Technical Data
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MBR20135/150CT SCHOTTKY RECTIFIER

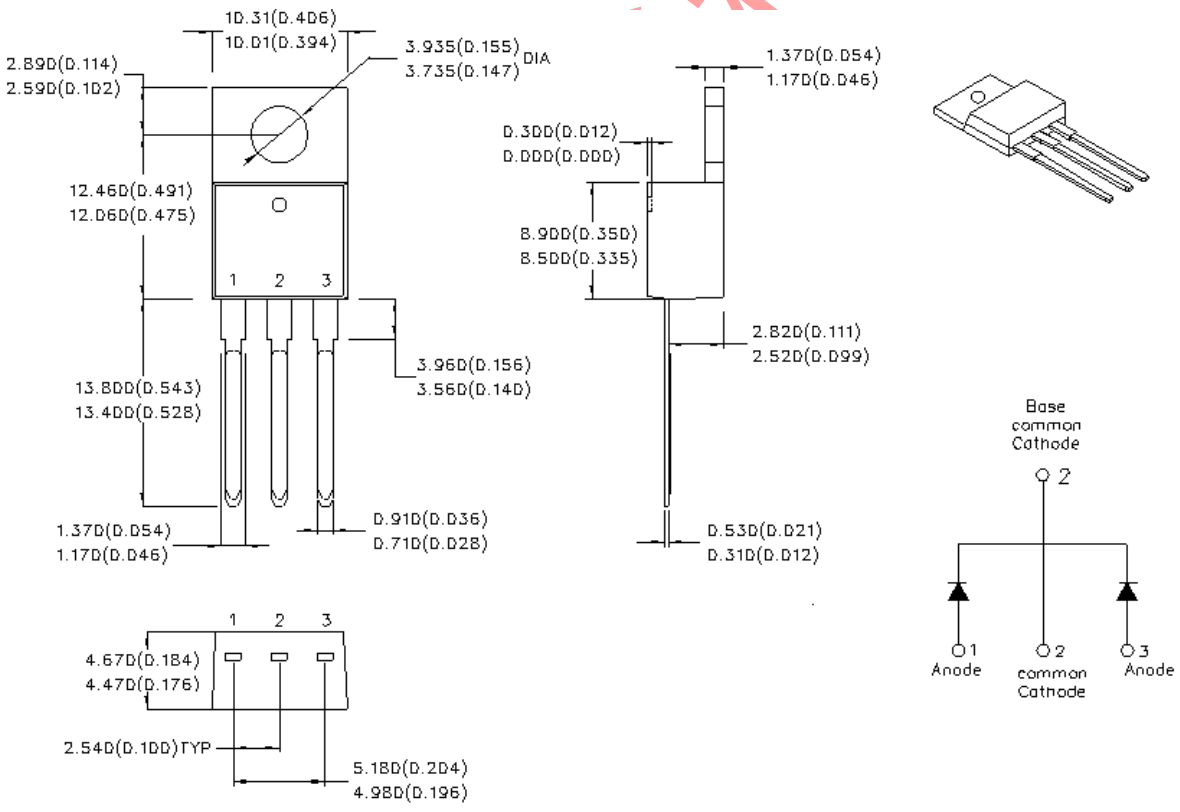
Applications:

- **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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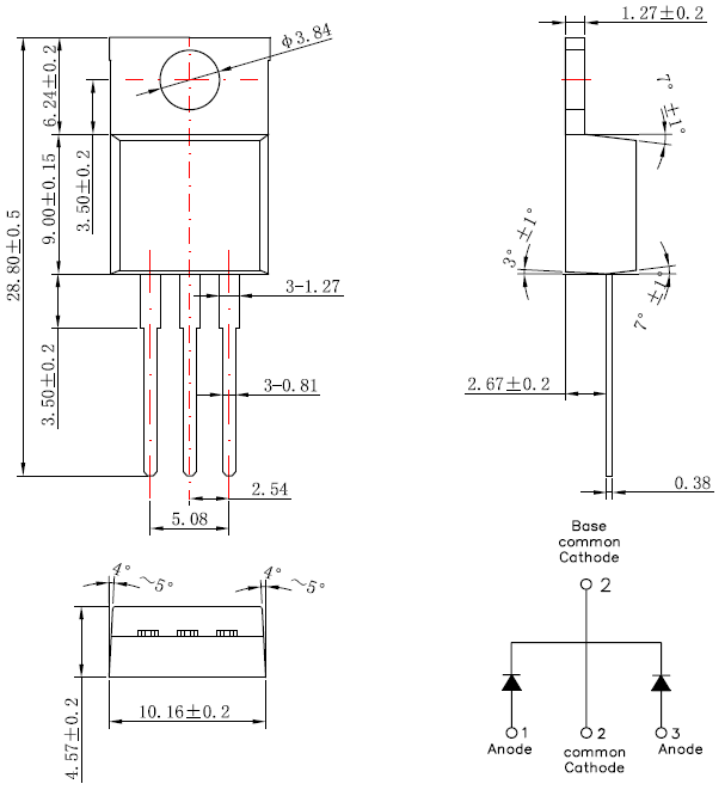

OPTION2 (HD)

TO-220AB

MARKING, MOLDING RESIN
Marking, for MBR20135CT/150CT, first row, MBR20135CT/150CT, 2nd row SSG YYWWL
Where YY is the manufacture year
WW is the manufacture week code
L is the wafer's Lot Number
Molding resin
Epoxy resin UL: 94V-0

