Global Semiconductor

MBR10150CT MBR10150FCT MBR10150LCT MBR10150NCT

Schottky Rectifier

$I_{F(Total)}$ =10 A
V_R = 150 V
V_F = 0.9V

Major Ratings and Characteristics

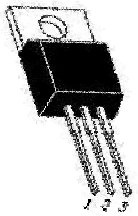
Characteristics	Values	Units
$I_{F(Total)}$	10	A
I_{FSM}	150	A
V_R	150	V
V_F	0.9	V
T_J	150	℃
T storage	-65 ~150	℃

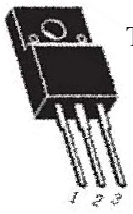
Description/ Features

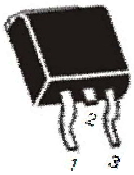
This low cost Schottky rectifier has been optimized for low reverse leakage at high temperature. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

- 150℃ Tj operation
- Low Power Loss, High Efficiency
- Low forward voltage drop
- High surge capacity
- Lead Free Finish/ROHS Compliant(Note 1)

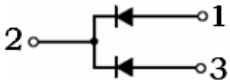
Case Styles


TO-220


TO-220F


TO-263


TO-262



1、 ANODE
2、 CATHODE
3、 ANODE

Ordering Information

Part Number	Package	Packaging
MBR10150CT	TO-220	Tube
MBR10150FCT	TO-220F	Tube
MBR10150LCT	TO-263	Tube & Reel
MBR10150NCT	TO-262	Tube

Electrical Characteristics(Tamb=25℃)

Characteristic	**Symbol**	**MBR10150**		**Unit**
Peak Repetitive Reverse Voltage	V_{RRM}	150		V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectifier Output Current	$I_{F(per\ leg)}$	5		A
	$I_{F(Totel)}$	10		
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase,60Hz)	I_{FSM}	150		A
Maximum Instantaneous Forward Voltage @I_F=5A,Tc=25℃ @I_F=5A,Tc=125℃	V_F	0.9 0.8		V
Peak Reverse Current @Tc=25℃ at Rated DC Blocking Voltage @Tc=125℃	I_R	0.1 6		mA
Maximum Operating Junction Temperature	T_j	-65~150		℃
Storage Temperature	T_{STG}	-65~150		
Maximum Thermal Resistance	θ_{JC}	TO-220	2.5	℃/W
		TO-220F	4.5	
		TO-262/263	2.5	
	θ_{JA}	TO-220	60	
		TO-220F	60	
		TO-262/263	60	

Notes:1.High Temperature Solder Exemption Applied, See EU Directive Annex 7.

