TAIWAN SEMICONDUCTOR
The Smartest Choice

SKL13B

1.0AMP Surface Mount Low V_F Schottky Barrier Rectifier

SMB/DO-214AA



Pb-Free

RoHS COMPLIANT

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 Classigication 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering guaranteed: 260℃/10s at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

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

Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)
SKL13B	SMB	850 / 7" REEL	R5	R5G
	SMB	3K / 13" REEL	R4	R4G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Parameter	Symbol	SKL13B	Unit
Maximum Repetitive 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	$I_{F(AV)}$	1	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 A	V_F	0.39	V
Maximum Reverse Current @ Rated VR T_A=25 ℃	I_R	0.2	mA
T_A=100℃		50	
Typical Thermal Resistance	$R_{\theta jL}$ $R_{\theta jA}$	30 85	^{O}C/W
Operating Temperature Range	T_J	- 55 to + 125	^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 150	^{O}C

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

TAIWAN SEMICONDUCTOR
The Smartest Choice

RATINGS AND CHARACTERISTIC CURVES (SKL13B)

FIG.1 FORWARD CURRENT DERATING CURVE

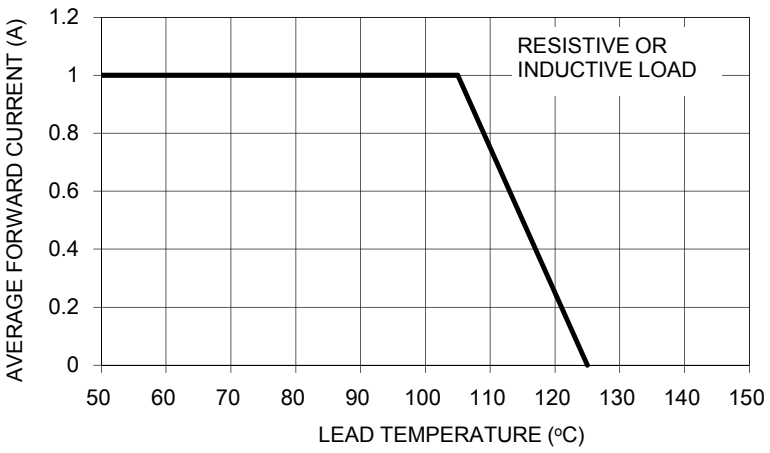


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

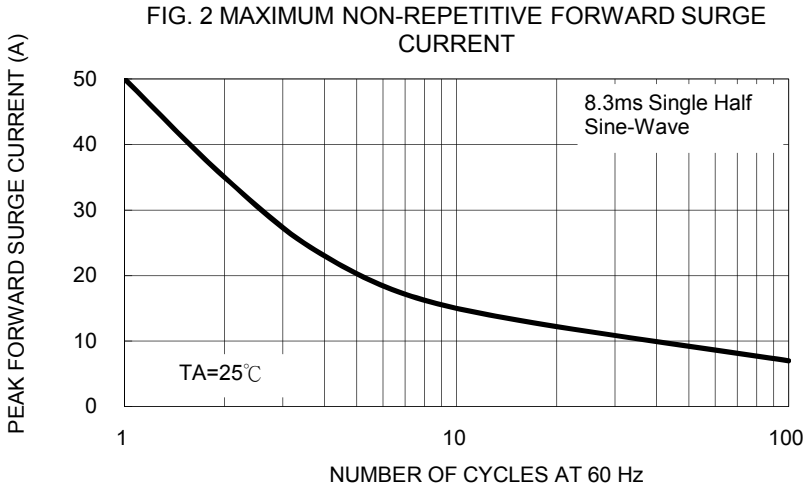


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

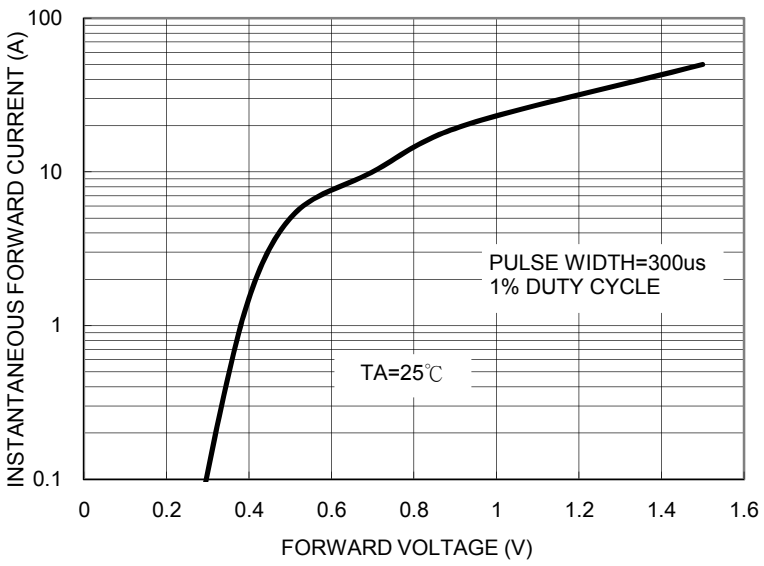


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

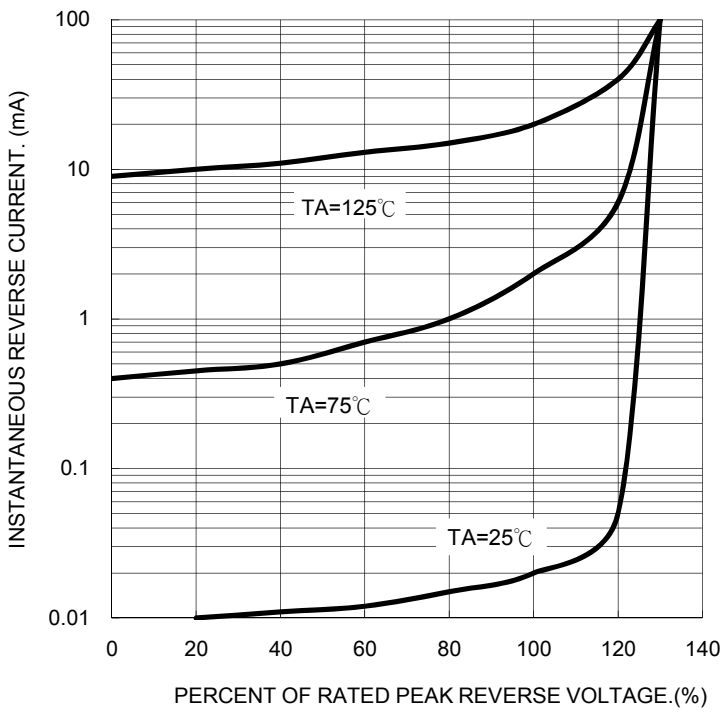
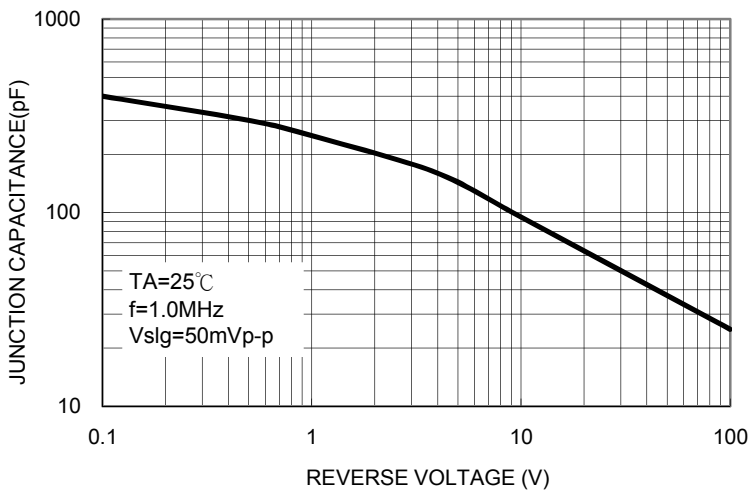
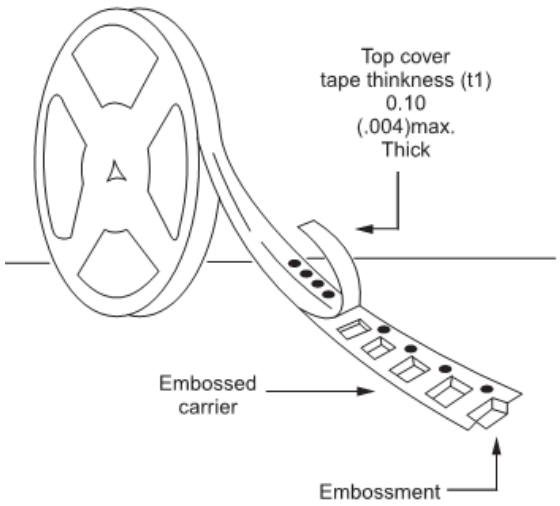


