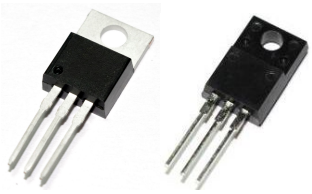
MBR10U100CT/10U100FCT

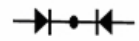
Low Trench Mos Barrier Schottky Rectifier

Voltage	100 Volts	Current	10 Amperes

DRAWING



TO-220AB ITO-220AB



Features

Low Forward Voltage Drop

Excellent High Temperature Stability

Patented Super Barrier Rectifier Technology

Soft, Fast Switching Capability

Mechanical Data

Case: TO-220AB，ITO-220AB

Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0

Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208

Weight: TO-220AB – 1.85 grams (approximate)

ITO-220AB – 1.65 grams (approximate)

Typical Applications

Power Supply − Output Rectification

Power Management

Instrumentation

Maximum Ratings (Per Leg) (T_A = +25°C, unless otherwise specified.)

Parameter	Symbol	MBR10U100CT/FCT	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Forward Current （Per Leg)	IF(AV)	5	A
Rated VR) TC = 130°C （Per Device)		10	
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	150	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 1 sec.	V_{AC}	1500	V

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

Thermal Characteristics (Per Leg)

Parameter		Symbol	Value	Unit
Typical Thermal Resistance	TO-220AB	$R_{\theta JC}$	2.2	℃/W
	ITO-220AB		4.0	
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +175	℃

Electrical Characteristics (Per Leg) (T_A = +25°C, unless otherwise specified.)

Parameter	Test conditions		Symbol	Typ	Max	Unit
Forward Voltage Drop	IF=5A	T_J =25℃	V_F		0.60	V
	IF=10A				0.70	
	IF=5A	T_J =125℃			0.55	
	IF=10A				0.65	
Leakage Current (Note 1)	V_R=100V	T_J =25℃	I_R		0.05	mA
		T_J =125℃			15	

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Using heatsink (by Black Aluminurn 45mm*20mm*12mm)

Ratings And Characteristics Curves(TC = 25 °C unless otherwise noted)