Characteristics Curve

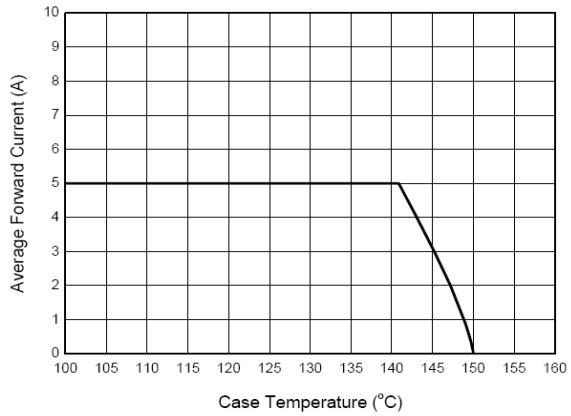


Figure 1. Forward Current Derating Curve

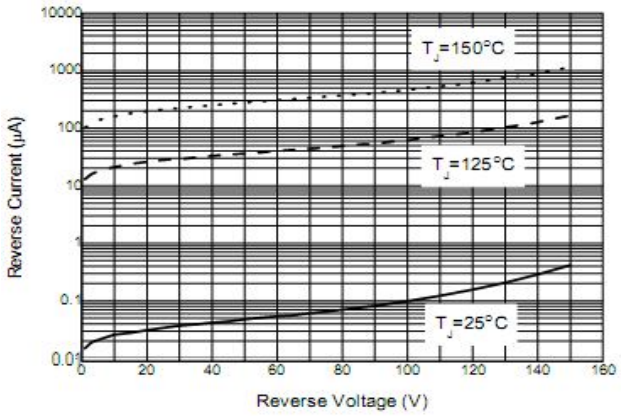


Figure 2. Typical Reverse Current per Diode

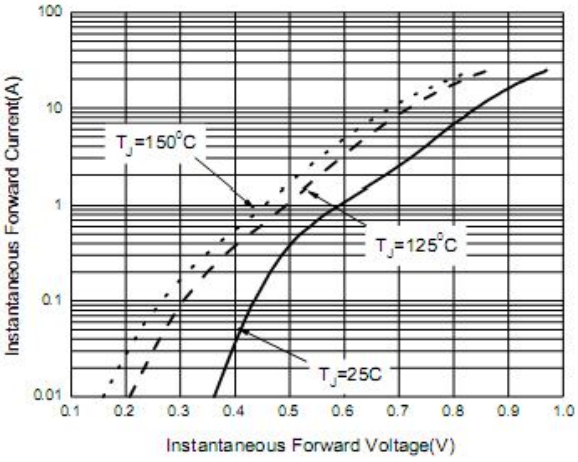
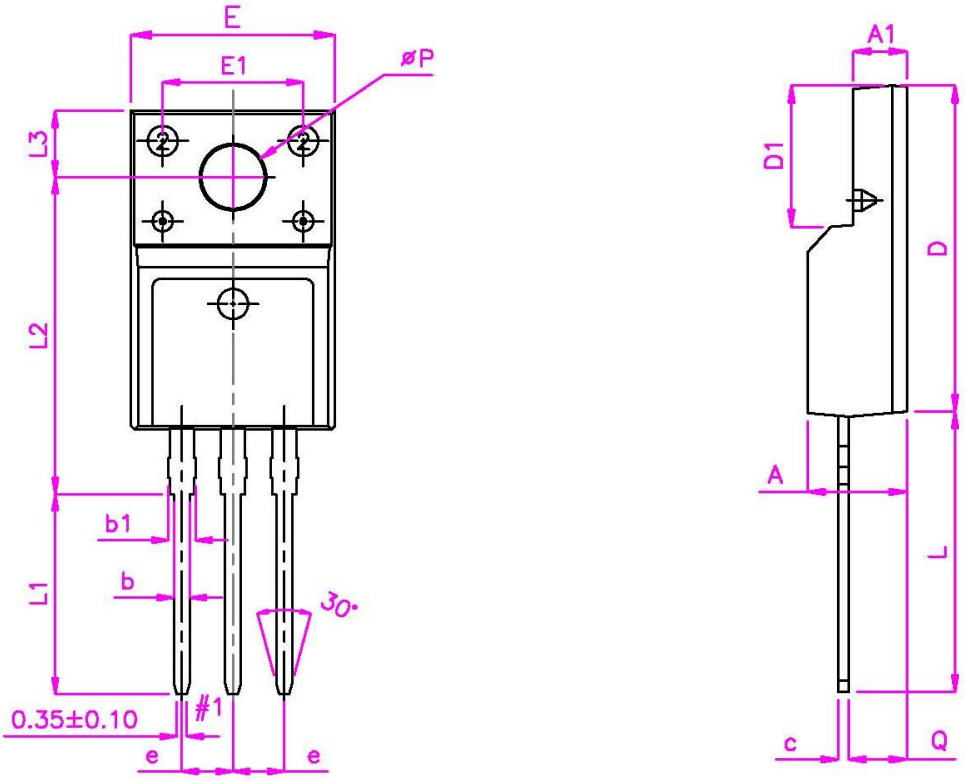


