SK12B THRU SK110B

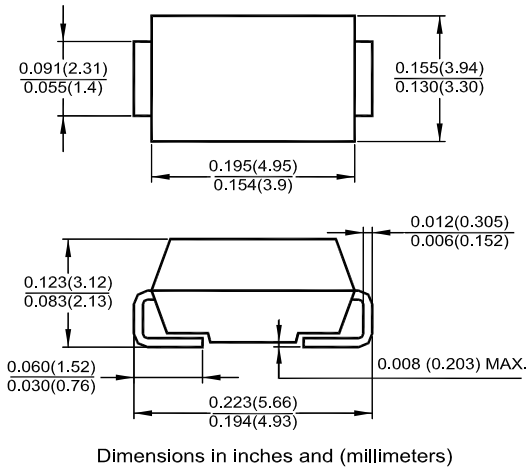
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

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

SMB (DO-214AA)



Dimensions in inches and (millimeters)

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

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	SK12B	SK13B	SK14B	SK15B	SK16B	SK18B	SK110B	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current at T_L	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	0.45	0.55		0.7		0.85		V
Maximum DC Reverse Current T_a = 25 °C	I_R	0.5							mA
at Rated DC Blocking Voltage T_a = 100 °C		6			5				
Typical Junction Capacitance [1]	C_j	110			90				pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	88							°C/W
Operating Junction Temperature Range	T_j	- 65 to + 125			- 65 to + 150				°C
Storage temperature range	T_{stg}	- 65 to + 150							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 V D.C.
[2] P.C.B. mounted with 0.2 X 0.2 (5 X 5 mm) copper pad areas.

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FIG. 1- FORWARD CURRENT DERATING CURVE

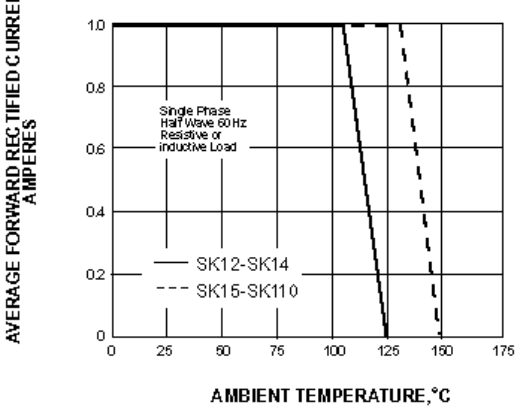

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

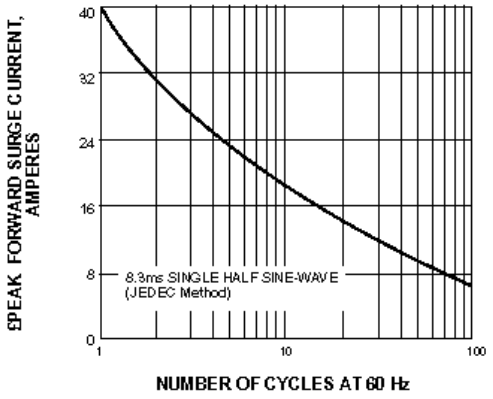

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

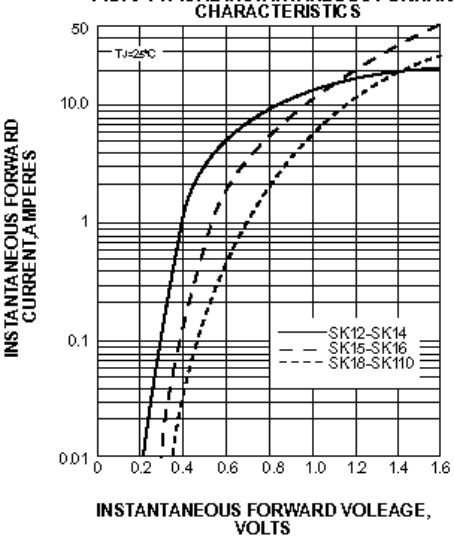

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

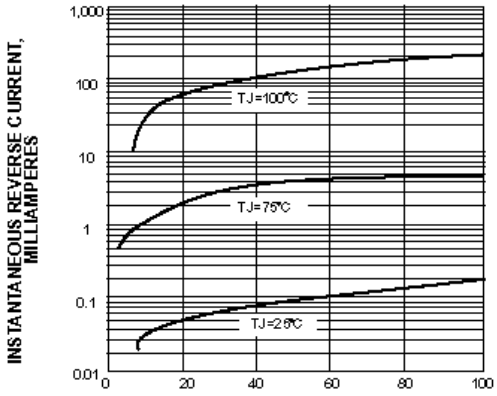

FIG. 5-TYPICAL JUNCTION CAPACITANCE

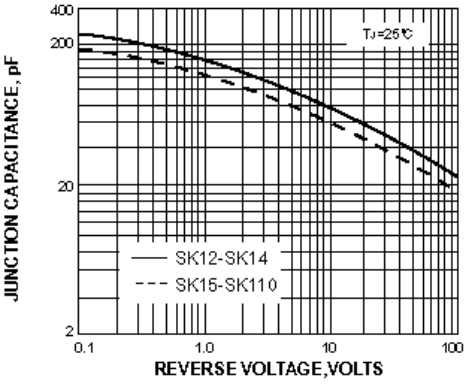

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE