SS3A THRU SS3M

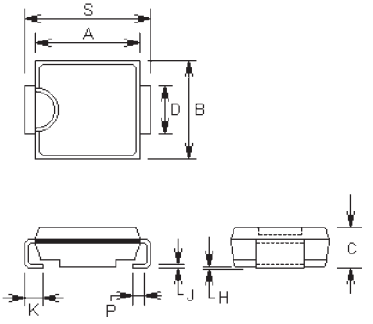
SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts
Forward Current - 3.0 Amperes

Features

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

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	SS3A	SS3B	SS3C	SS3D	SS3E	SS3G	SS3J	SS3K	SS3M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts
Maximum average forward rectified current at T_L=75℃	$I_{(AV)}$	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 DC	V_F	0.95				1.25		1.40			Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=100℃	I_R	5.0 / 500.0									μA
Maximum reverse recovery time (Note 1)	T_{rr}	35.0									nS
Typical junction capacitance (Note 2)	C_J	45.0									pF
Typical thermal resistance (Note 3)	$R_{\theta JL}$	16.0									℃/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) 8mm² (0.013mm thick) land areas

RATINGS AND CHARACTERISTIC CURVES

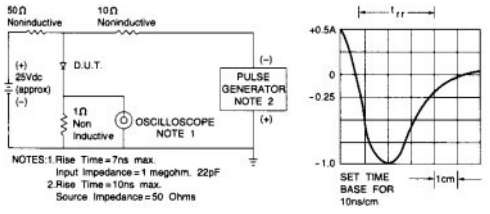


FIG. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM

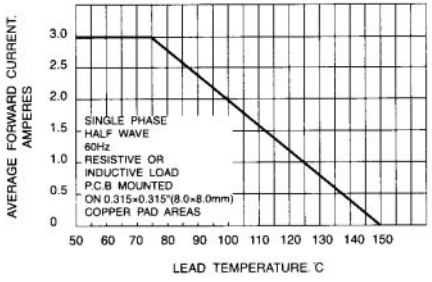


FIG. 2 – MAXIMUM AVERAGE FORWARD CURRENT RATING

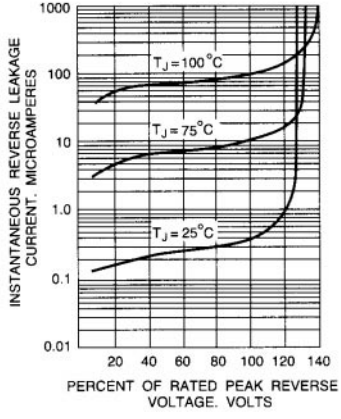


FIG. 3 – TYPICAL REVERSE CHARACTERISTICS

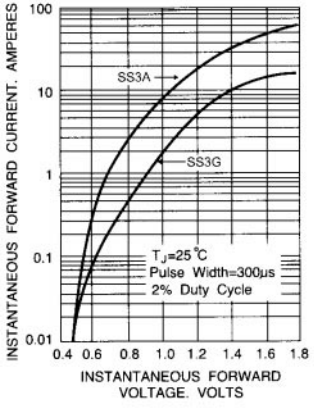


FIG. 4 – TYPICAL FORWARD CHARACTERISTICS

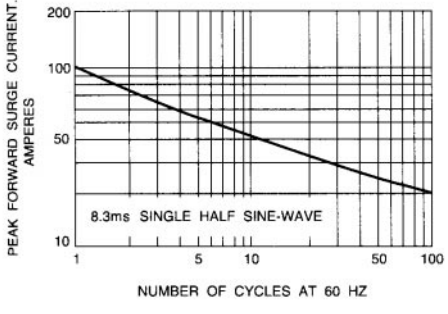


FIG. 5 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

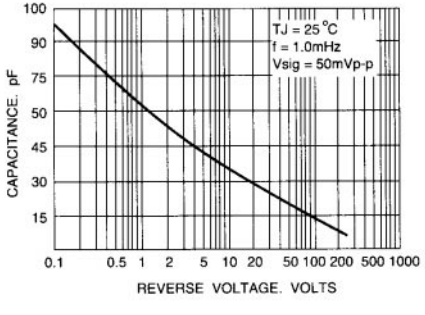


FIG. 6 – TYPICAL JUNCTION CAPACITANCE