Figure 3.Typical Forward Voltage per Diode

TO-220F Mechanical Data

UNIT.: mm

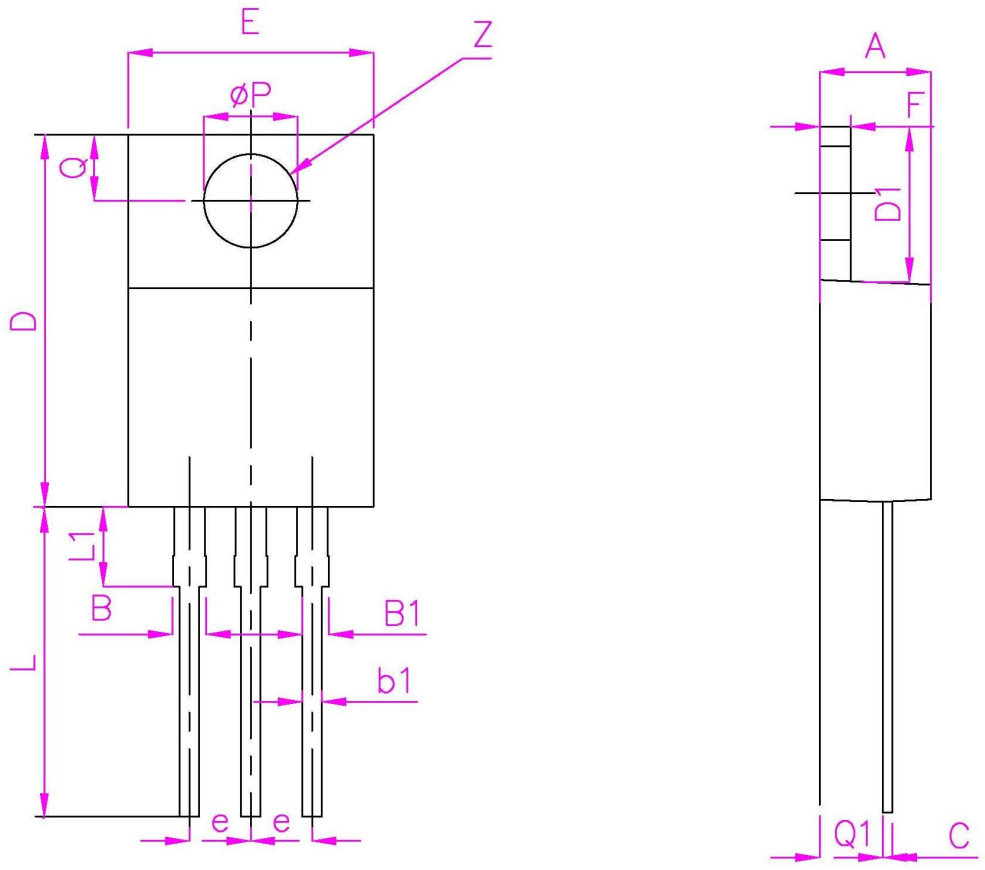
Symbol	MIN.	NOM.	MAX.	Symbol	MIN.	NOM.	MAX.
A	4.2	-	4.70	E1	-	7.0	-
A1	2.30	-	2.90	e	-	2.54	-
b	0.45	-	0.9	L	12.5	-	14.3
b1	1.1	-	1.7	L1	9.45	-	10.05
c	0.35	-	0.9	L2	15	-	16
D	14.5	-	17	L3	3.2	-	4.4
D1	6.10	-	9.0	ΦP	3.0	-	3.3
E	9.6	-	10.3	Q	2.5	-	2.90



