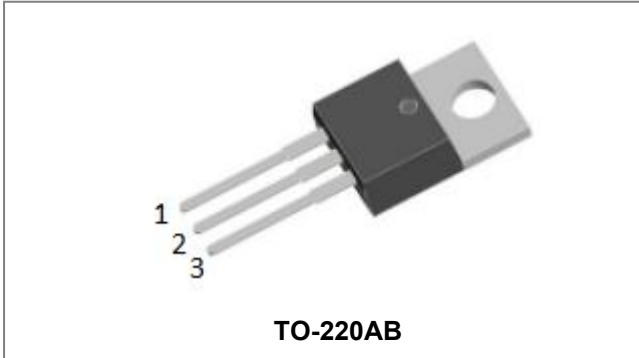


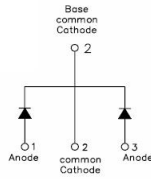
MBRH2045CTP SCHOTTKY RECTIFIER



Features

- 175°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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	45	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =80°C, rectangular wave form	10(Per Leg) 20(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V _{BR}	@ I _R = 100μA, T _J = 25 °C	55	60	65	V
Forward Voltage Drop (Per Leg)*	V _{F1}	@ 10 A, Pulse, T _J = 25 °C	-	0.66	0.70	V
	V _{F2}	@ 10 A, Pulse, T _J = 150 °C	-	0.56	0.60	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	-	2.94	100	μA
	I _{R2}	@V _R = rated V _R , T _J = 100 °C	-	0.65	10	mA
	I _{R3}	@V _R = rated V _R , T _J = 150 °C	-	13.4	20	mA
Junction Capacitance (Per Leg)	C _T	@V _R = 5V, T _C = 25 °C, f _{sig} = 1MHz	-	308	350	pF

* Pulse width < 300 μs, duty cycle < 2%

- China - Germany - Korea - Singapore - United States •
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Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	°C
Storage Temperature	T_{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case	$R_{th(j-c)}$	DC operation	5	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

