

Technical Data
Data Sheet M2940, Rev. A

MBR20135/150CT SCHOTTKY RECTIFIER

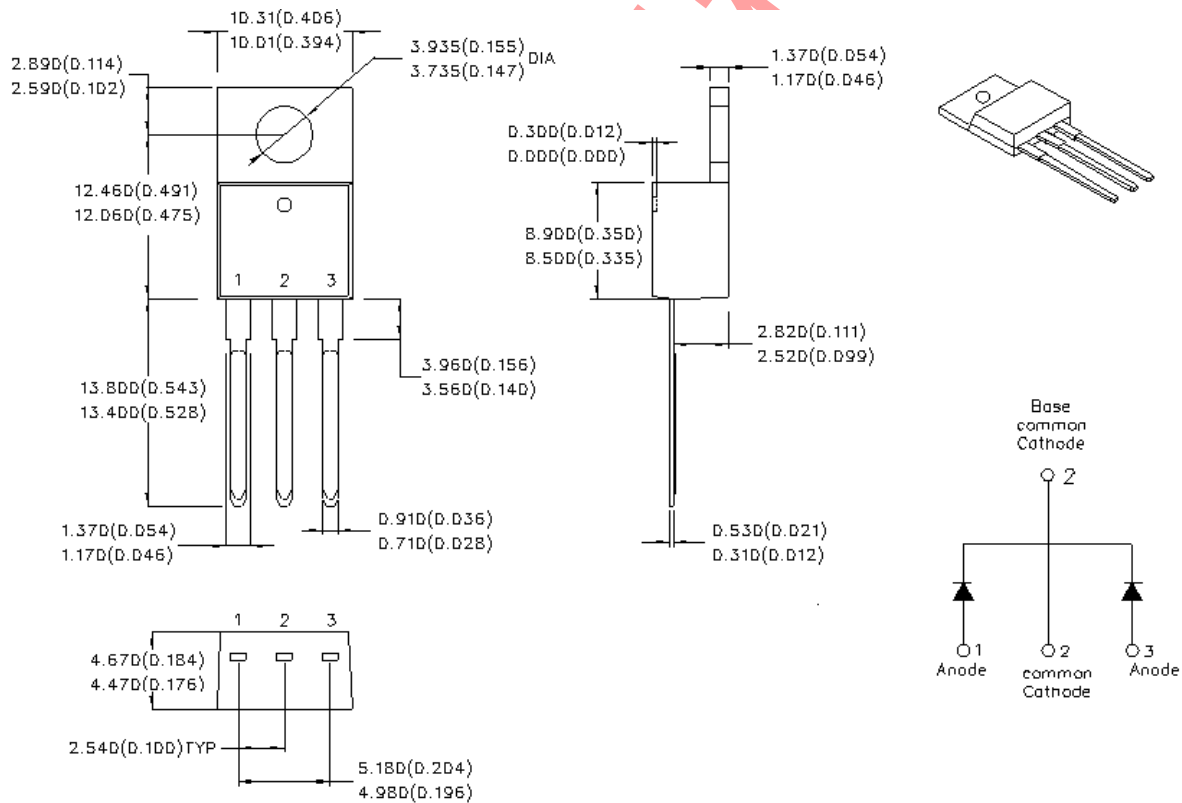
Applications:

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

Features:

- 150 °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

Mechanical Dimensions: In Inches / mm



OPTION 1 (CJ)

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V _{RWM}	-	135	V
			150	
Max. Average Forward	I _{F(AV)}	50% duty cycle @T _C =133°C, rectangular wave form	10(Per leg)	A
			20(Per device)	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I _{FSM}	8.3 ms, half Sine pulse	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V _{F1}	@ 10A, Pulse, T _J = 25 °C	0.90	V
		@ 20 A, Pulse, T _J = 25 °C	1.00	
	V _{F2}	@ 10 A, Pulse, T _J = 125 °C	0.83	V
		@ 20 A, Pulse, T _J = 125 °C	1.00	
Max. Reverse Current (per leg)*	I _{R1}	@V _R = rated VR T _J = 25 °C	Max.	mA
		Typical	0.01	
	I _{R2}	@V _R = rated VR T _J = 125 °C	5.0	mA
Max. Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	400	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	-	10,000	V/ s

* Pulse Width < 300µs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +150	°C
Max. Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	R _{θJC}	DC operation	2.0	°C/W
Maximum Thermal Resistance Junction to Case (per package)	R _{θJC}	DC operation	1.0	°C/W
Maximum Thermal Resistance, Case to Heat Sink	R _{θCS}	Mounting surface, smooth and greased(only for TO-220)	0.50	°C/W
Approximate Weight	wt	-	2	g
Mounting Torque	T _M	-	6(Min.) 12(Max.)	Kg-cm
Case Style	TO-220AB			

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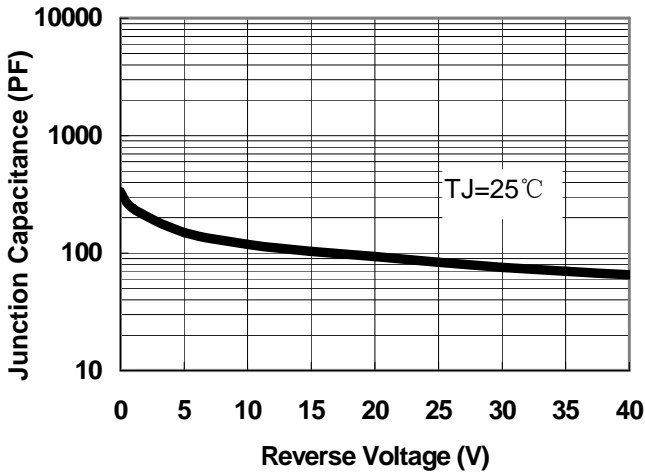


Fig.1-Typical Junction Capacitance

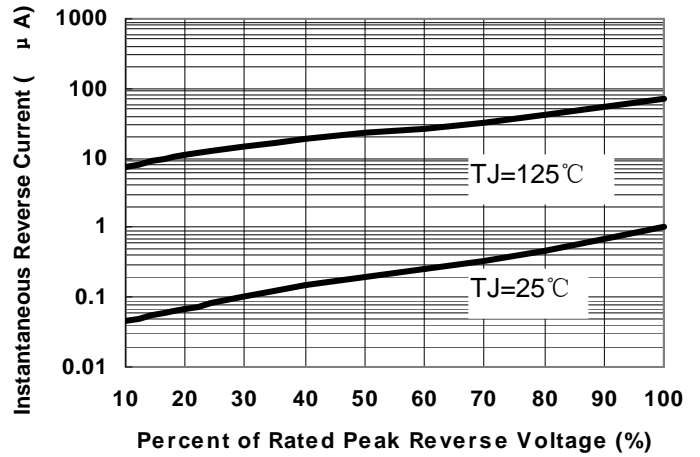


Fig.2-Typical Reverse Characteristics

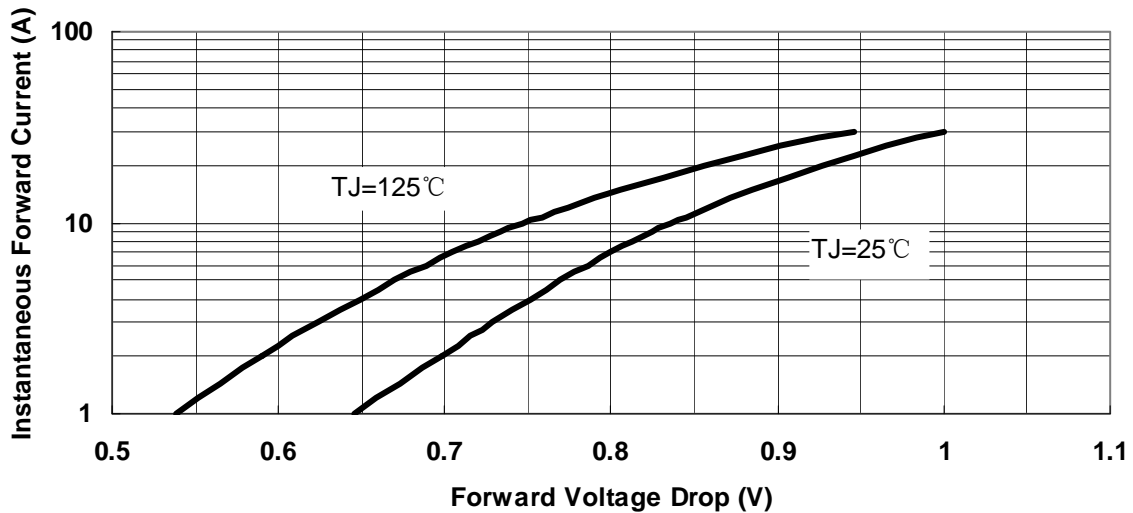


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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