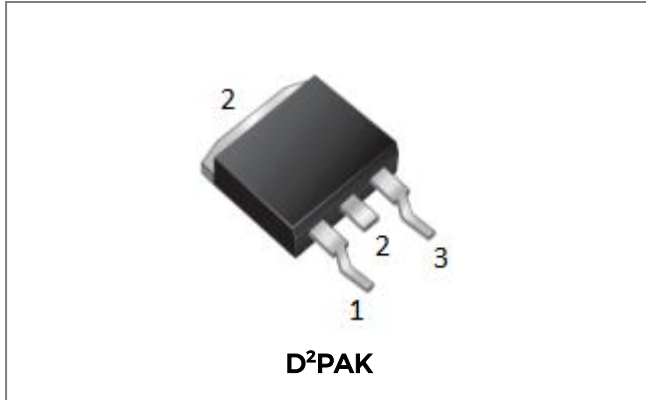


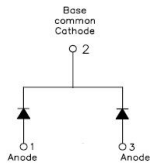
MBRB2090CT MBRB20100CT SCHOTTKY RECTIFIER



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
- 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

Circuit Diagram



Applications

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

Maximum Ratings@T_c=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	MBRB2090CT(90) MBRB20100CT(100)	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	T _c =136°C, In DC	10(Per Leg) 20(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	150	A

Electrical Characteristics:

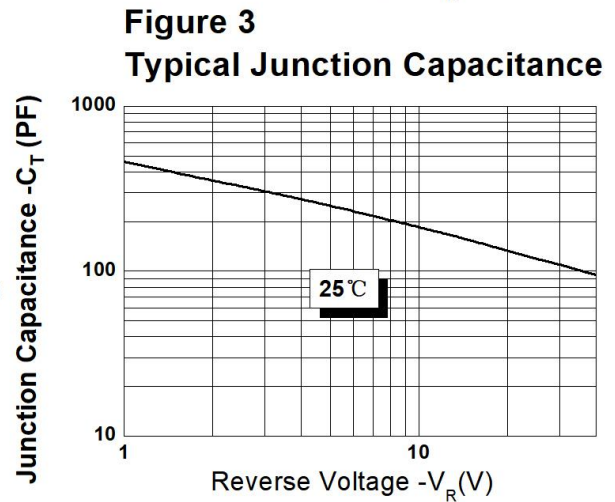
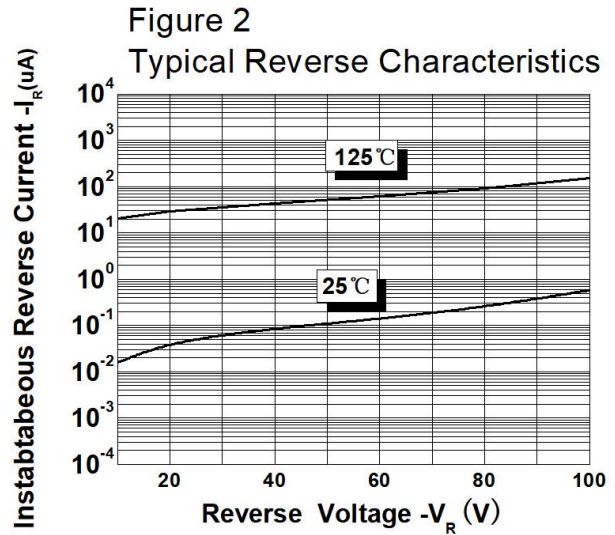
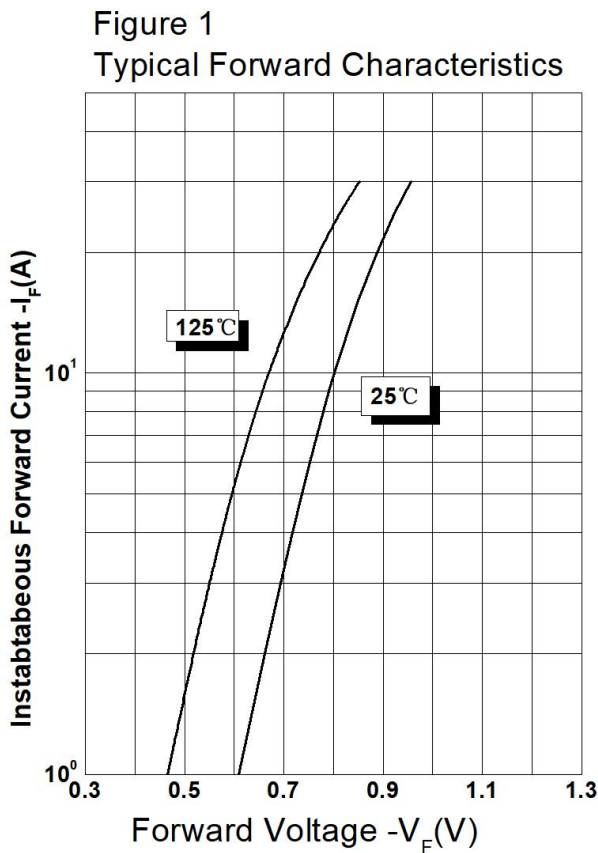
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg) *	V _{F1}	@ 5A, Pulse, T _J = 25 °C @ 10A, Pulse, T _J = 25 °C	0.74 0.80	0.80 0.90	V
	V _{F2}	@ 5A, Pulse, T _J = 125 °C @ 10A, Pulse, T _J = 125 °C	0.60 0.67	0.70 0.80	V
Reverse Current (Per Leg) *	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.0006	1.0	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	0.2	6.0	mA
Junction Capacitance(Per Leg)	C _T	@V _R = 5V, T _c = 25 °C, f _{sig} = 1MHz	253	300	pF

