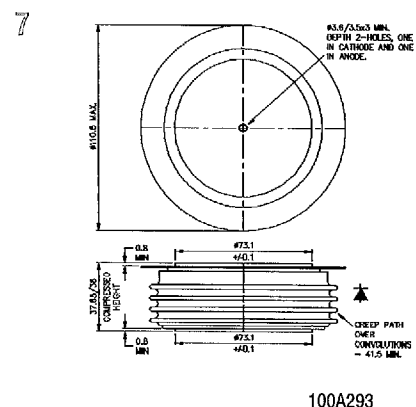
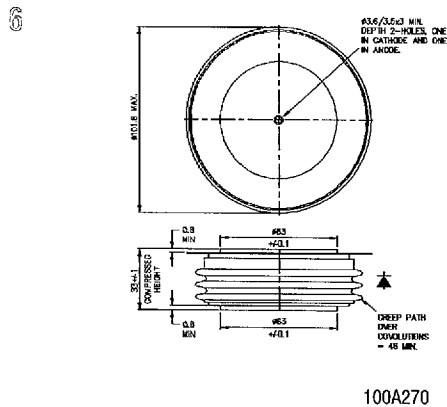
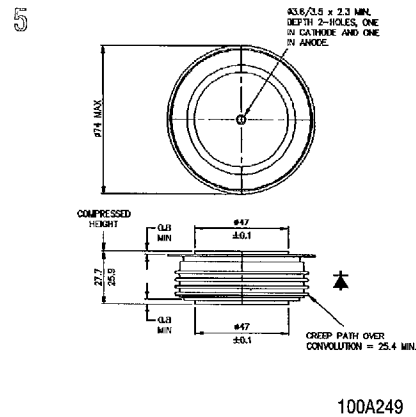
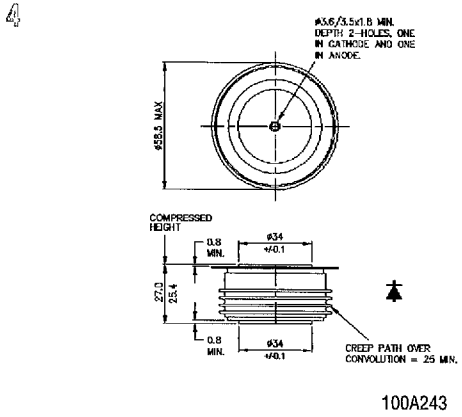
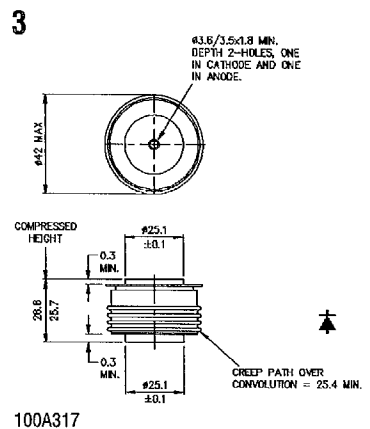
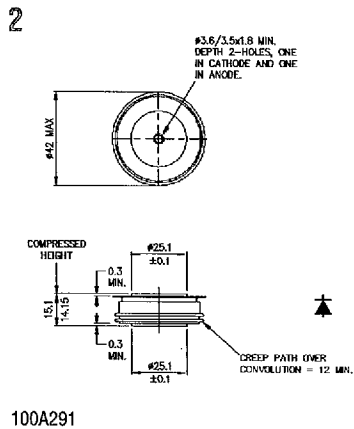
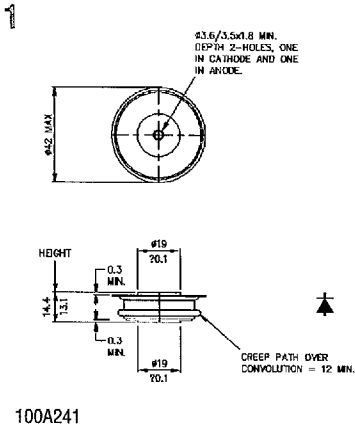


