

Technical Data
Data Sheet 2913, Rev. A

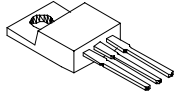
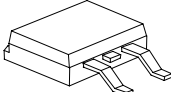
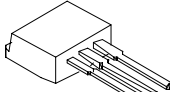
MBR16100CT/MBRB16100CT/MBR16100CT-1
SCHOTTKY RECTIFIER

Applications:

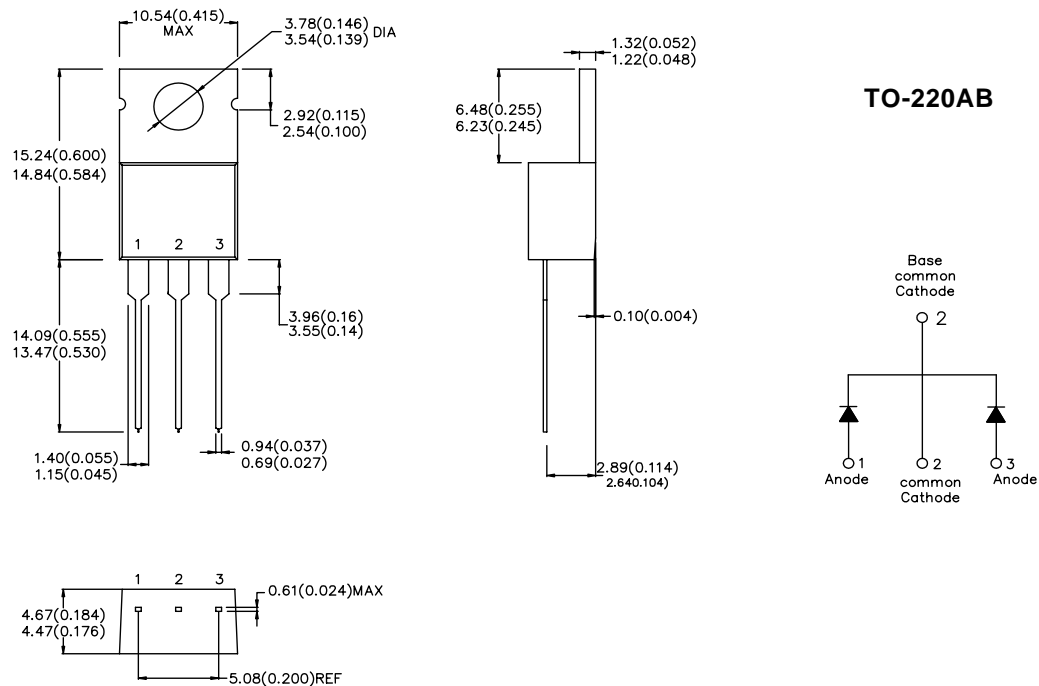
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

Features:

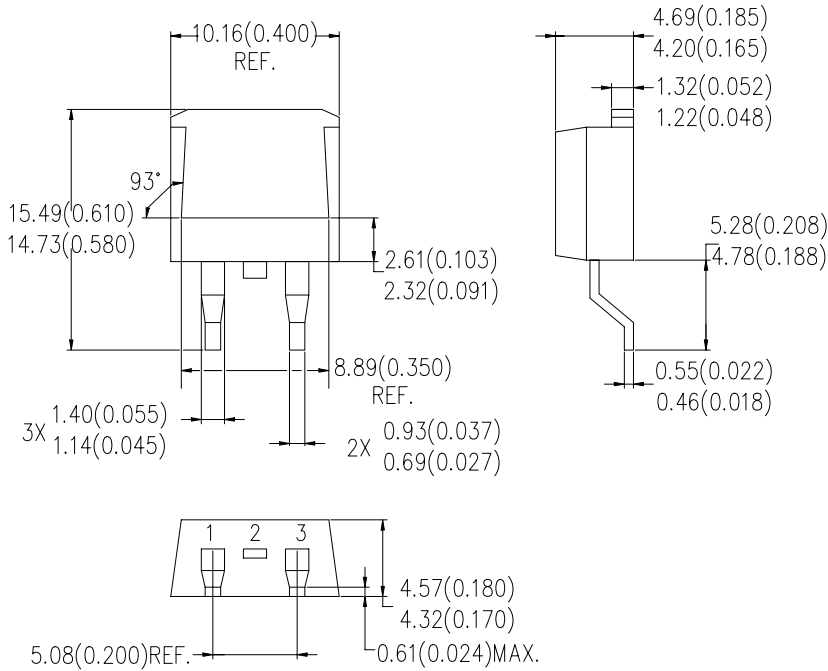
- 175 °C T_J operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Case styles		
MBR16100CT  TO-220AB	MBRB16100CT  D²PAK	MBR16100CT-1  TO-262

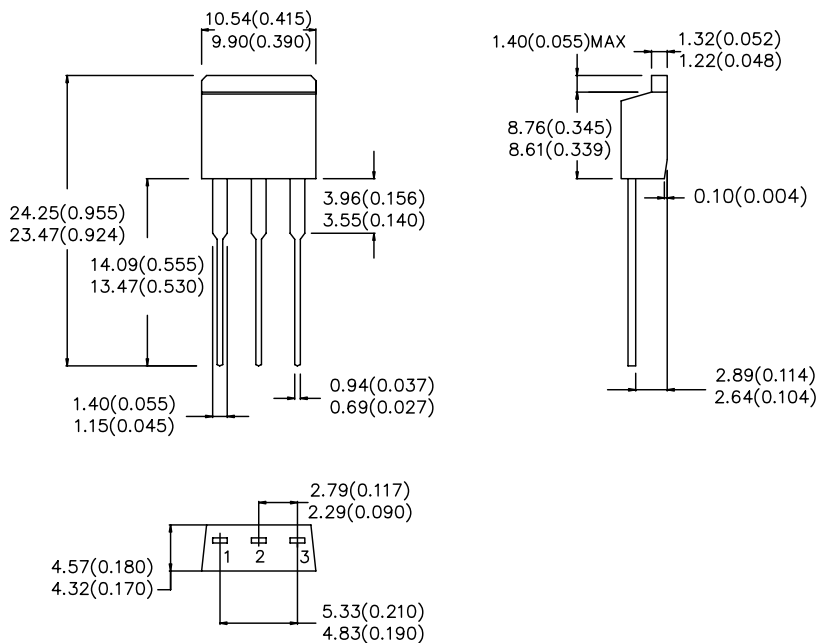
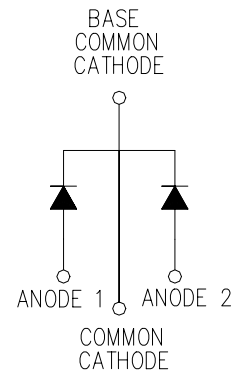
Mechanical Dimensions: In Inches / mm



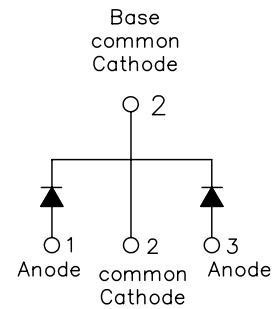
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D²PAK



TO-262



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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	100	V
Max. Average Forward Current (per leg)	$I_{F(AV)}$	50% duty cycle, @ $T_C=133^{\circ}C$, rectangular wave form	8.0	A
Peak Repetitive Forward Current (per leg)	I_{FRM}	Rated V_R , square wave, 20kHz $T_C = 133^{\circ}C$	16	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	180	A
Peak Repetitive Reverse Surge Current	I_{RRM}	2.0 μ sec 1.0 KHz	0.5	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 8 A, Pulse, $T_J = 25^{\circ}C$ @ 16 A, Pulse, $T_J = 25^{\circ}C$	0.74 0.84	V
	V_{F2}	@ 8 A, Pulse, $T_J = 125^{\circ}C$ @ 16 A, Pulse, $T_J = 125^{\circ}C$	0.60 0.69	V
Max. Reverse Current (per Leg) *	I_{R1}	@ $V_R =$ Rated V_R , Pulse, $T_J = 25^{\circ}C$	0.1	mA
	I_{R2}	@ $V_R =$ Rated V_R , Pulse, $T_J = 125^{\circ}C$	5.0	mA
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change (Rated V_R)	dv/dt	-	10,000	V/ μ s

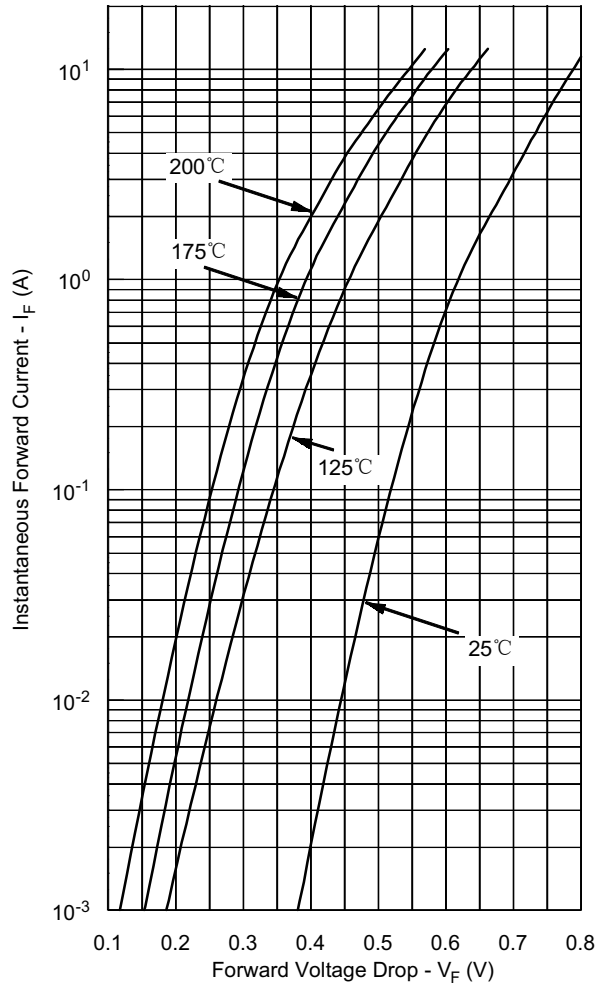
* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

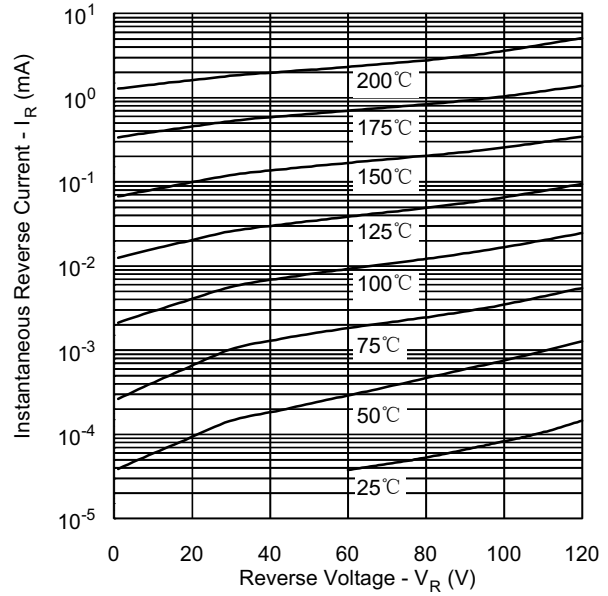
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-65 to +175	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	$^{\circ}C/W$
Maximum Thermal Resistance Junction to Ambient (per leg)	$R_{\theta JA}$	DC operation	60	$^{\circ}C/W$
Approximate Weight	wt	-	2.0	g
Mounting Torque	T_M	-	6 (min) 12 (max)	Kg-cm
Case Style	TO-220AB D ² PAK TO-262 (Suffix "-1" for TO-262;"MBRB x" for D ² PAK)			

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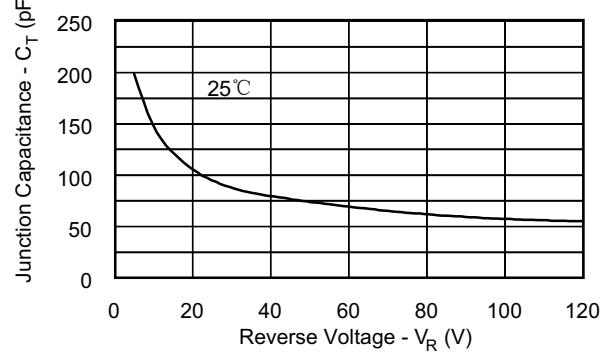
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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