

20A/100V ~ 200V Schottky Barrier Rectifier

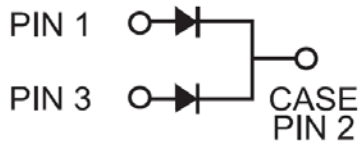
FEATURES

- ✧ High current capability, low forward voltage
- ✧ Excellent high temperature stability
- ✧ Low power loss, and high efficiency
- ✧ High forward surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ✧ RoHS compliant

ORDERING INFORMATION

- ✧ Device:
MBR20H100CT, MBR20H150CT, MBR20H200CT
MBR20H100FCT, MBR20H150FCT, MBR20H200FCT
- ✧ Package: TO-220/TO-220F
- ✧ Material: RoHS compliant
- ✧ Packing: Plastic tube
- ✧ Quantity per tube: 50pcs

PIN CONFIGURATION



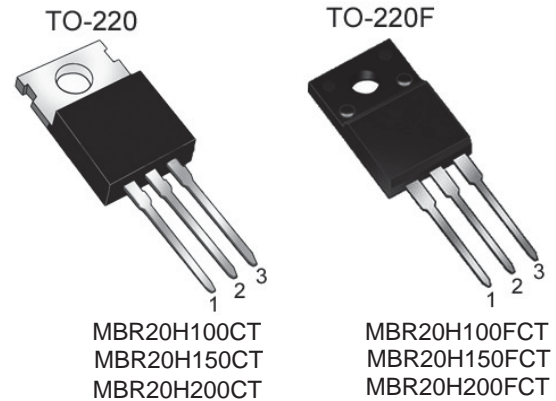
MACHANICAL DATA

- ✧ Case: TO-220/TO-220F molded plastic package
- ✧ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧ Molding Compound Flammability Rating: UL94-0
- ✧ High temperature soldering guaranteed:
260°C/10second
- ✧ Polarity: As marked
- ✧ Mounting position: Any

APPLICATIONS

- ✧ Switching mode power supply applications
- ✧ Portable equipment battery applications
- ✧ High frequency rectification
- ✧ DC/DC converter

PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING (Tamb=25 °C)

Symbol	Parameter	MBR20H100CT MBR20H100FCT	MBR20H150CT MBR20H150FCT	MBR20H200CT MBR20H200FCT	Units
V _{RRM}	Maximum Repetitive Peak Reverse Voltage	100	150	200	V
V _{RWM}	Working Peak Reverse Voltage	100	150	200	V
V _{DC}	Maximum DC Blocking Voltage	100	150	200	V
I _{F(AV)}	Maximum Average Forward Rectified Current Total device Per leg	20 10			A
I _{FSM}	Peak Forward Surge Current, 8.3ms single half sine-wave per leg	150			A
I _{R(RM)}	Peak Repetitive Reverse Surge Current @2.0µs, f=1kHz, T _J <125°C	3.5	3.0	2.5	A
dV/dt	Voltage Rate of Charge	10,000			V/µs
T _J	Junction Temperature	-65~175			°C
T _{STG}	Storage Temperature	-65~175			°C

ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

Symbol	Parameter	Test Condition	MBR20H100CT MBR20H100FCT	MBR20H150CT MBR20H150FCT	MBR20H200CT MBR20H200FCT	Units
V _F	Maximum Forward Voltage per leg	I _F = 10A T _a =25°C	0.84	0.87	0.88	V
		I _F = 10A T _a =125°C	0.74	0.77	0.78	
		I _F = 20A T _a =25°C	0.94	0.97	0.98	
		I _F = 20A T _a =125°C	0.84	0.87	0.88	
V _R	Minimum Reverse Breakdown Voltage	I _R =0.5mA	100	150	200	V
I _R	Maximum Reverse Leakage Current	V _R =V _{RWM} T _a =25°C	5	5	5	µA
		T _a =125°C	2000	2000	2000	

RATING AND CHARACTERISTICS CURVES (MBR20H100CT THRU MBR20H200CT)