Fast Recovery Diodes ~ Capsule types

Type	V _{RRM} Range (Note 3) (V)	I _{F(AV)} T _{hs} 55°C (A)	I _{F(RMS)} T _{hs} 25°C (A)	I _F T _{hs} 25°C (A)	Typical Reverse Recovered Charge and Typical Reverse Recovery @ T _j Max. (50% Chord)				I _{FSM(1)} 10ms V _R ≤ 60% V _{RRM} (Note 2) (A)
					Q _{ra} (μC)	t _{rr} (μs)	I _{FM} (A)	di/dt (A/μs)	
SMxCXC100	1200-1800	337	673	554	68	1.0	1000	100	2450
SMxCXC134	1600-2500	350	690	580	173	2.80	1000	150	4250
SMxCXC144	1600-2800	370	742	624	255	2.80	550	150	4500
SMxCXC170	200-1400	440	880	730	56	2.30	550	40	4500
SMxCXC174	1200-2000	435	870	725	120	2.80	550	40	4500
SMxCXC176	1200-2000	434	870	725	120	2.80	550	40	4500
SMxCXC190	200-1600	760	1540	1245	41	1.50	550	40	9500
SMxHXC084	3000-4500	220	415	360	266	2.50	1000	150	2000
SMxHXC103	2500-3500	310	580	500	188	2.30	1000	100	4590
SMxHXC164	3000-4500	364	678	597	480	2.60	1000	150	4900
SMxHXC166	2000-3000	240	450	380	75	1.5	1000	100	3100
SMxCXC220	200-1600	860	1745	1404	105	2.30	800	50	10000
SMxCXC224	1400-2100	875	1760	1440	225	1.70	800	50	10000
SMxCXC274	4600-5600	710	1400	1200	1000	3.30	1000	200	8400
SMxCXC314	200-1300	1090	2175	1790	120	1.60	1000	200	13500
SMxCXC344	3000-4500	588	1104	948	315	3.50	1000	60	3955
SMxCXC364	3000-4500	660	1315	1110	263	3.00	1000	50	7620
SMxCXC374	3000-4500	736	1465	1240	953	3.80	1000	200	9000
SMxCXC474	2600-3600	864	1730	1437	548	2.80	1000	200	10000
SMxCXC524	1600-2500	956	1944	1552	338	2.00	1000	200	11700
SMxCXC724	200-2000	940	1900	1680	248	1.90	1000	200	14000
SMxCXC804	1800-2500	761	1540	1250	140	2.4	800	50	9000
SMxCXC334	1600-2500	1500	2807	2450	420	2.30	1000	200	17000
SMxCXC504	200-600	1830	3640	3070	225	1.50	1000	200	26000
SMxCXC574	4600-5600	1105	2185	1885	1500	4.50	1000	200	13000
SMxCXC604	3000-4500	1010	1880	1665	724	3.00	1000	200	9600
SMxCXC614	3000-4500	1160	2165	1910	600	5.30	1000	60	10800
SMxCXC624	3000-4500	1106	2185	1884	863	3.80	1000	200	13000
SMxCXC824	2600-3600	1243	2465	2108	698	2.90	1000	200	16400
SMxCXC915	1600-2500	1610	3026	2580	551	3.00	1000	200	17500
SMxCXC924	1600-2500	1496	2984	2506	280	3.70	1000	60	19600
SMxCXC864	3000-4500	1490	2755	2485	1125	4.10	1000	200	24800
SMxCXC968	1800-2500	2840	5300	4630	1650	4.40	1000	200	31800
SMxCXC384	3000-4000	1350	2680	2300	750	5.0	350	150	19700
SMxCXC974	2000-3000	3775	7114	5990	1125	4.10	1000	60	44000

