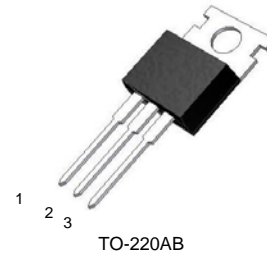


20A SCHOTTKY BARRIER DIODE Dual High Voltage Schottky Rectifier

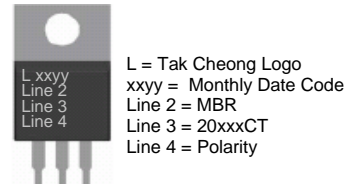
Specification Features:

- High Voltage Wide Range Selection, 100V, 150V & 200V
- High Switching Speed Device
- Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- Guard Ring for Over-voltage Protection
- High Surge Capability
- RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Terminal Leads Surface is Corrosion Resistant and can withstand to 260°C Wave Soldering or per MIL-STD-750, Method 2026.

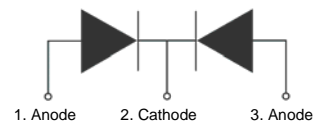


TO-220AB

DEVICE MARKING DIAGRAM



POLARITY CONFIGURATION



MAXIMUM RATINGS (Per Leg, unless otherwise specified)

Symbol	Parameter	MBR20100CT	MBR20150CT	MBR20200CT	Units
V_{RRM} V_{RWM} V_R	Maximum Repetitive Reverse Voltage Working Peak Reverse Voltage Maximum DC Reverse Voltage	100	150	200	V
$I_{F(AV)}$	Average Rectified Forward Current Per Leg Per Package		10 20		A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3mS Single Phase @ Rated Load		150		A
T_{STG}	Storage Temperature Range		-65 to +150		°C
T_J	Operating Junction Temperature		+150		°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

THERMAL CHARACTERISTICS $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction-to-Case	2.0	°C/W
$R_{\theta JA}$	Maximum Thermal Resistance, Junction-to-Ambient (per leg)	60	°C/W

ELECTRICAL CHARACTERISTICS (Per Diode) $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition (Note 1)	MBR20100CT		MBR20150CT		MBR20200CT		Units
			Min	Max	Min	Max	Min	Max	
I_R	Reverse Current	@ rated V_R	---	200	---	200	---	200	μA
V_F	Forward Voltage	$I_F = 10\text{A}$	---	0.85	---	0.92	---	1.00	V
		$I_F = 20\text{A}$	---	0.95	---	1.00	---	1.25	

Note/s:

- Tested under pulse condition of 300 μs .

