

FAST SWITCHING DEVICE - Fast Recovery Diodes - Capsule Types

Old Part Number	Data Sheet Available	New Part Number	V _{RM} Range (Note 3) (V)	I _F (AV)	I _F (AV) Max	I _F	Typical Reverse Recovered Charge and Typical Reverse Recovery @ T _J Max. (50% Chord)					I _{TRM1} 10ms V _{RR}	I _{TRM2} 10ms V _{RR} @ 410V	I ² t _{RR} 10ms	I _{RR}	V _s	r	V _{RR} at I _{RR}		T _J Max	R _{th} J-hs		Wt (typ)	Mounting Force	Outline No. (Note 4)
				@ T _{max} 55°C (A)	@ T _{max} 25°C (A)	@ T _{max} 25°C (A)	Gra	trr	I _{RR}	di/dt (A/μs)	(Note 2) (A)	(Note 2) (A)	(Note 2) (A ² S)	@ T _J Max (mA)	@ T _J Max. (Note 1) (V)	(A)	(°C)	d.c. 180° sine (K/W)	120° Rect. (K/W)	(g)	(kN)				
SM18XC100	N	IM0358WCx0	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		
SM20XC115	N	IM0233WCx2B0	1600-2800	233	458	400	180	3.0	1000	100	1865	2050	20 x 10 ³	50	1.49	3.22	3.53	635	125	0.090	0.095	70	3.3 - 5.5	100A241	
SM25XC134	N	IM0347WCx0	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	IM0367WCx0	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	IM0437WCx0	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	IM0430WCx0	1200-2000	433	870	725	120	2.80	550	40	4500	4950	122 x 10 ³	20	1.00	0.74	1.47	635	125	0.090	0.095	70	3.3 - 5.5		
SM20XC176	N	IM0451WCx0	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	IM0759WCx0	200-1600	759	1540	1245	41	1.50	550	40	9500	10450	546 x 10 ³	50	1.13	0.38	1.70	1500	125	0.050	0.065	90	5.3 - 10.0		
SM45HXC284	N	IM0251WCx0	3000-4500	225	415	360	286	2.50	1000	150	2000	2200	24 x 10 ³	50	1.80	4.18	4.54	635	150	0.100	0.106	141	3.5 - 5.5		
SM35HXC103	N	IM0310WFx0	3000-3500	310	580	500	188	2.30	1000	100	4590	5050	128 x 10 ³	50	1.49	2.08	2.06	150	150	0.100	0.106	141	3.5 - 5.5	100A317	
SM45HXC144	N	IM0321WFx0	3500-4500	371	678	597	480	2.60	1000	150	4900	5400	146 x 10 ³	50	1.05	1.65	1.65	150	150	0.100	0.106	141	3.5 - 5.5		
SM25HXC166	N	IM0489WFx0	2600-3000	439	450	380	75	1.5	1000	100	3100	3424	59 x 10 ³	50	2.01	3.33	3.33	150	150	0.100	0.106	141	3.5 - 5.5		
SM16XC220	N	IM0891Cxx0	1200-1600	899	1745	1404	105	2.30	800	50	10000	11000	605 x 10 ³	50	1.17	0.32	1.55	1200	125	0.044	0.055	340	10.0 - 20.0		
SM21XC224	N	IM0872Cxx0	1400-2100	872	1760	1440	225	1.70	800	50	10000	11000	605 x 10 ³	50	1.09	0.34	1.50	1200	125	0.044	0.055	340	10.0 - 20.0		
SM60XC274	N	IM0710LCxx0	5600-6000	710	1400	1200	1000	3.30	1000	200	8400	9240	0.427 x 10 ⁶	100	1.45	0.875	2.500	1200	125	0.033	0.040	340	10.0 - 20.0		
SM12XC314	N	IM1080LCxx0	1000-1200	1080	2175	1790	120	1.60	1000	200	13500	14900	1.10 x 10 ⁶	100	1.15	0.30	1.510	1200	125	0.033	0.040	340	10.0 - 20.0		
SM45XC344	N	IM0598LCxx0	4000-4500	588	1104	948	315	3.50	1000	60	3955	4350	94.6 x 10 ³	100	2.32	1.77	4.80	1400	150	0.033	0.040	340	10.0 - 20.0	100A243	
SM45XC364	N	IM0699LCxx0	4200-4500	699	1315	1110	263	3.00	1000	50	7620	8470	359 x 10 ³	100	1.71	0.925	3.000	1400	125	0.033	0.040	340	10.0 - 20.0		
SM45XC374	N	IM0736LCxx0	4000-4500	736	1465	1240	953	3.80	1000	200	9000	10000	506 x 10 ³	100	1.50	0.78	2.56	1400	125	0.033	0.040	340	10.0 - 20.0		
SM36XC474	N	IM0832LCxx0	2600-3600	863	1730	1437	548	2.80	1000	200	10000	11000	605 x 10 ³	100	1.39	0.50	2.10	1400	125	0.033	0.040	340	10.0 - 20.0		
