

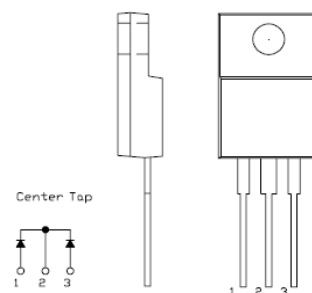
## MBRF20200CTL SCHOTTKY RECTIFIER

### Applications:

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

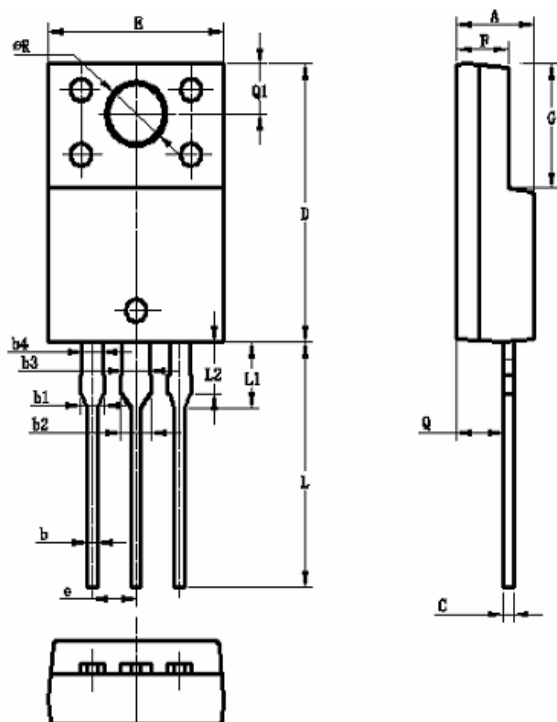
### Features:

- 175 °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



OUTLINE DRAWING

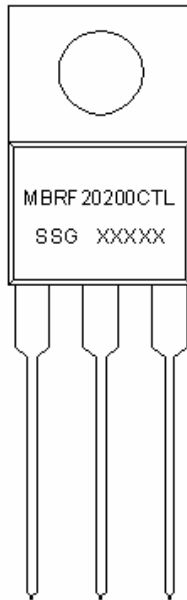
### Mechanical Dimensions: In mm



Dim	OPTION 1(CJ)		OPTION 2(HD)	
	Min	Max	Min	Max
A	4.35	4.65	4.30	4.70
b	0.50	0.75	0.50	0.75
b1	1.15	1.402	1.20	1.45
b2	1.55	1.802	1.60	1.85
b3	1.55	1.65	1.50	1.75
b4	1.10	1.35	1.10	1.35
C	0.50	0.75	0.55	0.75
D	14.8	15.2	14.80	15.20
E	10.06	10.26	9.96	10.36
e	2.46	2.62	2.55TYP	
F	2.85	3.15	2.80	3.20
G	6.50	6.90	6.50	6.90
L	12.70	13.70	12.70	13.70
L1	3.40	3.80	3.40	4.00
L2	2.60	3.00	-	-
Q	2.60	2.80	2.50	2.90
Q1	2.50	2.90	2.50	2.90
ØR	3.40	3.60	3.30	3.70

ITO-220AB

**Marking Diagram:**



Where XXXXX is YYWWL

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

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

**Ordering Information:**

Device	Package	Shipping
MBRF20200CTL	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	$V_{RWM}$	-	200	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	10(Per leg) 20(Per device)	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	Max.	Units
Forward Voltage Drop (per leg) *	$V_{F1}$	@ 1A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ @ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.65 1.00	V
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
Reverse Current (per leg) *	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	50	mA
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
Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	$T_J$	-	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-	-55 to +175	$^\circ\text{C}$
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			



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