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	135	MBR20135CT	V
			150	MBR20150CT	
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =133℃, 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 ℃		0.90	V
		@ 20 A, Pulse, T_J = 25 ℃		1.00	
	V_{F2}	@ 10 A, Pulse, T_J = 125 ℃		0.83	V
		@ 20 A, Pulse, T_J = 125 ℃		1.00	
Max. Reverse Current (per leg)*	I_{R1}	@V_R = rated VR	Max.	0.50	mA
		T_J = 25 ℃	Typical	0.01	
	I_{R2}	@V_R = rated VR T_J = 125 ℃		5.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 ℃ 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	℃
Max. Storage Temperature	T_{stg}	-	-55 to +150	℃
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	℃/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	1.0	℃/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased(only for TO-220)	0.50	℃/W
Approximate Weight	wt	-	2	g
Mounting Torque	T_M	-	6(Min.) 12(Max.)	Kg-cm
Case Style	TO-220AB			

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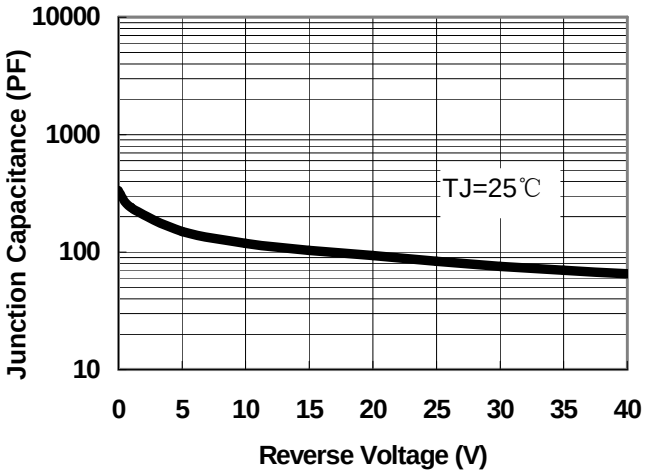

Fig.1-Typical Junction Capacitance

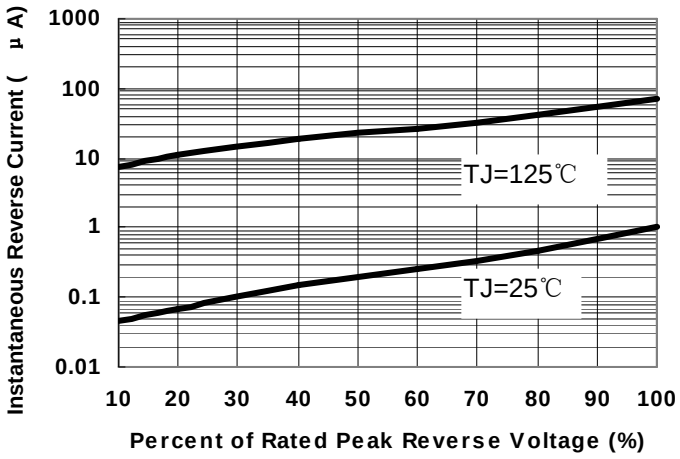

Fig.2-Typical Reverse Characteristics

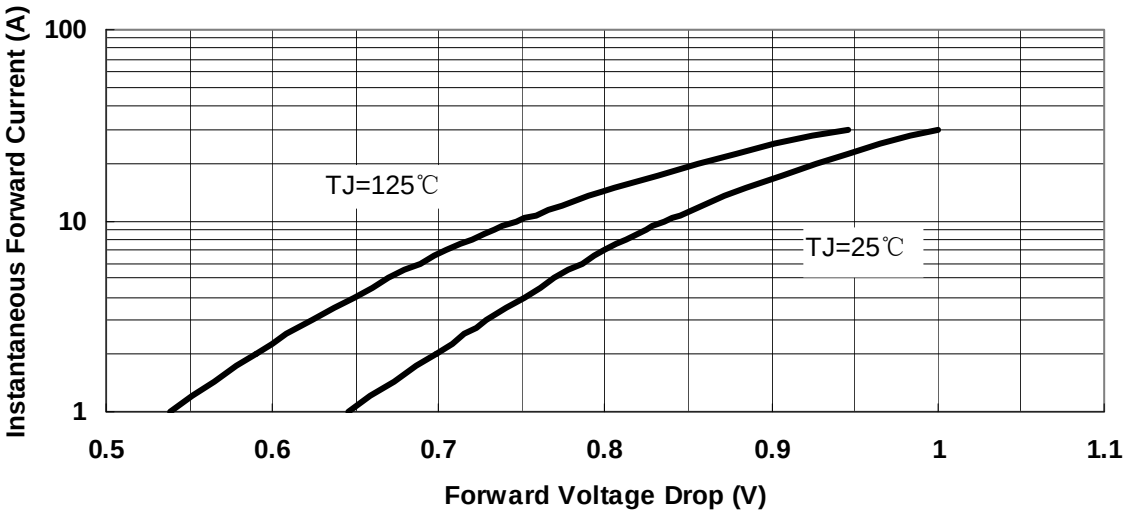

Fig.3-Typical Instantaneous Forward Voltage Characteristics

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