Technical Data
Data Sheet 2856, Rev. -

MBR150/MBR160 SCHOTTKY RECTIFIER

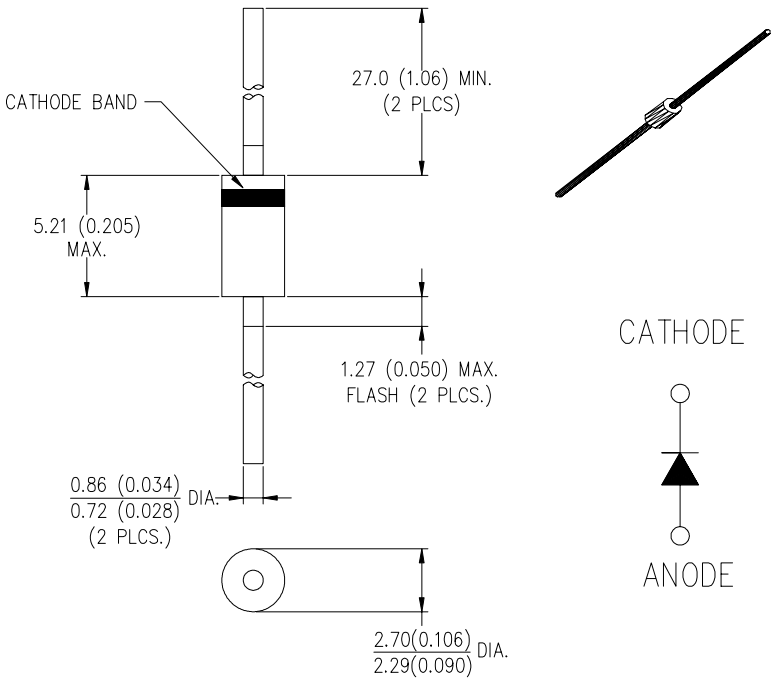
Applications:

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

Features:

- **Low profile, axial leaded outline**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **Very low forward voltage drop**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**

Mechanical Dimensions: In Inches / mm



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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	50	(MBR150)	V
			60	(MBR160)	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_L = 75 °C, rectangular wave form	1.0		A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	30		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop *	V_{F1}	@1 A, Pulse, T_J = 25 °C @2 A, Pulse, T_J = 25 °C @3 A, Pulse, T_J = 25 °C	0.75 0.90 1.0	V
	V_{F2}	@1 A, Pulse, T_J = 125 °C @2 A, Pulse, T_J = 125 °C @3 A, Pulse, T_J = 125 °C	0.65 0.75 0.82	V
Max. Reverse Current *	I_{R1}	@V_R = Rated V_R, Pulse, T_J = 25 °C	0.5	mA
	I_{R2}	@V_R = Rated V_R, Pulse, T_J = 100 °C	5	mA
	I_{R3}	@V_R = Rated V_R, Pulse, T_J = 125 °C	10	mA
Max. Junction Capacitance	C_T	@V_R = 5 V, T_C = 25 °C f_{SIG} = 1MHz	55	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		10,000	V/µs

* Pulse Width < 300µs, Duty Cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-40 to +150	°C
Max. Storage Temperature	T_{stg}	-	-40 to +150	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	80	°C/W
Approximate Weight	wt	-	0.33	g
Case Style	DO-41(DO-204AL)			

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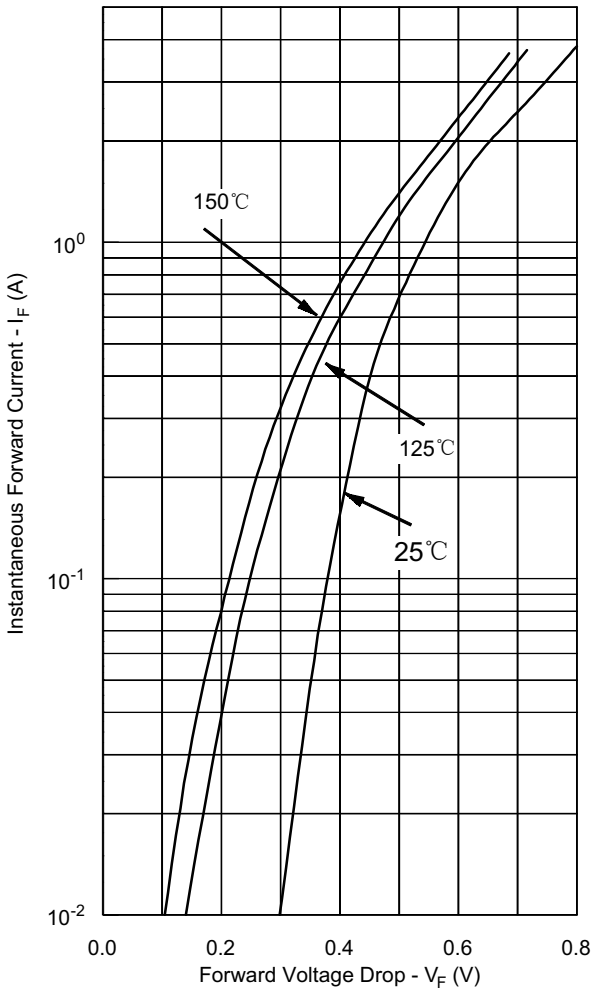
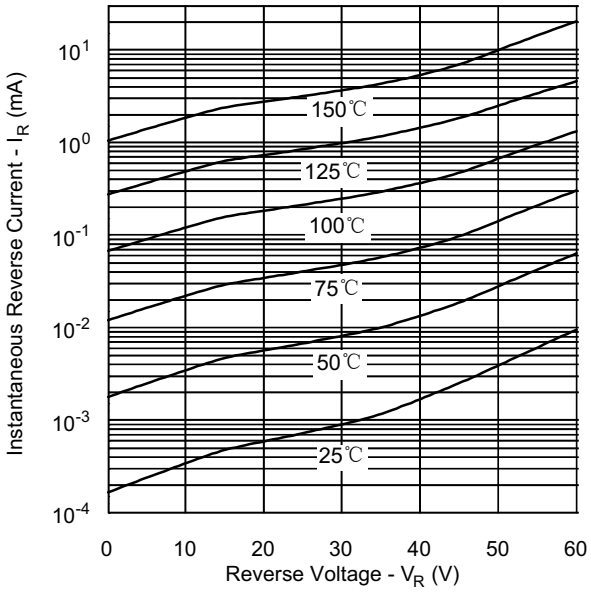
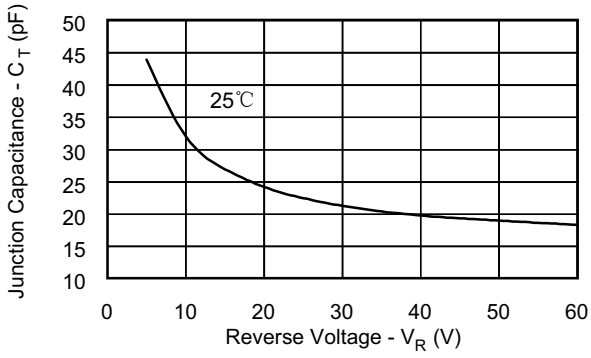
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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