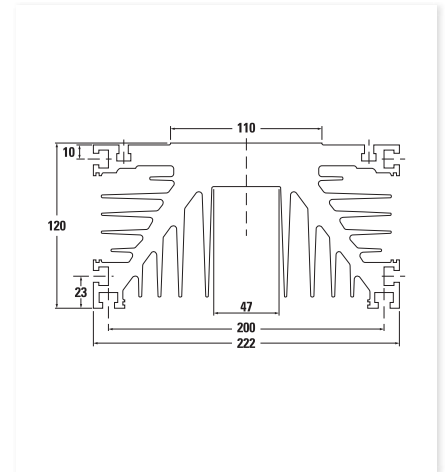
WH4 - T FIN



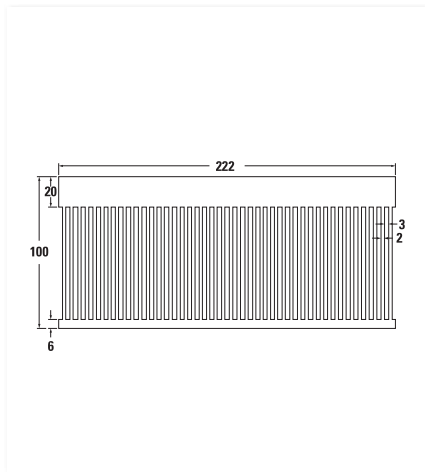
WH5 - TB FIN



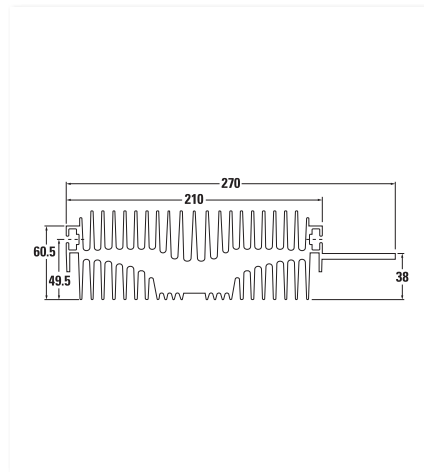
WH6 - TC FIN



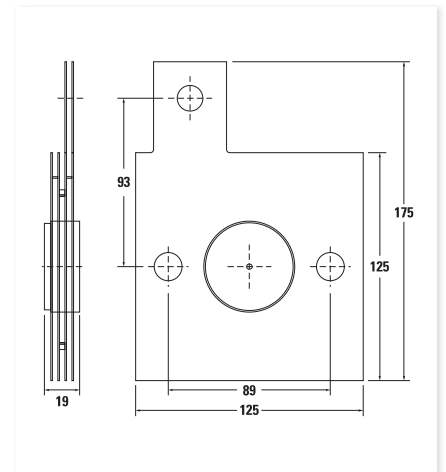
WH7 - LP100



WH8 - WS46

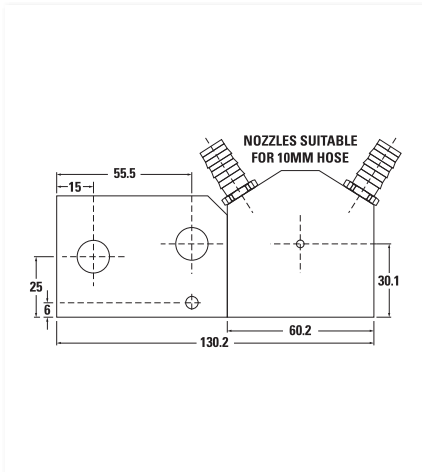


WH9 - WS30 - COPPER

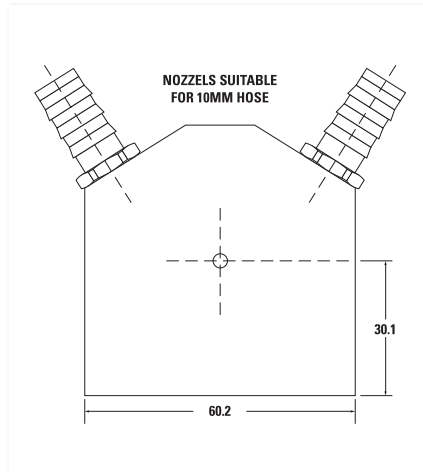


Outline Drawings

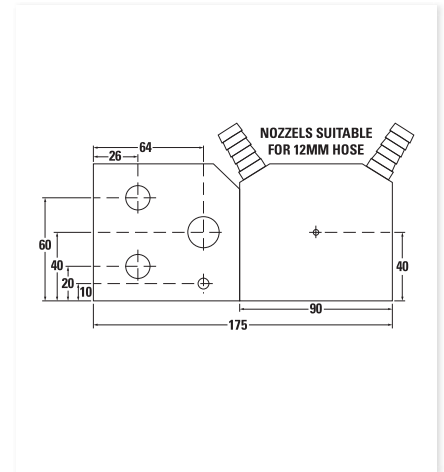
WCL1 - LK COOLER



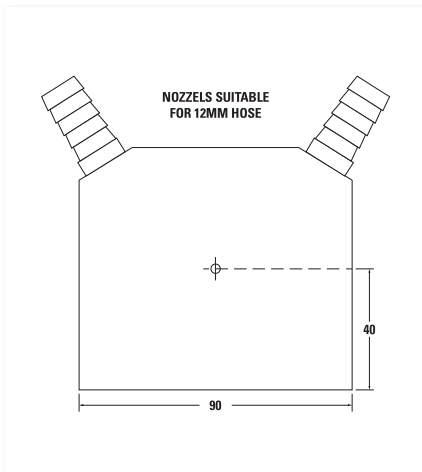
