

# SK12BD THRU SK110BD

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 100 V

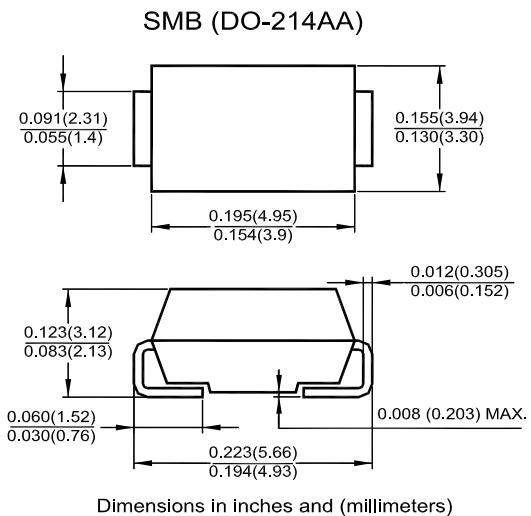
Forward Current - 1 A

### 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

### Mechanical Data

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



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half-wave, 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	SK12BD	SK13BD	SK14BD	SK15BD	SK16BD	SK18BD	SK110BD	Units
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current at T <sub>L</sub>	I <sub>F(AV)</sub>				1				A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>				40				A
Maximum Instantaneous Forward Voltage at 1 A	V <sub>F</sub>	0.45	0.55	0.7	0.85				V
Maximum DC Reverse Current T <sub>a</sub> = 25 °C at Rated DC Blocking Voltage T <sub>a</sub> = 100 °C	I <sub>R</sub>			0.5					mA
			6		5				
Typical Junction Capacitance <sup>1)</sup>	C <sub>j</sub>	110			90				pF
Typical Thermal Resistance <sup>2)</sup>	R <sub>θJA</sub>			88					°C/W
Operating Junction Temperature Range	T <sub>j</sub>	- 65 to + 125		- 65 to + 150					°C
Storage temperature range	T <sub>stg</sub>			- 65 to + 150					°C

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C.

<sup>2)</sup> P.C.B. mounted with 0.2 X 0.2 (5 X 5 mm) copper pad areas.

**TOP DYNAMIC**



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AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

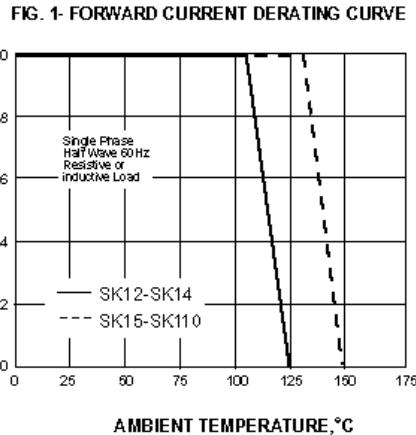
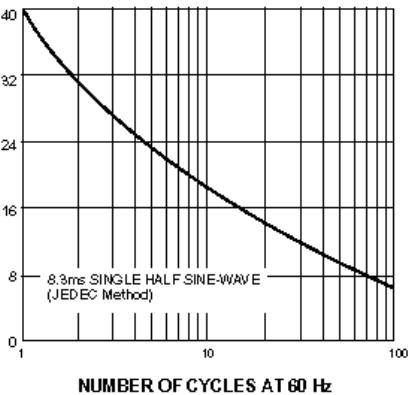


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD CURRENT, AMPERES

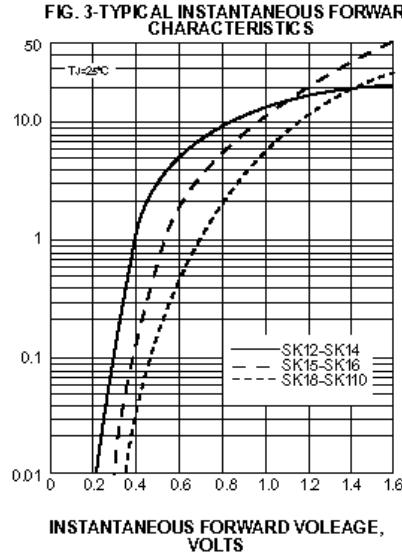
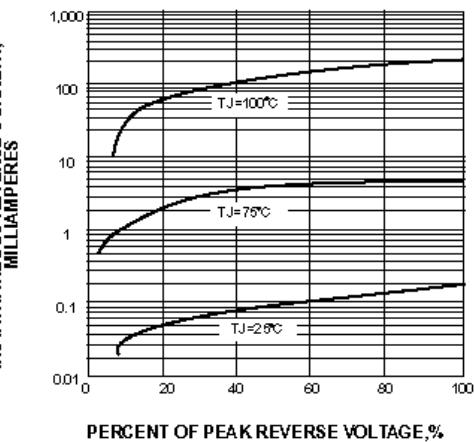


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

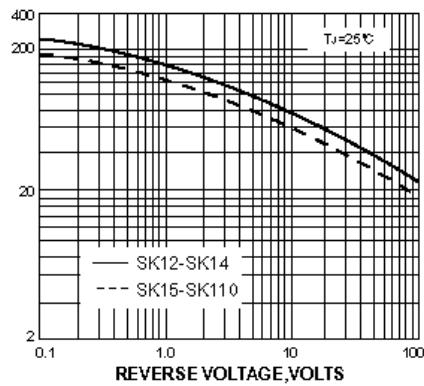
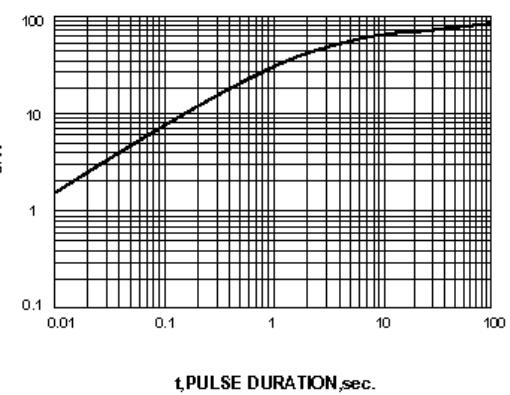


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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