

SINLOON®

肖特基二極管

Case: TO-220

SB1040LCT

10A Low V_f Dual Schottky Barrier Rectifier

Feature

- ◆ Ultra Low Forward Voltage Drop
- ◆ Guard Ring for Transient Protection
- ◆ Low Power Losses
- ◆ High Efficiency Switching Operation
- ◆ High Surge Current Capability
- ◆ Plastic Material has UL Flammability Classification 94V-0

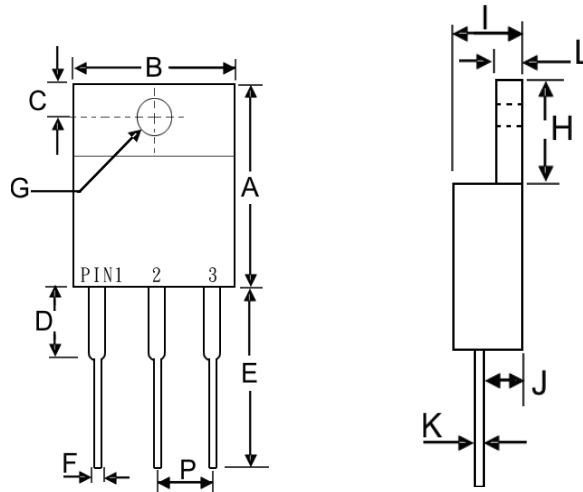
Mechanical Data

- ◆ Case: TO-220, Molded Plastic
- ◆ Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- ◆ Polarity: See Diagram
- ◆ Weight: 2.24 grams (approx)
- ◆ Mounting Position: Any
- ◆ Mounting Torque: 11.5 cm·kg (10 in·lbs) max.
- ◆ Lead Free: For RoHS / Lead Free Version Add "-LF" Suffix to part Number.

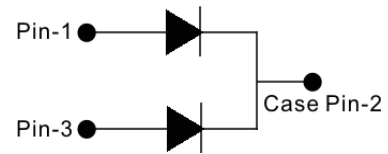
Dimension

Case: TO-220 (mm)

Dim.	Min.	Max.
A	13.9	15.9
B	9.8	10.7
C	2.54	3.43
D	3.56	4.56
E	12.7	14.73
F	0.51	0.96
G (Φ)	3.55	4.09
H	5.75	6.85
I	4.16	5.0
J	2.3	2.92
K	0.3	0.65
L	1.14	1.4
P	2.29	2.79

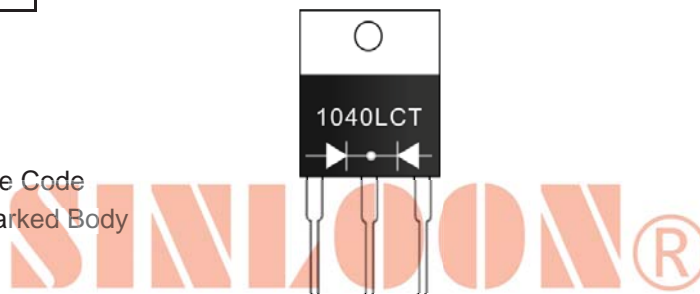


Figure



Marking Information

1040LCT = Device Code
Polarity = As Marked Body



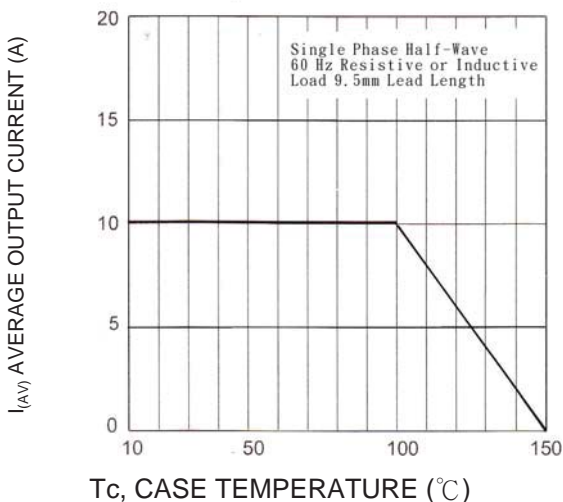
Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load For capacitive load, derate current by 20%.

