

20A, 40V SCHOTTKY RECTIFIER

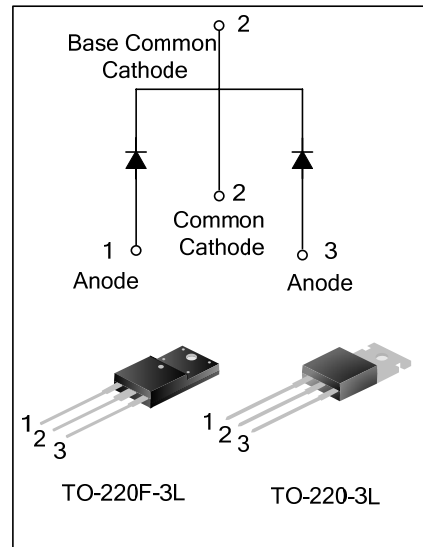
DESCRIPTION

SBD20C45T/F is schottky rectifier fabricated in silicon epitaxial planar technology, Guard ring construction for over voltage protection and enhanced long term reliability.

Typical applications are in switching power supplies, converter, free-wheeling diodes, and reverse battery protection.

FEATURES

- * Guard ring for Stress Protection
- * High Surge Capacity
- * Low power loss , high efficiency
- * Low Forward Voltage Drop
- * 125°C Operating Junction Temperature



ORDERING SPECIFICATIONS

Part No.	Package	Marking	Material	Packing
SBD20C40T	TO-220-3L	SBD20C40T	Pb free	Tube
SBD20C40F	TO-220F-3L	SBD20C40F	Pb free	Tube

ABSOLUTE MAXIMUM RATINGS (Tc=25°C unless otherwise noted)

Parameters	Symbol	Ratings	Unit
Maximum Repetitive Peak Reverse Voltage	VRRM	40	V
Average Forward Rectified Current	IFAV	20	A
Peak Forward Surge Current@8.3ms	IFSM	150	A
Operation Junction Temperature	TJ	125	°C
Storage Temperature Range	TSTG	-40~125	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-Case	RθJC	2.0	°C/W

ELECTRICAL CHARACTERISTICS (Per Leg)

Parameters	Symbol	Test Condition	Min.	Max.	Unit
Forward Voltage	V _F	I _F =10 A; T _J =25°C	--	0.65	V
	V _F	I _F =10 A; T _J =125°C	--	0.57	V
	V _F	I _F =20 A; T _J =25°C	--	0.84	V
	V _F	I _F =20 A; T _J =125°C	--	0.72	V
Reverse Current	I _R	V _R =40V; T _J =25°C	--	100	μA
	I _R	V _R =40V; T _J =125°C	--	15	mA

CHARACTERISTIC CURVES

Figure 1. Typical Forward Voltage

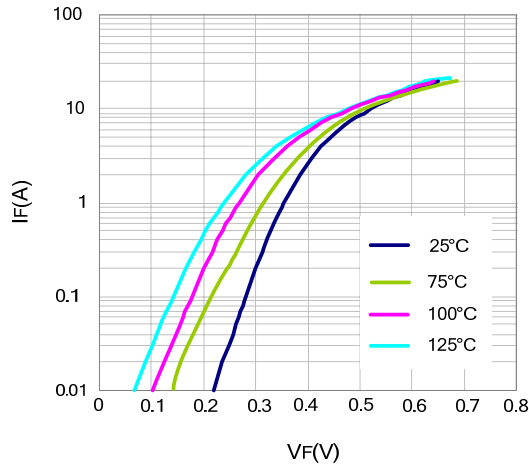


Figure 2. Typical Reverse Current (I_R) vs Reverse Voltage (V_R) for temperatures 25°C, 75°C, 100°C, and 125°C.

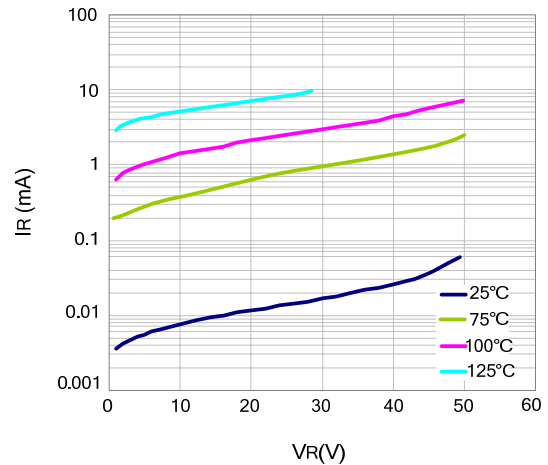
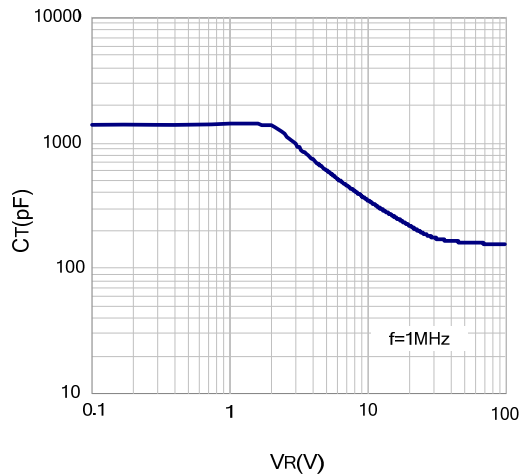