Fig 1 Typical Forward Current Derating Curve

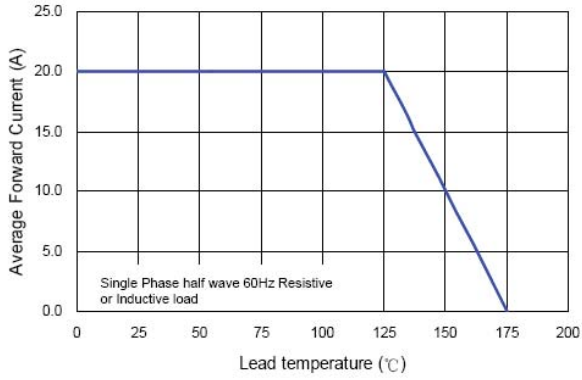


Fig 2 Typical Instantaneous Forward Characteristics per Leg

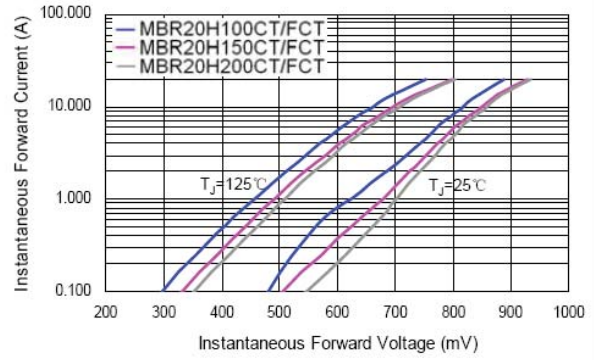


Fig 3 Max. Non-repetitive Forward Surge Current per Leg

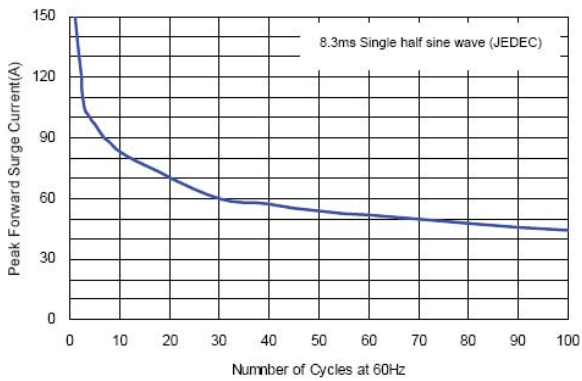


Fig 4 Typical Reverse Characteristics Per Leg

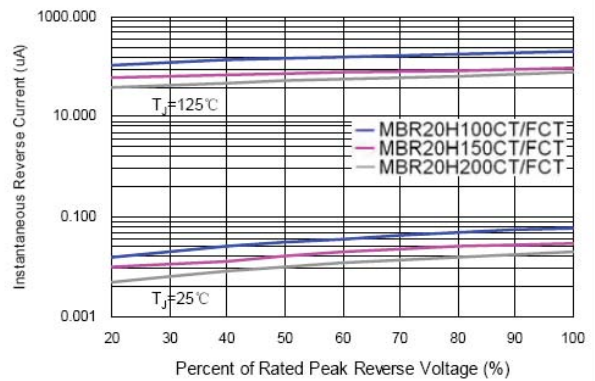
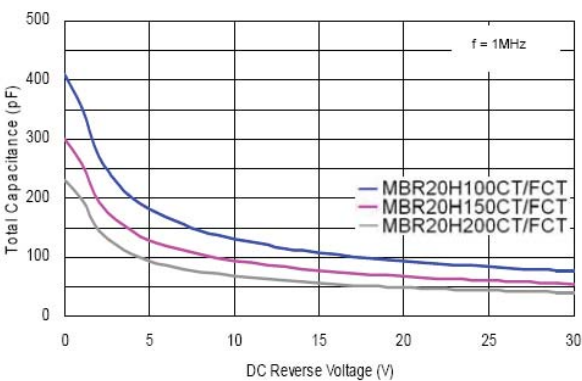
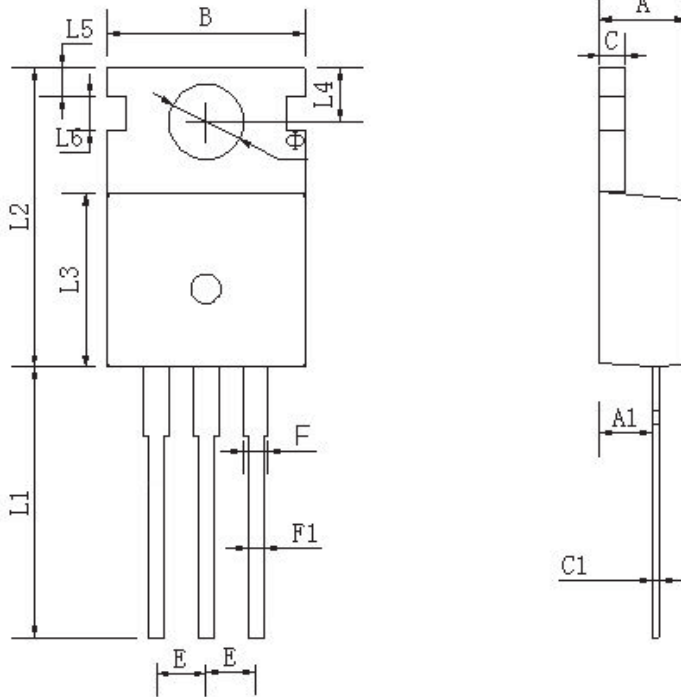


