



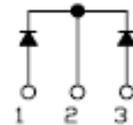
**MBRF1080CT(CTR) SCHOTTKY RECTIFIER**

**Applications:**

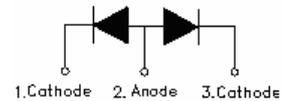
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

**Features:**

- 150 °C T<sub>J</sub> 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

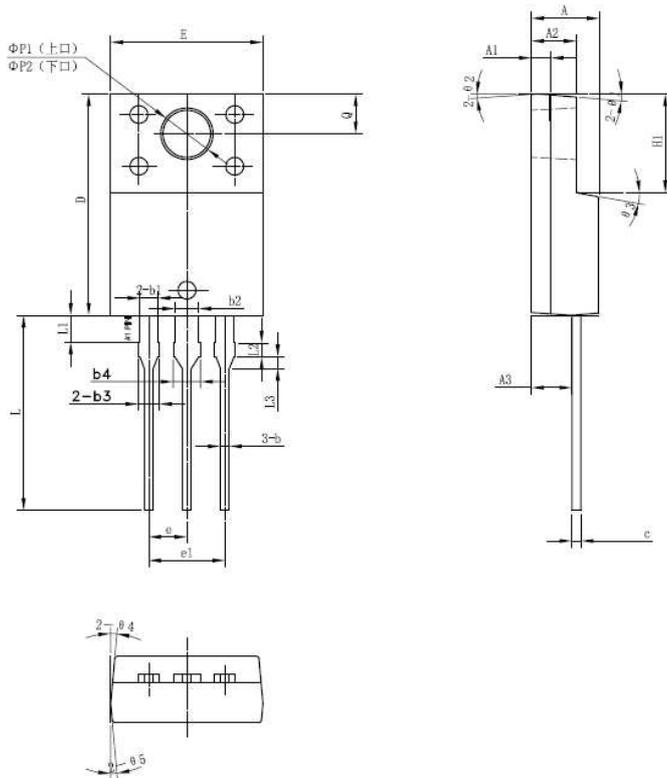


**MBRF1080CT**



**MBRF1080CTR**

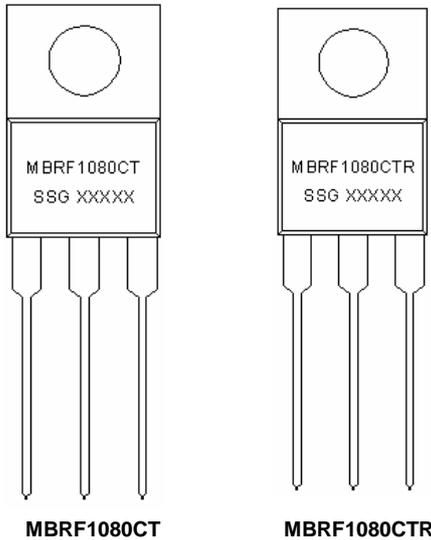
**Mechanical Dimensions: In mm**



SYMBOL	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上口)	3.30	3.50	3.70
ΦP2(下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	

**ITO-220AB**

**Marking Diagram:**



Where XXXXX is YYWWL

MBR = Device Type  
F = Package Type  
10 = Forward Current (10A)  
80 = Reverse Voltage (80V)  
CT/CTR = Configuration  
SSG = SSG  
YY = Year  
WW = Week

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

**Ordering Information:**

Device	Package	Shipping
MBRF1080CT(CTR)	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	$V_{RWM}$	-	80	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=100^\circ\text{C}$ , rectangular wave form	10	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	120	A



