

**FAST SWITCHING DEVICE - Fast Recovery Diodes - Stud Types**

Old Part Number	Data Sheet Available	New Part Number	V <sub>RRM</sub> Range (Note 3) (V)	I <sub>F(AV)</sub> at T <sub>sink</sub> 55°C (A)	I <sub>F(RMS)</sub> Max. (at T <sub>sink</sub> ) (A)	I <sub>F</sub> Max. (at T <sub>sink</sub> ) (A)	Typical Reverse Recovered Charge and Typical Reverse Recovery @ T <sub>J</sub> Max (50% Chord)				I <sub>FSM(1)</sub> 10ms V <sub>R</sub> £60% V <sub>RRM</sub> (Note 2) (A)	I <sub>FSM(2)</sub> 10ms V <sub>R</sub> £10V (Note 2) (A)	I <sup>2</sup> t <sub>(2)</sub> 10ms (A <sup>2</sup> s)	I <sub>RRM</sub> @ T <sub>J</sub> Max (mA)	V <sub>o</sub> r @ T <sub>J</sub> Max. (Note 1) (V) (mW)		V <sub>FM</sub> at I <sub>FM</sub> @ T <sub>J</sub> Max (Note 1) (V) (A)		T <sub>J</sub> Max (°C)	R <sub>th</sub> j-c		R <sub>th</sub> c-hs (K/W)	Wt (typ) (g)	Mounting Torque (kgf·m <sup>-1</sup> )	Outline No. (Note 4)
							O <sub>ra</sub> (nC)	t <sub>rr</sub> (ms)	I <sub>FM</sub> (A)	di/dt (A/ms)					d.c.sine (K/W)	120° Rect (K/W)									
SM20-25MCN094	N	M0130SL200-250	1600-2500	130	170 (70°C)	170 (45°C)	240	2.60	1000	150	2240	2450	30.0 x 10 <sup>3</sup>	20	1.29	1.54	1.72	280	125	0.3	0.36	0.08	85	1.15 - 1.44	100A303
SM20-25MCR094	N	M0130RL200-250	1600-2500	130	170 (70°C)	170 (45°C)	240	2.60	1000	150	2240	2450	30.0 x 10 <sup>3</sup>	20	1.29	1.54	1.72	280	125	0.3	0.36	0.08	85	1.15 - 1.44	
SM12-18PHN100	N	M0139SR120-180	1200-1800	139	175 (72°C)	175 (48°C)	68	1.00	1000	100	2450	2700	36.5 x 10 <sup>3</sup>	20	1.24	1.28	1.60	280	125	0.3	0.4	0.08	85	1.15 - 1.44	100A294
SM12-18PHR100	N	M0139RR120-180	1200-1800	139	175 (72°C)	175 (48°C)	68	1.00	1000	100	2450	2700	36.5 x 10 <sup>3</sup>	20	1.24	1.28	1.60	280	125	0.3	0.4	0.4	85	1.15 - 1.44	
SM20-25PHN134	N	M0268SP200-250	1600-2500	268	400 (59°C)	400 (35°C)	173	2.80	1000	150	4250	4670	109 x 10 <sup>3</sup>	20	1.21	1.20	1.77	470	125	0.13	0.14	0.04	250	1.15 - 1.44	100A297
SM20-25PHR134	N	M0268RP200-250	1600-2500	268	400 (59°C)	400 (35°C)	173	2.80	1000	150	4250	4670	109 x 10 <sup>3</sup>	20	1.21	1.20	1.77	470	125	0.13	0.14	0.04	250	1.15 - 1.44	
SM20-25PHN144	N	M0280SP200-250	1600-2500	280	400 (63°C)	400 (39°C)	255	2.80	1000	150	4500	4950	122 x 10 <sup>3</sup>	20	1.28	0.92	1.71	470	125	0.13	0.14	0.04	250	1.15 - 1.44	100A281
SM20-25PHR144	N	M0280RP200-250	1600-2500	280	400 (63°C)	400 (39°C)	255	2.80	1000	150	4500	4950	122 x 10 <sup>3</sup>	20	1.28	0.92	1.71	470	125	0.13	0.14	0.04	250	1.15 - 1.44	
SM12-14PHN170	N	M0336SP120-140	800-1400	336	400 (77°C)	400 (57°C)	137	1.80	1000	200	4500	4950	122 x 10 <sup>3</sup>	20	1.02	0.70	1.35	470	125	0.13	0.14	0.04	250	2.77 - 2.5	100A280
SM12-14PHR170	N	M0336RP120-140	800-1400	336	400 (77°C)	400 (57°C)	137	1.80	1000	200	4500	4950	122 x 10 <sup>3</sup>	20	1.02	0.70	1.35	470	125	0.13	0.14	0.04	250	2.77 - 2.5	
SM12-18PHN174	N	M0334SP120-180	1200-1800	334	400 (76°C)	400 (58°C)	293	2.30	1000	200	4500	4950	122 x 10 <sup>3</sup>	20	1.00	0.74	1.35	470	125	0.13	0.14	0.04	250	2.77 - 2.5	100A280
SM12-18PHR174	N	M0334RP120-180	1200-1800	334	400 (76°C)	400 (58°C)	293	2.30	1000	200	4500	4950	122 x 10 <sup>3</sup>	20	1.00	0.74	1.35	470	125	0.13	0.14	0.04	250	2.77 - 2.5	

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- Note 1 V<sub>o</sub> Threshold Voltage  
r Slope resistance ) for conduction loss and heatsink calculations. (T<sub>J</sub> = 125°C)
- Note 2 I<sub>FSM</sub> (8.3ms) = I<sub>FSM</sub> (10ms) x 1.066 I<sup>2</sup>t (8.3ms) = I<sup>2</sup>t (10ms) x 0.943 at initial temperature T<sub>J</sub> max.
- Note 3 A blocking voltage derating factor of 0.13% per degree centigrade is applicable for T<sub>J</sub> below 25°C
- Note 4 Leaded types, code changes from SP/RP (PHN/R), SN/RN (HHN/R) or SR/RR (PXN/R) . Lead length 135mm (base of hexagon to centre of lug hole).