

FAST SWITCHING DEVICE - Fast Recovery Diodes - Capsule Types

Old Part Number	Data Sheet Available	New Part Number	V _{RRM} Range (Note 3) (V)	I _{F(AV)} @ T _{sink} 55°C (A)	I _{F(RMS) Max} @ T _{sink} 25°C (A)	I _F @ T _{sink} 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)	I _{FSM(2)} 10ms V _R £10V (Note 2) (A)	I ² t ₍₂₎ 10ms (Note 2) (A ² S)	I _{RRM} @ T _J Max (mA)	V _o r @ T _J Max. (Note 1)	V _{FM} at I _{FM} @ T _J Max. (V) (A)		T _J Max (°C)	Rth J-hs d.c. 180° sine (K/W) 120° Rect. (K/W)		Wt (typ) (g)	Mounting Force (kN)	Outline No. (Note 4)	
				Q _{ra} (nC)	t _{rr} (ms)	I _{FM} (A)	di/dt (A/ms)	Q _{ra} (nC)	t _{rr} (ms)	I _{FM} (A)	di/dt (A/ms)	Q _{ra} (nC)	t _{rr} (ms)	I _{FM} (A)	di/dt (A/ms)	Q _{ra} (nC)	t _{rr} (ms)	I _{FM} (A)	di/dt (A/ms)	Q _{ra} (nC)	t _{rr} (ms)	I _{FM} (A)		di/dt (A/ms)
SM18XC100	N	M0358WC180	1200-1800	358	673	554	68	1.0	1000	100	2450	2700	30 x 10 ³	20	1.46	0.80	1.97	635	125	0.090	0.095	70	3.3 - 5.5	100A241
SM28XC115	N	M0233WC280	1600-2800	233	458	400	180	3.0	1000	100	1860	2050	20.9 x 10 ³	50	1.49	3.22	3.53	635	125	0.090	0.095	70	3.3 - 5.5	
SM25XC134	N	M0347WCxx0	1600-2500	347	690	580	173	2.80	1000	150	4250	4670	109 x 10 ³	20	1.21	1.20	1.97	635	125	0.090	0.095	70	3.3 - 5.5	
SM28XC144	N	M0367WCxx0	1600-2800	367	742	624	255	2.80	550	150	4500	4950	122 x 10 ³	20	1.28	0.92	1.86	635	125	0.090	0.095	70	3.3 - 5.5	
SM14XC170	N	M0437WCxx0	800-1400	437	880	730	56	2.30	550	40	4500	4950	122 x 10 ³	20	1.02	0.70	1.46	635	125	0.090	0.095	70	3.3 - 5.5	
SM20XC174	N	M0433WCxx0	1200-2000	433	870	725	120	2.80	550	40	4500	4950	122 x 10 ³	20	1.00	0.74	0.74	635	125	0.090	0.095	70	3.3 - 5.5	
SM20XC176	N	M0451YCxx0	1200-2000	451	870	725	120	2.80	550	40	4500	4950	122 x 10 ³	20	1.00	0.74	1.47	635	125	0.085	0.090	80	3.65 - 10.0	100A291
SM16XC190	N	M0759YCxx0	200-1600	759	1540	1245	41	1.50	550	40	9500	10450	546x 10 ³	50	1.13	0.38	1.70	1500	125	0.050	0.065	90	5.3 - 10.0	
SM45HXC084	N	M0225YFxx0	3000-4500	225	415	360	266	2.50	1000	150	2000	2200	24x 10 ³	50	1.90	4.16	4.54	635	150	0.100	0.106	141	3.5 - 5.5	100A317
SM35HXC103	N	M0310YFxx0	3000-3500	310	580	500	188	2.30	1000	100	4590	5050	128x 10 ³	50	1.49	2.06	2.06	150	150	0.100	0.106	141	3.5 - 5.5	
SM45HXC164	N	M0371YFxx0	3500-4500	371	678	597	480	2.60	1000	150	4900	5400	146x 10 ³	50	1.05	1.65	1.65	150	150	0.100	0.106	141	3.5 - 5.5	
SM25HXC166	N	M0439YFxx0	2500-3000	439	450	380	75	1.5	1000	100	3100	3424	59x 10 ³	50	2.01	3.33	3.33	150	150	0.100	0.106	141	3.5 - 5.5	