WCL2 - LKA COOLER



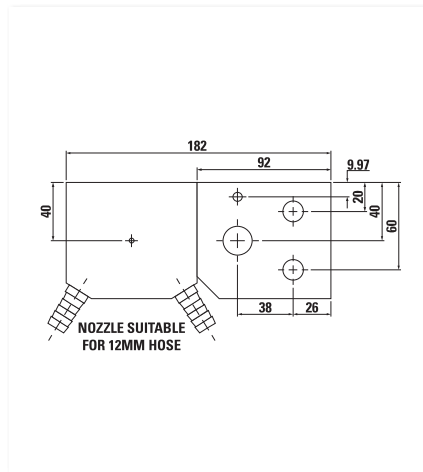
WCL3 - LKB COOLER



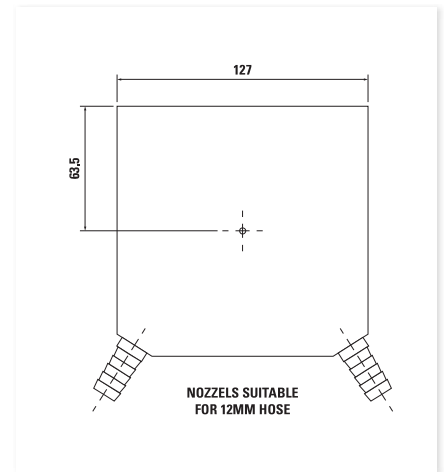
WCL4 - LKC COOLER



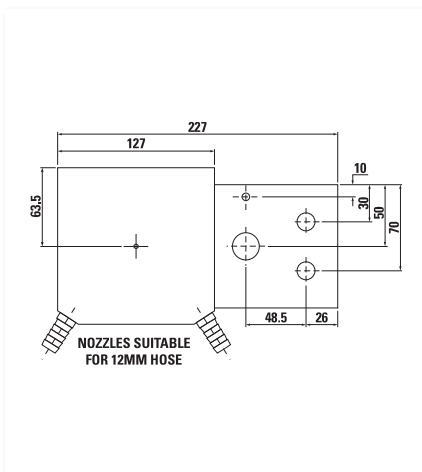
WCL5 - LKD COOLER



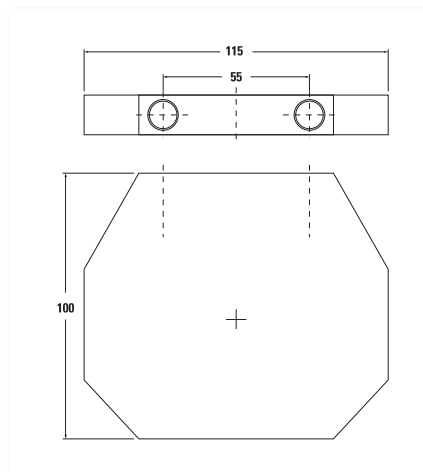
WCL6 - LKE COOLER



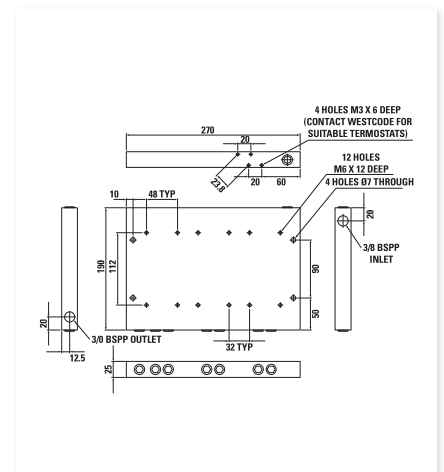
WCL7 - LKF



WCL8 - WS27

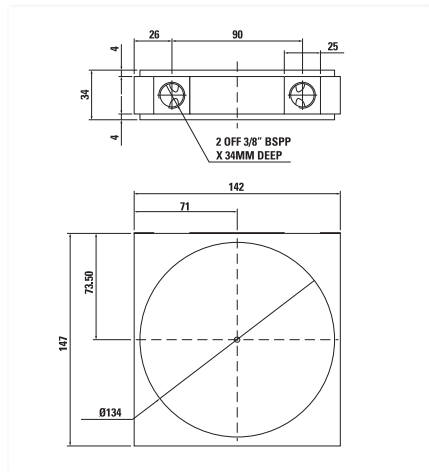


WCL9 - WS65 COOLER



Outline Drawings

WCL19 - XW180BxxxE



WCL20 - XW180BxxxF