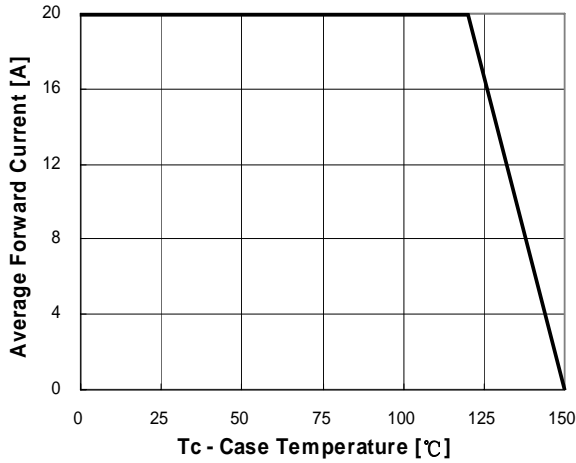
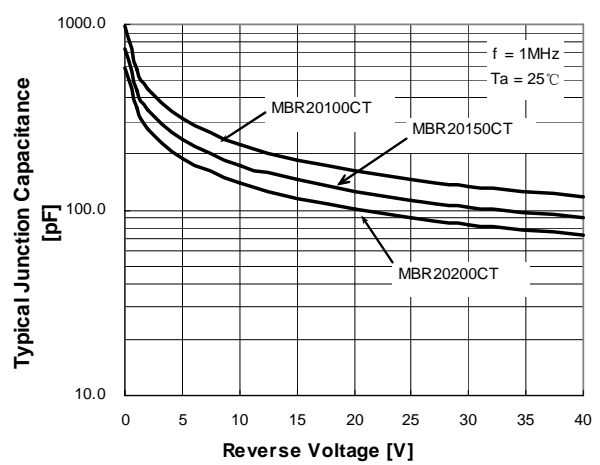
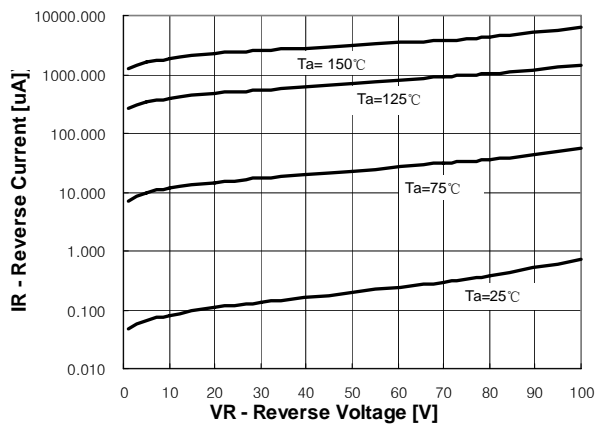
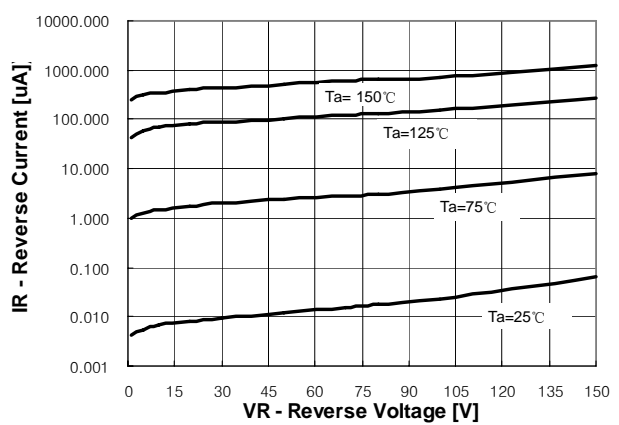
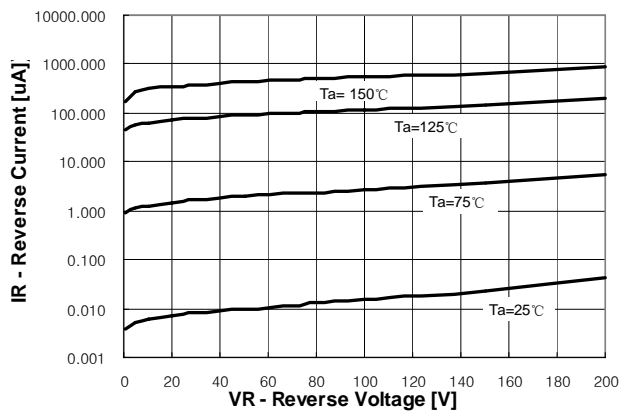
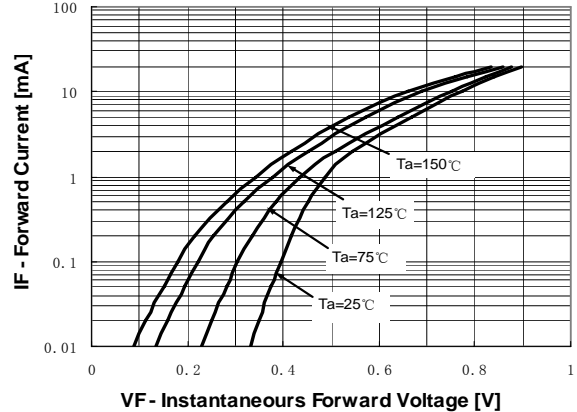
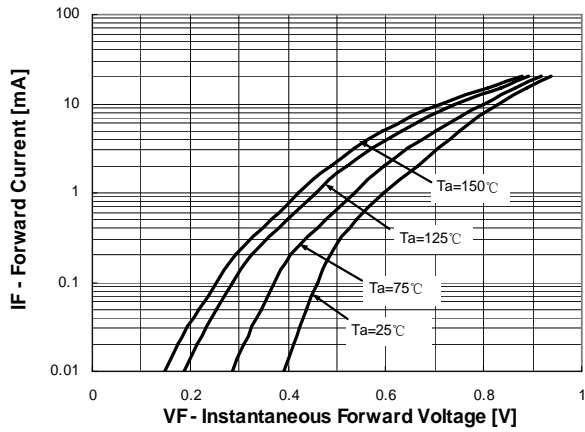
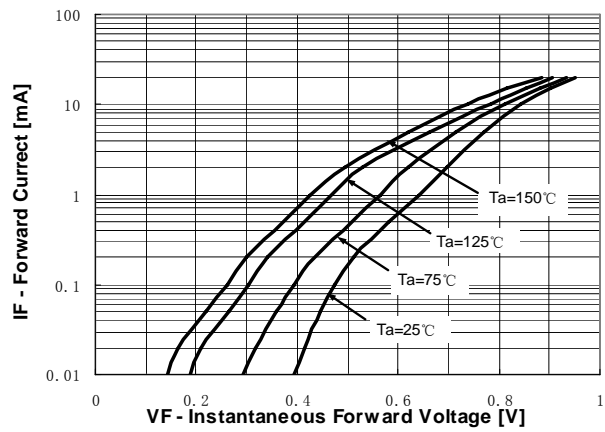
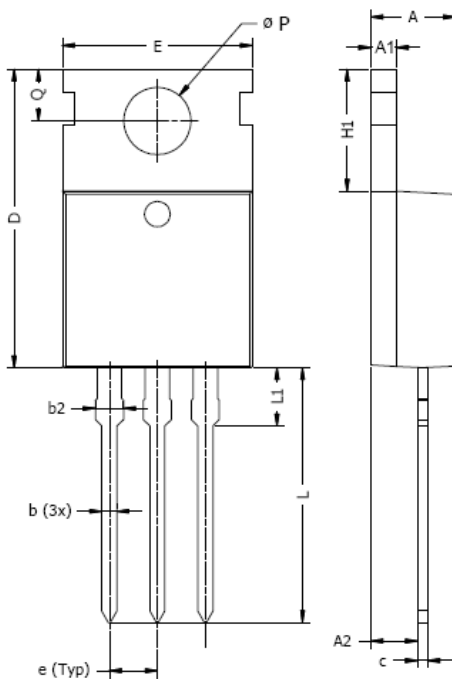
TYPICAL CHARACTERISTICS
Figure 1. Forward Current Derating Curve (Per Diode)

Figure 2. Junction Capacitance (Per Diode)

Figure 3. MBR20100CT Typical Reverse Current (Per Diode)

Figure 4. MBR20150CT Typical Reverse Current (Per Diode)

Figure 5. MBR20200CT Typical Reverse Current (Per Diode)

Figure 6. MBR20100CT Typical Forward Voltage (Per Diode)


Figure 7. MBR20150CT Typical Forward Voltage (Per Diode)

Figure 8. MBR20200CT Typical Forward Voltage (Per Diode)

TO220 PACKAGE OUTLINE


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.60	4.80	0.142	0.189
A1	1.20	1.40	0.047	0.055
A2	2.03	2.90	0.080	0.114
b	0.40	1.00	0.016	0.039
b2	1.20	1.78	0.047	0.070
c	0.36	0.60	0.014	0.024
D	14.22	16.50	0.560	0.650
e	2.34	2.74	0.092	0.108
E	9.70	10.60	0.382	0.417
H1	5.84	6.85	0.230	0.270
L	12.70	14.70	0.500	0.579
L1	2.70	3.30	0.106	0.130
ØP	3.50	4.00	0.138	0.157
Q	2.54	3.40	0.100	0.134

NOTE: Above package outline conforms to JEDEC TO-220AB.

NOTICE

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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