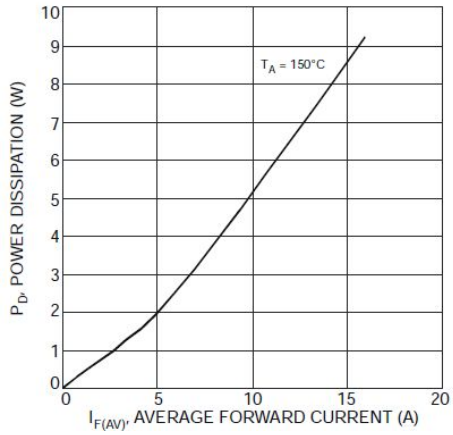


Figure 1 Forward Power Dissipation

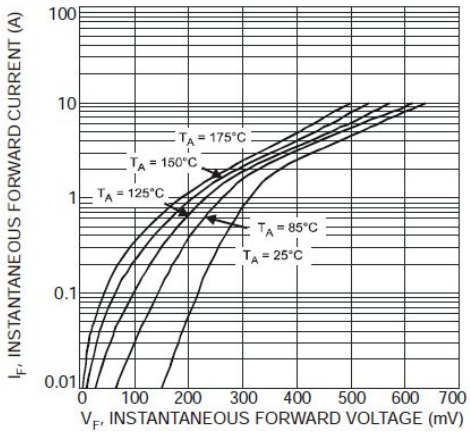


Figure 2. Typical Forward Characteristics

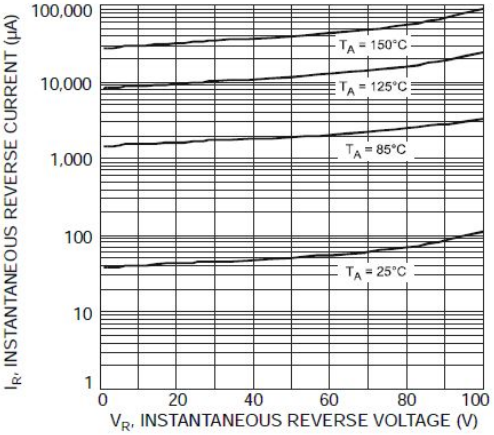


Figure 3. Typical Reverse Characteristics

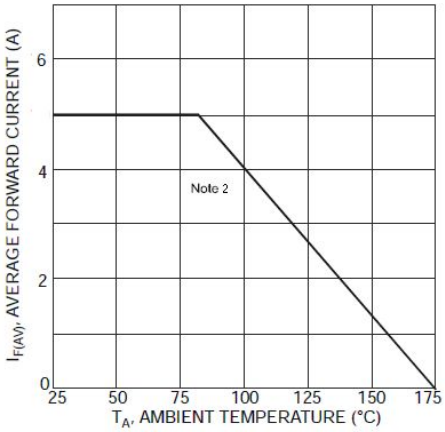


Figure 4. Forward Current Derating Curve

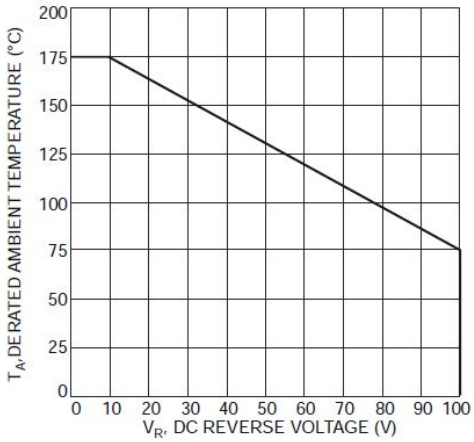
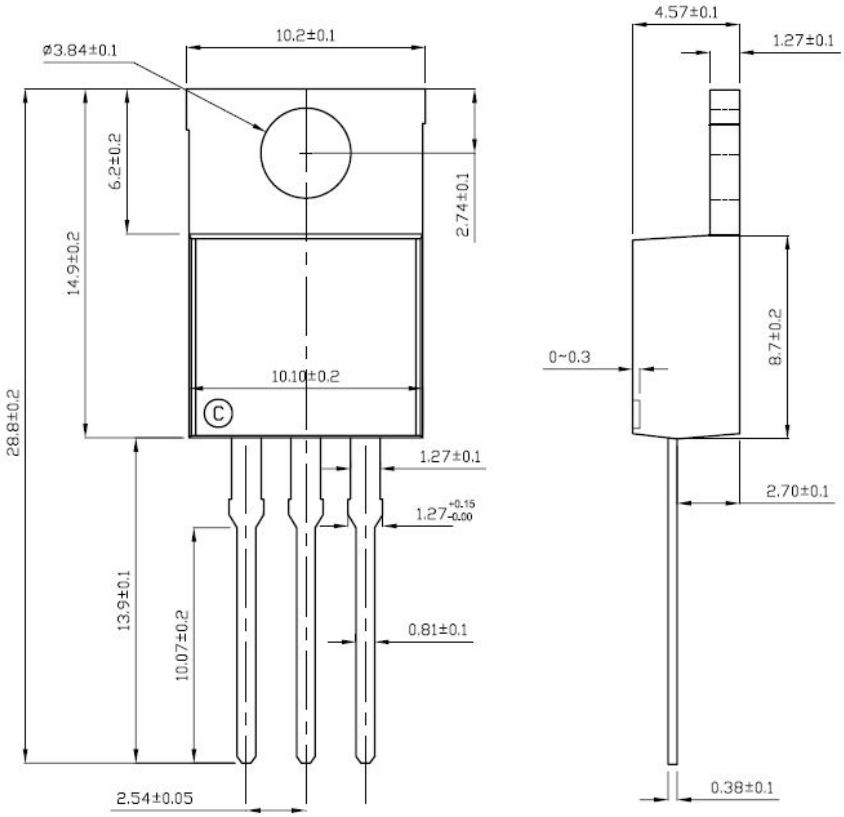


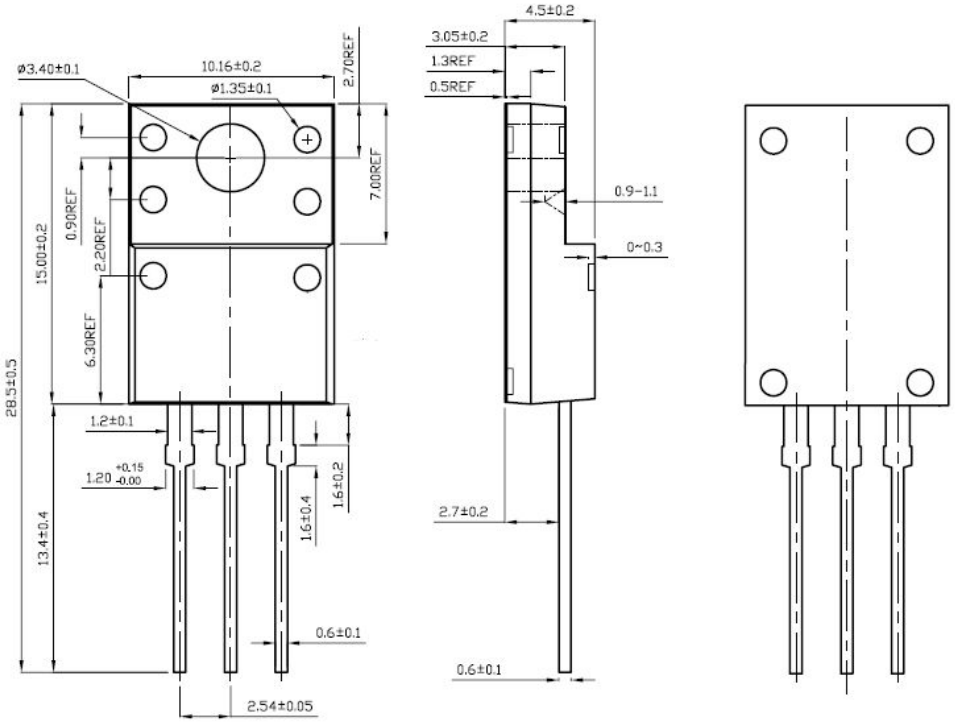
Figure 5. Operating Temperature Derating

Mechanical Dimensions

TO-220AB



ITO-220AB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10.16±0.2
ø1.35±0.1
2.70REF
7.00REF
0.90REF
2.20REF
6.30REF
15.00±0.2
28.5±0.5
13.4±0.4
1.2±0.1
1.20 +0.15 -0.00
1.6±0.2
1.6±0.4
0.6±0.1
2.54±0.05
4.5±0.2
3.05±0.2
1.3REF
0.5REF
0.9~1.1
0~0.3
2.7±0.2
0.6±0.1