

Technical Data  
Data Sheet 3463, Rev. A

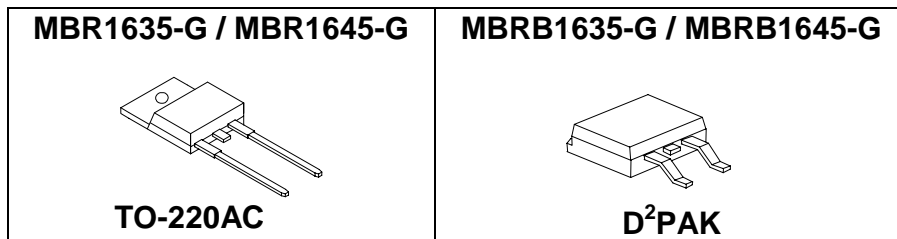
**MBR1635-G/MBRB1635-G/MBR1645-G/MBRB1645-G**  
**SCHOTTKY RECTIFIER**

**Applications:**

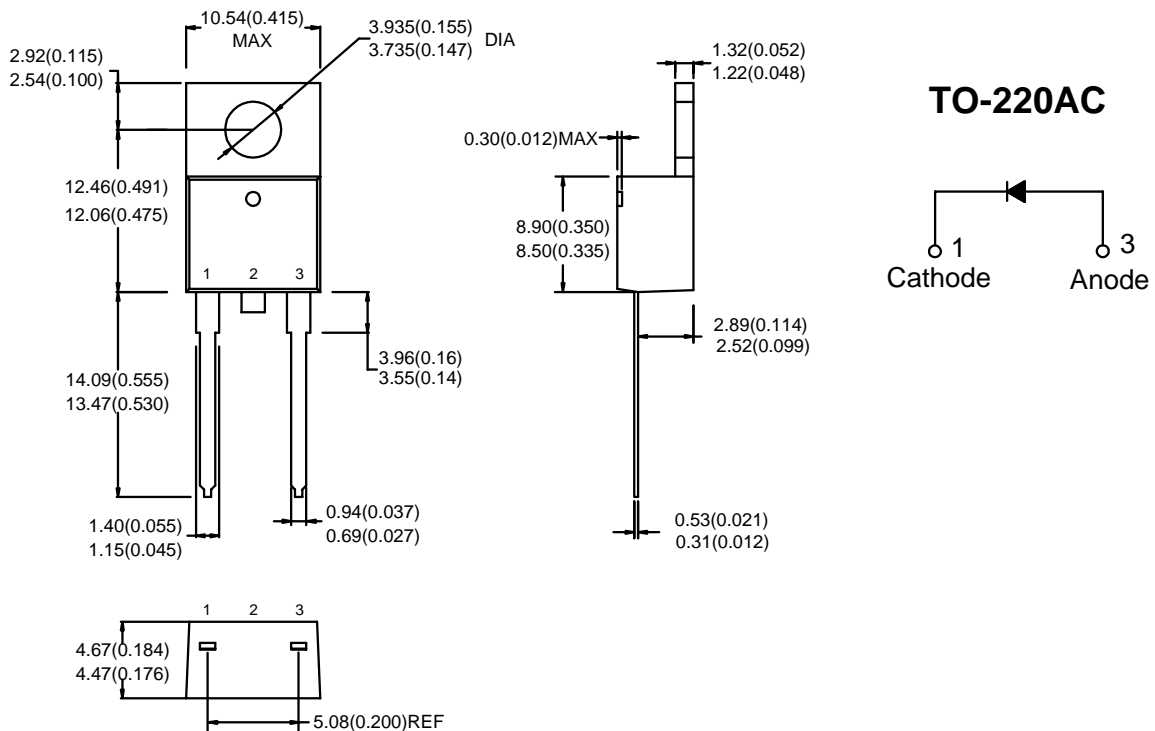
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

**Features:**

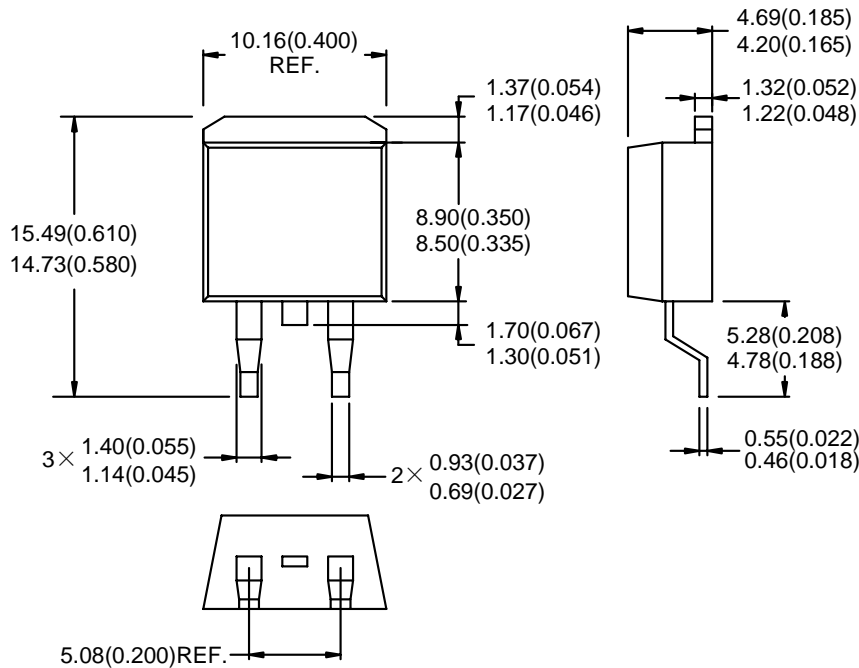
- 150 °C T<sub>J</sub> operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability



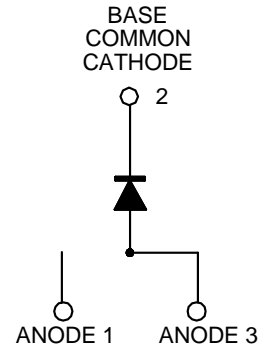
**Mechanical Dimensions: In Inches / mm**



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**D<sup>2</sup>PAK**



**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	35 ( MBR1635-G, MBRB1635-G ) 45 ( MBR1645-G, MBRB1645-G )	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 load condition halfwave, single phase, 60Hz	150	A
Peak Repetitive Reverse Surge Current	$I_{RRM}$	2.0 $\mu$ sec 1.0KHz	1.0	A

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**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 16A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.63	V
	$V_{F2}$	@ 16A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.57	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ , Pulse $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , Pulse $T_J = 125\text{ }^\circ\text{C}$	40	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	1400	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	$dv/dt$	-	10,00	V/ $\mu\text{s}$

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

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	1.5	$^\circ\text{C/W}$
Typical Thermal Resistance Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.50	$^\circ\text{C/W}$
Approximate Weight	wt	-	2	g
Mounting Torque	$T_M$	-	6(Min.) 12(Max.)	Kg-cm
Case Style	TO-220AB D <sup>2</sup> PAK(Suffix "s" for D <sup>2</sup> PAK;"MBRB $\times \times \times \times$ " for D <sup>2</sup> PAK)			

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