

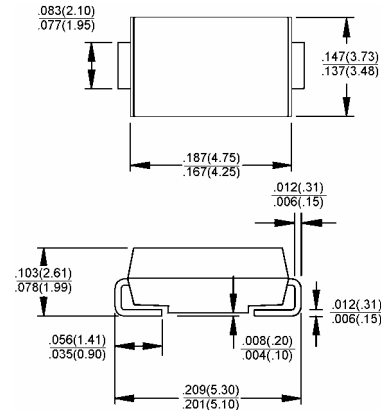


# SKL13B

## 1.0 AMP. Surface Mount Low $V_F$ Schottky Barrier Rectifiers **SMB/DO-214AA**

### Features

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



Dimensions in inches and (millimeters)

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Matte tin plating
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.093 gram

### 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	SKL13B	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	30	V
Maximum RMS Voltage	$V_{RMS}$	21	V
Maximum DC Blocking Voltage	$V_{DC}$	30	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	1.0	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	50	A
Maximum Instantaneous Forward Voltage (Note 1) @ 1.0A	$V_F$	0.39	V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	0.2	mA
		50	mA
Maximum Thermal Resistance (Note 2)	$R_{\theta JL}$	30	$^\circ\text{C/W}$
	$R_{\theta JA}$	85	
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 150	$^\circ\text{C}$

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

### RATINGS AND CHARACTERISTIC CURVES (SKL13B)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

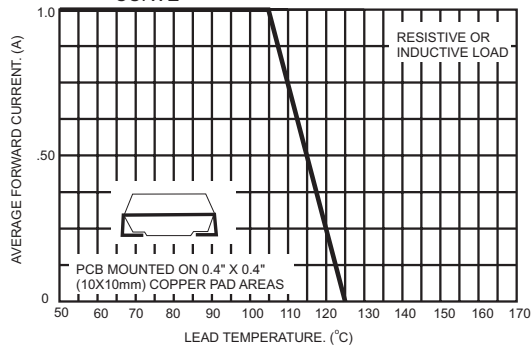


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

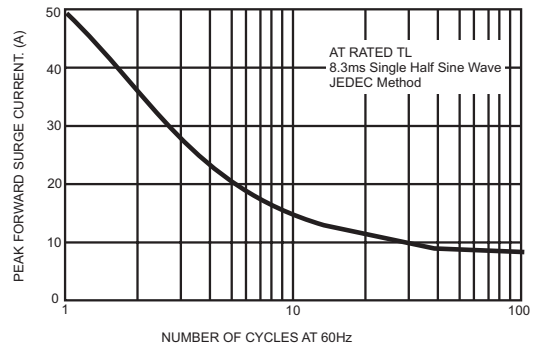


FIG.3- TYPICAL FORWARD CHARACTERISTICS

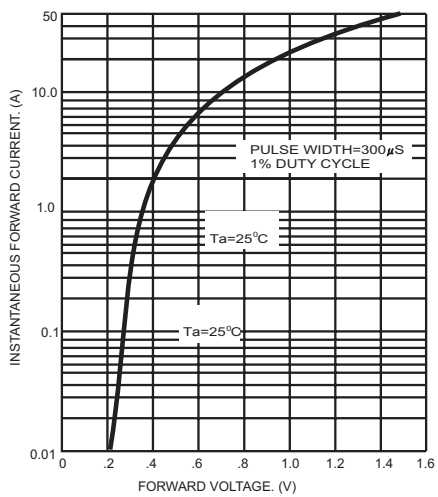


FIG.4- TYPICAL REVERSE CHARACTERISTICS

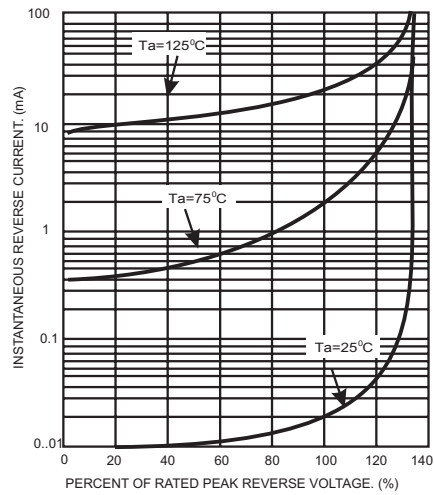


FIG.5- TYPICAL JUNCTION CAPACITANCE

