

Technical Data  
Data Sheet 2882, Rev. -

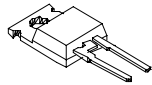
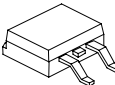
**MBR1635/MBRB1635 / MBR1645/MBRB1645**  
**SCHOTTKY RECTIFIER**

**Applications:**

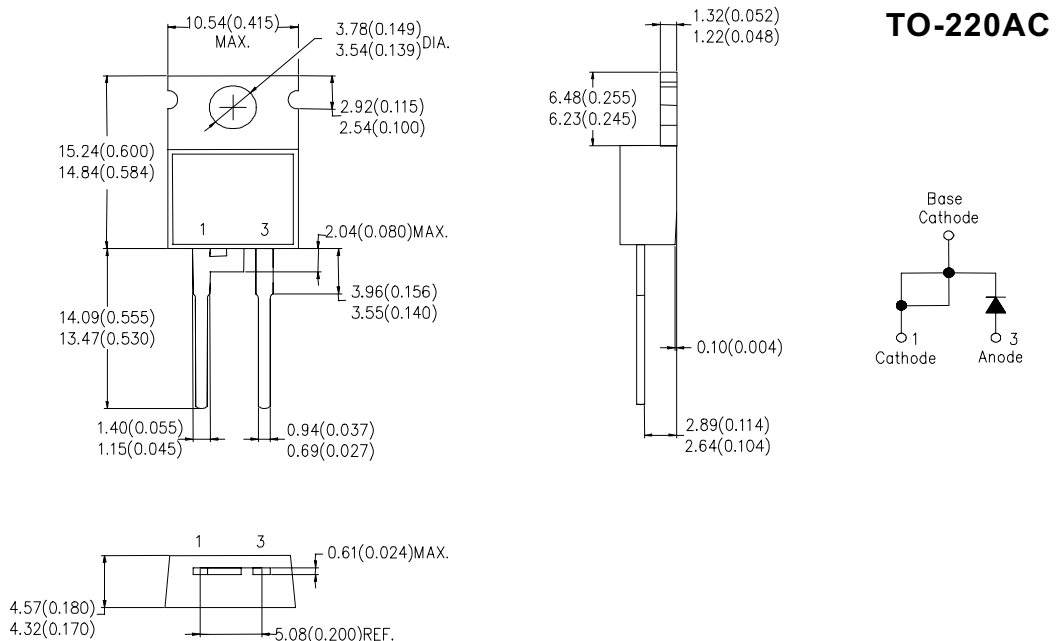
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

**Features:**

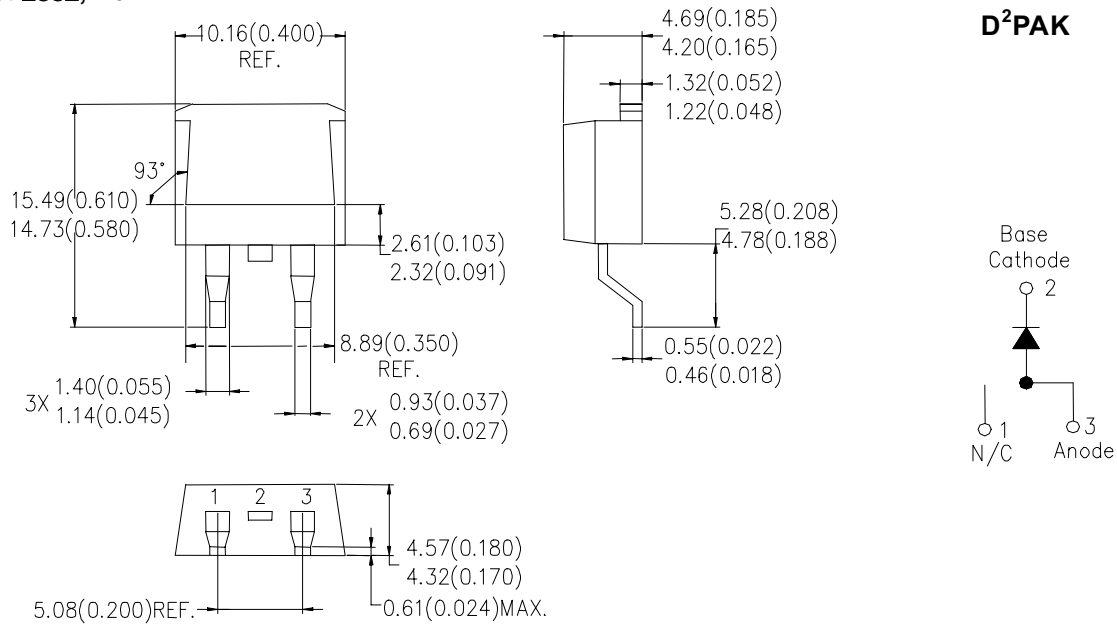
- 150 °C T<sub>J</sub> operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Case styles	
<p><b>MBR1635/MBR1645</b></p>  <p><b>TO-220AC</b></p>	<p><b>MBRB1635/MBRB1645</b></p>  <p><b>D<sup>2</sup>PAK</b></p>