Fig 5 Junction Capacitance vs. Reverse Voltage per Leg

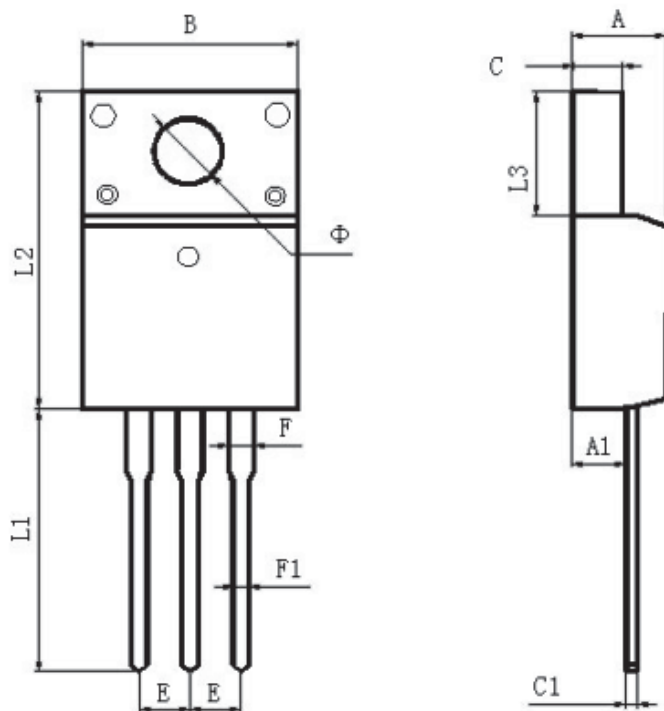


TO-220 PACKAGE OUTLINE DIMENSIONS



DIM	MIN	NOM	MAX
A	4.25	4.45	4.65
A1	2.47	2.67	2.87
B	9.86	10.16	10.46
C	1.22	1.27	1.37
C1	0.33	0.38	0.48
E	2.44	2.54	2.64
F	1.07	1.27	1.47
F1	0.7	0.8	0.9
L1	12.5	13.5	14.5
L2	14.94	15.24	15.54
L3	8.55	8.85	9.15
L4	2.54	2.74	2.94
L5	1.07	1.27	1.47
L6	1.45	1.65	1.85
Φ	3.64	3.84	4.04
Unit: mm			

TO-220F PACKAGE OUTLINE DIMENSIONS

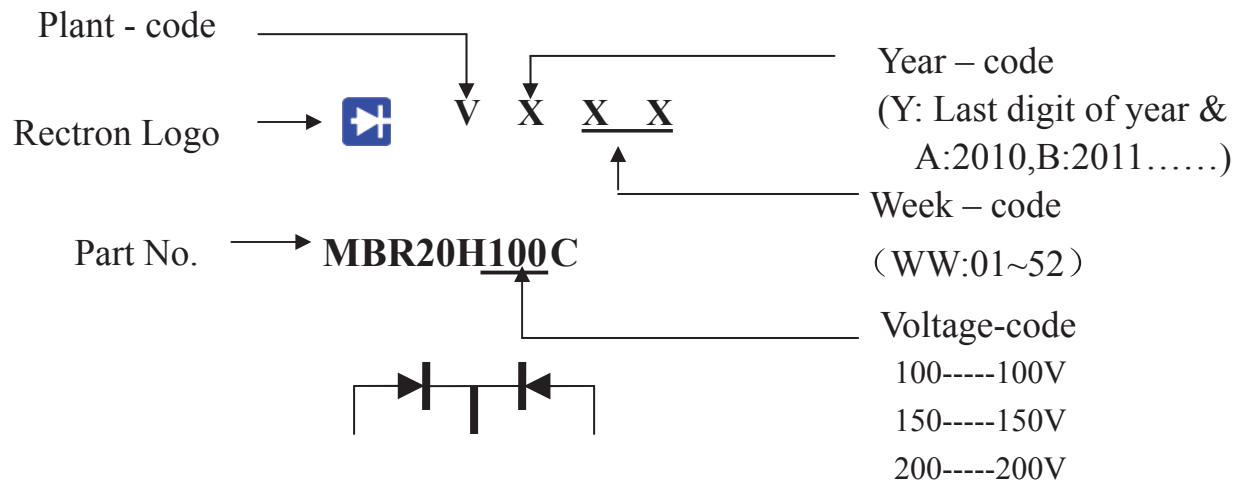


DIM	MIN	NOM	MAX
A	4.50	4.70	4.90
A1	2.56	2.76	2.96
B	9.86	10.16	10.46
C	2.34	2.54	2.74
C1	0.45	0.50	0.60
E	2.34	2.54	2.74
F	1.08	1.28	1.48
F1	0.7	0.8	0.9
L1	11.98	12.98	13.98
L2	15.57	15.87	16.17
L3	6.48	6.68	6.88
Φ	2.98	3.18	3.38
Unit: mm			

1. Internal Circuit



2. Marking on the body



DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.