

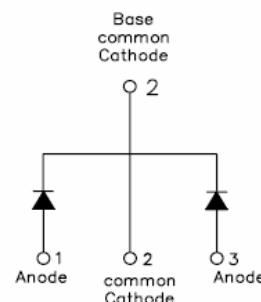
**MBR2050/2060CT MBRB2050/2060CT
 MBR2050/2060CT-1 SCHOTTKY RECTIFIER**

Applications:

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

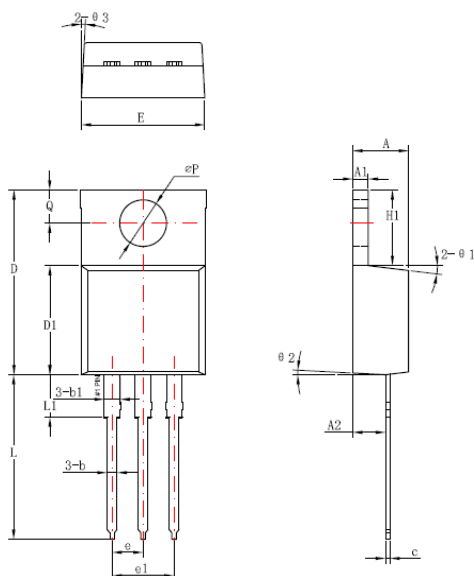
Features:

- 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



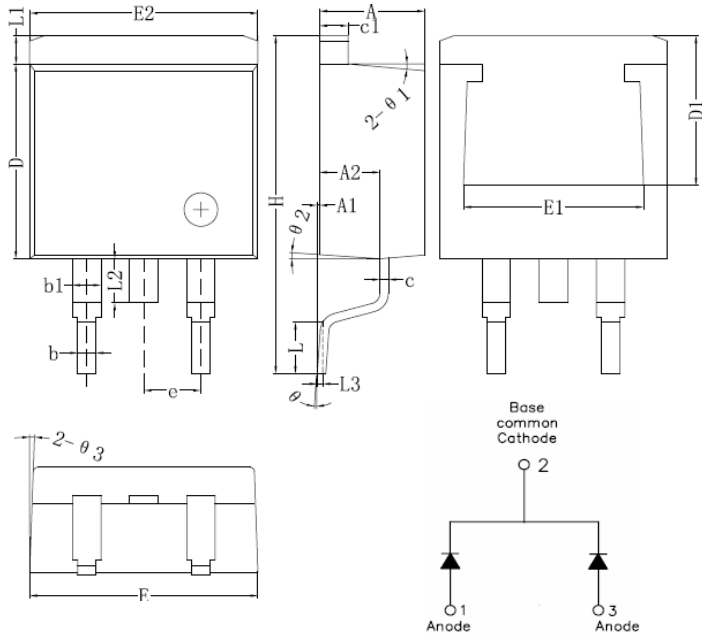
Case styles		
MBR2050CT MBR2060CT  TO-220AB	MBRB2050CT MBRB2060CT  D²PAK	MBR2050CT-1 MBR2060CT-1  TO-262

