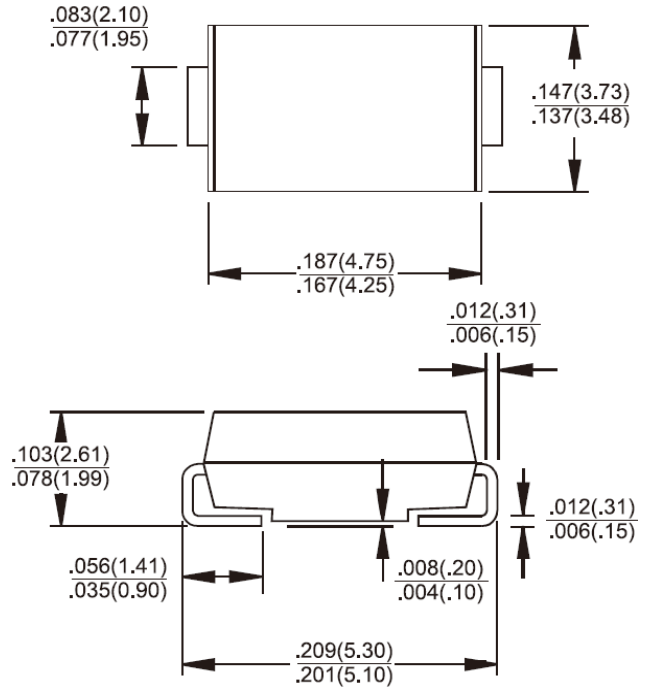


SMB/DO-214AA

RoHS COMPLIANCE

Features

- ✧ UL Recognized File # E-326243
- ✧ 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode


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: 0.1 gram

Dimensions in inches and (millimeters)
Marking Diagram


- SK5XB = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

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 52B	SK 53B	SK 54B	SK 55B	SK 56B	SK 59B	SK 510B	SK 515B	Unit	
Maximum Repetitive 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	$I_{F(AV)}$	5.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 5.0A	V_F	0.55		0.75		0.85		0.95		V	
Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	0.5						0.1			mA
		20			10			-			
		-						2			
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	19								°C/W	
	$R_{\theta JA}$	60									
Operating Temperature Range	T_J	- 55 to + 150								°C	
Storage Temperature Range	T_{STG}	- 55 to + 150								°C	

Note 1: Pluse Test with PW=300 usec, 1% Duty Cycle

Note 2: Measured on P.C.B. Board with 0.4" x 0.4"(10mm x 10mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (SK52B THRU SK515B)

