Technical Data
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Green Products

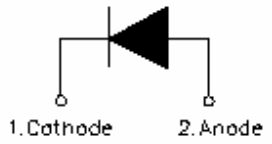
MBR20200 SCHOTTKY RECTIFIER

Applications:

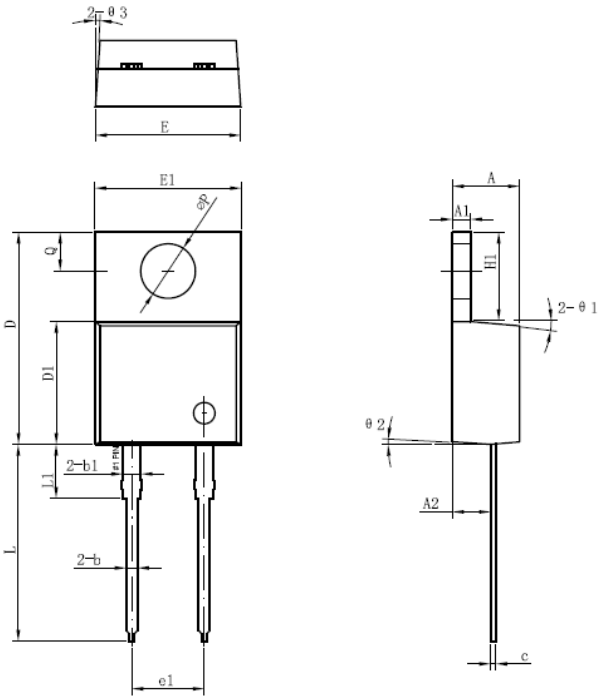
- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**
- **Center tap configuration**

Features:

- **150 ℃ TJ 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)



Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
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	14.64	14.94	15.24
D1	8.55	8.07	8.85
E	10.01	10.16	10.31
E1	9.98	10.18	10.38
e1		5.08	
H1	6.04	6.24	6.44
L	13.00	13.86	14.08
L1		3.80	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
Θ1		5°	
Θ2		4°	
Θ3		4°	

OPTION 1(HD)

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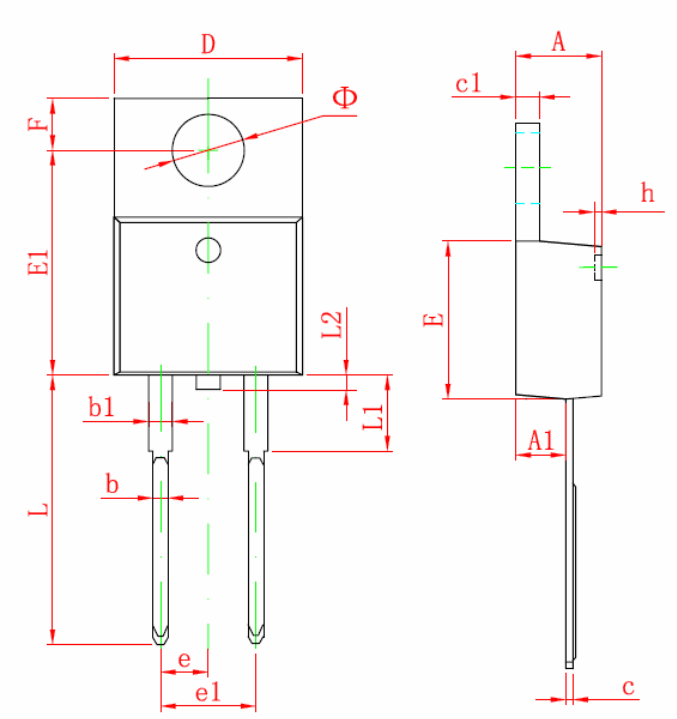

Symbol	Dimensions In Millimeters	
	Min	Max
A	4.470	4.670
A1	2.520	2.820
b	0.710	0.910
b1	1.170	1.370
c	0.310	0.530
c1	1.170	1.370
D	10.010	10.310
E	8.500	8.900
E1	12.060	12.460
e	2.540 TYP	
e1	4.980	5.180
F	2.590	2.890
h	0.000	0.300
L	13.400	13.800
L1	3.560	3.960
L2		1.000
Φ	3.735	3.935

OPTION 2(CJ)

TO-220AC

• Weiqi Street, Airport Development Zone, Jiangning District, Nanjing, China 211113 (86) 25-87123907 •
• FAX (86) 25-87123900 • World Wide Web Site - http://www.sangdest.com.cn • E-Mail Address - sales@ sangdest.com.cn •

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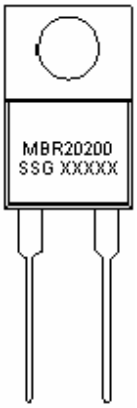
Marking Diagram:



