

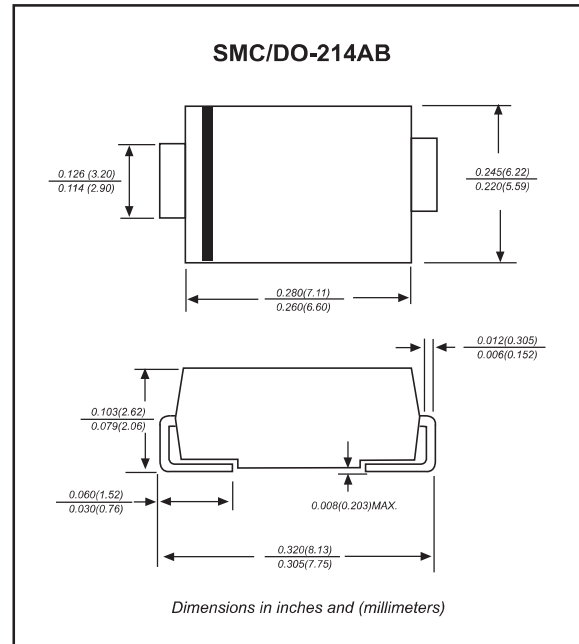
### Features

- ◆ 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

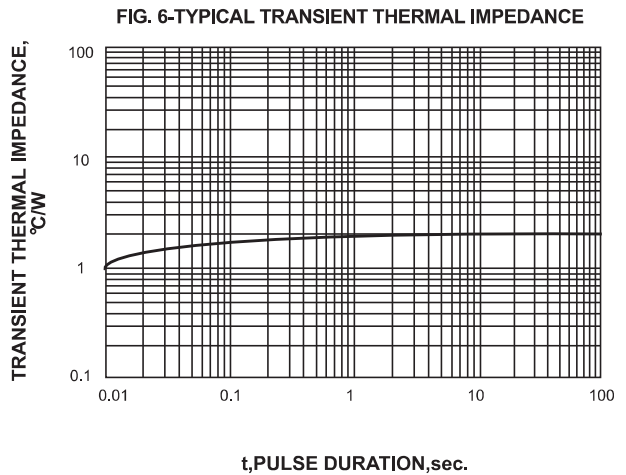
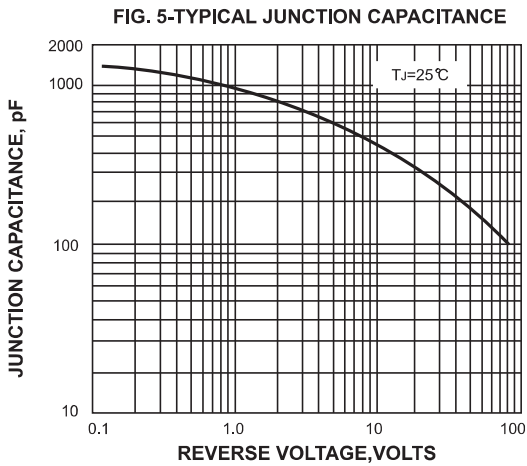
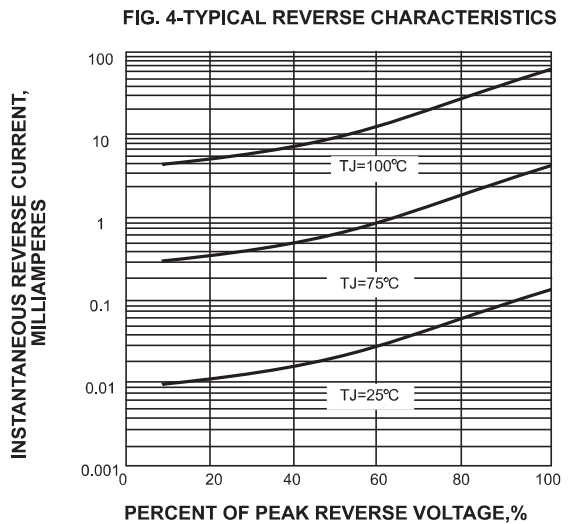
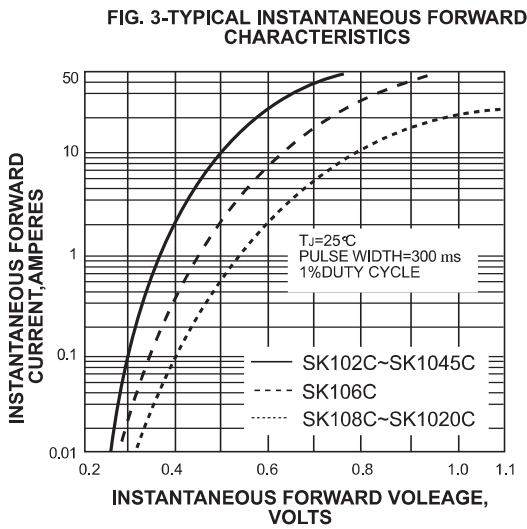
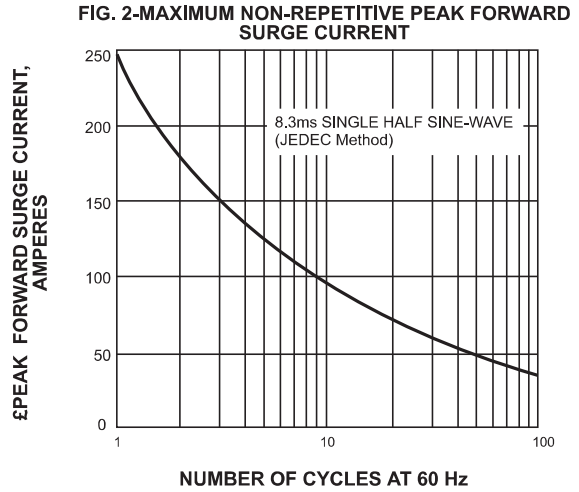
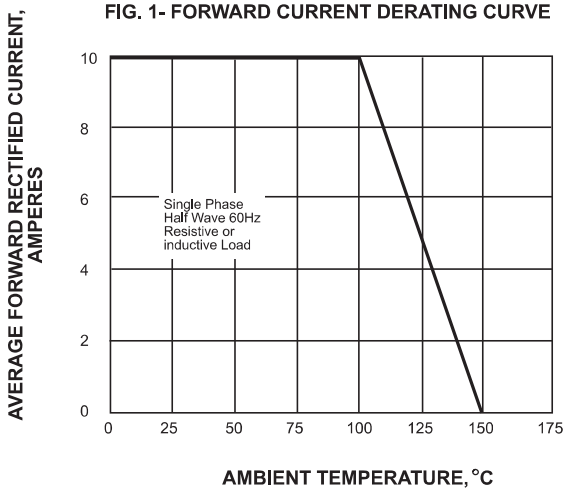


