

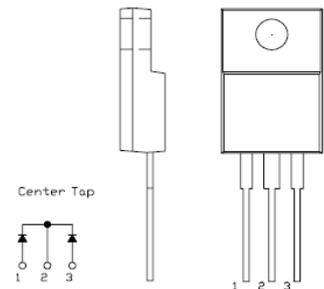
MBRF3060CT SCHOTTKY RECTIFIER

Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

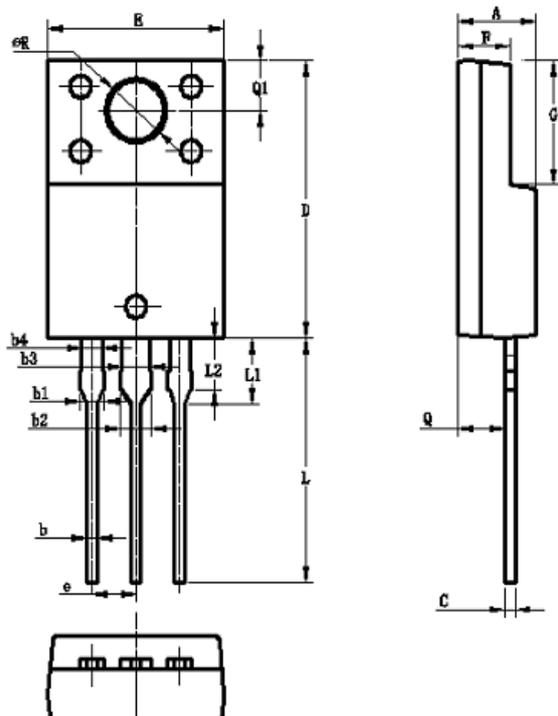
Features:

- 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
- Terminals: pure tin plated, solderable per MIL-STD-750, Method 20
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

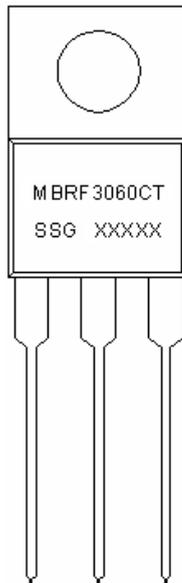


OUTLINE DRAWING

Mechanical Dimensions: In mm



Dim	OPTION 1(CJ)		OPTION 2(HD)	
	Min	Max	Min	Max
A	4.4	4.6	4.30	4.70
b	0.6TYP		0.50	0.75
b1	1.3TYP		1.30	1.40
b2	1.7TYP		1.70	1.80
b3	1.6TYP		1.50	1.75
b4	1.2TYP		1.10	1.35
C	0.60TYP		0.50	0.75
D	14.8	15.1	14.80	15.20
E	10.06	10.26	9.96	10.36
e	2.55TYP		2.54TYP	
F	2.9	3.1	2.80	3.20
G	6.5	6.9	6.50	6.90
L	12.7	13.7	12.8	13.2
L1	3.4	3.8	3.60	4.00
L2	2.6	3.0	-	-
Q	2.5	2.9	2.50	2.90
Q1	2.5	2.9	2.70REF	
ØR	3.5REF		3.50REF	

Marking Diagram:


Where XXXXX is YYWWL

MBR	= Device Type
F	= Package type
30	= Forward Current (30A)
60	= Reverse Voltage (60V)
CT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
MBRF3060CT	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 Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	60	V
Average Rectified Forward Current (per device)	$I_{F(AV)}$	50% duty cycle @ $T_C = 95^\circ\text{C}$, rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	200	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg)*	V _{F1}	@ 15A, Pulse, T _J = 25 °C	0.69	0.70	V
	V _{F2}	@ 15A, Pulse, T _J = 125 °C	0.66	0.67	V
Reverse Current (per leg)*	I _{R1}	@V _R = rated V _R T _J = 25 °C	0.015	1.0	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	0.9	100	mA
Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	300	700	pF
Series Inductance (per leg)	L _S	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs
RSM Isolation Voltage (t = 1.0 second, R. H. < =30%, T _A = 25 °C)	V _{ISO}	Clip mounting, the epoxy body away from the heatsink edge by more than 0.110" along the lead direction.	-	4500	V
		Clip mounting, the epoxy body is inside the heatsink.	-	3500	
		Screw mounting, the epoxy body is inside the heatsink.	-	1500	