SM16XC220	N	M0859LCxx0	1200-1600	859	1745	1404	105	2.30	800	50	10000	11000	605x 10 ³	50	1.17	0.32	1.55	1200	125	0.044	0.055	340	10.0 - 20.0	100A243
SM21XC224	N	M0872LCxx0	1400-2100	872	1760	1440	225	1.70	800	50	10000	11000	605x 10 ³	50	1.09	0.34	1.50	1200	125	0.044	0.055	340	10.0 - 20.0	
SM60XC274	N	M0710LCxx0	5600-6000	710	1400	1200	1000	3.30	1000	200	8400	9240	0.427x 10 ⁶	100	1.45	0.875	2.500	1200	125	0.033	0.040	340	10.0 - 20.0	
SM12XC314	N	M1080LCxx0	1000-1200	1080	2175	1790	120	1.60	1000	200	13500	14900	1.10X10 ⁶	100	1.15	0.30	1.510	1200	125	0.033	0.040	340	10.0 - 20.0	
SM45XC344	N	M0588LCxx0	4000-4500	588	1104	948	315	3.50	1000	60	3955	4350	94.6x 10 ³	100	2.32	1.77	4.80	1400	150	0.033	0.040	340	10.0 - 20.0	
SM45XC364	N	M0659LCxx0	4000-4500	659	1315	1110	263	3.00	1000	50	7620	8470	359x 10 ³	100	1.71	0.925	3.000	1400	125	0.033	0.040	340	10.0 - 20.0	
SM45XC374	N	M0736LCxx0	4000-4500	736	1465	1240	953	3.80	1000	200	9000	10000	500x 10 ³	100	1.50	0.76	2.56	1400	125	0.033	0.400	340	10.0 - 20.0	
SM36XC474	N	M0863LCxx0	2600-3600	863	1730	1437	548	2.80	1000	200	10000	11000	605x 10 ³	100	1.39	0.50	2.10	1400	125	0.033	0.040	340	10.0 - 20.0	
SM25XC524	N	M0955LCxx0	2000-2500	955	1944	1552	338	2.00	1000	200	11700	12870	830x 10 ³	50	1.44	0.33	1.90	1400	125	0.033	0.040	340	10.0 - 20.0	
SM20XC724	N	M1022LCxx0	1200-2000	1022	1900	1680	248	1.90	1000	200	14000	15400	1.19x 10 ⁶	100	1.24	0.33	1.72	1450	125	0.033	0.040	340	10.0 - 20.0	
SM25XC804	N	M0760LCxx0	2000-2500	760	1540	1250	140	2.4	800	50	9000	10000	500x10 ³	50	1.70	0.58	2.54	1450	125	0.033	0.040	340	10.0 - 20.0	
SM25XC334	N	M1502NCxx0	2000-2500	1502	2807	2450	420	2.30	1000	200	17000	18700	1.75X10 ⁶	60	1.24	0.44	2.21	2200	150	0.022	0.028	510	19.0 - 26.0	
SM06XC504	N	M1825NCxx0	200-600	1825	1105	2185	225	1.50	1000	200	26000	28600	1.75X10 ⁶	50	0.93	0.18	1.47	3000	125	0.022	0.028	510	19.0 - 26.0	
SM60XC574	N	M1102NCxx0	5000-6000	1102	2185	1885	1500	4.50	1000	200	13000	14300	1.02X10 ⁶	60	1.36	0.56	2.20	1500	125	0.022	0.280	510	19.0 - 26.0	
SM45XC604	N	M1010NCxx0	4000-4500	1010	1880	1665	724	3.00	1000	200	9600	10600	0.56X10 ⁶	150	1.70	1.03	3.25	1500	150	0.022	0.028	510	19.0 - 26.0	
SM45XC614	N	M1163NCxx0	4000-4500	1163	2165	1910	600	5.30	1000	60	10800	11900	0.71X10 ⁶	150	1.50	0.77	2.65	1500	150	0.022	0.028	510	19.0 - 26.0	
SM45XC624	N	M1104NCxx0	4000-4500	1104	2185	1884	863	3.80	1000	200	13000	14300	1.02X10 ⁶	50	1.37	0.553	2.20	1500	125	0.022	0.028	510	19.0 - 26.0	