TO-220 Mechanical Data

UNIT.: mm

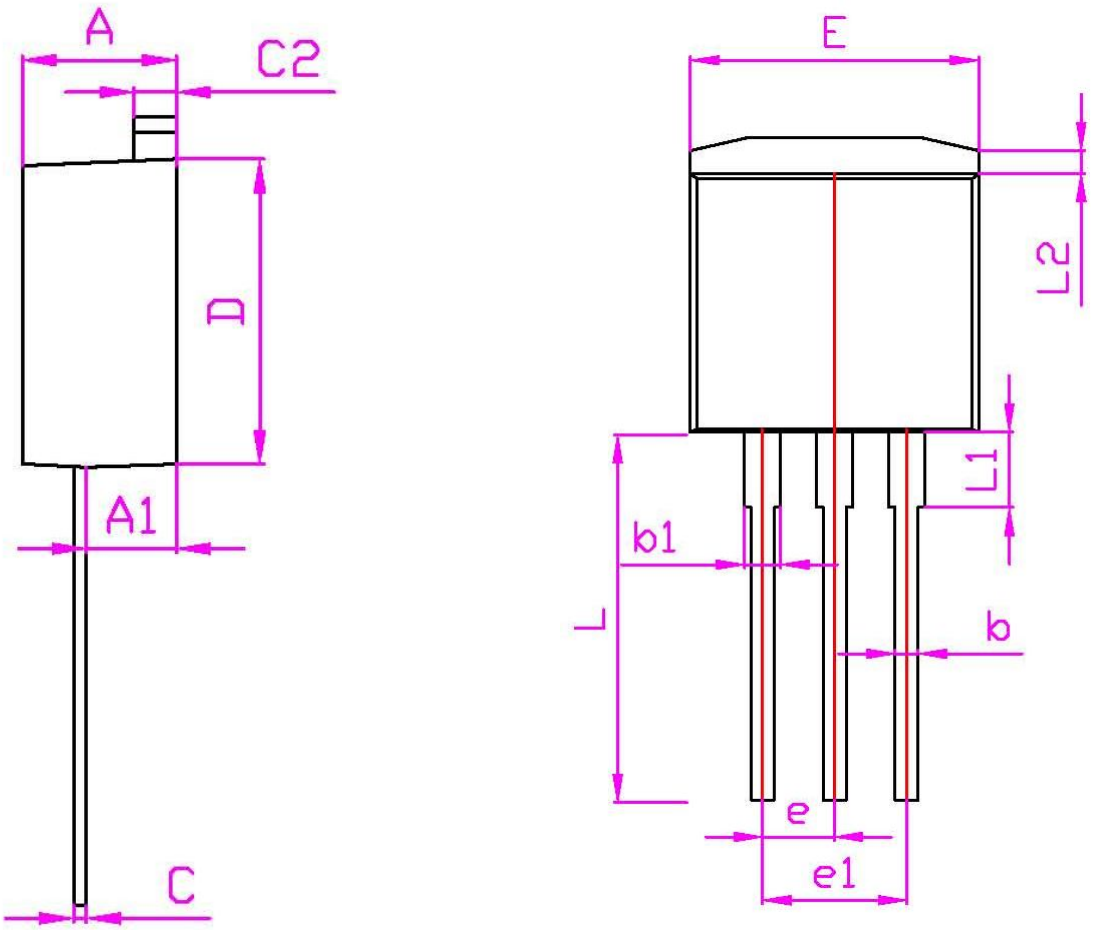
Symbol	MIN.	NOM.	MAX.	Symbol	MIN.	NOM.	MAX.
A	4.0	-	4.80	E	9.90	-	10.70
B	1.20	-	1.40	e	-	2.54	-
B1	1.0	-	1.30	F	1.10	-	1.40
b1	0.65	-	1.00	L	12.50	-	14.50
c	0.40	-	0.55	L1	3.00	3.50	4.00
D	15.0	-	16.5	Q	2.50	-	3.00
D1	5.90	-	6.90	Q1	2.00	-	2.90
				P	-	3.80	-



