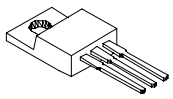
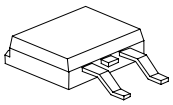
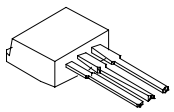
MBR1080CT-G/MBR1090CT-G/MBR10100CT-G SCHOTTKY RECTIFIER

Applications:

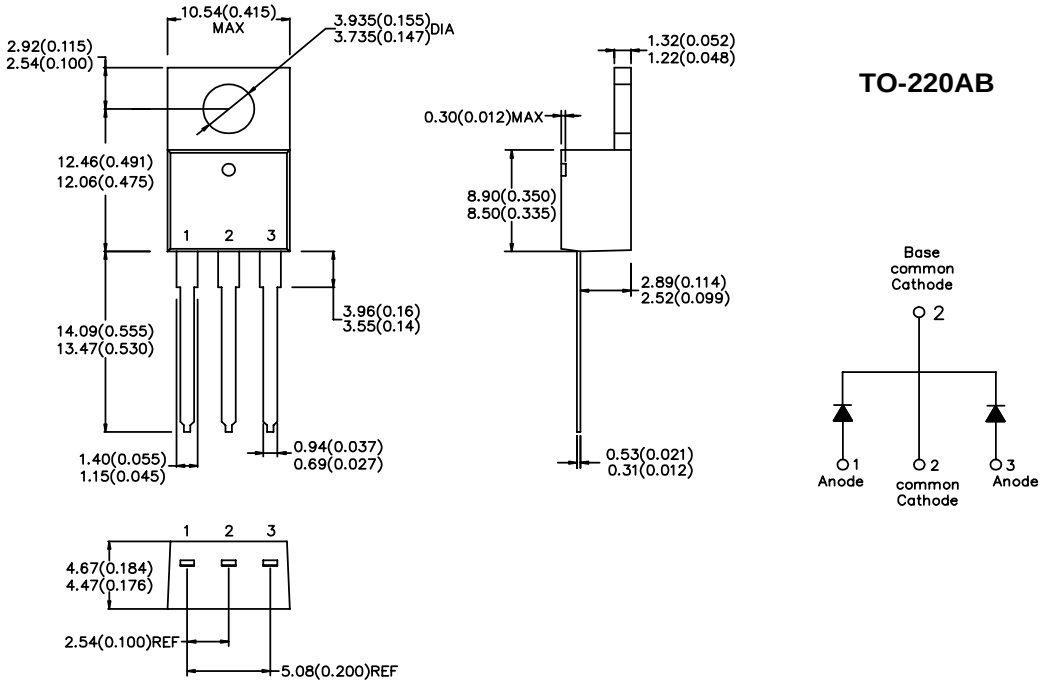
• Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

Features:

- **150 °C T_J operation**
- **Center tap configuration**
- **Low forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**

