

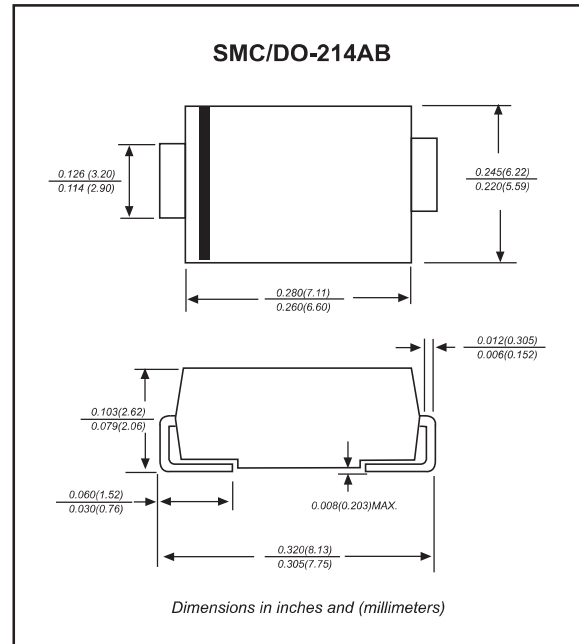
Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Compliant to RoHS Directive 2011/65/EU

Mechanical data

- ◆ **Case:** JEDEC DO-214AB molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

Package outline

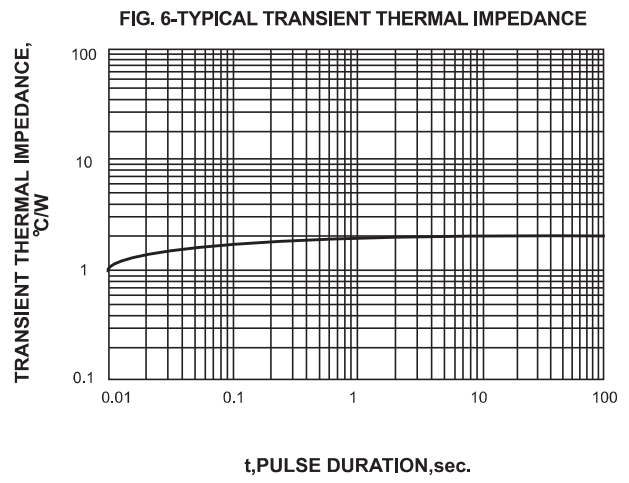
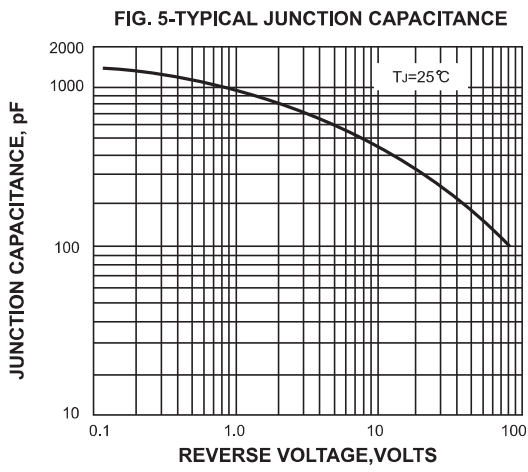
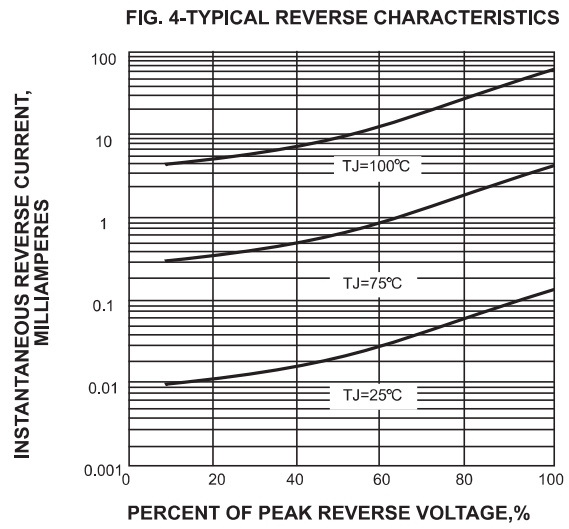
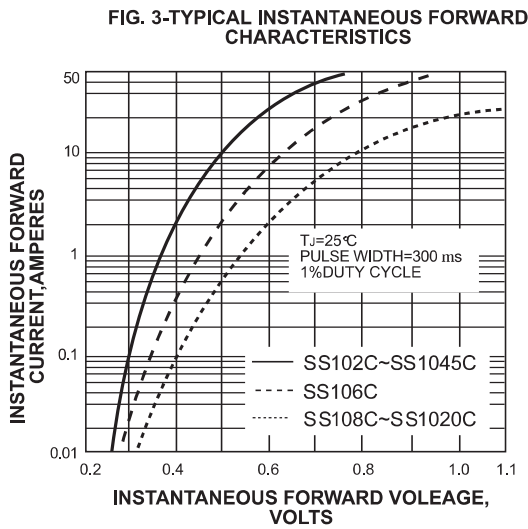
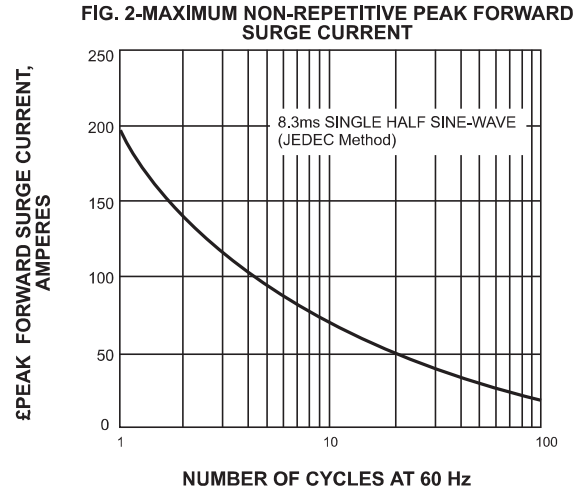
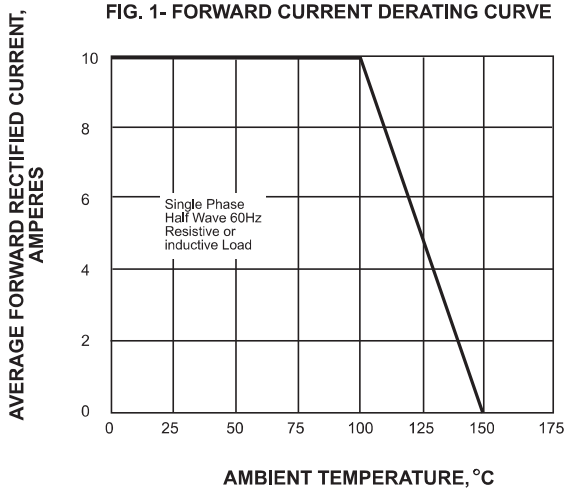


Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)



PARAMETER	SYMBOLS	SS102C	SS103C	SS104C	SS1045C	SS106C	SS108C	SS1010C	SS1015C	SS1020C	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	60	80	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	32	42	56	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	45	60	80	100	150	200	V	
Maximum average forward rectified current at T_L (see fig.1)	$I_{(AV)}$	10.0									A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200									A	
Maximum instantaneous forward voltage at 10A	V_F	0.55			0.70	0.85	0.95				V	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	0.5					10.0					mA
Typical junction capacitance (NOTE 1)	C_J	550										pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50										$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150										$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150										$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas

Rating and characteristic curves



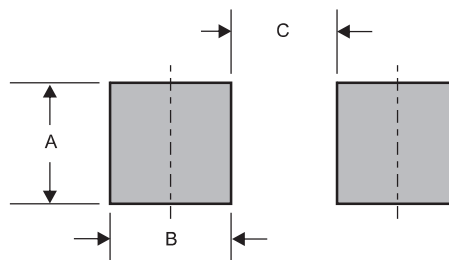
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SS102C	SS102
SS103C	SS103
SS104C	SS104
SS1045C	SS1045
SS106C	SS106
SS108C	SS108
SS1010C	SS1010
SS1015C	SS1015
SS1020C	SS1020

Suggested solder pad layout

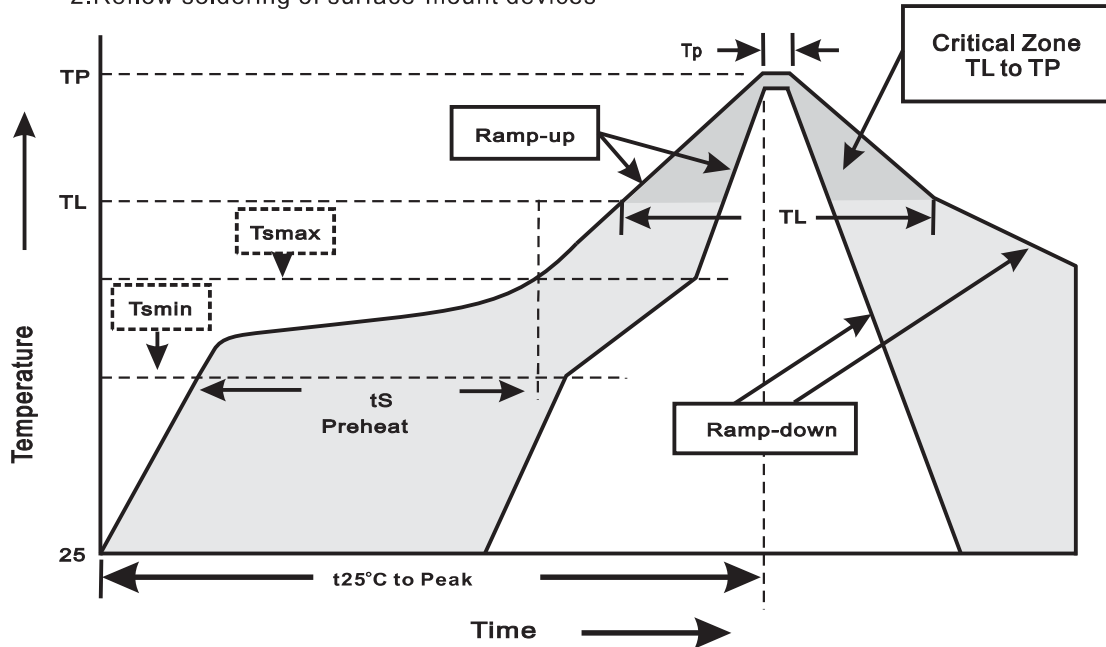


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.132 (3.30)	0.100 (2.50)	0.176(4.40)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes