




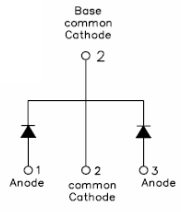
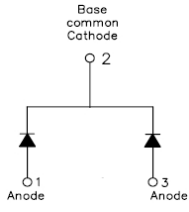
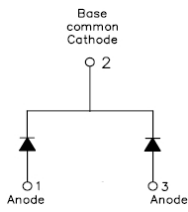
MBR20200CT/MBRB20200CT/MBR20200CT-1 SCHOTTKY RECTIFIER

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 finish: 100% Pure Tin
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Applications

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

<p style="text-align: center;">MBR20200CT</p> 	<p style="text-align: center;">MBRB20200CT</p> 	<p style="text-align: center;">MBR20200CT-1</p> 
		
TO-220AB	D2PAK	TO-262

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	200	V
Working Peak Reverse Voltage	V_{RWM}	-		
DC Blocking Voltage	V_R	-		
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @T _c =125°C, rectangular wave form	10(Per Leg) 20(Per Device)	A
Peak Repetitive Surge current (Rated V _R , Square Wave, 20KHz)	I_{RRM}	-	0.5	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	180	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	V _{F1}	@ 10A, Pulse, T _J = 25 °C	0.85	0.90	V
	V _{F2}	@ 10A, Pulse, T _J = 125 °C	0.73	0.80	V
Reverse Current (Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.002	1.00	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	0.9	50	mA
Junction Capacitance(Per Leg)	C _T	@V _R = 5V, T _C = 25 °C, f _{sig} = 1MHz	174	500	pF

* Pulse width < 300 μs, duty cycle < 2%

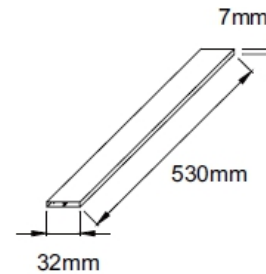
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +175	°C
Storage Temperature	T _{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case	R _{θJC}	DC operation	1.5	°C/W
Case Style	TO-220AB D ² PAK TO-262			

Tube Specification

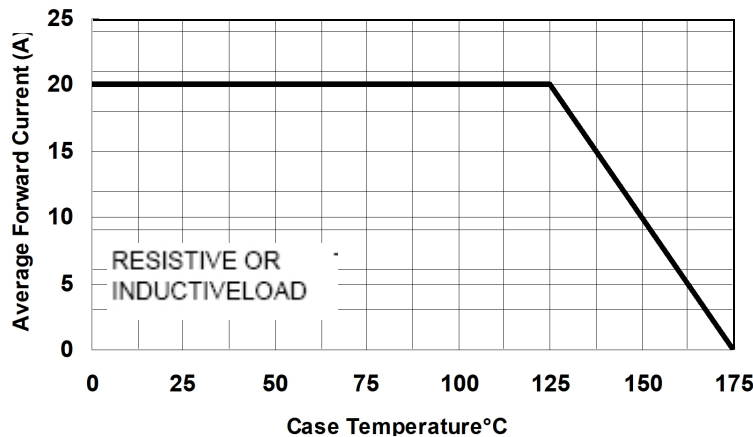
Device	Package	Weight	Shipping
MBR20200CT	TO-220AB	1.8g	50pcs / tube
MBRB20200CT	D ² PAK	1.85g	800pcs / reel
MBR20200CT-1	TO-262	1.85g	50pcs / tube

Tube Specification(TO-220AB/TO-262)



For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Ratings and Characteristics Curves



Forward current derating curve

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Figure 1
Typical Forward Characteristics

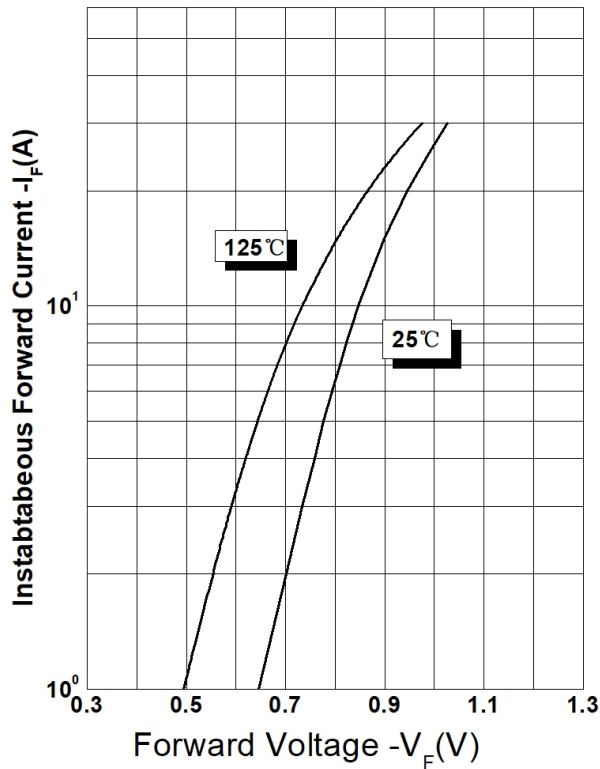


Figure 2
Typical Reverse Characteristics

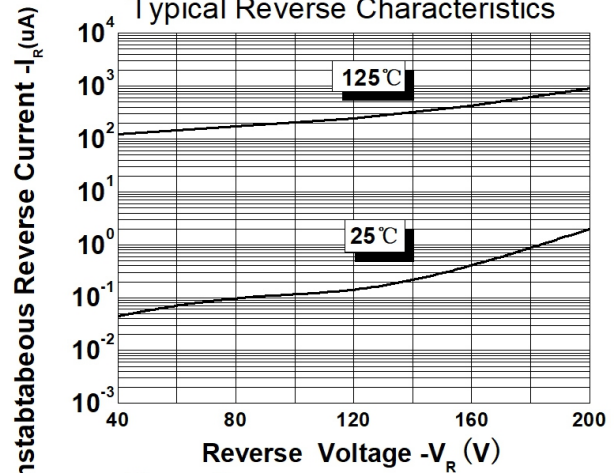
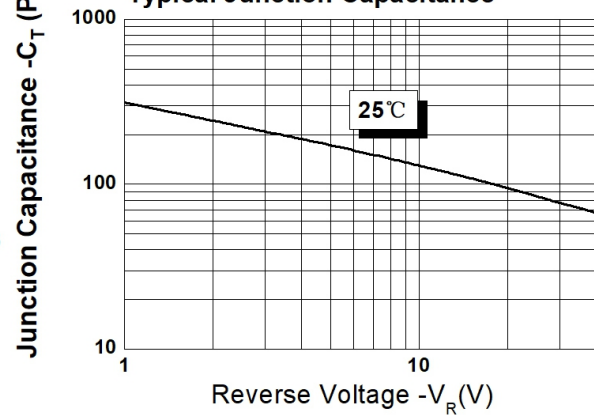
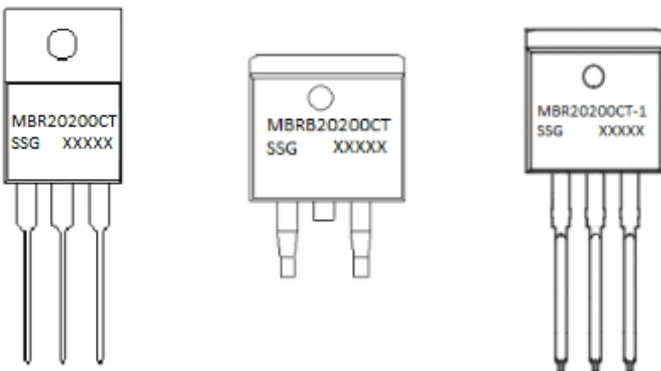


Figure 3
Typical Junction Capacitance



Marking Diagram

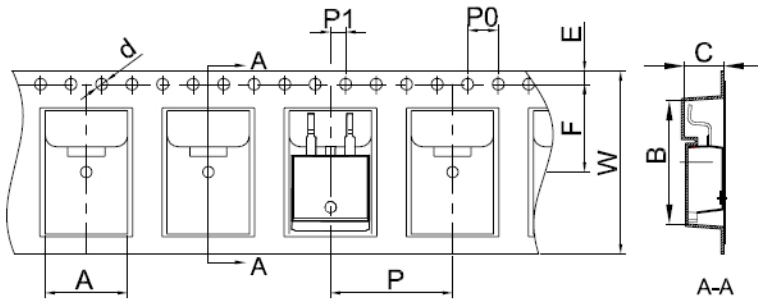


Where XXXXX is YYWWL

MBR = Device Type
B = Package type
20 = Forward Current (20A)
200 = Reverse Voltage (200V)
CT -1 = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

