SRR0 THRU SRR6

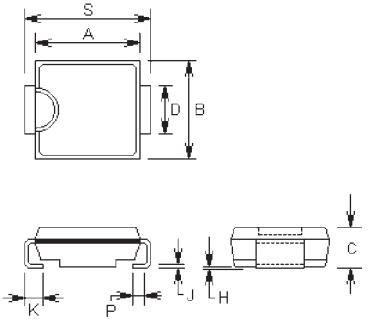
SURFACE MOUNT FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 600 Volts
Forward Current - 3.0 Amperes

Features

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering: 260℃/10 seconds at terminals
- Fast recovery times for high efficiency

SMC



Mechanical Data

- **Case:** SMC molded plastic
- **Terminals:** Solder plated solderable per MIL-STD-750, method 2026
- **Polarity:** Indicated by cathode band
- **Weight:** 0.007 ounce, 0.25 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.260	0.280	6.60	7.11	
B	0.220	0.240	5.59	6.10	
C	0.075	0.095	1.90	2.41	
D	0.115	0.121	2.92	3.07	
H	0.0020	0.0060	0.051	0.152	
J	0.006	0.012	0.15	0.30	
K	0.030	0.050	0.76	1.27	
P	0.020 REF		0.51 REF		
S	0.305	0.320	7.75	8.13	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	SRR0	SRR1	SRR2	SRR4	SRR6	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	Volts
Maximum average forward rectified current at T_L=50℃	$I_{(AV)}$	3.0					Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	100.0					Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.3					Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=125℃	I_R	10.0 350.0					μA
Maximum reverse recovery time (Note 1)	T_{rr}	150					nS
Typical junction capacitance (Note 2)	C_J	60.0					ρF
Maximum thermal resistance (Note 3)	$R_{\Theta JL}$ $R_{\Theta JA}$	15.0 50.0					℃/W
Operating and storage temperature range	T_J, T_{STG}	-50 to +125					℃

Notes:

(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) 8.0mm² (0.013mm thick) land areas

RATINGS AND CHARACTERISTIC CURVES

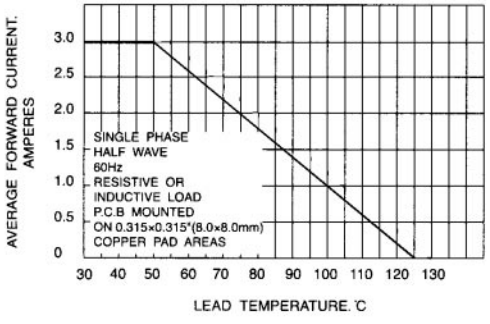


FIG. 1 – FORWARD CURRENT DERATING CURVE

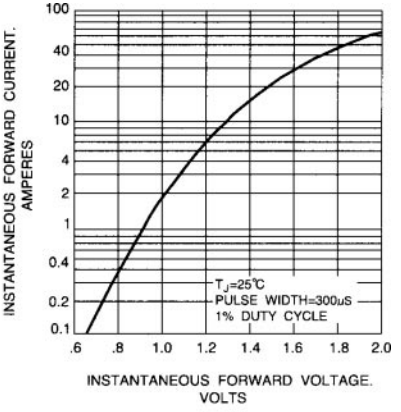


FIG. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

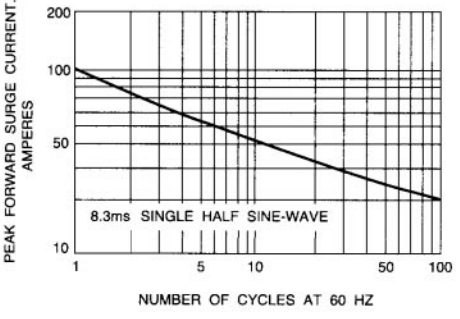


FIG 3. – MAXIMUM NON-REPETITIVE SURGE CURRENT

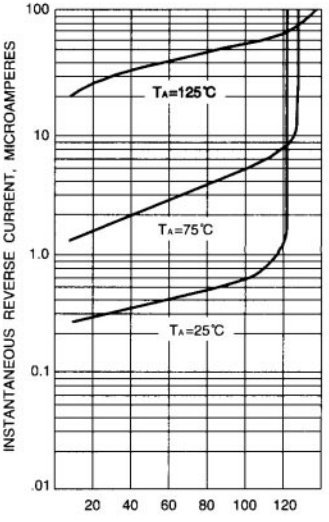


FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

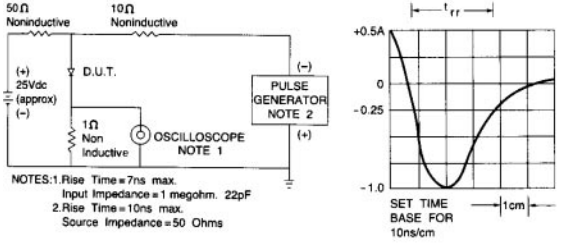


FIG. 5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM