

SK12B - SK115B

1.0 AMP. Surface Mount Schottky Barrier Rectifiers

SMB/DO-214AA

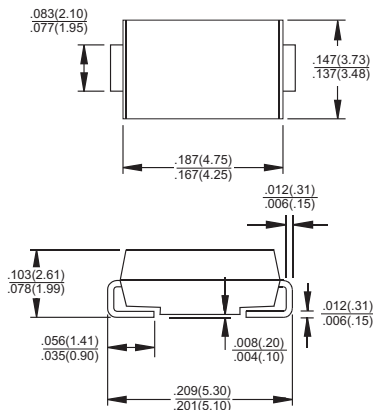


Features

- ✧ For surface mounted application
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low forward voltage drop
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.093 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SK 12B	SK 13B	SK 14B	SK 15B	SK 16B	SK 90B	SK 110B	SK 115B	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	V	
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	V	
Maximum Average Forward Rectified Current at $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	0.5			0.75		0.85	0.95		V	
Maximum DC Reverse Current (Note 1) @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	0.5					0.1				mA mA
		10			5.0		2.0				
Typical Junction Capacitance (Note 2)	C_j	110								pF	
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	25								°C/W	
Operating Temperature Range	T_J	-55 to +125				-55 to +150					°C
Storage Temperature Range	T_{STG}	-55 to +150									°C

- Notes:
1. Thermal Resistance from Junction to Lead.
 2. Measured at 1.0 MHz and Applies Reverse Voltage of 4.0V.
 3. Measured on P.C.Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Area.

RATINGS AND CHARACTERISTIC CURVES (SK12B THRU SK115B)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

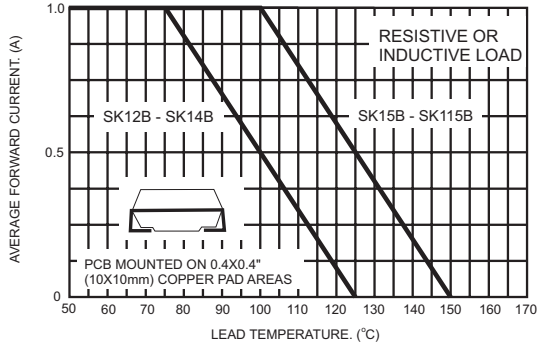


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

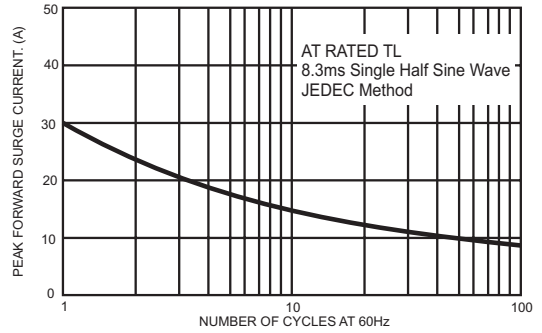


FIG.3- TYPICAL FORWARD CHARACTERISTICS

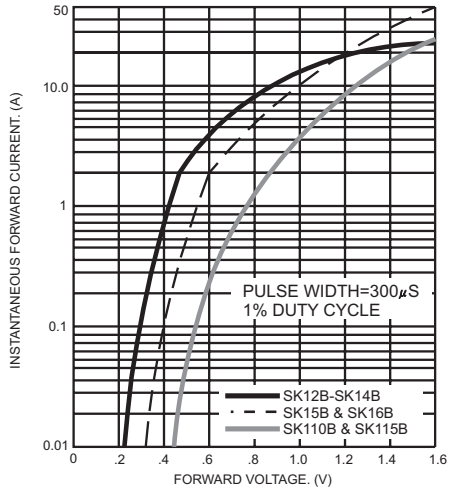


FIG.4- TYPICAL REVERSE CHARACTERISTICS

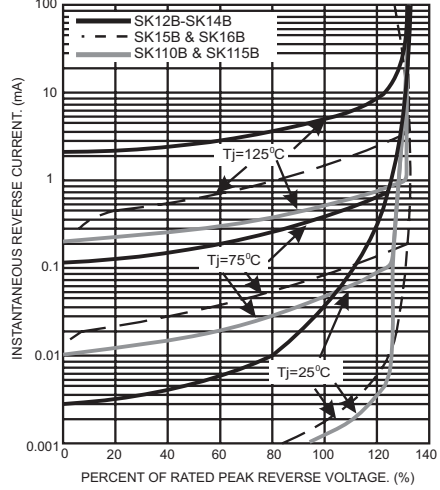


FIG.5- TYPICAL JUNCTION CAPACITANCE

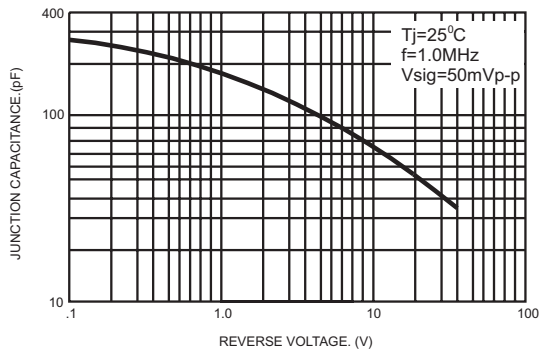


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

