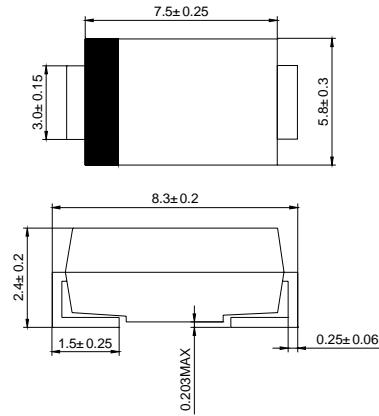


**REVERSE VOLTAGE: 20 --- 200 V**  
**CURRENT: 5.0 A**



### SMC



Dimensions in millimeters

## 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:  $250^{\circ}\text{C}/10$  seconds at terminals

## Mechanical Data

- Case: JEDEC SMC, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

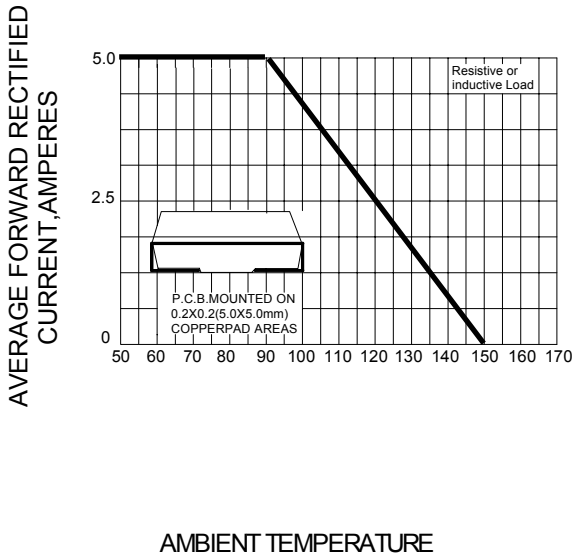
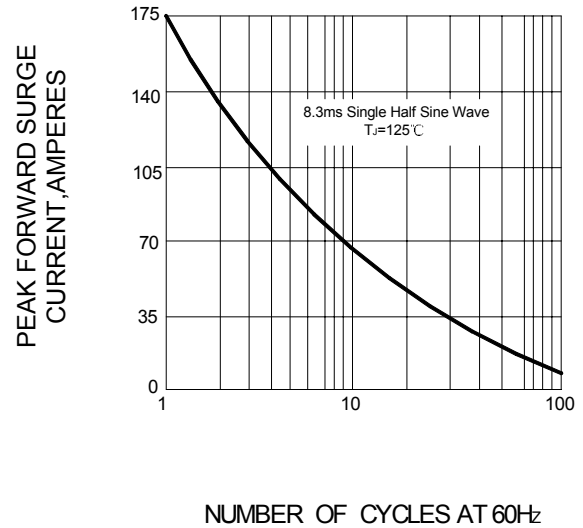
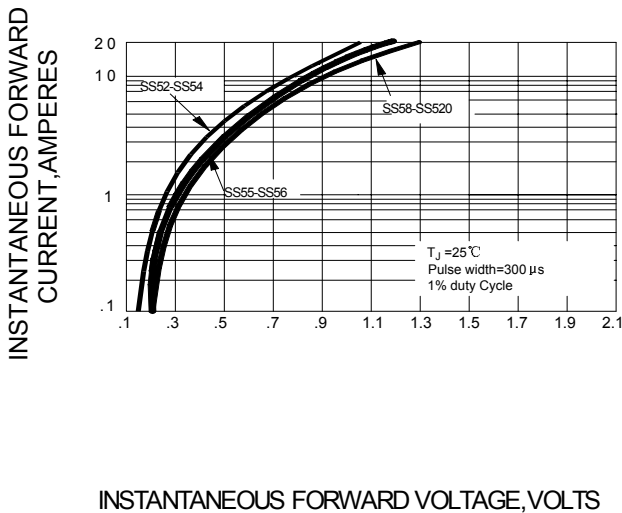
Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified

		SS52	SS53	SS54	SS55	SS56	SS58	SS59	SS510	SS520	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	200	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	56	63	70	140	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	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)	$V_F$	0.55			0.70		0.85				V
Maximum DC reverse current @ $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^{\circ}\text{C}$	$I_R$	0.5									mA
		20						10			
Typical thermal resistance (NOTE 2)	$R_{JA}$	55									$^{\circ}\text{C}/\text{W}$
	$R_{JL}$	17									
Operating junction temperature range	$T_J$	-55 --- +150									$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 --- +150									$^{\circ}\text{C}$

NOTE: 1. Pulse test: 300  $\mu\text{s}$  pulse width, 1% duty cycle

2. P.C.B. mounted with  $0.55 \times 0.55$  (14.0X14.0mm<sup>2</sup>) 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**