Where XXXXX is YYWWL

MBR	= Device Type
20	= Forward Current (20A)
200	= Reverse Voltage (200V)
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR20200	TO-220AC (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}	-	200	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =133°C, rectangular wave form	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	230	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 20A, Pulse, T_J = 25 °C	0.95	V
	V_{F2}	@ 20A, Pulse, T_J = 125 °C	0.80	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	6.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	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/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 (per leg)	$R_{\theta JC}$	DC operation	2.0	°C/W
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.50	°C/W
Approximate Weight	wt	-	1.6	g
Case Style	TO-220AC			

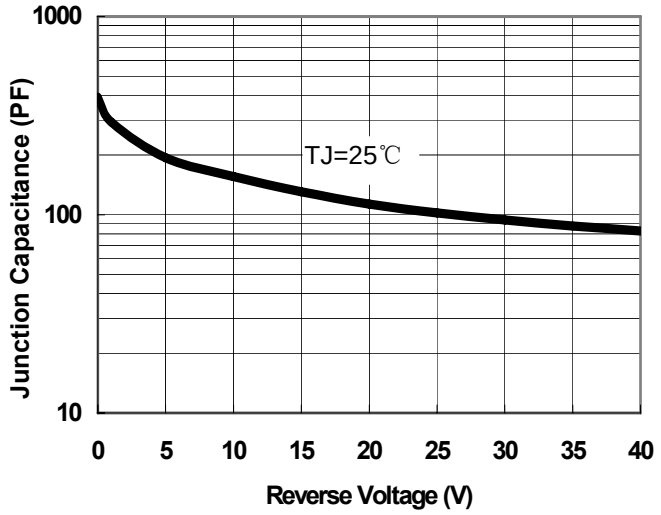

Fig.1-Typical Junction Capacitance

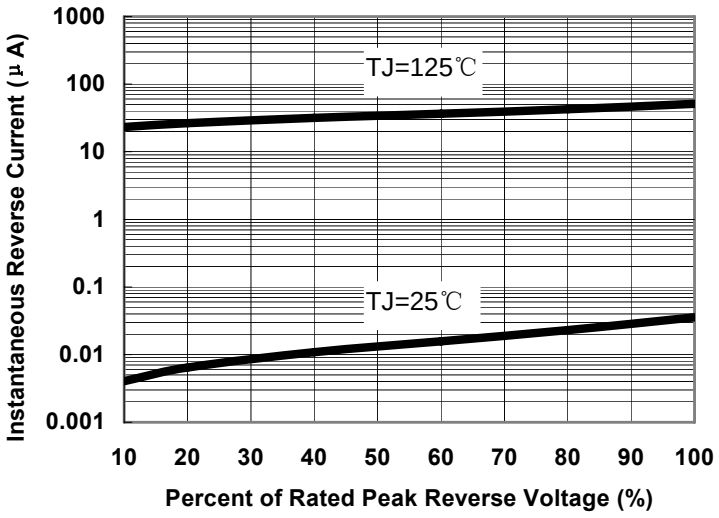

Fig.2-Typical Reverse Characteristics

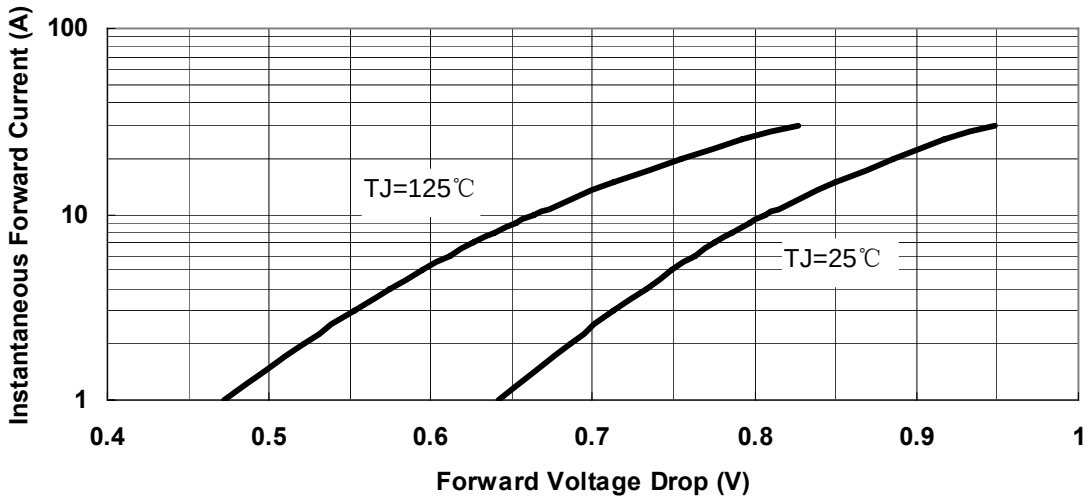

Fig.3-Typical Instantaneous Forward Voltage Characteristics

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