

SK12BD THRU SK110BD

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 100 V

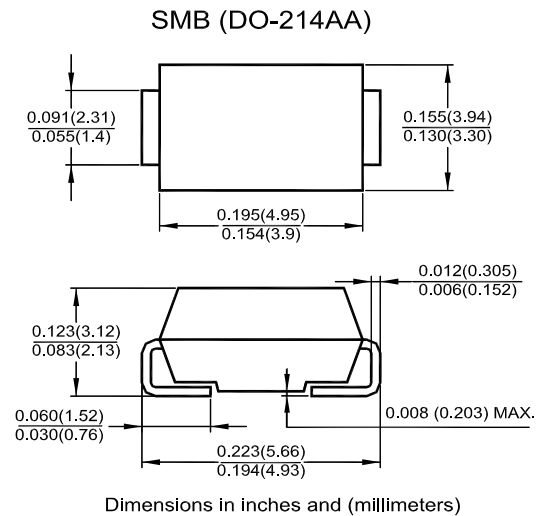
Forward Current - 1 A

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



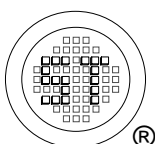
Maximum Ratings and Electrical Characteristics

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_{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 at Rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 100\text{ }^\circ\text{C}$	I_R	0.5							mA
		6			5				
Typical Junction Capacitance ¹⁾	C_j	110			90				pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	88							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	- 65 to + 125			- 65 to + 150				$^\circ\text{C}$
Storage temperature range	T_{stg}	- 65 to + 150							$^\circ\text{C}$

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.



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



SK12BD THRU SK110BD

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

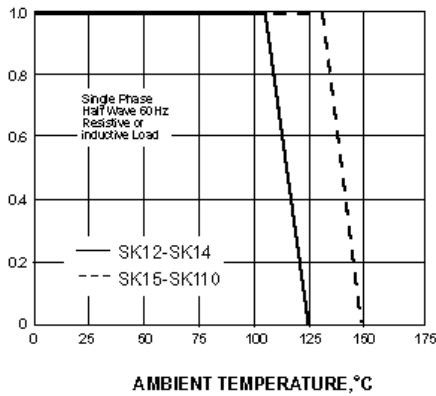


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

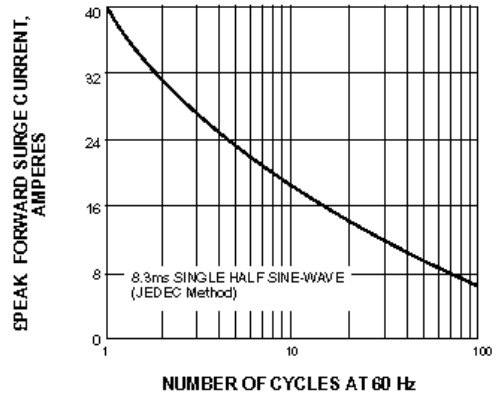


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

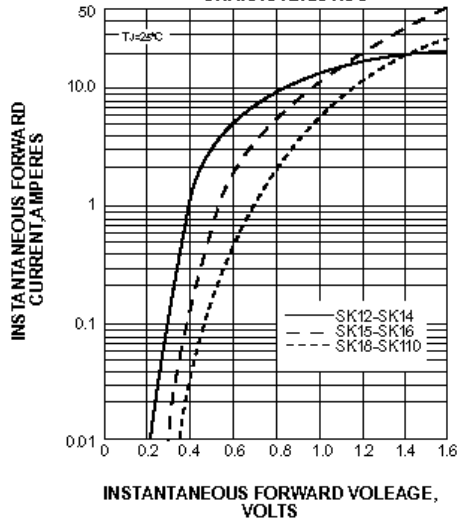


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

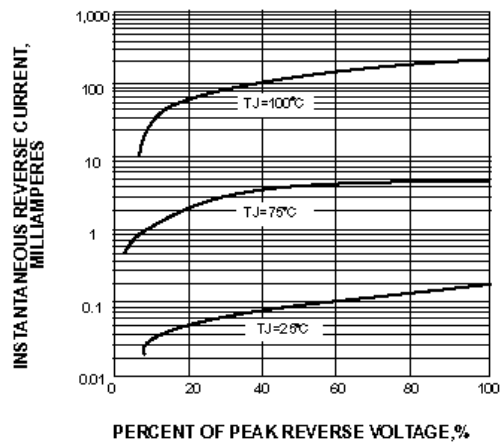


FIG. 5- TYPICAL JUNCTION CAPACITANCE

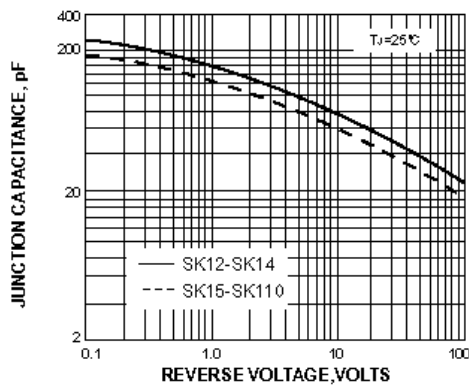
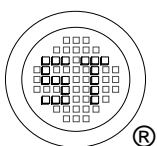
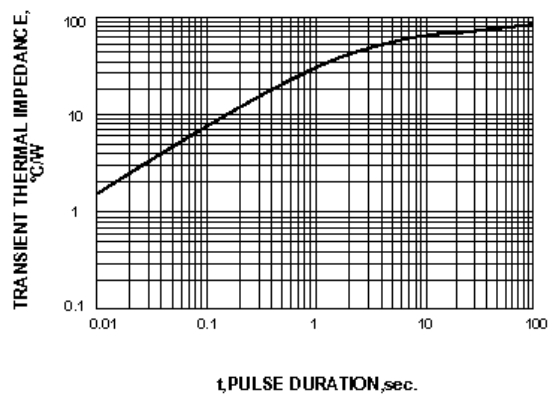


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



Dated: 13/04/2012 C Rev: 01