**Electrical Characteristics:**

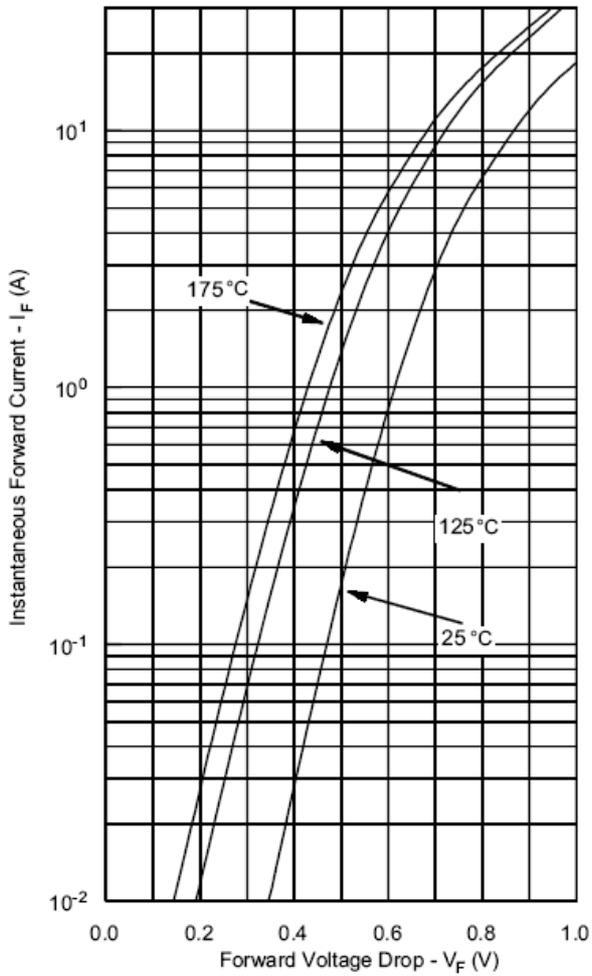
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_{F1}$	@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ @ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.85 0.95	V
	$V_{F2}$	@ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ @ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.75 0.85	V
Max. Reverse Current at DC condition (per leg)	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	15	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	300	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/ $\mu\text{s}$
RSM Isolation Voltage ( $t = 1.0$ second, R. H. $\leq 30\%$ , $T_A = 25\text{ }^\circ\text{C}$ )	$V_{ISO}$	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 < 300 $\mu\text{s}$ , Duty Cycle < 2%

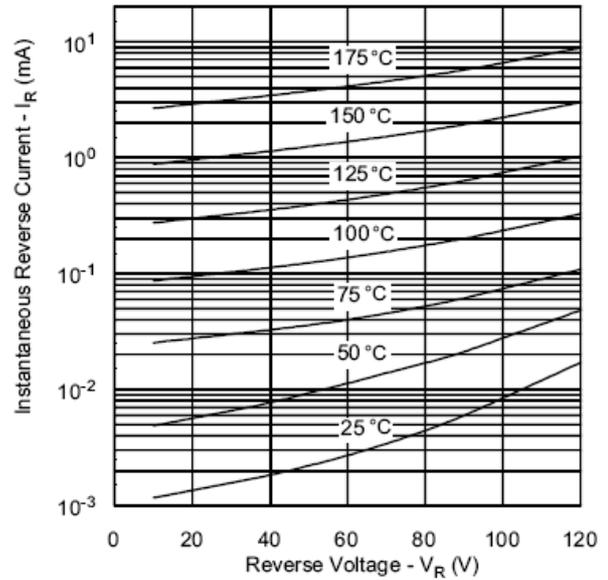
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	4.5	$^\circ\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

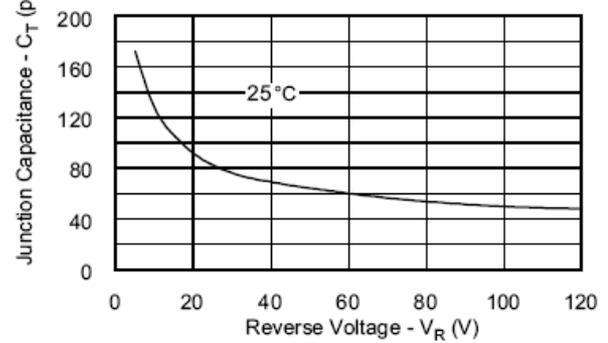
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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