### Maximum ratings and Electrical Characteristics (AT T<sub>A</sub>=25°C unless otherwise noted)



PARAMETER	SYMBOLS	SK102C	SK103C	SK104C	SK1045C	SK106C	SK108C	SK1010C	SK1015C	SK1020C	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	45	60	80	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	32	42	56	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	45	60	80	100	150	200	V
Maximum average forward rectified current at T <sub>L</sub> (see fig.1)	I <sub(av)< sub=""></sub(av)<>	10.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	250									A
Maximum instantaneous forward voltage at 10A	V <sub>F</sub>	0.55			0.70	0.85	0.95				V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25°C T <sub>A</sub> =100°C	I <sub>R</sub>	0.5 10.0									mA
Typical junction capacitance (NOTE 1)	C <sub>J</sub>	550									pF
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub>	50									°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +150									°C
Storage temperature range	T <sub>STG</sub>	-55 to +150									°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**



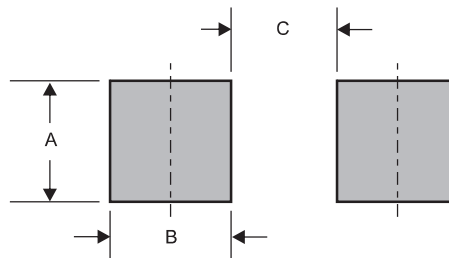
**Pinning information**

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

**Marking**

Type number	Marking code
SK102C	SK102
SK103C	SK103
SK104C	SK104
SK1045C	SK1045
SK106C	SK106
SK108C	SK108
SK1010C	SK1010
SK1015C	SK1015
SK1020C	SK1020

**Suggested solder pad layout**

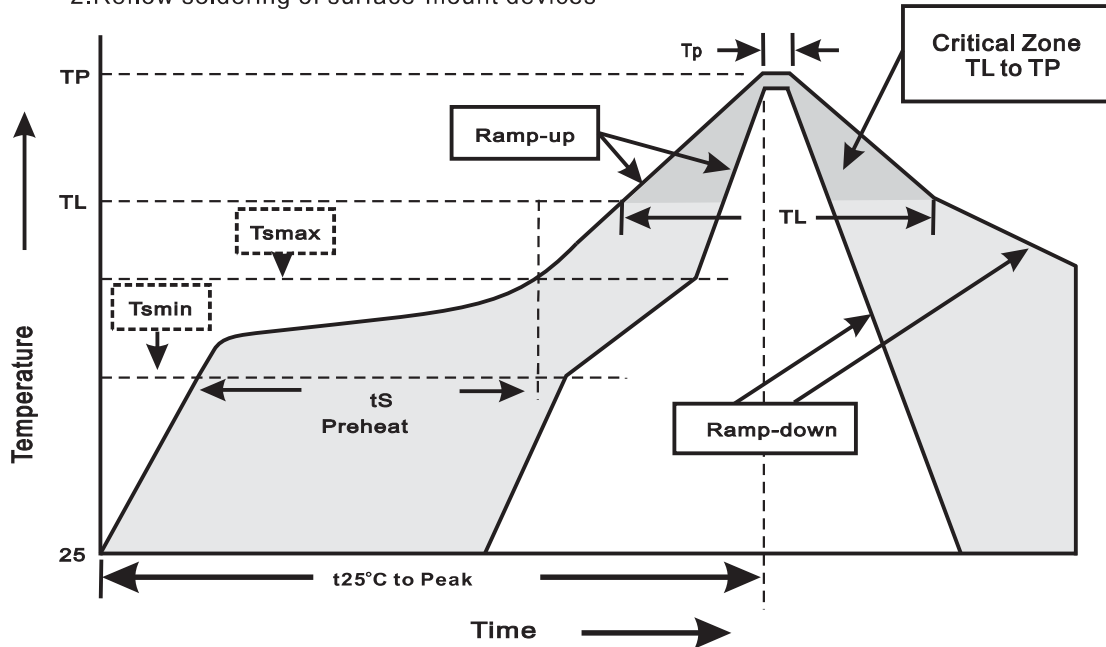


Dimensions in inches and (millimeters)

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(T <sub>L</sub> to T <sub>P</sub> )	<3°C/sec
Preheat -Temperature Min(T <sub>smin</sub> ) -Temperature Max(T <sub>smax</sub> ) -Time(min to max)(t <sub>s</sub> )	150°C 200°C 60~120sec
T <sub>smax</sub> to T <sub>L</sub> -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T <sub>L</sub> ) -Time(t <sub>L</sub> )	217°C 60~260sec
Peak Temperature(T <sub>P</sub> )	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t <sub>P</sub> )	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes