Technical Data
Data Sheet 3208, Rev. B

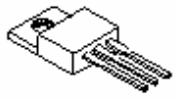
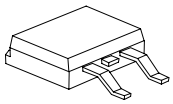
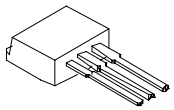
MBR40…CT/MBRB40…CT/MBR40…CT-1
SCHOTTKY RECTIFIER

Applications:

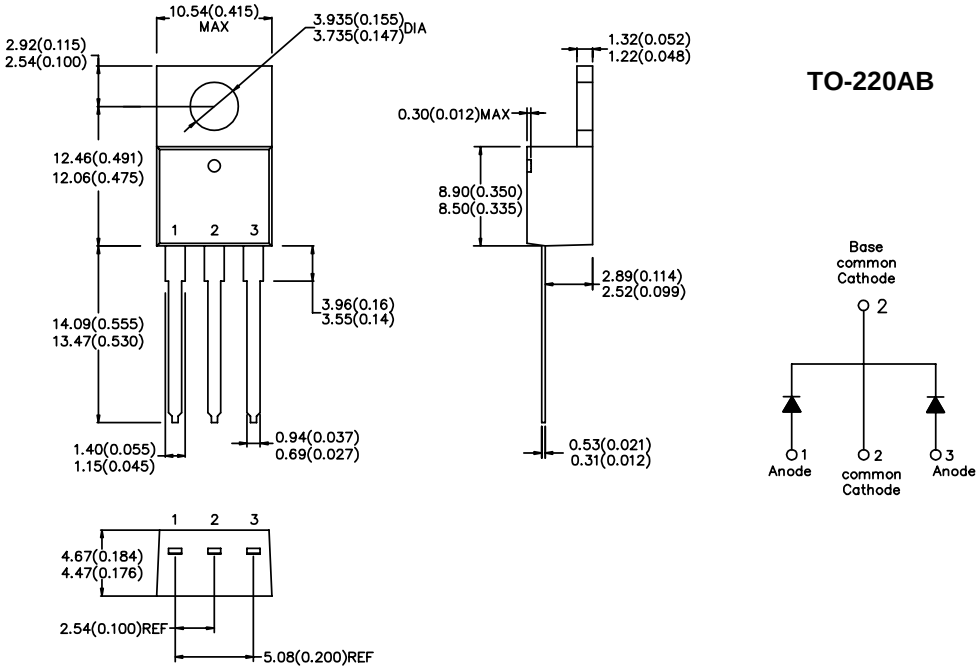
- **Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection**

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		
MBR40…CT	**MBRB40…CT**	**MBR40…CT-1**
		
TO-220AB	**D^2PAK**	**TO-262**

Mechanical Dimensions: In Inches / mm



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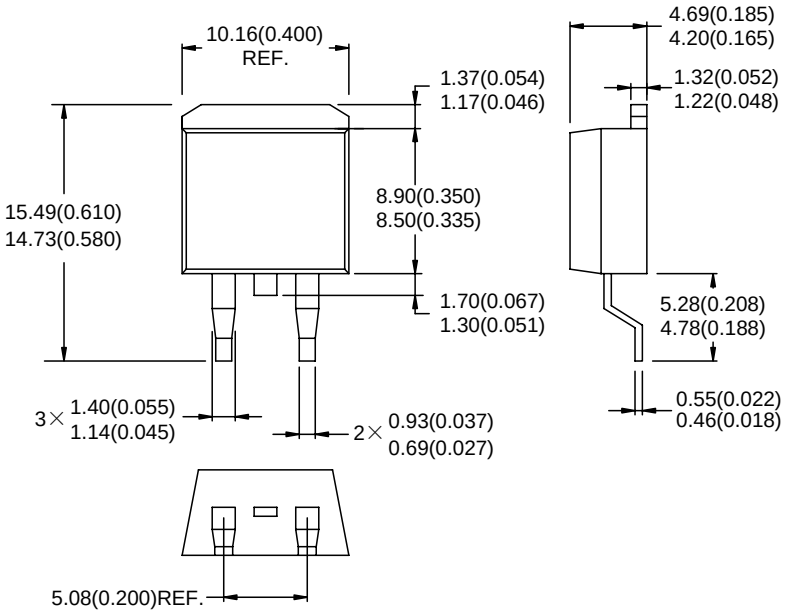
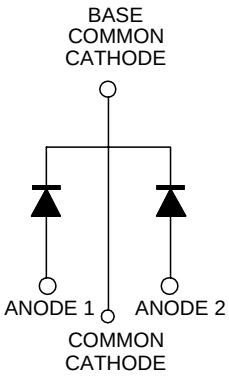
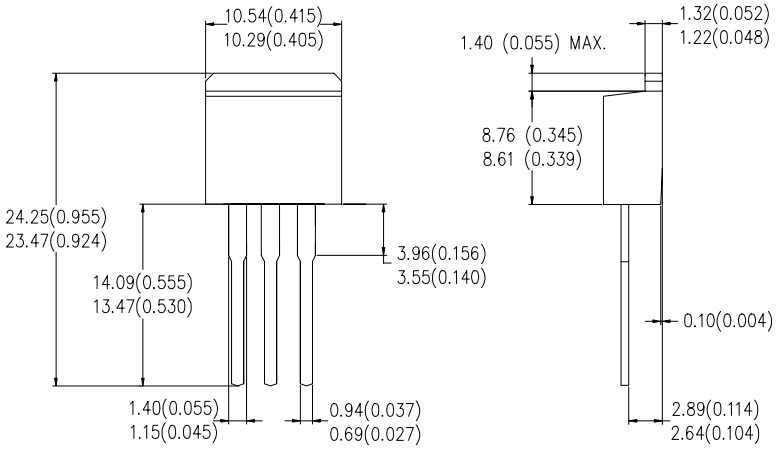
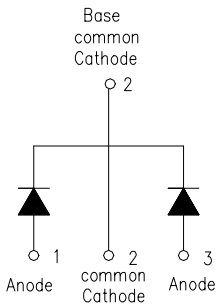
D^2PAK

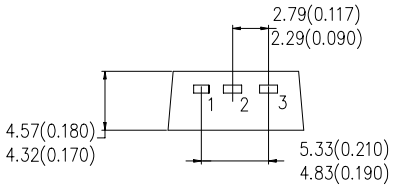




TO-262







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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	80	MBR4080CT MBRB4080CT MBR4080CT-1	V
			90	MBR4090CT MBRB4090CT MBR4090CT-1	
			100	MBR40100CT MBRB40100CT MBR40100CT-1	
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C = 135°C, rectangular wave form	20(Per leg) 40(Per device)		A
Peak Repetitive Forward Current(per leg)	I_{FRM}	Rated V_R square wave, 20KHz T_C = 133°C	20		A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	Surge applied at rated load conditions halfwave, single phase,60Hz	280		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 20 A, Pulse, T_J = 25 °C @ 40 A, Pulse, T_J = 25 °C	0.88 1.02	V
	V_{F2}	@ 20 A, Pulse, T_J = 125 °C @ 40 A, Pulse, T_J = 125 °C	0.74 0.88	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.0	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	6.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	400	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%

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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	$R_{\theta JC}$	DC operation	2.0	°C/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta JA}$	DC operation	50	°C/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	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			

MBR4080/90/100CT
MBRB4080/90/100CT
MBR4080/90/100CT-1

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