$I_{FSM(2)}$ 10ms $V_R \leq 10v$ (Note 2) (A)	$I_{t(2)}$ 10ms (Note 2) (A's)	I_{RRM} @ Tj Max. (mA)	V_o r @ Tj Max. (Note 1)		V_{FM} at I_{FM} @ Tj Max.		Tj Max. (°C)	Rth j-hs		Wt (gm)	Mounting Force (Kgf)	Fig. No.	Type
			(V)	(mΩ)	(V)	(A)		d.c. 180° sine (KW)	120° Rect. (KW)				
2700	30 x 10 ³	20	1.46	0.80	1.97	635	125	0.090	0.095	70	330-550	1	CXC100
4670	109 x 10 ³	20	1.21	1.20	1.97	635	125	0.090	0.095	70	330-550	1	CXC134
4950	122 x 10 ³	20	1.28	0.92	1.86	635	125	0.090	0.095	70	330-550	1	CXC144
4950	122 x 10 ³	20	1.02	0.70	1.47	635	125	0.090	0.095	70	330-550	1	CXC170
4950	122 x 10 ³	20	1.00	0.74	1.47	635	125	0.090	0.095	70	330-550	1	CXC174
4950	122 x 10 ³	20	1.00	0.74	1.47	635	125	0.085	0.090	80	365-1000	2	CXC176
10450	546 x 10 ³	50	1.13	0.38	1.70	1500	125	0.050	0.065	90	530-1000	2	CXC190
2200	24 x 10 ³	50	1.90	4.16	4.54	635	150	0.100	0.106	141	330-550	3	HXC084
5050	128 x 10 ³	50	1.49	2.06	2.80	635	150	0.100	0.106	141	330-550	3	HXC103
5400	146 x 10 ³	50	1.05	1.65	2.10	635	150	0.100	0.106	141	330-550	3	HXC164
3424	59 x 10 ³	50	2.01	3.33	4.12	635	150	0.100	0.106	141	330-550	3	HXC166
11000	605 x 10 ³	50	1.17	0.32	1.55	1200	125	0.044	0.055	340	1000-2000	4	CXC220
11000	605 x 10 ³	50	1.09	0.34	1.50	1200	125	0.044	0.055	340	1000-2000	4	CXC224
9240	0.427 x 10 ⁶	100	1.45	0.875	2.50	1200	125	0.033	0.040	340	1000-2000	4	CXC274
14900	1.10 x 10 ⁶	100	1.15	0.304	1.51	1200	125	0.033	0.040	340	1000-2000	4	CXC314
4350	94.6 x 10 ³	100	2.32	1.77	4.80	1400	150	0.033	0.040	340	1000-2000	4	CXC344
8470	359 x 10 ³	100	1.71	0.925	3.00	1400	125	0.033	0.040	340	1000-2000	4	CXC364
10000	500 x 10 ³	100	1.50	0.76	2.54	1400	125	0.033	0.040	340	1000-2000	4	CXC374
11000	605 x 10 ³	100	1.39	0.50	2.10	1400	125	0.033	0.040	340	1000-2000	4	CXC474
12870	830 x 10 ³	50	1.44	0.33	1.90	1400	125	0.033	0.040	340	1000-2000	4	CXC524
15400	1.19 x 10 ⁶	100	1.24	0.33	1.72	1450	125	0.033	0.040	340	1000-2000	4	CXC724
10000	500 x 10 ³	50	1.70	0.58	2.54	1450	125	0.033	0.040	340	1000-2000	4	CXC804
18700	1.75 x 10 ⁶	60	1.24	0.44	2.21	2200	150	0.022	0.028	510	1900-2600	5	CXC334
28600	4.09 x 10 ⁶	50	0.93	0.18	1.47	3000	125	0.022	0.028	510	1900-2600	5	CXC504
14300	1.02 x 10 ⁶	60	1.36	0.56	2.20	1500	125	0.022	0.028	510	1900-2600	5	CXC574
10600	0.56 x 10 ⁶	150	1.70	1.03	3.25	1500	150	0.022	0.028	510	1900-2600	5	CXC604
11900	0.71 x 10 ⁶	150	1.50	0.77	2.65	1500	150	0.022	0.028	510	1900-2600	5	CXC614
14300	1.02 x 10 ⁶	50	1.37	0.553	2.20	1500	125	0.022	0.028	510	1900-2600	5	CXC624
18000	1.62 x 10 ⁶	60	1.27	0.420	2.20	2200	125	0.022	0.028	510	1900-2600	5	CXC824
19300	1.86 x 10 ⁶	150	1.31	0.345	2.07	2200	150	0.022	0.028	510	1900-2600	5	CXC915
21560	2.32 x 10 ⁶	85	1.15	0.265	2.34	4500	125	0.022	0.028	510	1900-2600	5	CXC924
27300	3.73 x 10 ⁶	150	1.38	0.71	2.80	2000	150	0.016	0.020	1000	2700-3400	6	CXC864
35000	6.10 x 10 ⁶	100	0.90	0.17	1.41	3000	150	0.016	0.020	1000	2700-3400	6	CXC968
21600	2.30 x 10 ⁶	150	2.30	0.72	3.75	2000	125	0.011	0.014	1700	2700-4700	7	CXC384
48400	11.7 x 10 ⁶	150	1.19	0.118	1.74	4700	150	0.011	0.014	1700	2700-4700	7	CXC974

Fast Recovery Diodes ~ Outlines



Fast Recovery Diodes ~ Notes

Ordering

Stud base diodes are available in both Normal (base cathode) and Reverse (base anode) polarity. Use N or R respectively in code according to polarity required, e.g.

NO13 – normal polarity, RO13 – reverse polarity:
(1N3899 – normal, 1N3899R – reverse).

The required voltage rating is defined by substituting the appropriate voltage code number into the type number in place of the “x” symbol:
(For 1N types see table below).

Examples

SM04PCN046: 400 volt normal polarity type 046 stud base diode.

SM12CXC170: 1200 volt type 170 capsule diode

Notes

(1) V_o Threshold voltage } for conduction loss
r Slope resistance } and heatsink
calculations
at T_j Max.

(2) $I_{FSM}(8.3ms) = I_{FSM}(10ms) \times 1.066$
 $I^2t(8.3ms) = I^2t(10ms) \times 0.943$
at T_j max.

(3) A blocking voltage derating factor of 0.13% per deg. Celsius is applicable for T_j below 25 deg. C.

(4) Outline 1 – Leded types, code changes from PCN/R to PHN/R. Lead length 135mm. (base of hexagon to centre of lug hole)

Table 1. Voltage Code

Voltage Code Number	V_{RRM}	V_{RSM}
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500
15	1500	1600
16	1600	1700
18	1800	1900
20	2000	2100
22	2200	2300
24	2400	2500
25	2500	2600
26	2600	2700
28	2800	2900
30	3000	3100
32	3200	3300
34	3400	3500
36	3600	3700
38	3800	3900
40	4000	4100
42	4200	4300
44	4400	4500
45	4500	4600
46	4600	4700
48	4800	4900
50	5000	5100
52	5200	5300
54	5400	5500
56	5600	5700

V_{RRM}	1N Type No	
50	1N3899	1N3909
100	1N3900	1N3910
200	1N3901	1N3911
300	1N3902	1N3912
400	1N3903	1N3913