**Mechanical Dimensions: In Inches / mm**



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**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	35(MBR.1635) 45(MBR.1645)	V
Max. Average Forward Current	$I_{F(AV)}$	@ $T_C = 135^\circ\text{C}$ (Rated $V_R$ )	16	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	Surge applied at rated load conditions halfwave , single phase, 60Hz	150	A
Peak Repetitive Reverse Surge Current	$I_{RRM}$	2.0 $\mu\text{sec}$ 1.0 KHz	1.0	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop *	$V_{F1}$	@16 A, Pulse, $T_J = 25^\circ\text{C}$	0.63	V
	$V_{F2}$	@16 A, Pulse, $T_J = 125^\circ\text{C}$	0.57	V
Max. Reverse Current *	$I_{R1}$	@ $V_R =$ Rated $V_R$ , Pulse, $T_J = 25^\circ\text{C}$	0.2	mA
	$I_{R2}$	@ $V_R =$ Rated $V_R$ , Pulse, $T_J = 125^\circ\text{C}$	40	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5\text{ V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ ,	1400	pF
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	-	10,00	V/ $\mu\text{s}$

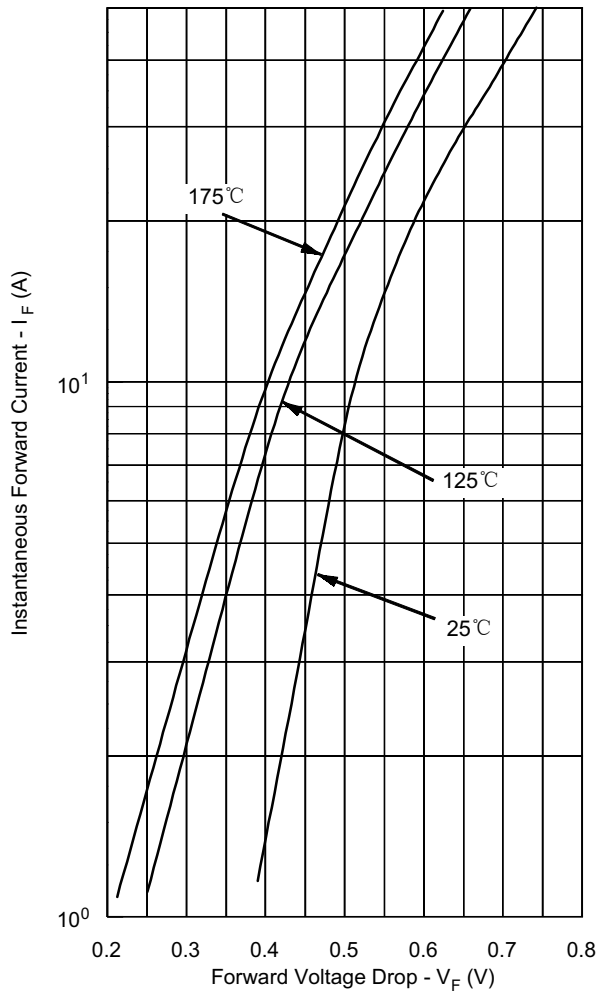
\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

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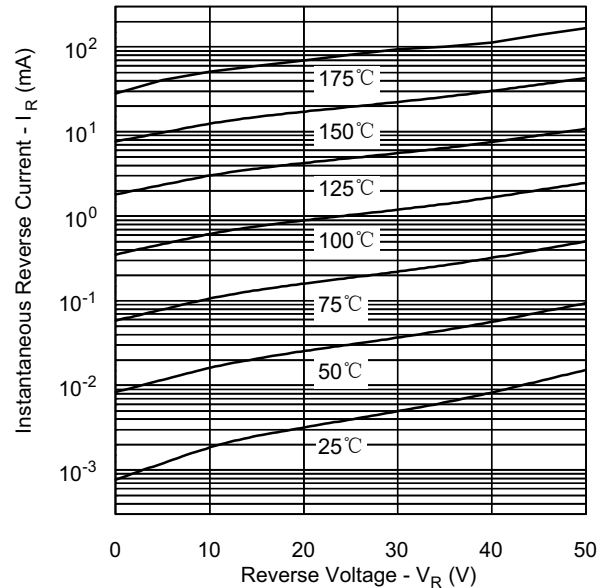
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-65 to +150	°C
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	1.50	°C/W
Typical 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-220AC D <sup>2</sup> PAK (Suffix "s" for D <sup>2</sup> PAK; "MBRB xxxx" for D <sup>2</sup> PAK)			

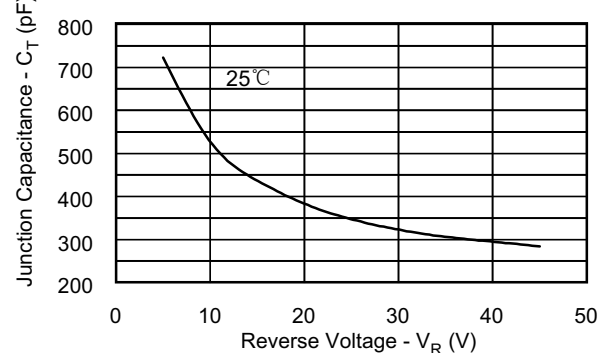
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**TECHNICAL DATA**

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