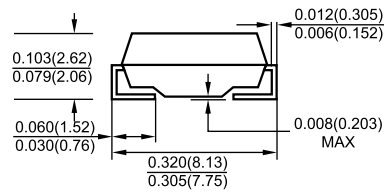
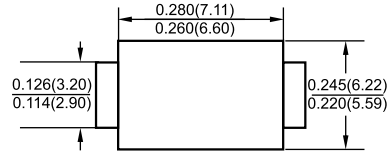




Features

- ✧ 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

SMC/DO-214AB



Dimensions in inches and (millimeters)

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°C ambient temperature unless otherwise specified

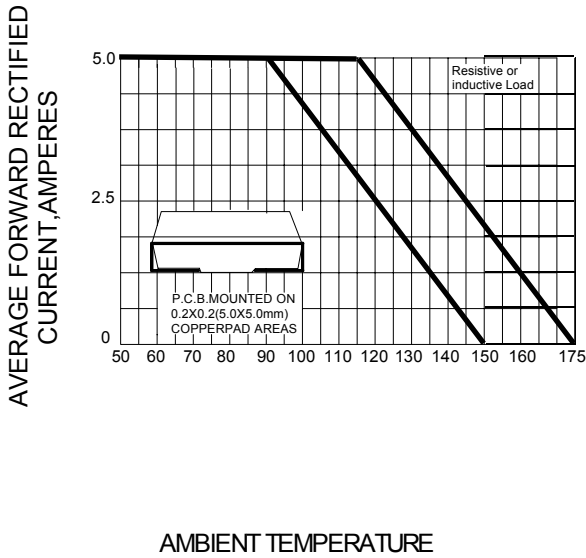
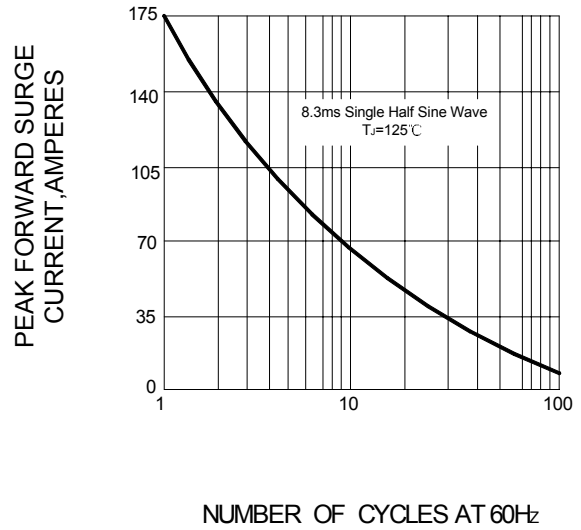
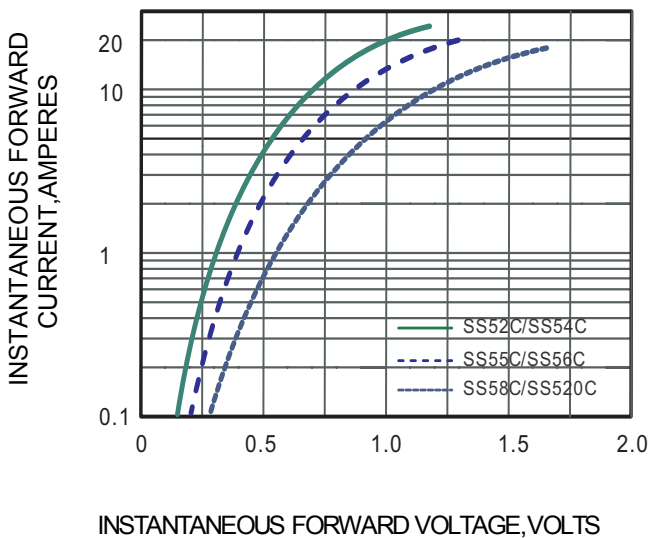
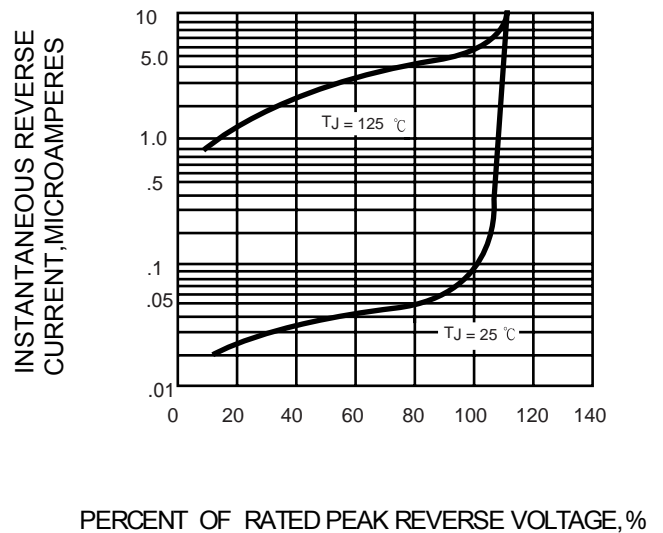
Parameter	SS52C	SS53C	SS54C	SS55C	SS56C	SS58C	SS59C	SS510C	SS515C	SS520C	UNITS	
Marking code	SS52	SS53	SS54	SS55	SS56	SS58	SS59	SS510	SS515	SS520		
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	50	60	80	90	100	150	200	V
Maximum RMS voltage	V_{RWS}	14	21	28	35	42	56	63	70	105	140	V
Maximum DC 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 @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ\text{C}$	I_R	0.5					0.1					mA
		20					10					
Typical thermal resistance (NOTE 2)	R_{JA}	55									$^\circ\text{C/W}$	
	R_{JL}	17										
Operating junction temperature range	T_J	-55--- +150					-55--- +175					$^\circ\text{C}$
Storage temperature range	T_{STG}	-55--- +150					-55--- +175					$^\circ\text{C}$

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

2. P. C. B. mounted with 0.55"X0.55" (14.0X14.0mm²) 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
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50