



REVERSE VOLTAGE: 20 --- 100 V

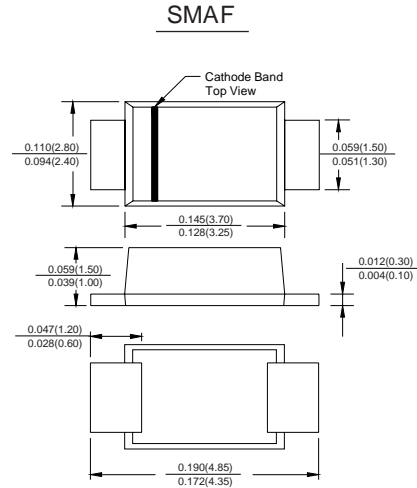
FORWARD CURRENT: 5.0 A

Features

- ✧ Plastic package has Underwriters Laborator Flammability Classification 94V-0
- ✧ For surface mounted applications
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Metal silicon junction, majority carrier conduction
- ✧ High surge capability
- ✧ High current capability, low forward voltage drop
- ✧ Low power loss, high efficiency
- ✧ For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

- ✧ Case: JEDEC SMAF, molded plastic over passivated chip
- ✧ Polarity: Color band denotes cathode end



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETERS		SS 52F	SS 53F	SS 54F	SS 55F	SS 56F	SS 58F	SS 59F	SS 510F	SS 515F	SS 520F	UNITS
Marking code		SS52	SS53	SS54	SS55	SS56	SS58	SS59	SS510	SS515	SS520	
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	50	60	80	90	100	150	200	V
Maximum RMS voltage	V_{RWS}	14	21	28	35	42	56	63	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	90	100	150	200	V
Maximum average forward rectified current at T_L (SEE FIG.1) (NOTE 2)	$I_{(AV)}$	5.0										A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175										A
Maximum instantaneous forward voltage at 5.0A (NOTE 1)	V_F	0.45	0.55		0.70		0.85					V
Maximum DC reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ C$	I_R	0.5										mA
		20						10				
Typical thermal resistance (NOTE 2)	R_{JA}	55										°C/W
	R_{JL}	17										
Operating junction temperature range	T_J	-55 --- +150						-55 --- +175				°C
Storage temperature range	T_{STG}	-55 --- +150						-55 --- +175				°C

NOTE: 1. Pulse test: 300 μs pulse width, 1% duty cycle

2. P.C.B. mounted with 0.55" x 0.55" (14.0 x 14.0 mm²) copper pad areas



Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

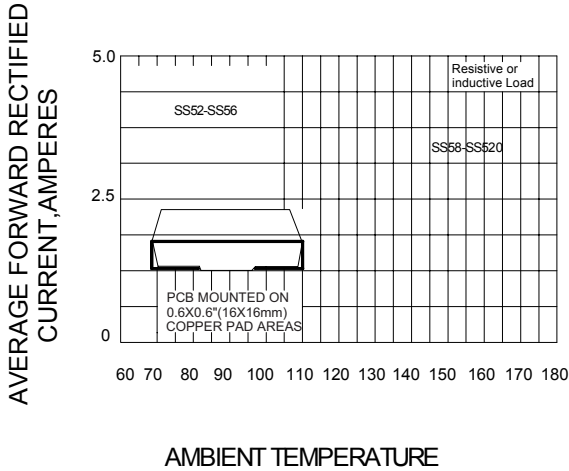


FIG.2- PEAK FORWARD SURGE CURRENT

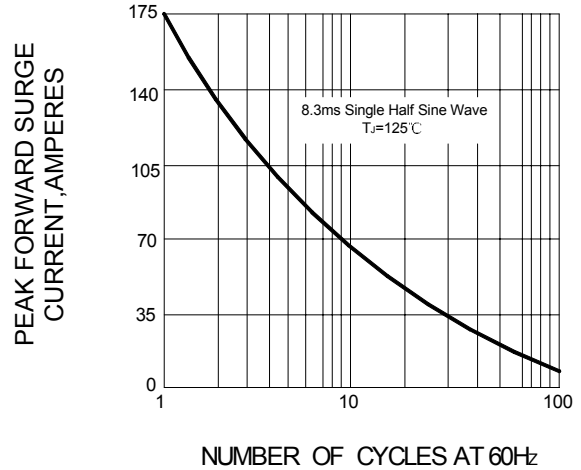


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

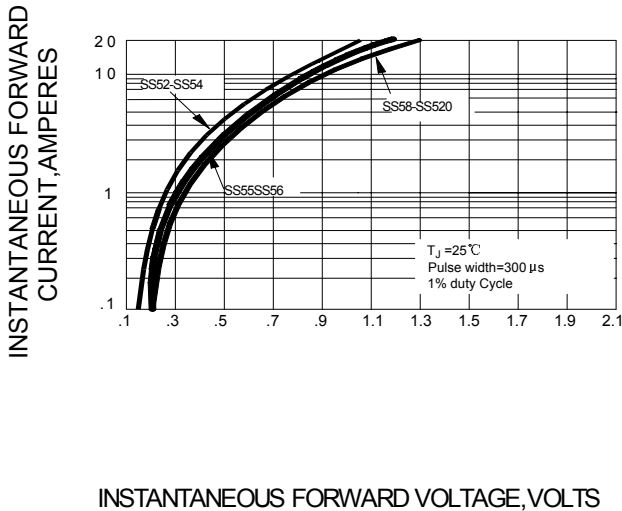
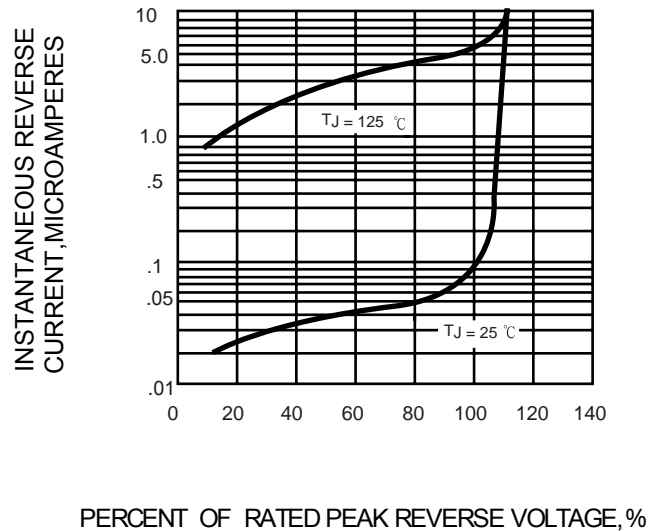


FIG.4 – TYPICAL REVERSE CHARACTERISTICS



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	5000/REEL	80000	36X30.6X31	12.00	11.00

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