FIG. 1 FORWARD CURRENT DERATING CURVE

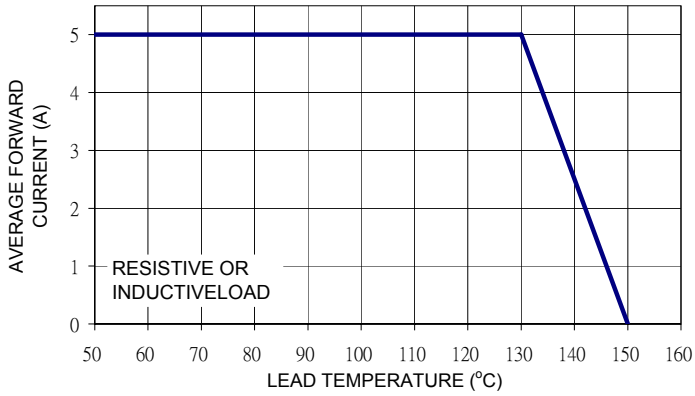


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

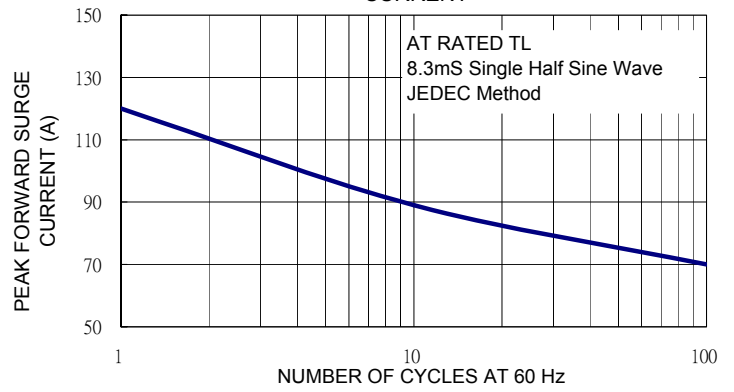


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

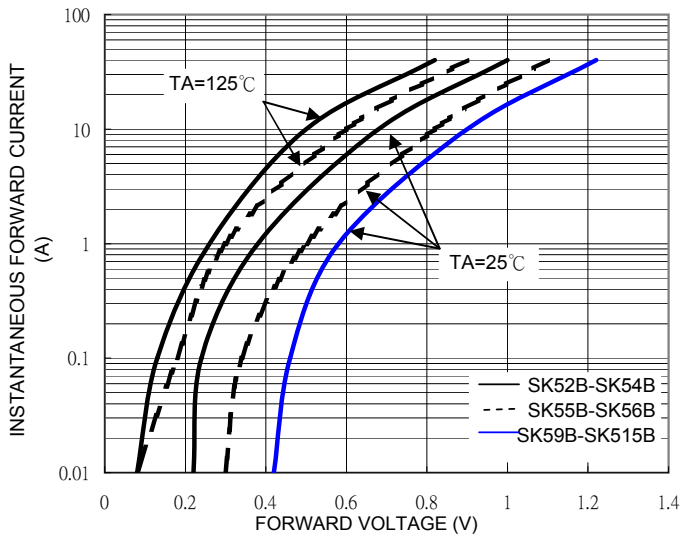


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

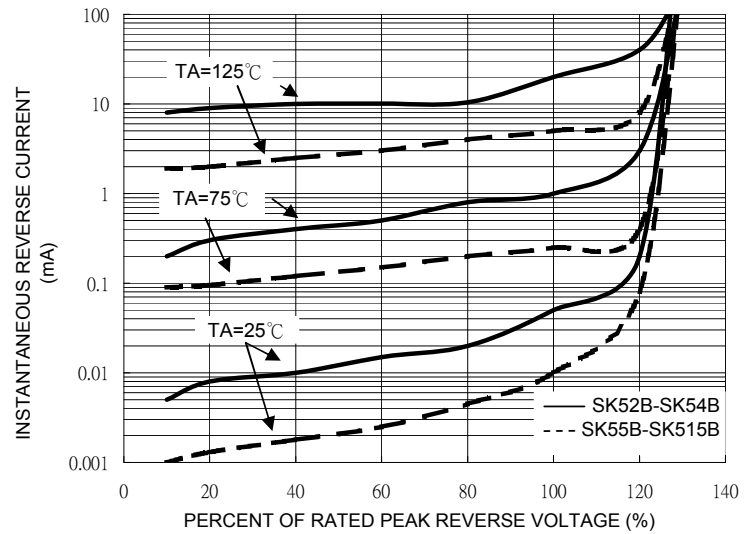


FIG. 5 TYPICAL JUNCTION CAPACITANCE

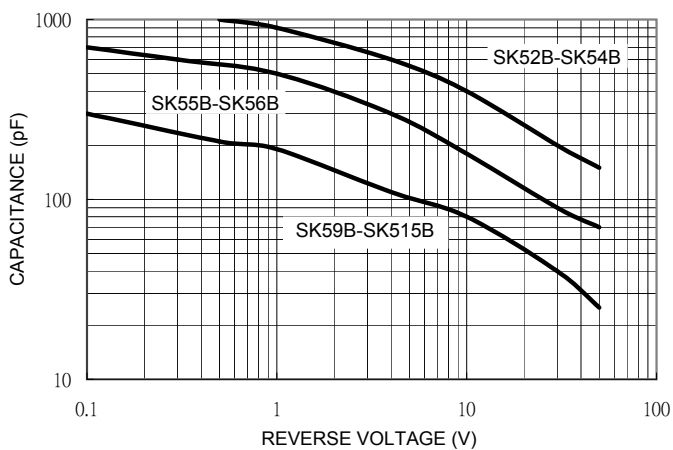


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