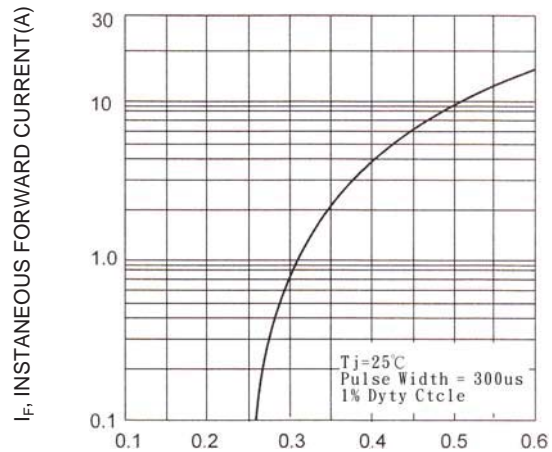
Characteristics	Symbol	SB1040LCT	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current (per diode) (per device)	I_O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150	A
Forward Voltage (Note1)	V_{FM}	@ $I_F=5.0\text{A}$ $T_J=25^\circ\text{C}$	0.44
		@ $I_F=5.0\text{A}$ $T_J=125^\circ\text{C}$	0.35
Peak Reverse Current @ $T_J = 25^\circ\text{C}$	I_{RM}	0.5	mA
At Rated DC Blocking Vol. @ $T_J=100^\circ\text{C}$		30	
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.5	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Note 1: Pulse width 300 μs , 1% duty cycle.

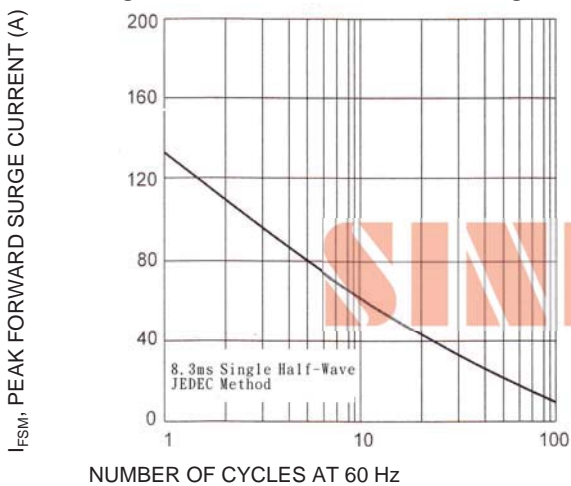
Note 2: Mounted on minimum recommended pad on FR-4 board.



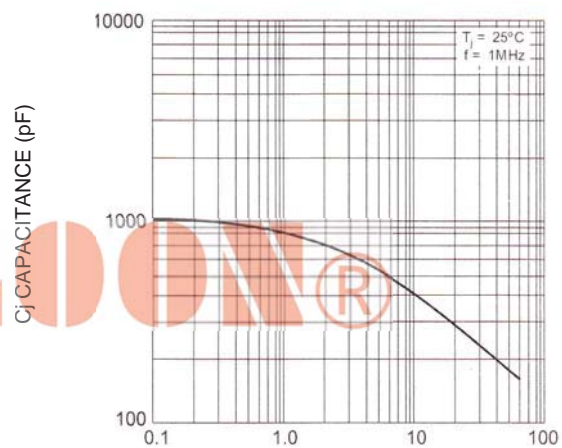
T_C , CASE TEMPERATURE ($^\circ\text{C}$)
Fig-1 Forward and Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig-2 Typical Forward Voltage Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig-3 Peak Forward Surge Current