Mechanical Dimensions: In Inches / mm



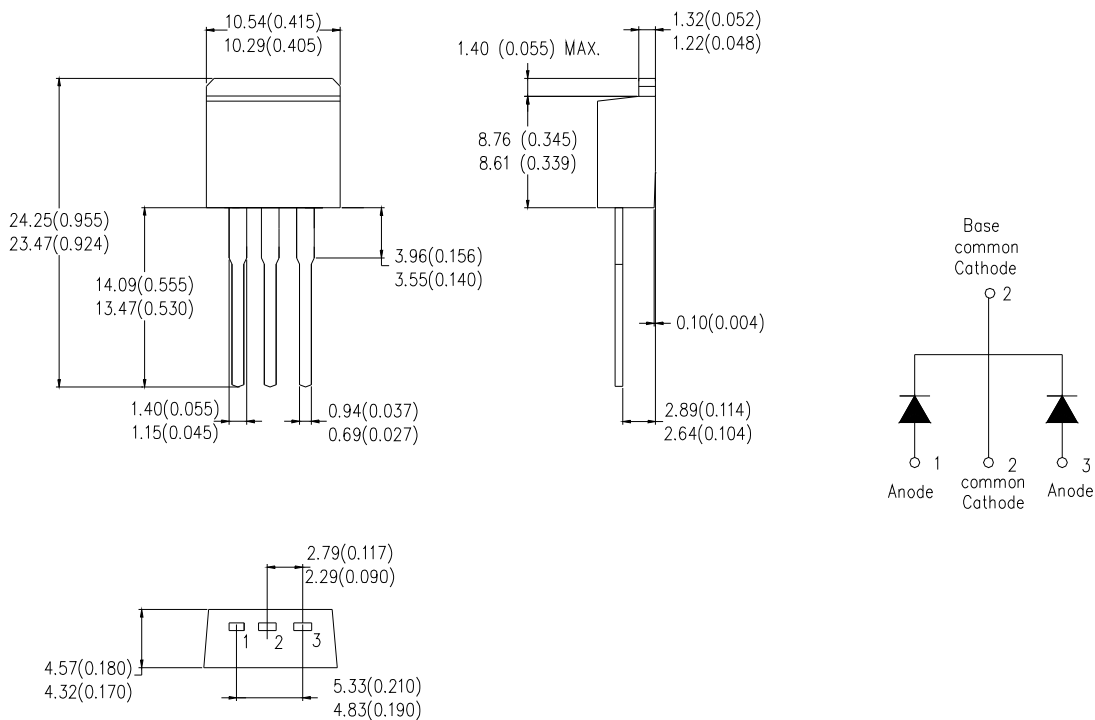
Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1		5.06	
H1	6.04	6.24	6.44
L	12.7	13.56	13.78
L1		3.5	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
Θ1		7°	
Θ2		3°	
Θ3		4°	

TO-220AB



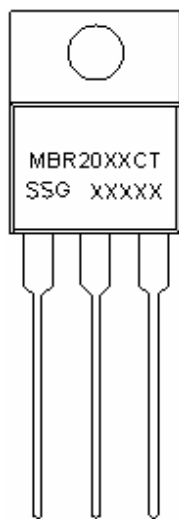
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D²PAK

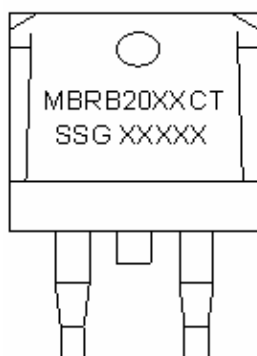


TO-262

Marking Diagram:



MBR20XXCT



MBRB20XXCT

Where XX is Reverse Voltage
 Where XXXXX is YYWWL

MBR = Device Type
 B = Package type
 20 = Forward Current (20A)
 XX = Reverse Voltage (50/60V)
 CT/CT-1 = Configuration
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR20XXCT MBR20XXCT-1	TO-220AB (Pb-Free)	50pcs / tube
MBRB20XXCT	D ² PAK (Pb-Free)	800pcs / reel

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}	-	50	MBR2050CT
			60	MBR2060CT
Average Rectified Output Current	I_o	50Hz Full Sine Wave Resistive Load @ $T_c = 80\text{ }^\circ\text{C}$	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3ms,50Hz Full Sine Wave, 1Cycle Non-repetitive	180	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.80	V
		@ 20 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.95	
	V_{F2}	@ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.70	V
		@ 20A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.85	
Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{rated VR}$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{rated VR}$ $T_J = 125\text{ }^\circ\text{C}$	150	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	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 < 300 μs , 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	$R_{\theta JC}$	DC operation	2.3	$^\circ\text{C/W}$
Typical Thermal Resistance Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased (only for TO-220)	0.50	$^\circ\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