Case styles		
MBR10…CT-G	**MBRB10…CT-G**	**MBR10…CT-1-G**
		
TO-220AB	**D^2PAK**	**TO-262**

Mechanical Dimensions: In Inches / mm



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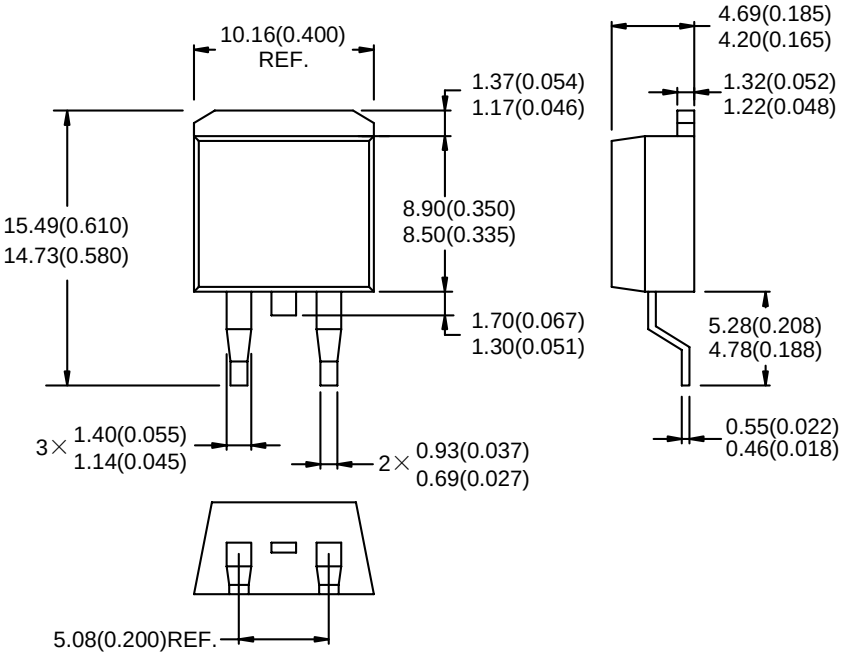
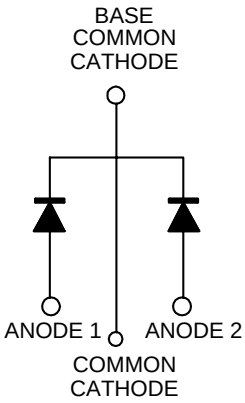
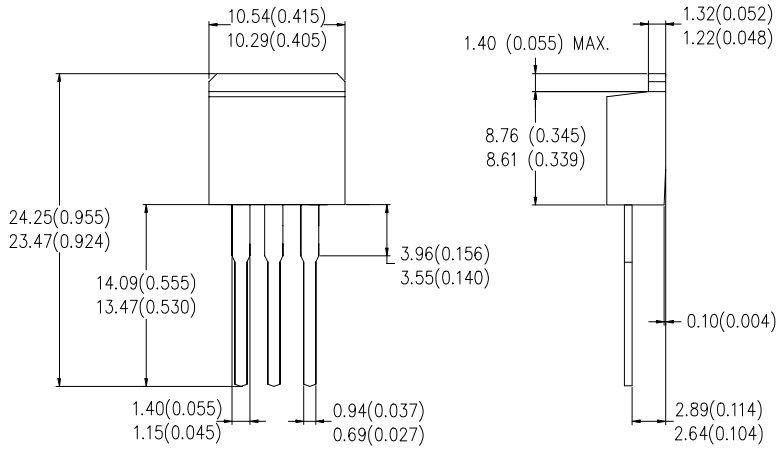
Green Products

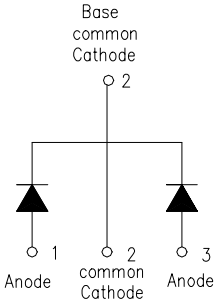
D²PAK

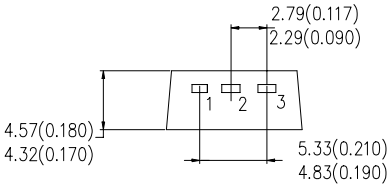




TO-262







Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	80	MBR1080CT-G MBRB1080CT-G MBR1080CT-1-G	V
			90	MBR1090CT-G MBRB1090CT-G MBR1090CT-1-G	
			100	MBR10100CT-G MBRB10100CT-G MBR10100CT-1-G	
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =100°C, rectangular wave form	5(Per leg) 10(Per device)		A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	120		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25 °C @ 10 A, Pulse, T_J = 25 °C	0.85 0.95	V
	V_{F2}	@ 5 A, Pulse, T_J = 125 °C @ 10 A, Pulse, T_J = 125 °C	0.75 0.85	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.00	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	15	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	300	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/µs

* Pulse Width < 300µs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	°C
Max. Storage Temperature	T_{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	°C/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased (only for TO-220)	0.50	°C/W
Approximate Weight	wt	-	2	g
Mounting Torque	T_M	-	6(Min.) 12(Max.)	Kg-cm
Case Style	TO-220AB D^2PAK TO-262			

MBR1080/90/100CT-G
MBRB1080/90/100CT-G
MBR1080/90/100CT-1-G

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