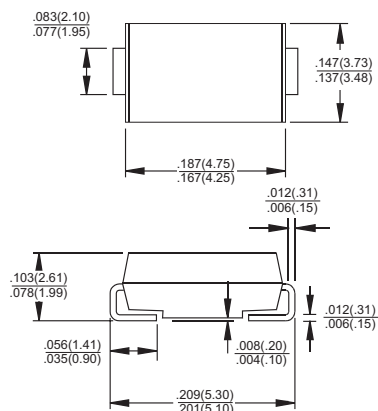


SK52B - SK515B

5.0 AMPS. 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: 0.1 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 52B	SK 53B	SK 54B	SK 55B	SK 56B	SK 59B	SK 510B	SK 515B	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_L (See Fig. 1)	$I_{(AV)}$	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 @ 5.0A	V_F	0.55		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
		20		10		2.0				mA	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	17								°C/W	
	$R_{\theta JA}$	75									
Operating Temperature Range	T_J	-55 to +125				-55 to +150				°C	
Storage Temperature Range	T_{STG}	-55 to +150									°C

- Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Measured on P.C.Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (SK52B THRU SK515B)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

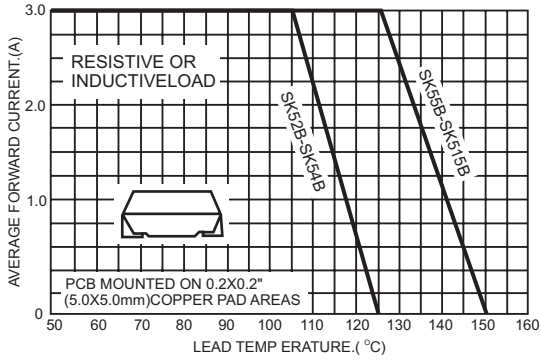


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

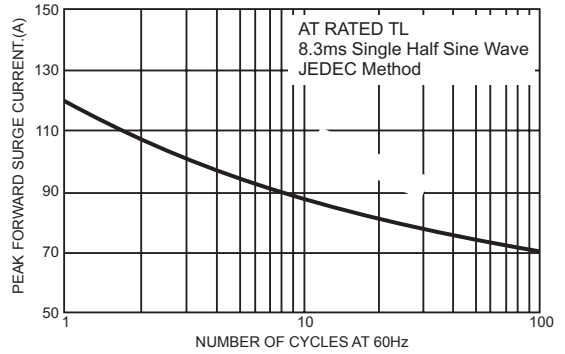


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

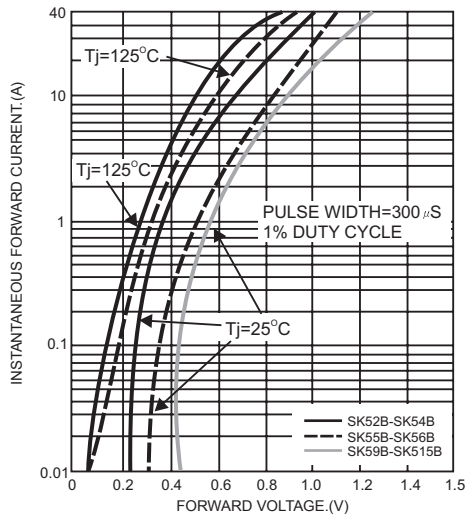


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

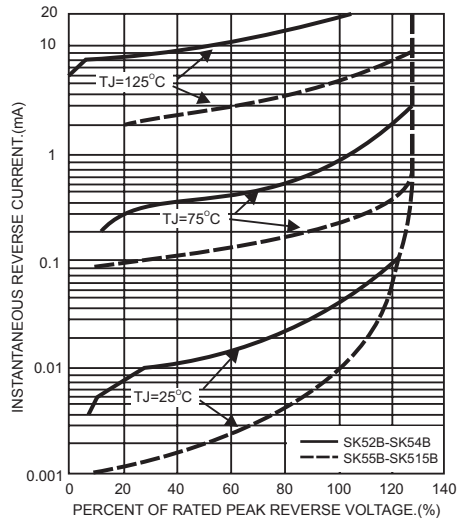


FIG. 5- TYPICAL JUNCTION CAPACITANCE

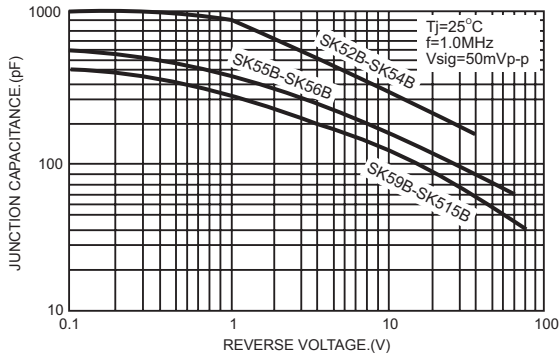


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