V_R , REVERSE VOLTAGE (V)
Fig-4 Typical Junction Capacitance

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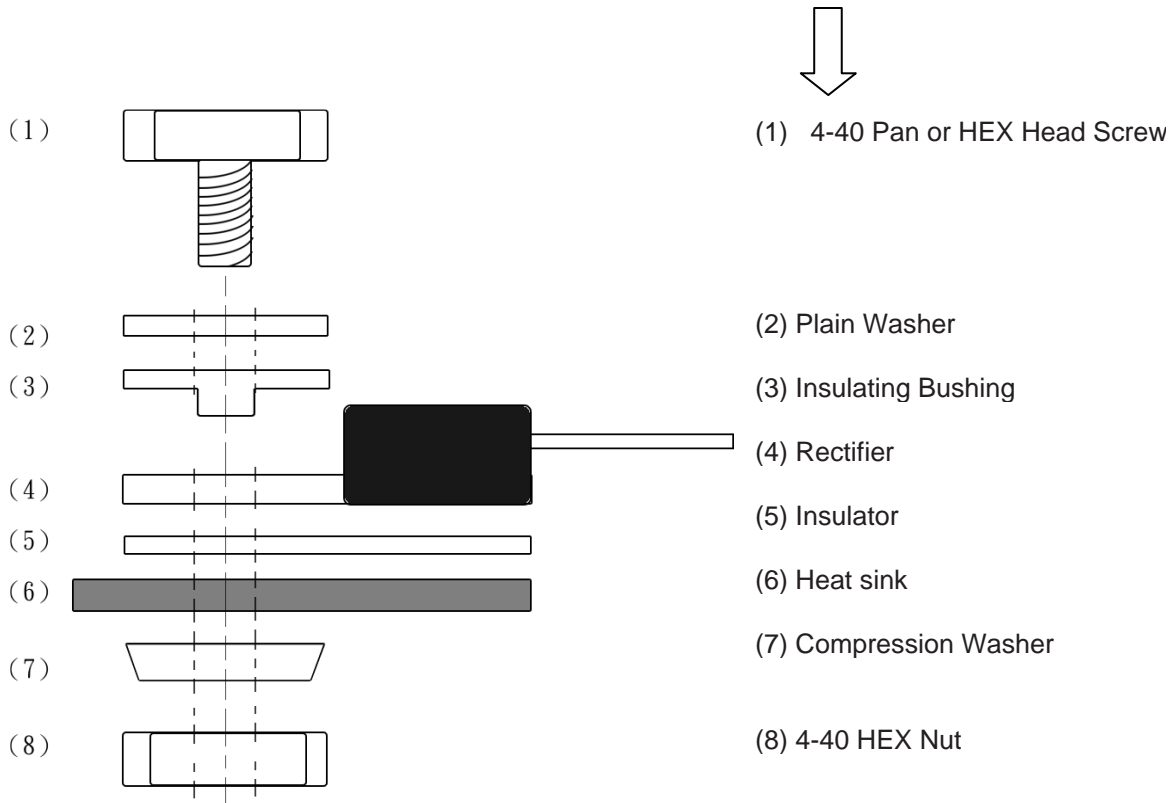
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Packaging Information

Tube Size LxWxH (mm)	Quantity (Pcs)	Inner Box Size LxWxH (mm)	Quantity (Pcs)	Carton Size LxWxH (mm)	Quantity (Pcs)	Gross Weight
525 x 31 x 6	50	555x145x95	2000	572x306x218	8000	19.0kg

Note: 1. Anti-static tube, water clear color.

Recommended Screw Mount Arrangement



◆ Recommended isolated mounting when screw is at heat sink potential 4-40 hardware.

◆ Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package. The insulating bushing inside the mounting hole will insure the screw threads do not contact the metal base.

◆ The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation

SINLOON®

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※Mayloon characteristic parameters of electronic product specification changes or updates without notice to improve。

