

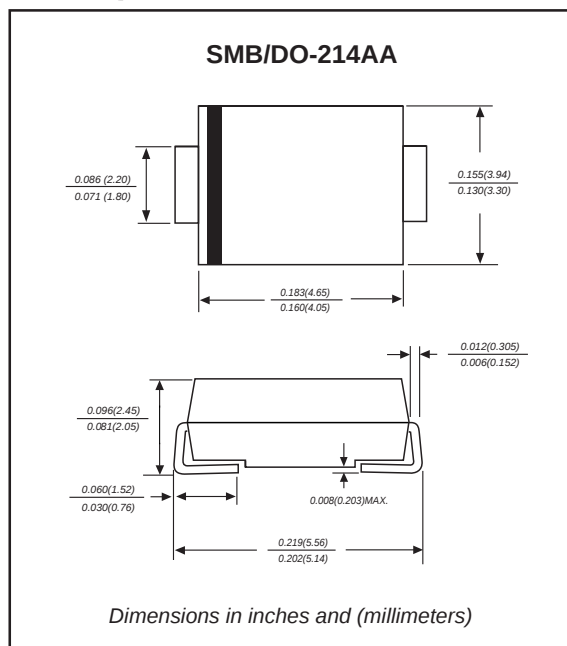
Features

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

Package outline

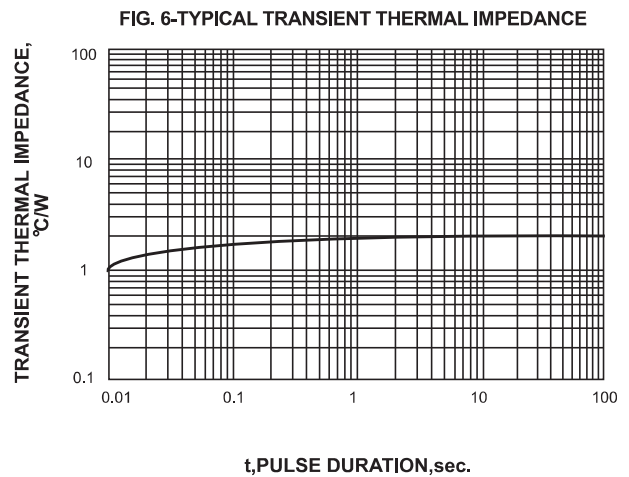
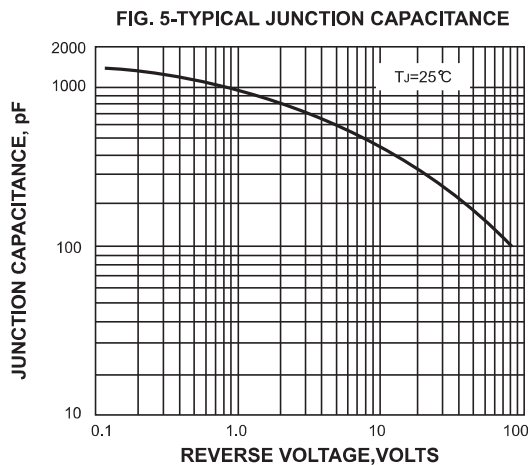
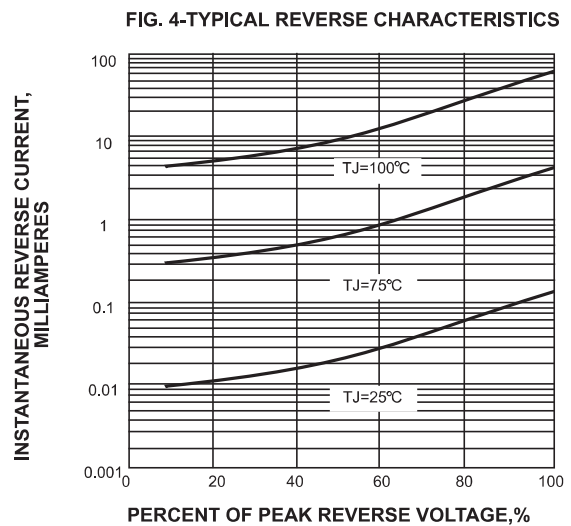
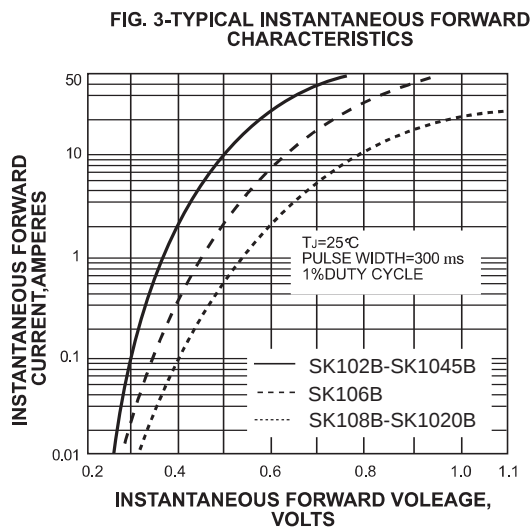
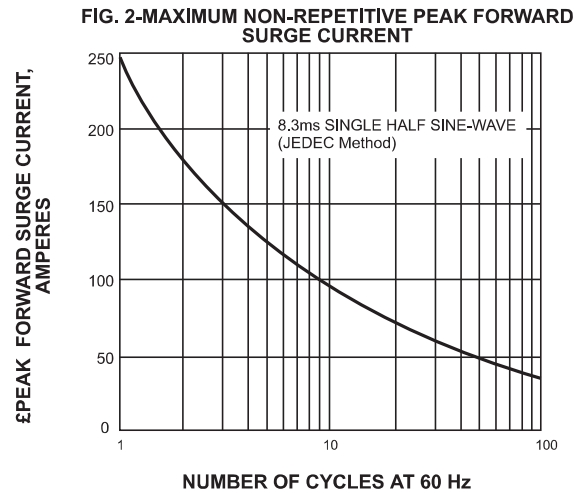
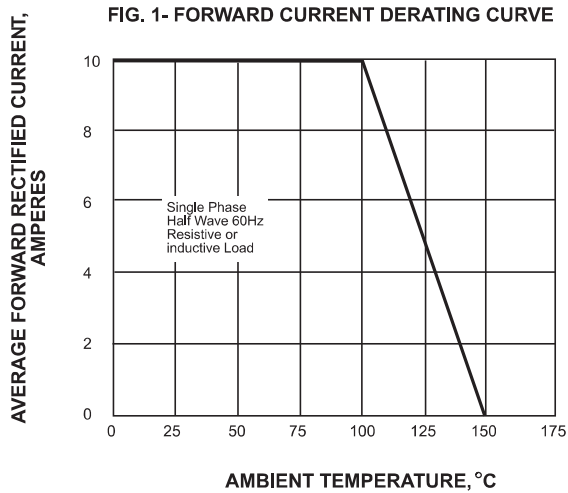


Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	SK102B	SK103B	SK104B	SK1045B	SK106B	SK108B	SK1010B	SK1015B	SK1020B	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}	250									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°C at rated DC blocking voltage T _A =100°C	I _R	0.5									mA
		10.0									
Typical junction capacitance (NOTE 1)	C _J	550									pF
Typical thermal resistance (NOTE 2)	R _{θJA}	50									°C/W
Operating junction temperature range	T _J	-55 to +150									°C
Storage temperature range	T _{STG}	-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



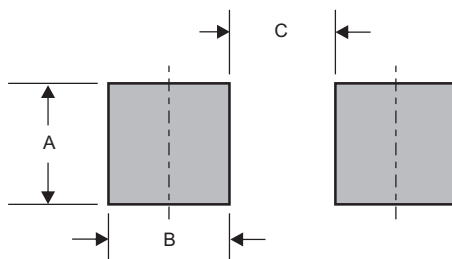
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SK102B	SK102B
SK103B	SK103B
SK104B	SS104
SK1045B	SK1045B
SK106B	SK106B
SK108B	SK108B
SK1010B	SK1010B
SK1015B	SK1015B
SK1020B	SK1020B

Suggested solder pad layout

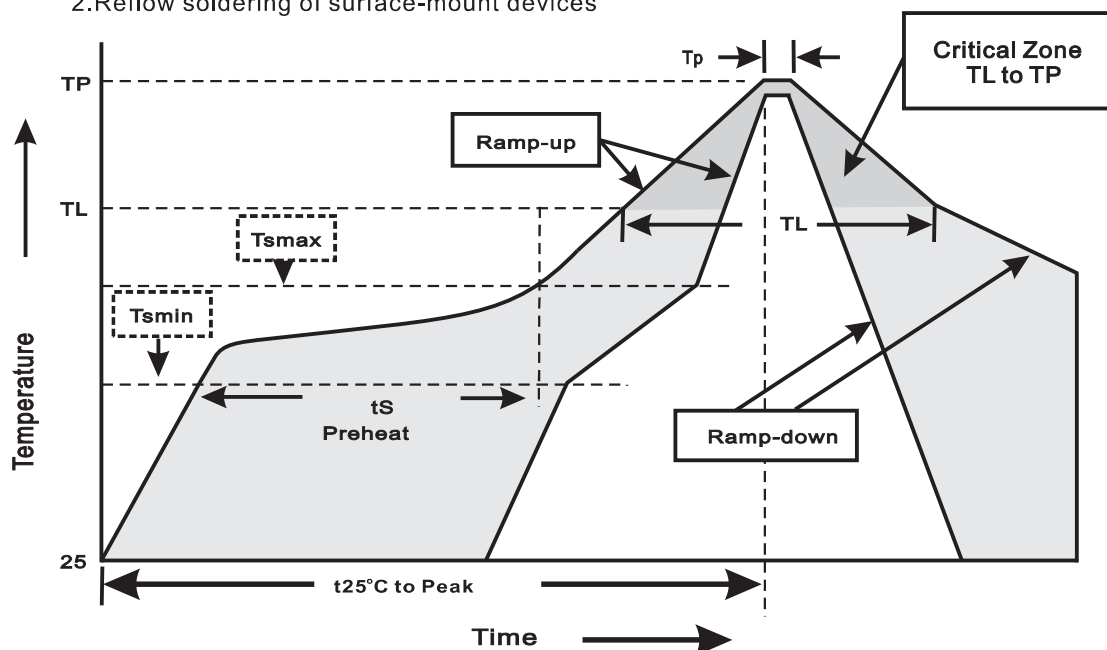


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)

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