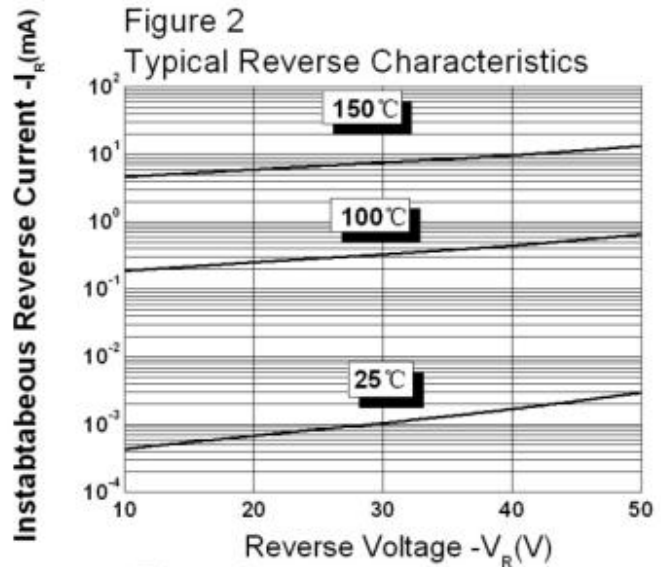
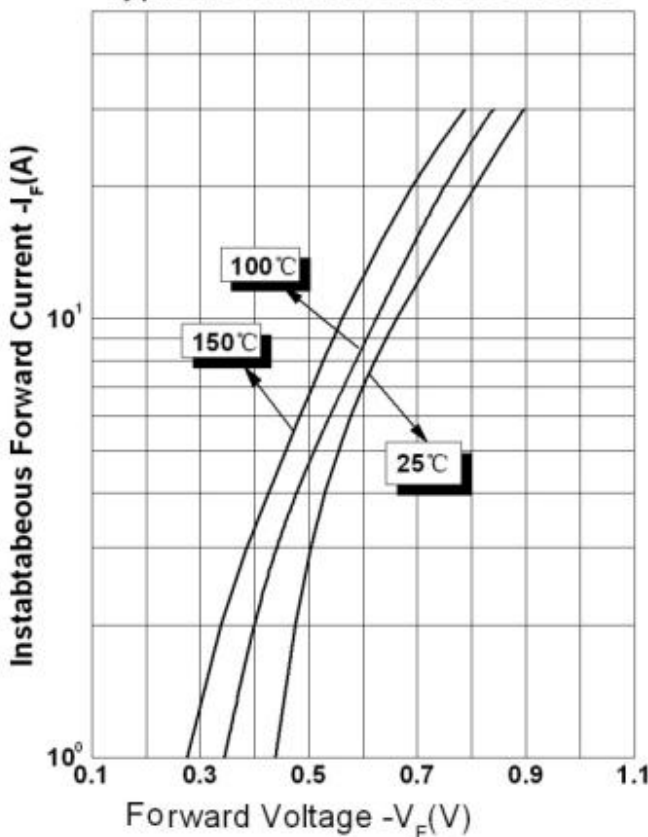
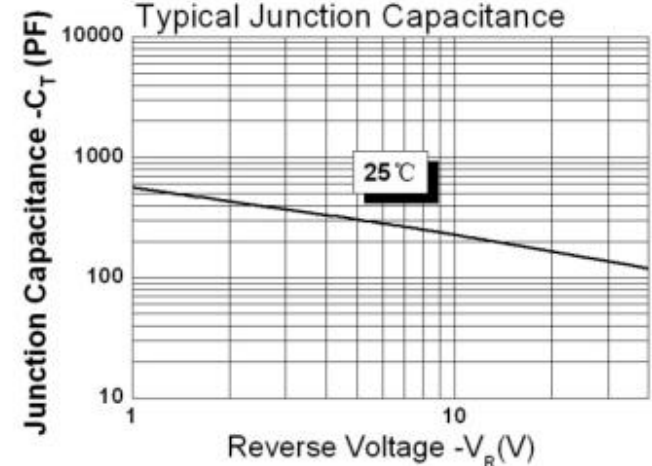
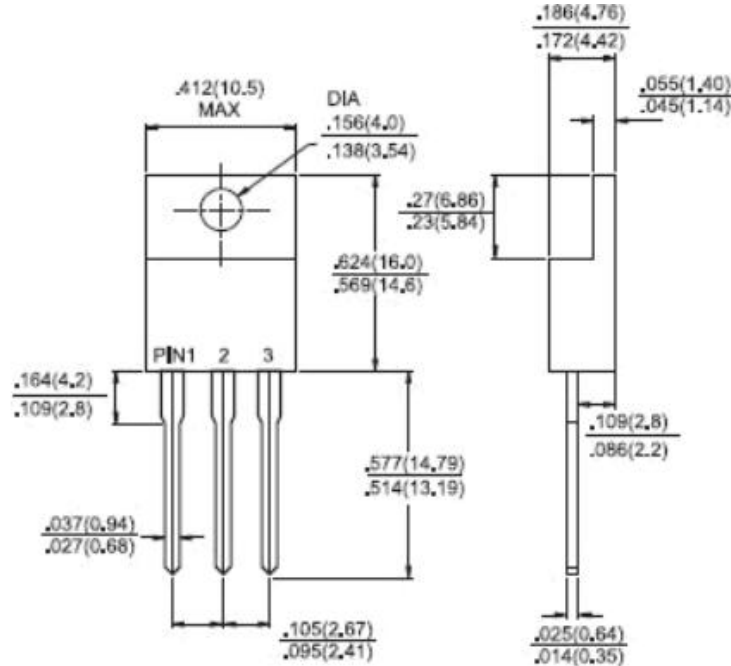


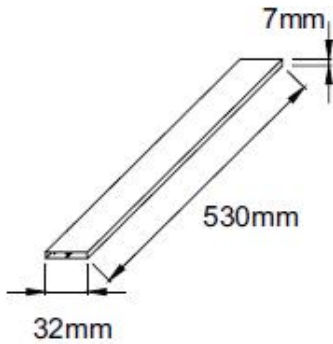
Figure 3
Typical Junction Capacitance



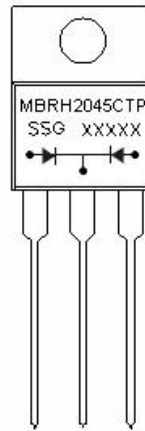
Mechanical Dimensions TO-220AB(In Inches/mm)



Tube Specification



Marking Diagram



Where XXXXX is YYWWL

- MBR = Device Type
- H = T_J 175°C
- 20 = Forward Current (20A)
- 45 = Reverse Voltage(45V)
- CTP = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin

Ordering Information

Device	Package	Shipping
MBRH2045CTP	TO-220AB (Pb-Free)	50 pcs/ tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.



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