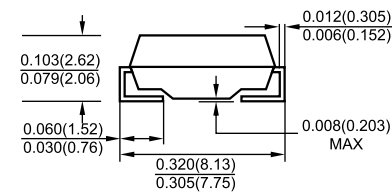
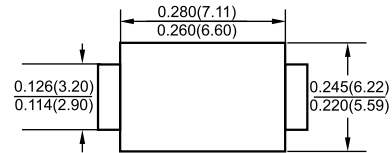




### Features

- ✧ 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

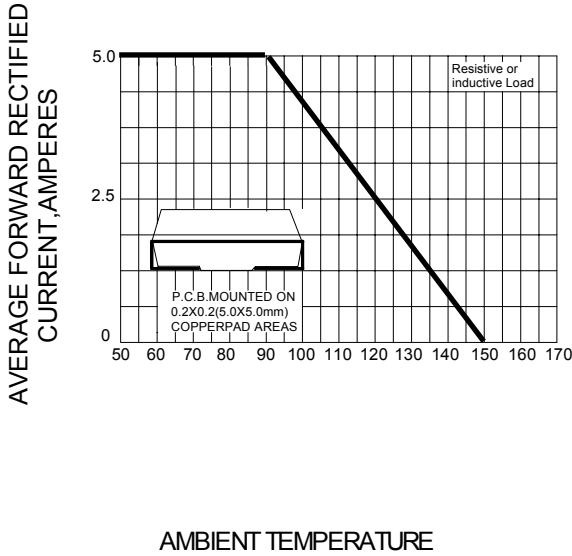
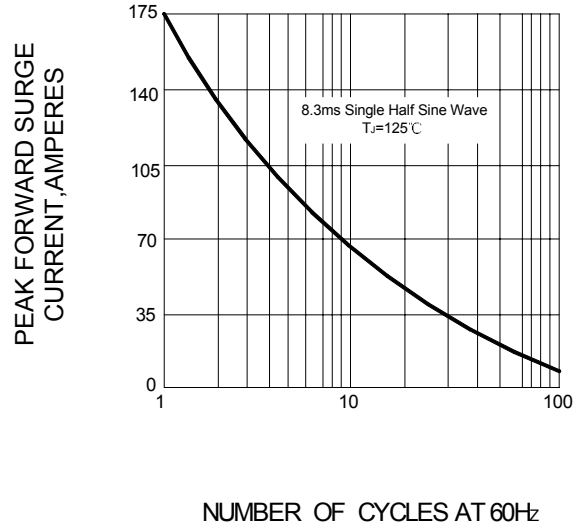
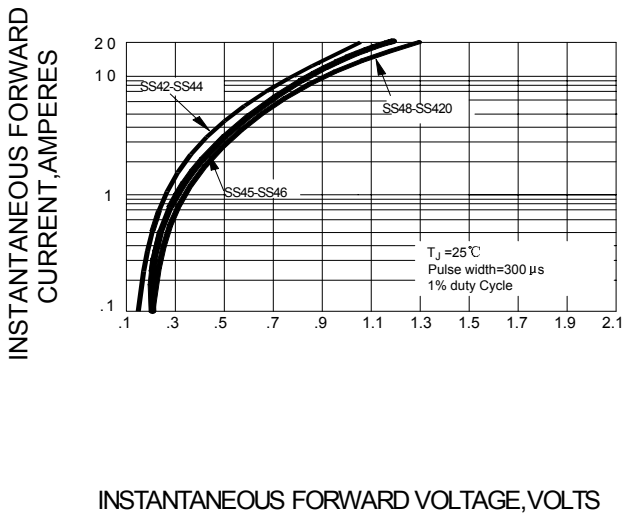
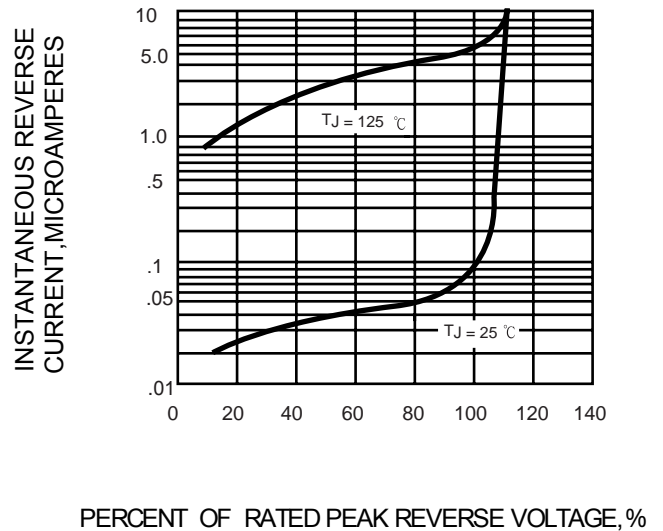
Ratings at 25°C ambient temperature unless otherwise specified

		SS42	SS43	SS44	SS45	SS46	SS48	SS49	SS410	SS420	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)	$I_{(AV)}$	4.0									A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100									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					10					mA
Typical thermal resistance (NOTE 2)	$R_{JA}$	55									°C/W	
	$R_{JL}$	17										
Operating junction temperature range	$T_J$	-55--- +150									°C	
Storage temperature range	$T_{STG}$	-55--- +150									°C	

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

2. P.C.B. mounted with 0.55"X0.55" (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**


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