

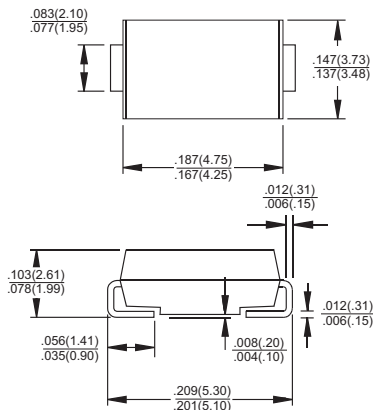


# SK12B - SK115B

## 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

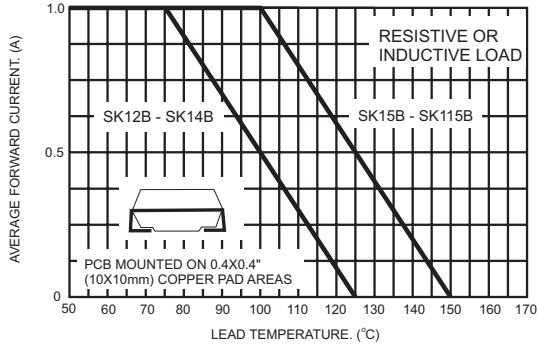


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

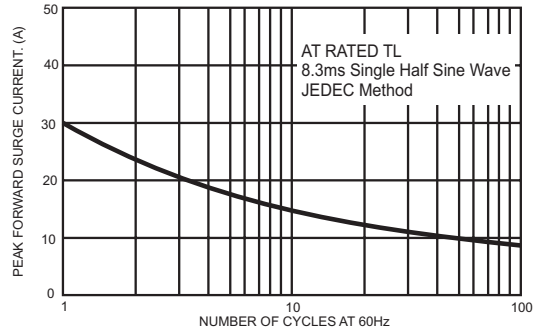


FIG.3- TYPICAL FORWARD CHARACTERISTICS

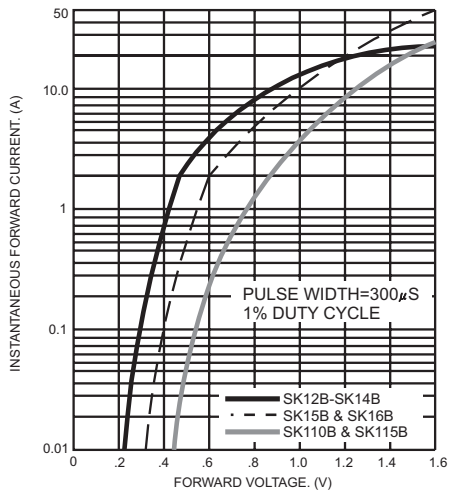


FIG.4- TYPICAL REVERSE CHARACTERISTICS

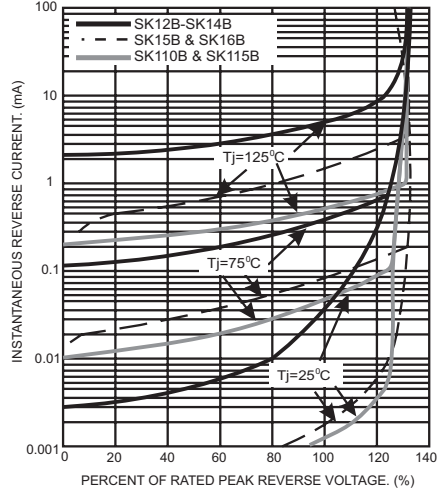


FIG.5- TYPICAL JUNCTION CAPACITANCE

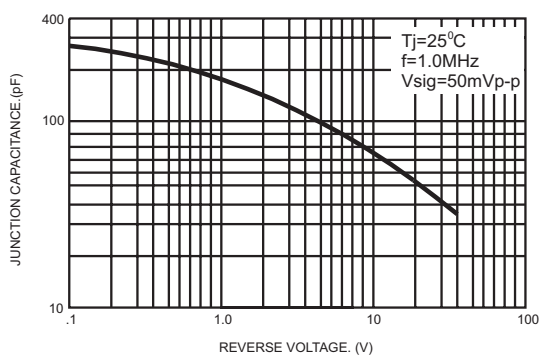


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