SM36XC824	N	M1242NCxx0	2600-3600	1242	2465	2108	698	2.90	1000	200	16400	18000	1.62X10 ⁶	60	1.27	0.420	2.20	2200	125	0.022	0.028	510	19.0 - 26.0	
SM26XC915	N	M1609NCxx0	2000-2600	1609	3026	2580	551	3.00	1000	200	17500	19300	1.86X10 ⁶	150	1.31	0.345	2.07	2200	150	0.022	0.028	510	19.0 - 26.0	
SM25XC924	N	M1495NCxx0	1600-2500	1494	2984	2506	280	3.70	1000	60	19600	21560	2.32X10 ⁶	85	1.15	0.265	2.34	4500	125	0.022	0.028	510	19.0 - 26.0	
SM45XC394	N	M1565VCxx0	4000-4500	1565	3080	2700	1550	4.5	1000	200	19700	21700	2.35X10 ⁶	100	1.09	0.36	1.80	2000	125	0.018	0.022	1000	27.0 - 34.0	100A270
SM45XC864	N	M1488VCxx0	4000-4500	1488	2755	2485	1125	4.10	1000	200	24800	27300	3.73X10 ⁶	150	1.38	0.71	2.80	2000	150	0.016	0.020	1000	27.0 - 34.0	
SM25XC968	N	M2837VCxx0	1800-2500	2837	5300	4630	1650	4.40	1000	200	31800	35000	6.10X10 ⁶	100	0.90	0.17	1.41	3000	150	0.016	0.020	1000	27.0 - 34.0	
SM40XC384	N	M2326ZCxx0	3000-4000	2322	4695	3819	1500*	5.5	1000	150	23000	25300	3.19X10 ⁶	150	1.67*	0.186	2.04	2000	125	0.011	0.014	1700	27.0 - 47.0	100A293
SM42XC954	N	M2637ZCxx0	3600-4200	2640	4925	4315	1500*	5.5	1000	200	27520	30270	4.58X10 ⁶	150	1.38	0.29	2.25	3000	150	0.011	0.014	1700	27.0 - 47.0	
SM35XC964	N	M2698ZCxx0	2500-3500	2698	4980	4545	1500	12.00	1000	150	27800	30600	4.70X10 ⁶	150	1.00	0.33	3.00	6000	150	0.011	0.014	1700	27.0 - 47.0	
SM30XC974	N	M3770ZCxx0	2000-3000	3770	7114	5990	1125	4.10	1000	60	44000	30600	11.7X10 ⁶	150	1.19	0.118	1.740	4700	150	0.011	0.014	1700	27.0 - 47.0	
SM45XC1084	N	TBA	3600-4500	Large Area 87mm Diode - Under development																				

The information contained herein is confidential and is protected by Copyright. The information may not be used or disclosed except with the written permission of and in the manner permitted by the proprietors Westcode Semiconductors Limited. In the interest of product improvement, Westcode reserves the right to change specifications at any time without prior notice.

- Note 1 V_o Threshold Voltage
r Slope resistance) for conduction loss and heatsink calculations. (T_J = 125°C)
- Note 2 I_{FSM} (8.3ms) = I_{FSM} (10ms) x 1.066 I²t (8.3ms) = I²t (10ms) x 0.943 at initial temperature T_J max
- Note 3 A blocking voltage derating factor of 0.13% per degree centigrade is applicable for T_J below 25°C
- Note 4 Capsule outlines available with the following compressed heights:
Outline 100A249 27.0 / 25.5 = ordering code SMxxFCxxx, e.g. SM30FC864
Outline 100A270 25.6 / 26.9 = ordering code SMxxDXCxxx, e.g. SM30DXC964