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	in DC forward mode	-55 to +175	°C
Storage Temperature	T _{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case	R _{θJC}	DC operation	3.0	°C/W
Typical Thermal Resistance, Case to Heat Sink	R _{θJA}	DC operation	60	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

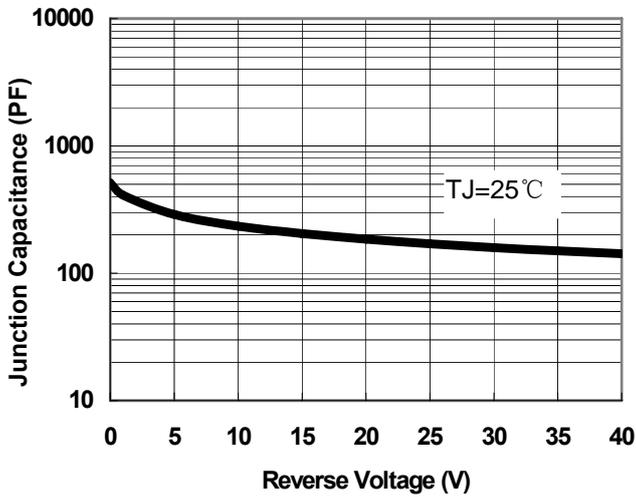


Fig.1-Typical Junction Capacitance

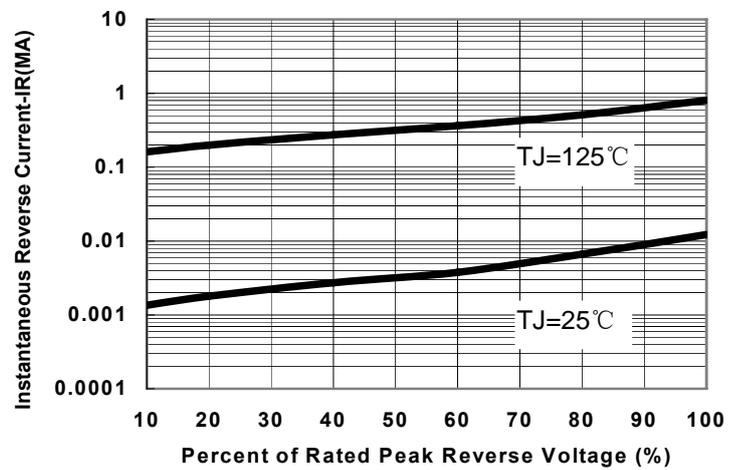


Fig.2-Typical Reverse Characteristics

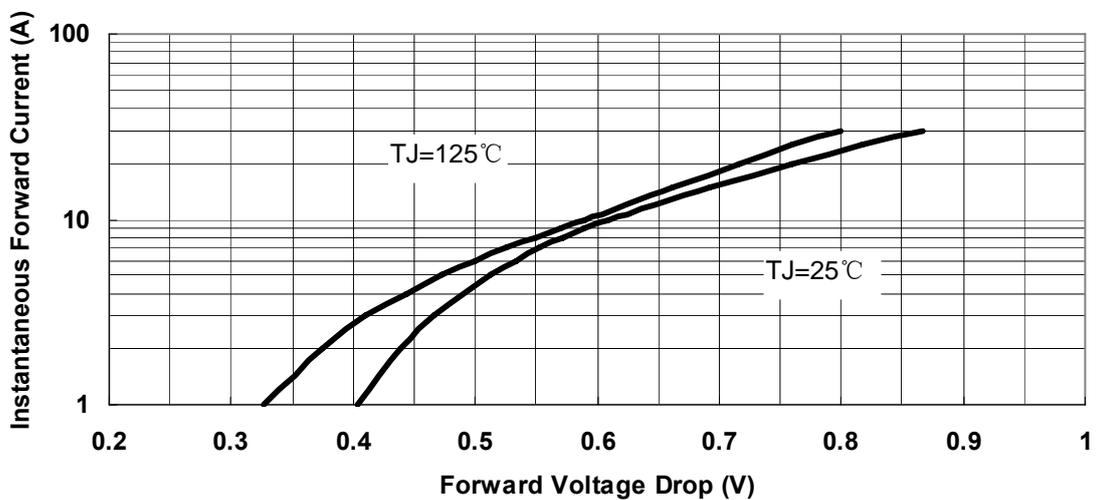


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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