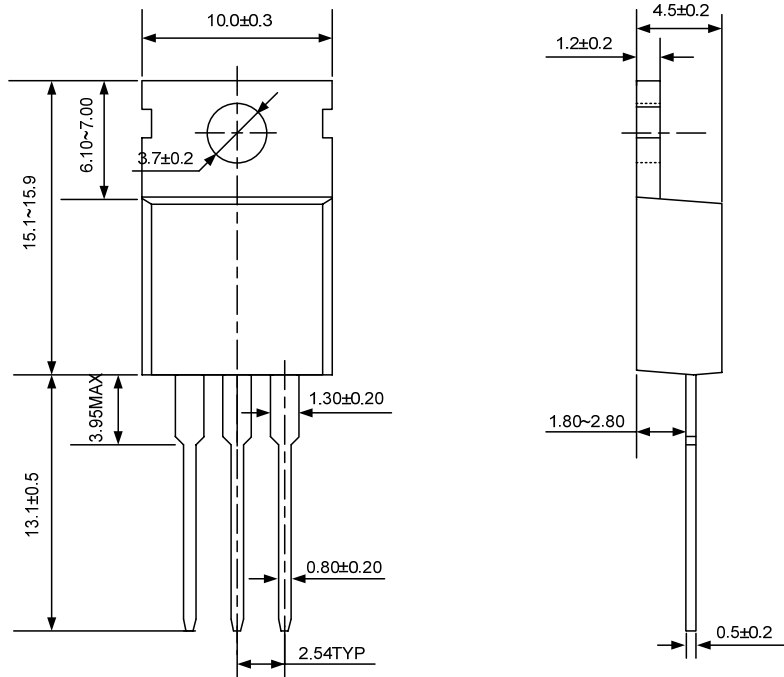
Figure 3. Typical Capacitance (C_T) vs Reverse Voltage (V_R) at f=1MHz



PACKAGE OUTLINE

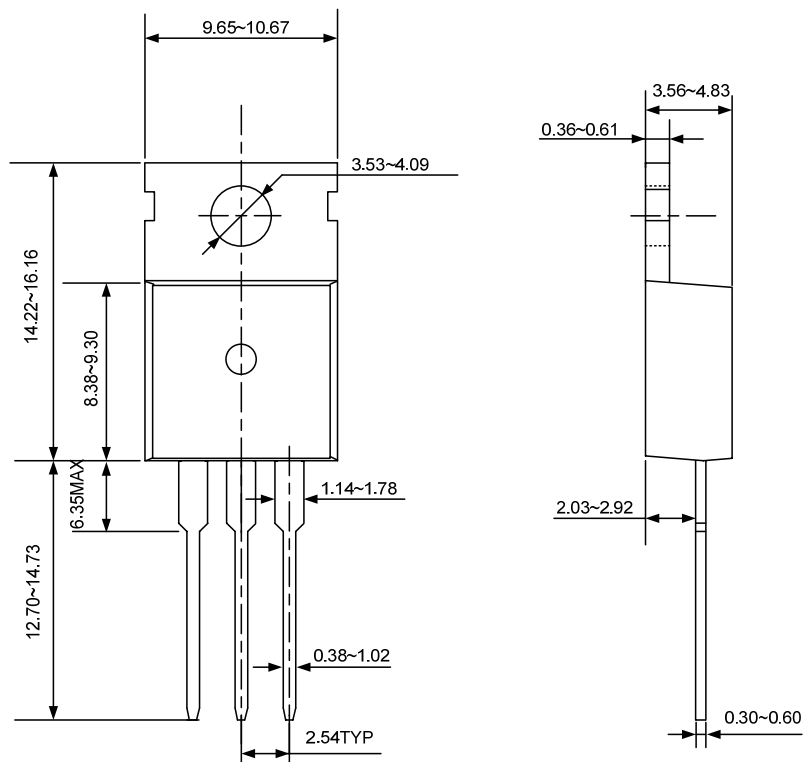
TO-220-3L(1)

