Technical Data
Data Sheet 3415, Rev. -

Green Products

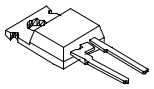
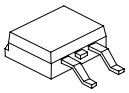
MBR735-G/ MBR745-G/ MBRB735-G/MBRB745-G
SCHOTTKY RECTIFIER

Applications:

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

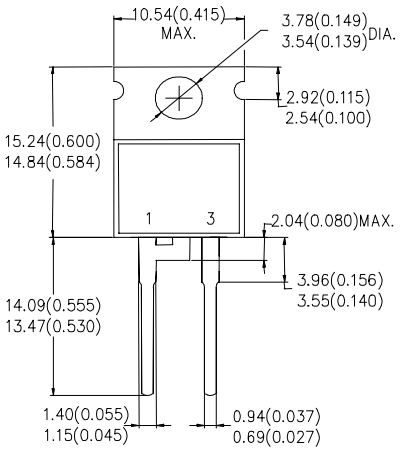
Features:

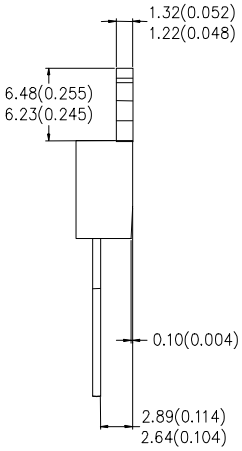
- **150 °C T_J operation**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **Green Products in Compliance with the RoHS Directive**

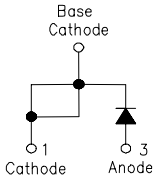
Case styles	
MBR735-G/MBR745-G	**MBRB735-G/MBRB745-G**
	
TO-220AC	D^2PAK

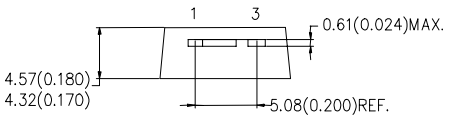
Mechanical Dimensions: In Inches / mm

TO-220AC





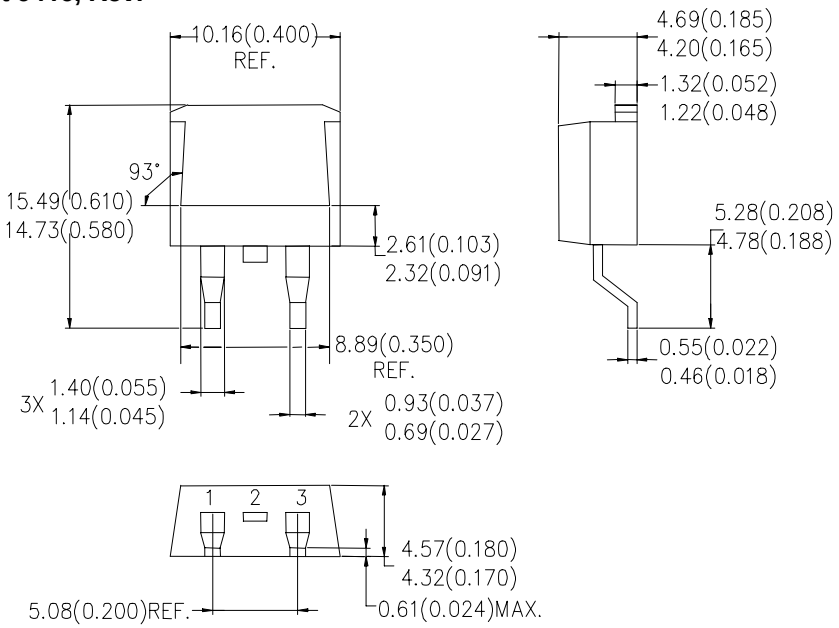


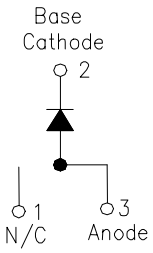


Data Sheet 3415, Rev. -

Green Products

D²PAK





Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	35(MBR.735-G) 45(MBR.745-G)	V
Max. Average Forward Current	$I_{F(AV)}$	@ T_C = 131 °C (Rated V_R)	7.5	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	150	A
Peak Repetitive Reverse Surge Current	I_{RRM}	2.0 µsec 1.0 KHz	1.0	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop *	V_{F1}	@15 A, Pulse, T_J = 25 °C	0.84	V
	V_{F2}	@7.5 A, Pulse, T_J = 125 °C @15 A, Pulse, T_J = 125 °C	0.57 0.72	V
Max. Reverse Current *	I_{R1}	@V_R = Rated V_R, Pulse, T_J = 25 °C	0.1	mA
	I_{R2}	@V_R = Rated V_R, Pulse, T_J = 125 °C	15.0	mA
Max. Junction Capacitance	C_T	@V_R = 5 V, T_C = 25 °C f_{SIG} = 1MHz,	400	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/µs