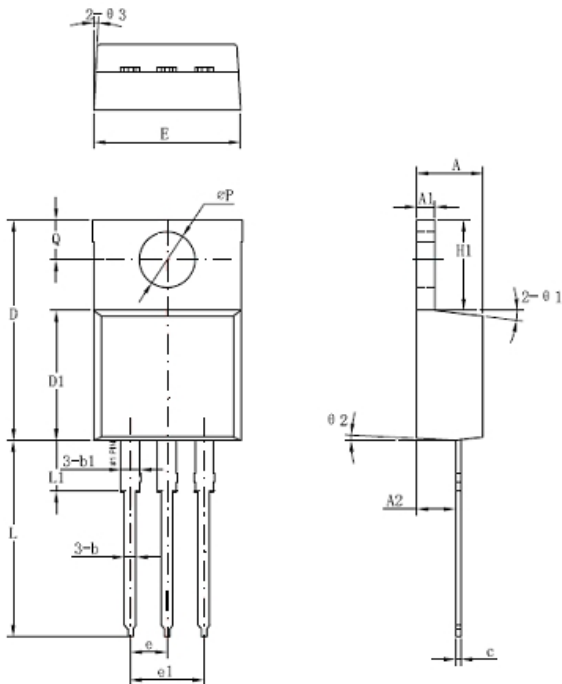
Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification D2PAK



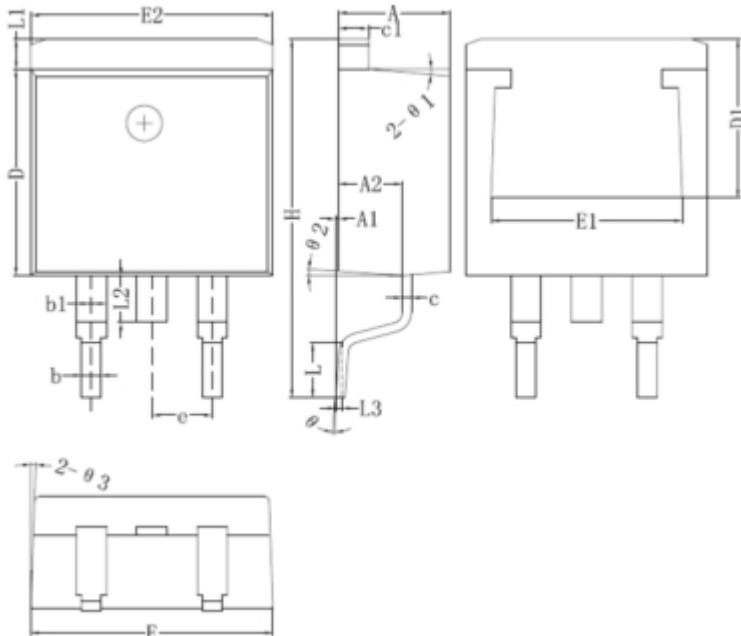
Symbol	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Mechanical Dimensions TO-220AB



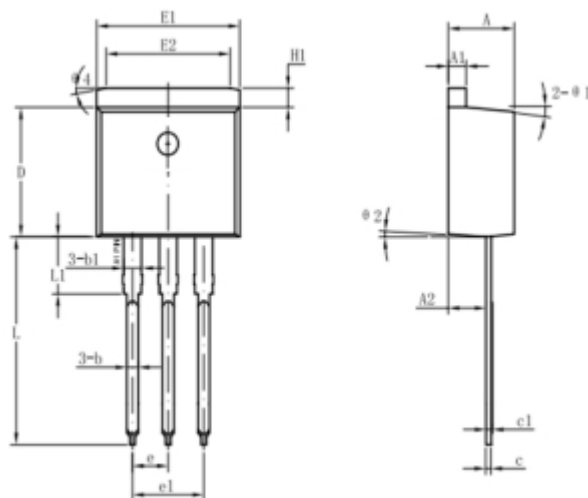
Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	3.56	-	4.83
A1	0.51	-	1.40
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
c	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E	9.65	-	10.67
e	-	2.54	-
e1	-	5.08	-
H1	5.84	-	6.86
L	12.70	-	14.73
L1	-	-	6.35
ΦP	-	3.56	-
Q	2.54	-	3.43

Mechanical Dimensions D²PAK



Symbol	Dimensions in millimeters	
	Min.	Max.
A	4.06	4.83
A1	0	0.26
b	0.51	0.99
b1	1.14	1.78
c	0.31	0.74
c1	1.14	1.65
D	8.38	8.65
D1	6.86	
E1	6.22	
E2	9.65	10.67
e	2.54BSC	
H	14.60	15.88
L	1.78	2.80
L1	-	1.68
L2	-	1.78
L3	0.255BSC	
Θ	0	8°

Mechanical Dimensions TO-262



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°	

Technical Data
Data Sheet N0763, Rev. C



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