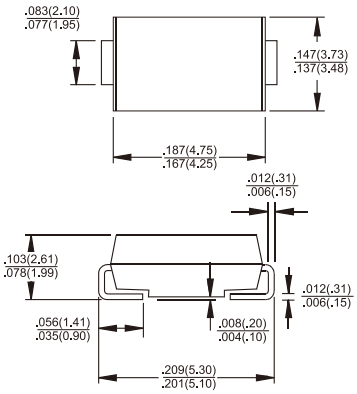
TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

SKL13B

1.0 AMP. Surface Mount
Low V_F Schottky Barrier Rectifiers

SMB/DO-214AA



Dimensions in inches and (millimeters)

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
- Green compound with suffix "G" on packing code & prefix "G" on datecode

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 grams

SKL13B = 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	SKL13B	Units
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	$I_{F(AV)}$	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 @ 1.0A	V_F	0.39	V
Maximum DC Reverse Current @ T_A=25 °C	I_R	0.2	mA
at Rated DC Blocking Voltage (Note 1) @ T_A=100 °C		50	mA
Maximum Thermal Resistance (Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	30 85	°C/W
Operating Temperature Range	T_J	-55 to +125	°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" (10 x 10mm) Copper Pad Areas.

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RATINGS AND CHARACTERISTIC CURVES (SKL13B)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

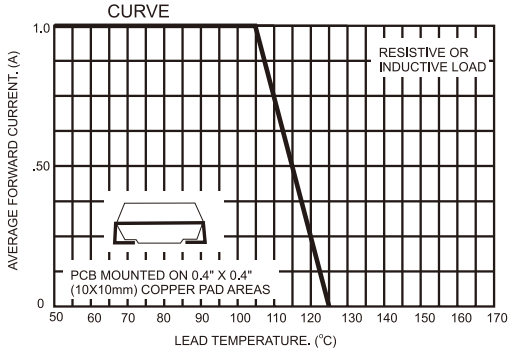

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

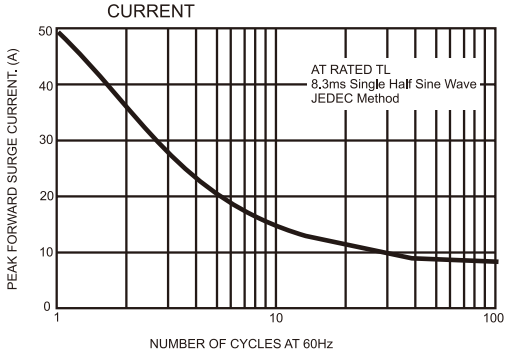

FIG.3- TYPICAL FORWARD CHARACTERISTICS

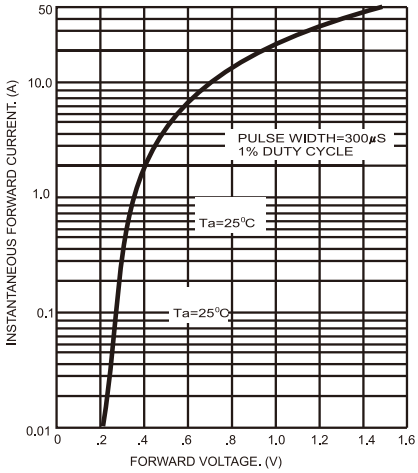

FIG.4- TYPICAL REVERSE CHARACTERISTICS

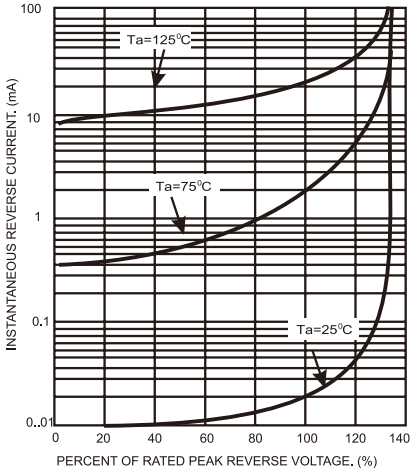

FIG.5- TYPICAL JUNCTION CAPACITANCE