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

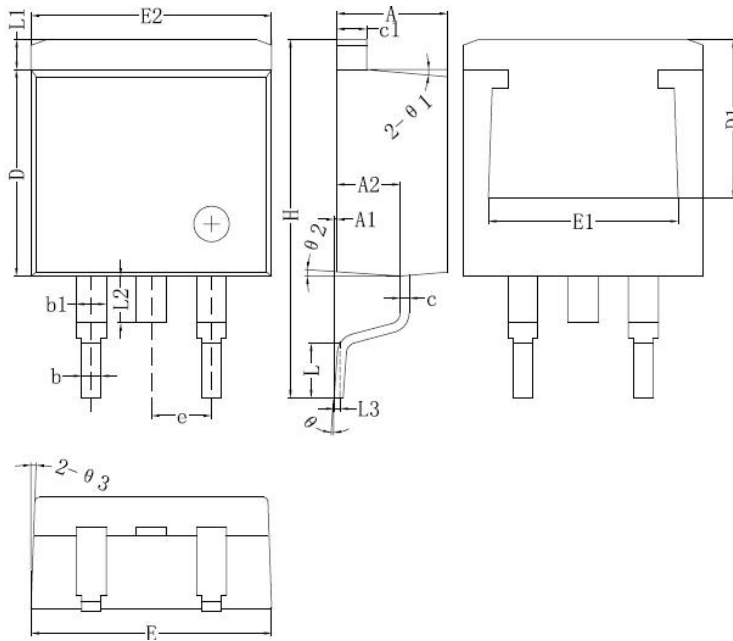
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case(Per Leg)	$R_{\theta\text{JC}}$	DC operation	2.0	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	1.85	g
Case Style		D ² PAK		

Ratings and Characteristics Curves



Mechanical Dimensions D²PAK



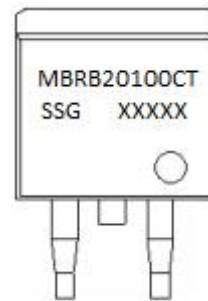
Symbol	Dimensions in millimeters	
	Min.	Max.
A	4.06	4.83
A1	0	0.26
b	0.51	0.99
b1	1.14	1.78
c	0.31	0.74
c1	1.14	1.65
D	8.38	9.65
D1	6.4	
E1	6.22	
E2	9.65	10.67
e	2.54BSC	
H	14.6	15.88
L	1.78	2.8
L1	-	1.68
L2	-	2.2
L3	0.255BSC	
θ	0	8°

Ordering Information

Device	Package	Shipping
MBRB2090CT MBRB20100CT	D ² PAK	800pcs / reel
MBRB2090CTTR	D ² PAK	800pcs / reel
MBRB20100CTTR	D ² PAK	800pcs / reel

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

Marking Diagram

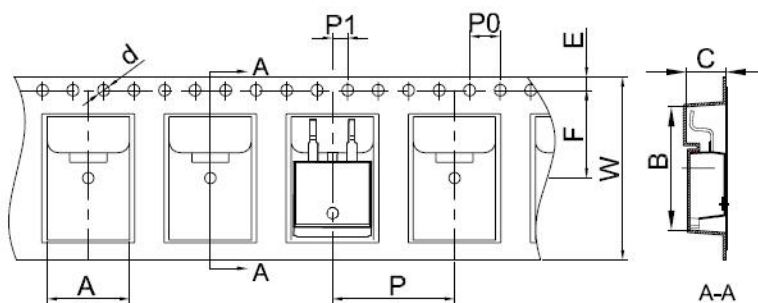


Where XXXXX is YYWWL

- MBR = Device Type
- B = Package type
- 20 = Forward Current (20A)
- 100 = Reverse Voltage(100V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL94V-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

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