TO-262 Mechanical Data

UNIT.: mm

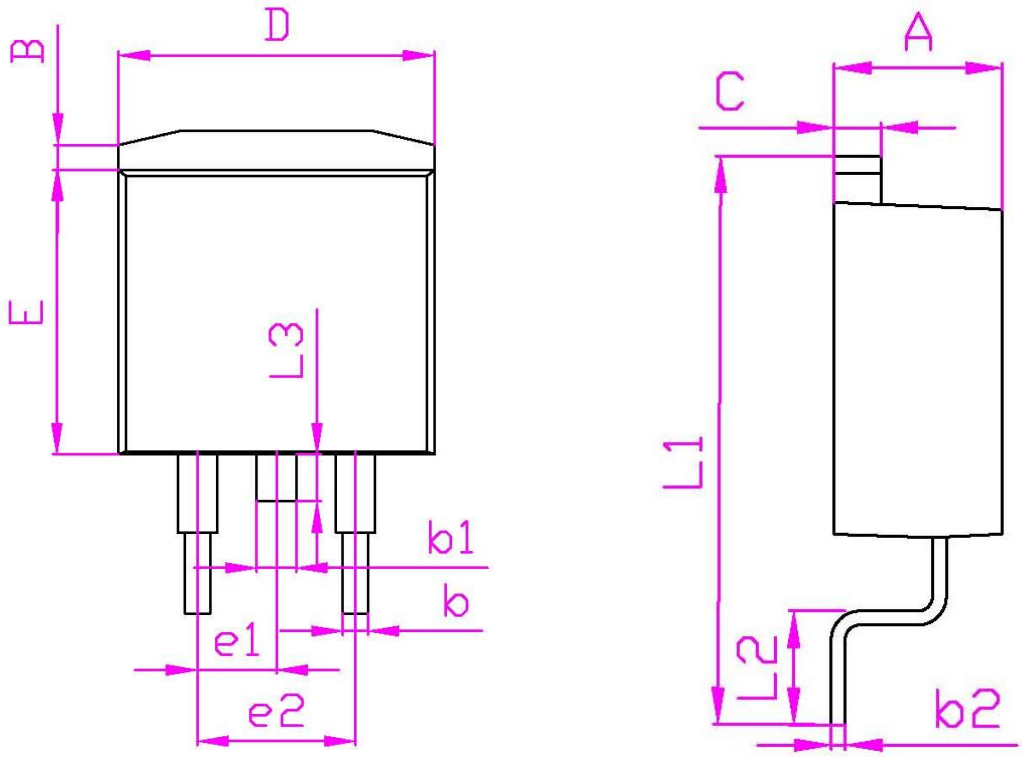
Symbol	MIN.	NOM.	MAX.	Symbol	MIN.	NOM.	MAX.
A	3.80	-	4.80	e	-	2.54	-
A1	2.00	-	2.80	e1	-	-	5.30
b	0.60	-	1.00	E	9.90	-	10.70
b1	1.20	-	1.40	L	12.50	-	14.50
c	0.40	-	0.70	L1	3.00	3.50	4.00
c2	1.10	-	1.40	L2	-	-	1.50
D		-	9.60	-	-	-	-



TO-263 Mechanical Data

UNIT.: mm

Symbol	MIN.	NOM.	MAX.	Symbol	MIN.	NOM.	MAX.
A	4.42	-	4.72	E	8.99	-	9.29
B	1.22	-	1.32	e1	2.44	-	2.64
b	0.76	-	0.86	e2	4.98	-	5.18
b1	1.22	-	1.32	L1	15.19	-	15.79
b2	0.33	-	0.43	L2	1.94	-	2.19
c	1.22	-	1.32	L3	-	-	-
D	9.95	-	10.25	-	-	-	-



Data and specifications subject to change without notice.
This product has been designed and qualified for Industrial Level and Lead-Free.
Qualification Standards can be found on GS's Web site.
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