UNIT: mm



TO-220-3L(2)

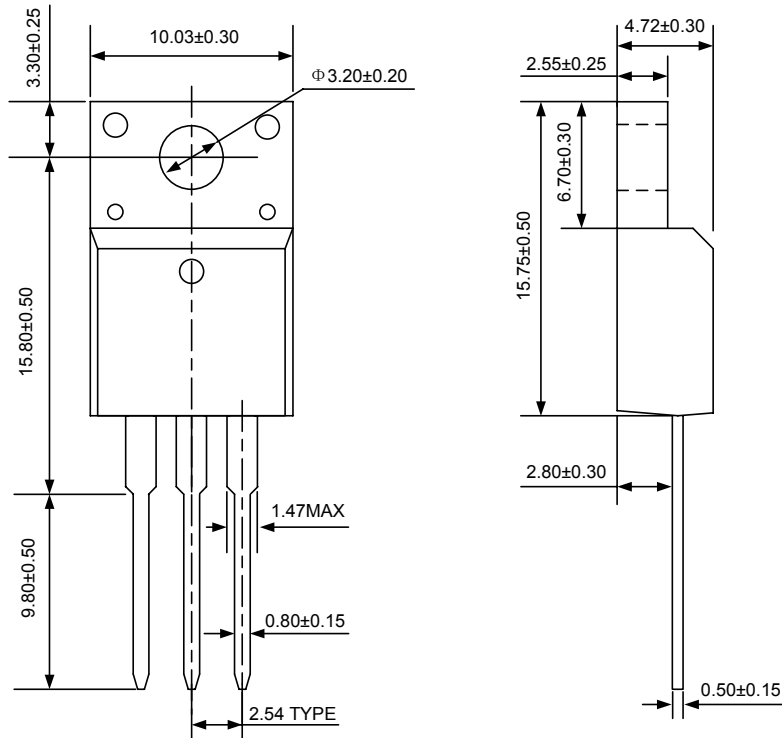
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PACKAGE OUTLINE(continued)

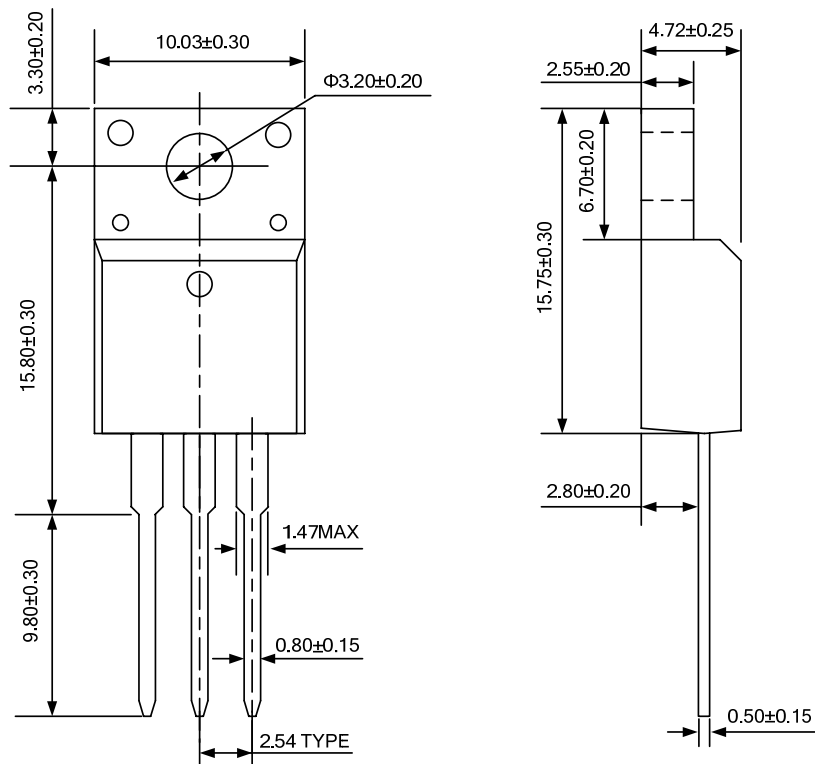
TO-220F-3L(1)

UNIT: mm



TO-220F-3L(2)

UNIT: mm



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- Silan will supply the best possible product for customers!

ATTACHMENT**Revision History**

Date	REV	Description	Page
2010.06.09	1.0	Original	
2010.09.02	1.1	Add TO-220-3L, TO-220F-3L package of youyi	
2010.10.22	1.2	Modify the template of datasheet	