

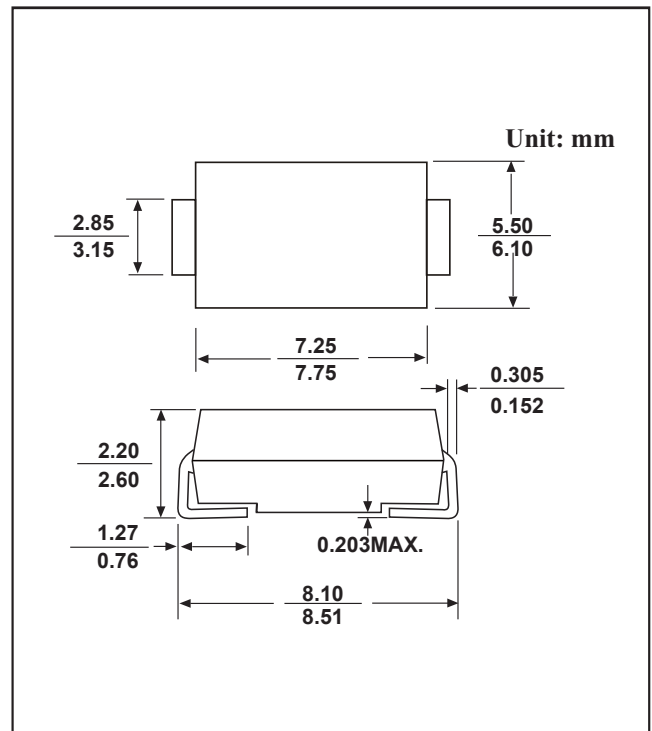
## SMC PLASTIC SILICON RECTIFIERS

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing
- Metal silicon junction ,majority carrier conduction
- Built-in strain relief
- For surface mounted applications
- Low power loss ,high efficiency,High surge capability
- High current capability ,Low forward voltage drop
- 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 2015/863 and WEEE 2012/19/EU

### MECHANICAL DATA

- Case: SMC molded plastic body
- Terminals:Lead solderable per MIL-STD-750,method 2026
- Polarity:Color band denotes cathode end



## MAXIMUM RATINGS AND CHARACTERISTICS

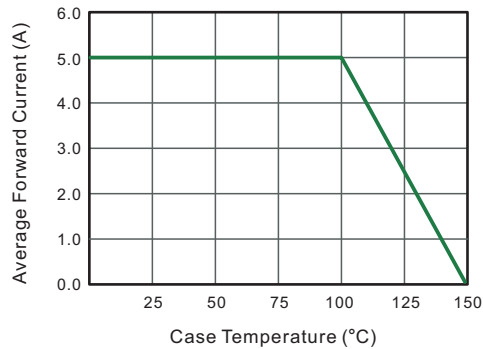
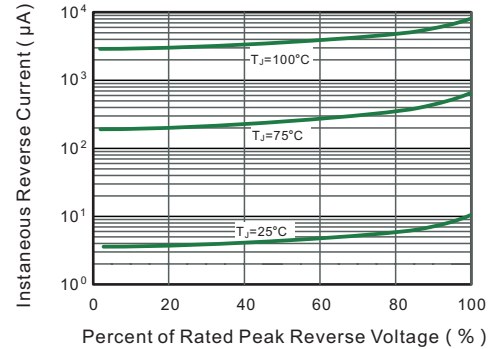
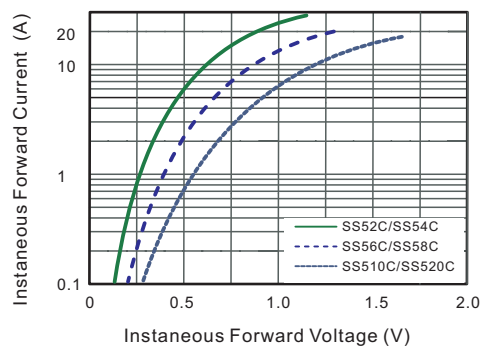
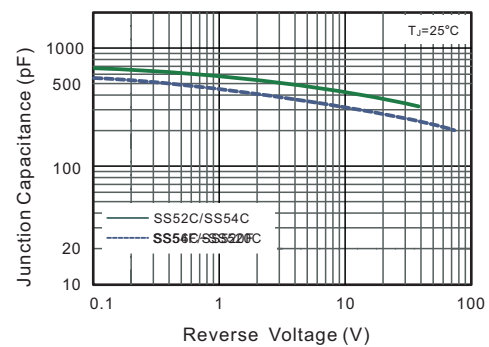
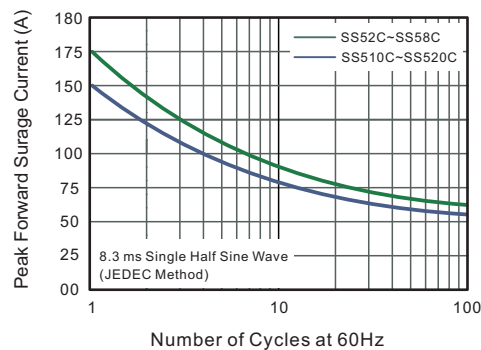
@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbols	SS52	SS54	SS56	SS58	SS510	SS512	SS515	SS520	Units
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	5.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	175				150				A
Max Instantaneous Forward Voltage at 5 A	V <sub>F</sub>	0.55		0.70		0.85				V
Maximum DC Reverse Current   T <sub>a</sub> = 25°C at Rated DC Reverse Voltage   T <sub>a</sub> =100°C	I <sub>R</sub>	1.0 50								mA
Typical Junction Capacitance <sup>(1)</sup>	C <sub>j</sub>	600		400						pF
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub>	35								°C/W
Operating Junction Temperature Range	T <sub>j</sub>	-55 ~ +150								°C
Storage Temperature Range	T <sub>stg</sub>	-55 ~ +150								°C

( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

## RATINGS AND CHARACTERISTIC CURVES

**Fig.1 Forward Current Derating Curve**

**Fig.2 Typical Reverse Characteristics**

**Fig.3 Typical Forward Characteristic**

**Fig.4 Typical Junction Capacitance**

**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

**Fig.6- Typical Transient Thermal Impedance**
