

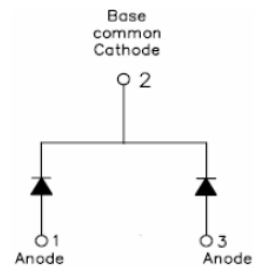
MBRF1045CTP SCHOTTKY RECTIFIER

Applications:

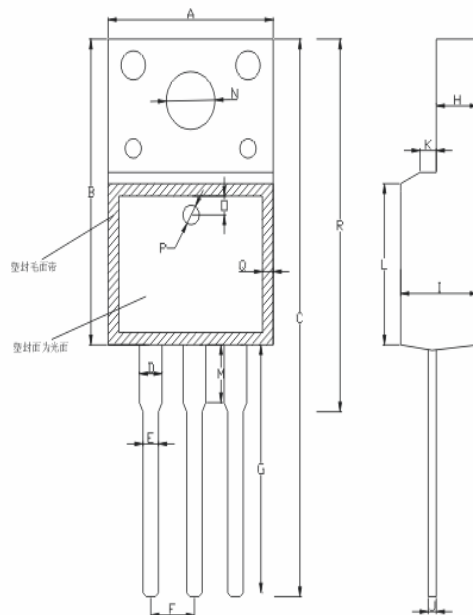
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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



Mechanical Dimensions: In mm



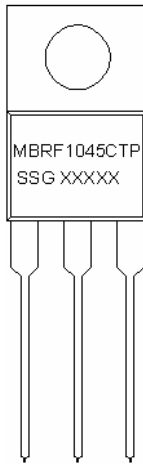
A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1,0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1,25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 1.0		

ITO-220AB

Technical Data
Data Sheet N0070, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

MBR = Device Type
F = Package Type
10 = Forward Current (10A)
45 = Reverse Voltage (45V)
CTP = Configuration
SSG = SSG
YY = Year
WW = Week

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
MBRF1045CTP	ITO-220AB (Pb-Free)	50pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	45	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$, rectangular wave form	10	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	125	A



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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V _{F1}	@ 5A, Pulse, T _J = 25 °C	0.70	V
	V _{F2}	@ 5A, Pulse, T _J = 125 °C	0.57	V
Max. Reverse Current (per leg) *	I _{R1}	@V _R = rated V _R T _J = 25 °C	1.0	mA
	I _{R2}	@V _R = rated V _R T _J = 125°C	15	mA
Max. Junction Capacitance (per leg)	C _T	@V _R = 4V, T _C = 25 °C f _{SIG} = 1MHz	150	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/μs

* 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	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
Case Style	ITO-220AB			

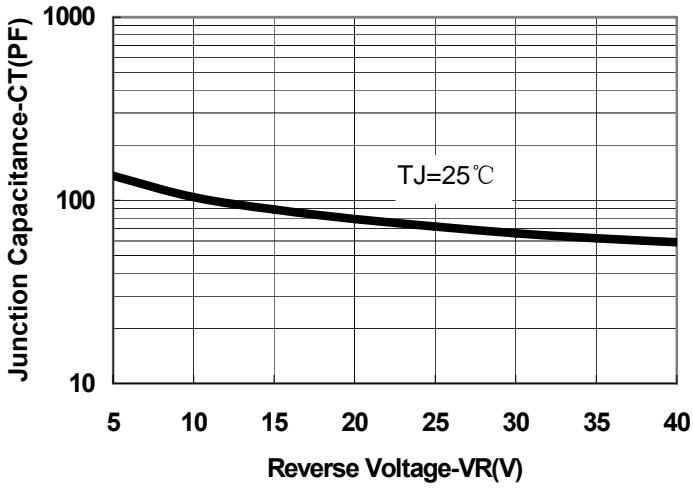


Fig.1-Typical Junction Capacitance

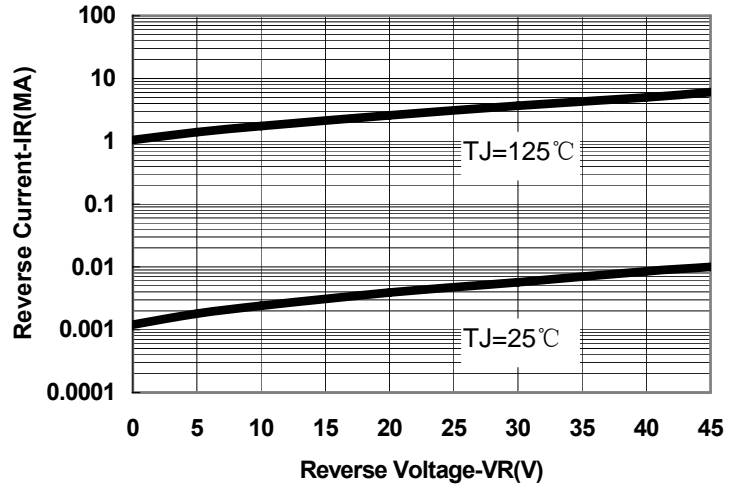


Fig.2-Typical Reverse Characteristics

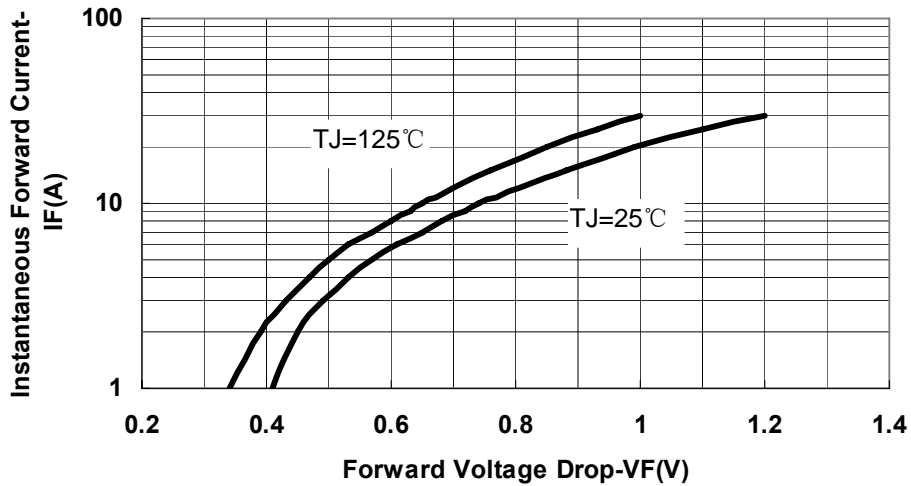


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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