SM25XC524	N	IM0955LCxx0	2000-2500	955	1944	1552	338	2.00	1000	200	11700	12870	830 x 10 ³	50	1.44	0.33	1.90	1400	125	0.033	0.040	340	10.0 - 20.0		
SM20XC724	N	IM1022LCxx0	1200-2000	1022	1900	1680	248	1.90	1000	200	14000	15400	1.19 x 10 ⁶	100	1.24	0.33	1.72	1450	125	0.033	0.040	340	10.0 - 20.0		
SM25XC804	N	IM0760LCxx0	2000-2500	760	1540	1250	140	2.4	800	50	9000	10000	500 x 10 ³	50	1.70	0.58	2.54	1450	125	0.033	0.040	340	10.0 - 20.0		
SM25XC334	N	IM1502NCxx0	2000-2500	1502	2807	2450	420	2.30	1000	200	17000	18700	1.75 x 10 ⁶	60	1.24	0.44	2.21	2200	150	0.022	0.028	510	19.0 - 26.0		
SM25XC504	N	IM1829NCxx0	2000-600	1825	3105	2785	225	1.50	1000	200	26000	28600	1.75 x 10 ⁶	50	0.93	0.18	1.47	3000	125	0.022	0.028	510	19.0 - 26.0		
SM60XC574	N	IM1102NCxx0	5000-6000	1102	2185	1885	1350	4.50	1000	200	13000	14300	1.02 x 10 ⁶	40	1.36	0.56	2.20	1500	125	0.022	0.280	510	19.0 - 26.0		
SM45XC604	N	IM1010NCxx0	4000-4500	1010	1880	1665	124	3.00	1000	200	9600	10600	0.56 x 10 ⁶	150	1.70	1.03	3.25	1500	150	0.022	0.028	510	19.0 - 26.0		
SM45XC614	N	IM1163NCxx0	4000-4500	1163	2165	1910	600	5.30	1000	60	10800	11900	0.71 x 10 ⁶	150	1.50	0.77	2.65	1500	150	0.022	0.028	510	19.0 - 26.0	100A249	
SM45XC624	N	IM1104NCxx0	4000-4500	1104	2185	1884	863	3.80	1000	200	13000	14300	1.02 x 10 ⁶	50	1.37	0.553	2.20	1500	125	0.022	0.028	510	19.0 - 26.0		
SM36XC824	N	IM1242NCxx0	2600-3600	1242	2465	2108	698	2.90	1000	200	16400	18000	1.62 x 10 ⁶	60	1.27	0.420	2.20	2200	125	0.022	0.028	510	19.0 - 26.0		
SM36XC915	N	IM1609NCxx0	2000-2600	1609	3026	2580	551	3.00	1000	200	17500	19300	1.86 x 10 ⁶	150	1.31	0.345	2.07	2200	150	0.022	0.028	510	19.0 - 26.0		
SM25XC924	N	IM1495NCxx0	1600-2500	1494	2984	2506	280	3.70	1000	60	19600	21560	2.32 x 10 ⁶	85	1.15	0.265	2.34	4500	125	0.022	0.028	510	19.0 - 26.0		
SM45XC934	N	IM1545NCxx0	4000-4500	1545	3080	2700	1550	4.5	1000	200	19700	21700	2.25 x 10 ⁶	100	1.09	0.34	1.80	2000	125	0.018	0.022	1000	27.0 - 34.0		
SM45XC964	N	IM1488VCxx0	4000-4500	1488	2755	2485	1125	4.10	1000	200	24800	27300	3.73 x 10 ⁶	150	1.38	0.71	2.80	2000	150	0.016	0.020	1000	27.0 - 34.0	100A270	
SM25XC968	N	IM2837VCxx0	1800-2500	2837	5300	4630	1650	4.40	1000	200	31800	35000	6.10 x 10 ⁶	100	0.90	0.17	1.41	3000	150	0.016	0.020	1000	27.0 - 34.0		
SM40XC384	N	IM2326ZCxx0	3000-4000	2322	4695	3819	1500*	5.5	1000	150	23000	25300	3.19 x 10 ⁶	150	1.67*	0.186	2.04	2000	125	0.011	0.014	1700	27.0 - 47.0		
SM42XC954	N	IM2637ZCxx0	3600-4200	2640	4925	4315	1500*	5.5	1000	200	27520	30270	4.58 x 10 ⁶	150	1.38	0.29	2.25	3000	150	0.011	0.014	1700	27.0 - 47.0		
SM35XC964	N	IM2698ZCxx0	2500-3500	2698	4980	4545	1500	12.00	1000	150	27800	30600	4.70 x 10 ⁶	150	1.00	0.33	3.00	6000	150	0.011	0.014	1700	27.0 - 47.0	100A293	
SM30XC974	N	IM3770ZCxx0	2000-3000	3770	7114	5990	1125	4.10	1000	60	44000	30600	11.7 x 10 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

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- Note 1 V_s - Threshold Voltage
r - Slope resistance
) for conduction loss and heatsink calculations. (T_J = 125°C)
- Note 2 I_{TRM} (8.3ms) = I_{RR} (10ms) x 1.086 / I_{RR} (8.3ms) - I_{RR} (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 SMMaxFXCxxx, e.g. SM30FXC844
Outline 100A270 25.6 / 26.9 - ordering code SMMaxDXCxxx, e.g. SM30DXC964