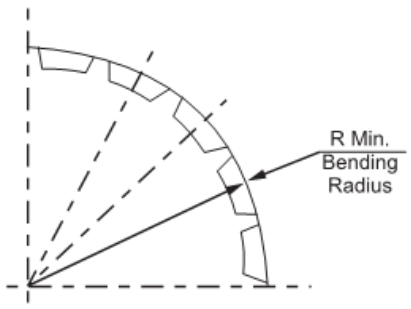
FIG. 5 TYPICAL JNUCTION CAPACITANCE



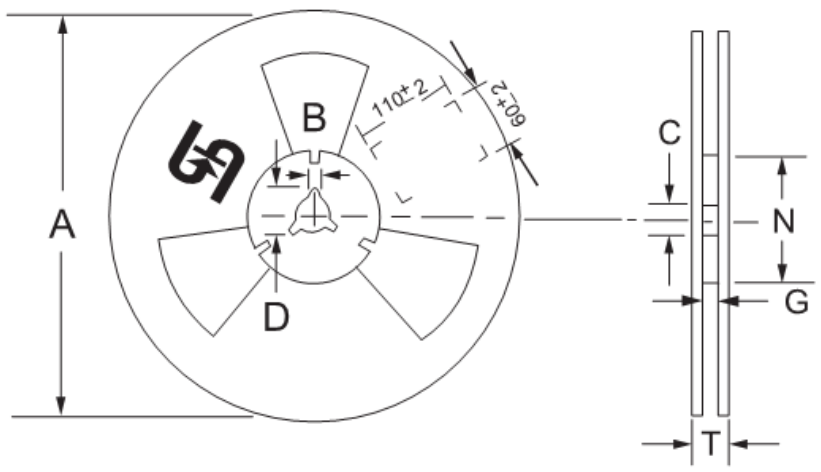
TAIWAN SEMICONDUCTOR
The Smartest Choice

Tape & Reel specification





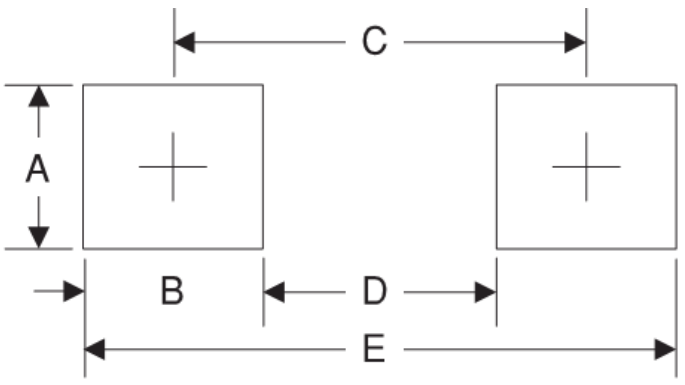
Tape with components shall pass around bending radius without damage, for reels with hub diameters approaching minimum dimension



Reel Size	Tape Size	A	B	C	D	N	G	T
		±2.0	±0.4	+0.5;-0.2	min	±1.0	+0.8;-0	max
7"	12mm	178	1.9	13	21	62	12.2	14.6
Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	12mm	330	2	13	20.2	75	12.4	18.4

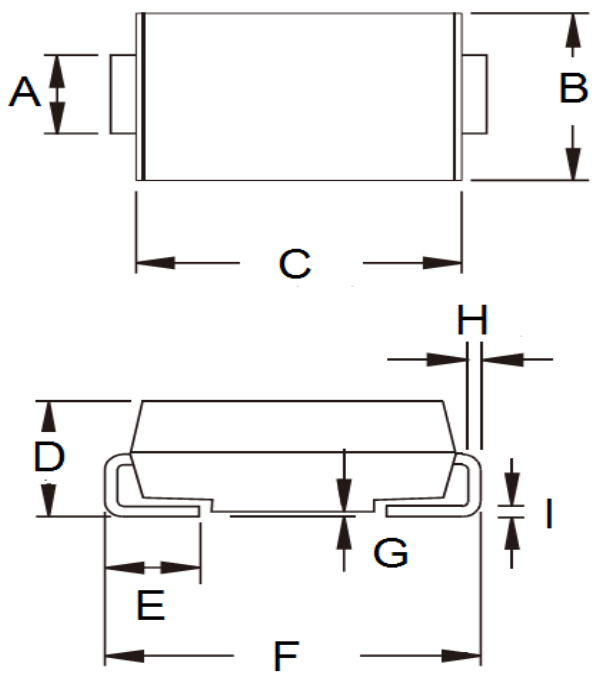
Unit (mm)

Suggested PAD Layout



Symbol	Unit(mm)
A	2.3
B	2.5
C	4.3
D	1.8
E	6.7

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.95	2.10	0.077	0.083
B	3.48	3.73	0.137	0.147
C	4.25	4.75	0.167	0.187
D	1.99	2.61	0.078	0.103
E	0.90	1.41	0.035	0.056
F	5.10	5.30	0.201	0.209
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012
I	0.15	0.31	0.006	0.012

Marking Diagram



P/N	= Specific Device Code
G	= Green Compound
YW	= Date Code
F	= Factory Code