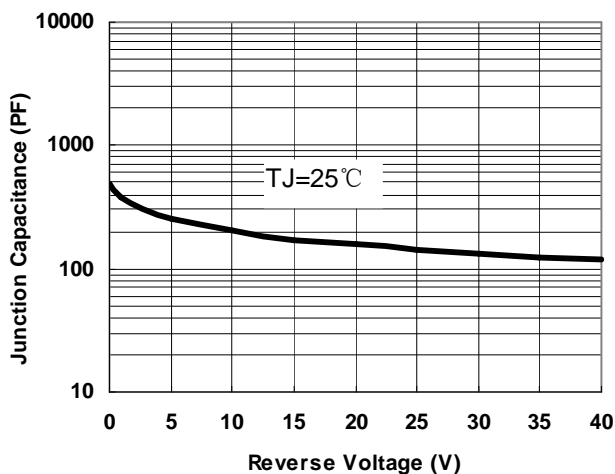


Fig.1-Typical Junction Capacitance

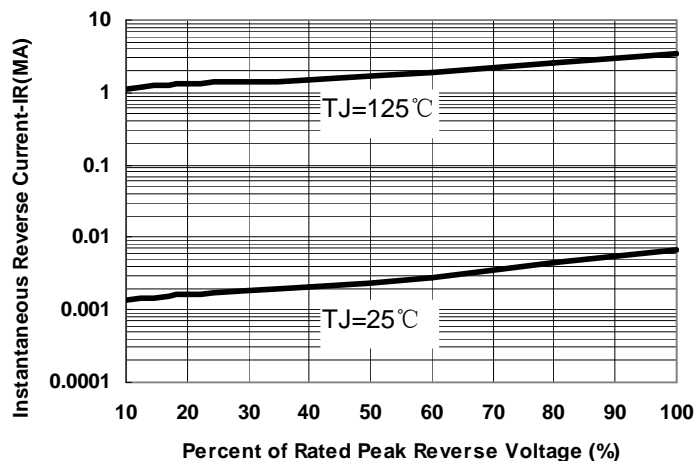


Fig.2-Typical Reverse Characteristics

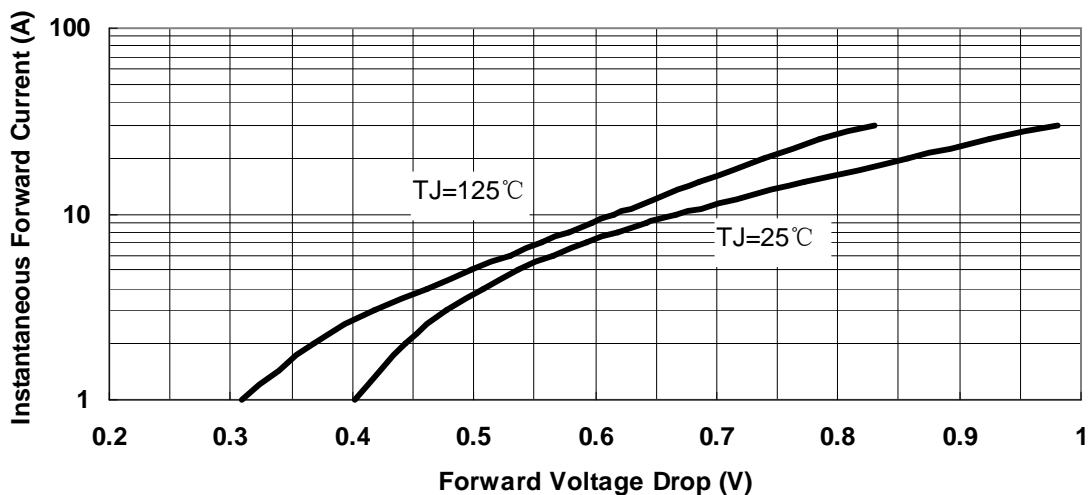


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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