SRN3 THRU SRN7

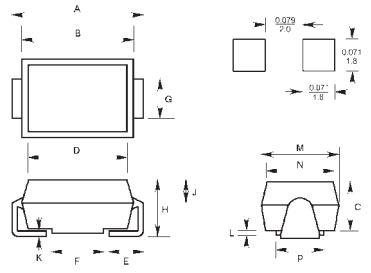
SURFACE MOUNT FAST SWITCHNG RECTIFIER

Reverse Voltage - 50 to 600 Volts
Forward Current - 1.0 Ampere

Features

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

SMA



Mechanical Data

- **Case:** SMA molded plastic
- **Terminals:** Solder plated solderable per MIL-STD-750, method 2026
- **Polarity:** Indicated by cathode band
- **Weight:** 0.004 ounce, 0.113 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.216	0.226	5.48	5.74	
B	0.176	0.182	4.48	4.63	
C	0.094	0.100	2.40	2.55	
D	0.170	0.176	4.33	4.48	
E	0.039	0.055	1.00	1.40	
F	0.080	0.081	2.03	2.07	
G	0.068	0.083	1.72	2.10	
H	0.112	0.118	2.85	3.00	
J	0.057	-	1.44	-	
K	-	0.018	-	0.45	
L	0.016	-	0.40	-	
M	0.109	0.115	2.77	2.93	
N	0.105	0.107	2.67	2.73	
P	0.078	0.081	2.00	2.05	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	SRN3	SRN4	SRN5	SRN6	SRN7	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=90℃	$I_{(AV)}$	1.0					Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0					Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.3					Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=125℃	I_R	5.0 300.0					μA
Maximum reverse recovery time (Note 1) T_J=25℃	T_{rr}	150			250	500	nS
Typical junction capacitance (Note 2)	C_J	10.0					pF
Maximum thermal resistance (Note 3)	$R_{\theta JL}$	30.0					℃/W
Operating and storage temperature range	T_J, T_{STG}	-50 to +150					℃

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

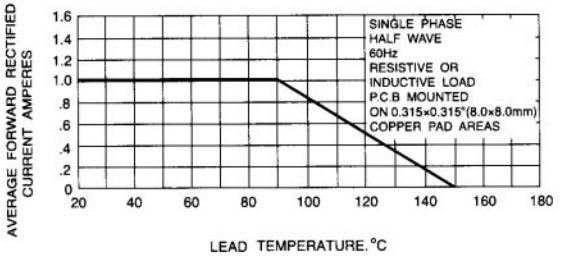


Fig. 1 – FORWARD CURRENT DERATING CURVE

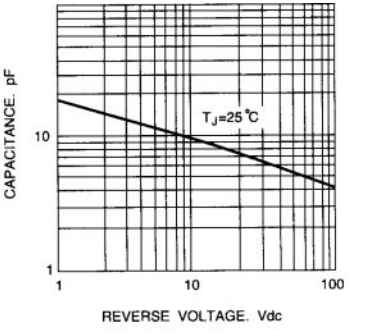


Fig. 2 – TYPICAL JUNCTION CAPACITANCE

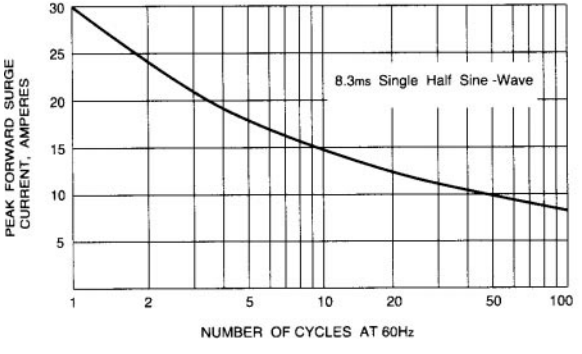


Fig. 3 – PEAK FORWARD SURGE CURRENT

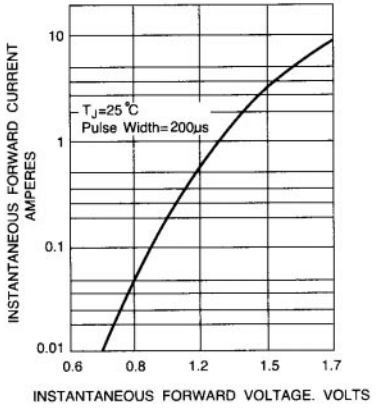


Fig. 4 – TYPICAL FORWARD CHARACTERISTICS

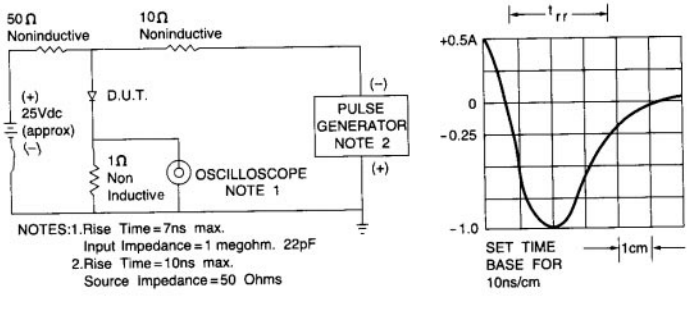


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC
AND TEST CIRCUIT DIAGRAM