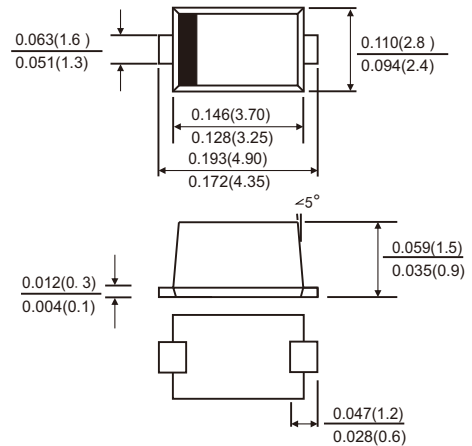


### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Low profile package
- Built-in strain relief ,ideal for automated placement
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



### SMAF



### MECHANICAL DATA

- Case: SMAF molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameters	Symbols	SS 52S	SS 53S	SS 54S	SS 56S	SS 510S	SS 515S	SS 520S	Units	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	60	100	150	200	Volts	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	42	71	105	140	Volts	
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	60	100	150	200	Volts	
Maximum average forward rectified current (see fig.1)	I(AV)	5.0							Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T <sub>J</sub> )	I <sub>FSM</sub>	125.0							Amps	
Maximum instantaneous forward voltage at 5.0 A(Note 1)	V <sub>F</sub>	0.55		0.70	0.85	0.90	0.95		Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T <sub>A</sub> =25°C	100				20				μA
	T <sub>A</sub> =100°C	10				-				mA
	T <sub>A</sub> =125°C	-				5				mA
Typical junction capacitance(Note 3)	C <sub>J</sub>	250					120			pF
Typical thermal resistance (Note 2)	R <sub>θJA</sub>					50.0				°C/W
	R <sub>θJL</sub>					28.0				
Operating junction temperature range	T <sub>J</sub>	-55 to +150							°C	
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C	

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

2. P.C.B. mounted 0.2X0.2"(5X5mm) copper pad areas

3. Measured at 1MHz and reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES SS52S THRU SS520S

FIG.1-FORWARD CURRENT DERATING CURVE

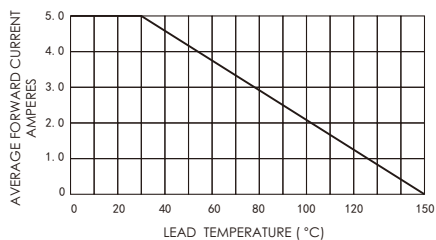


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

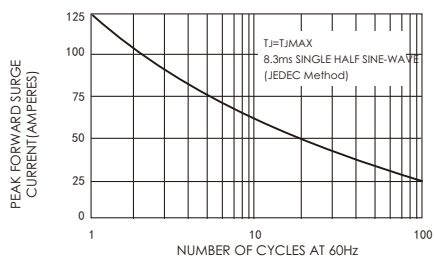


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

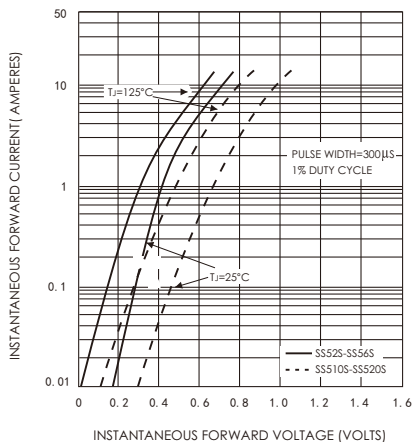


FIG.4-TYPICAL REVERSE CHARACTERISTICS

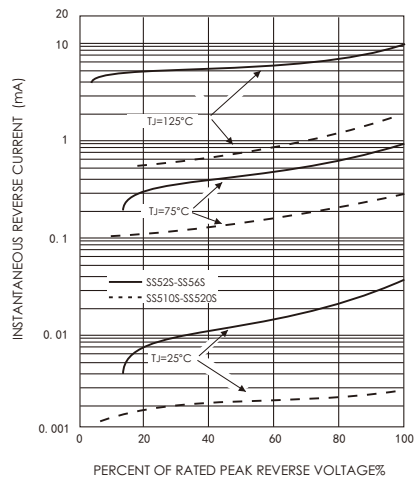


FIG.5-TYPICAL JUNCTION CAPACITANCE