* Pulse Width < 300µs, Duty Cycle <2%

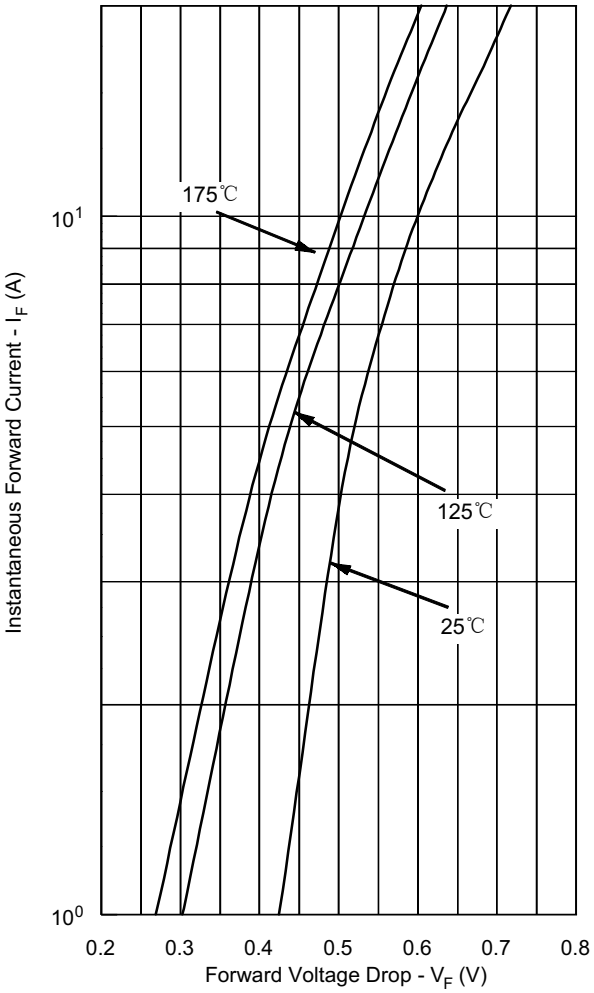
Thermal-Mechanical Specifications:

Green Products

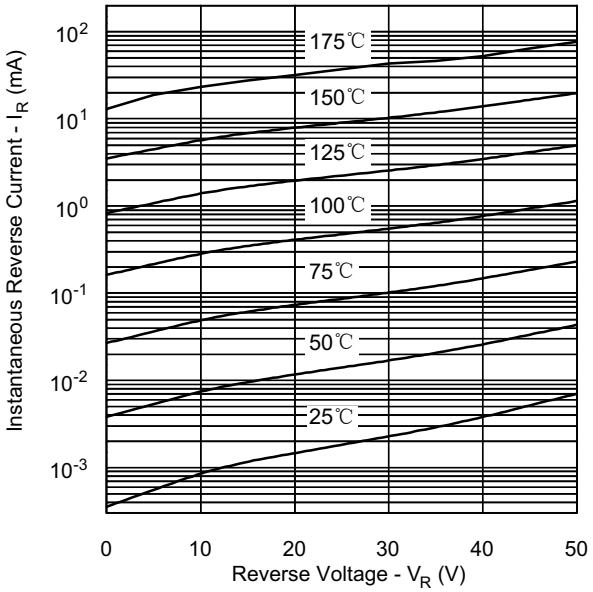
Data Sheet 3415, Rev. -

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	3.0	°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^2PAK (Suffix "s" for D^2PAK; "MBRB xxxx" for D^2PAK)			

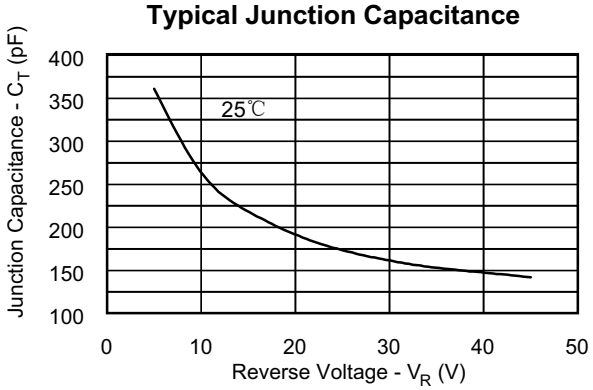
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Data Sheet 3415, Rev. - ***Green Products***

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