



MBR20H100CT thru MBR20H200CT MBR20H100FCT thru MBR20H200FCT

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

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

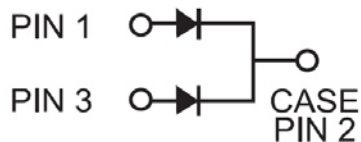
ORDERING INFORMATION

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

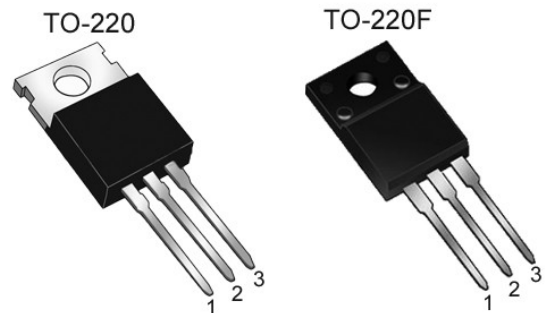
APPLICATIONS

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

PIN CONFIGURATION



PACKAGE OUTLINE





MBR20H100CT thru MBR20H200CT MBR20H100FCT thru MBR20H200FCT

20A/100V ~ 200V Schottky Barrier Rectifier

ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

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 _{RRM}	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, unless otherwise specified)

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	

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 Typical Forward Current Derating Curve

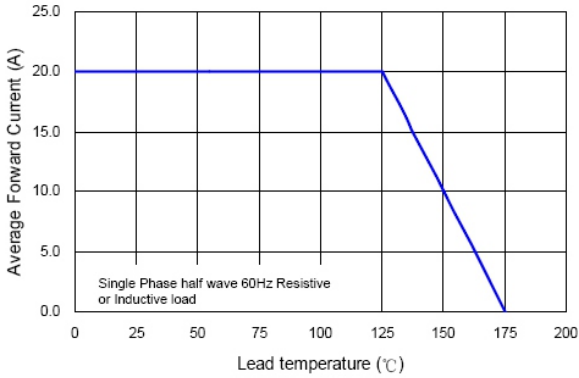


Fig 2 Typical Instantaneous Forward Characteristics per Leg

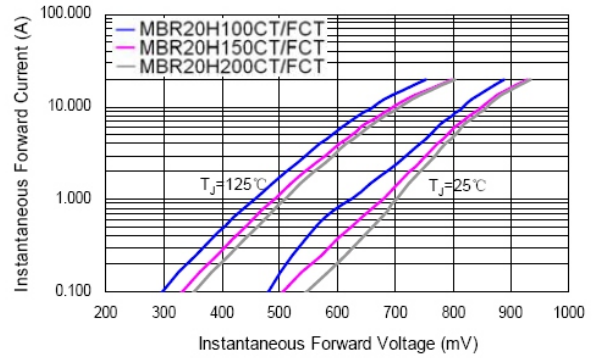


Fig 3 Max. Non-repetitive Forward Surge Current per Leg

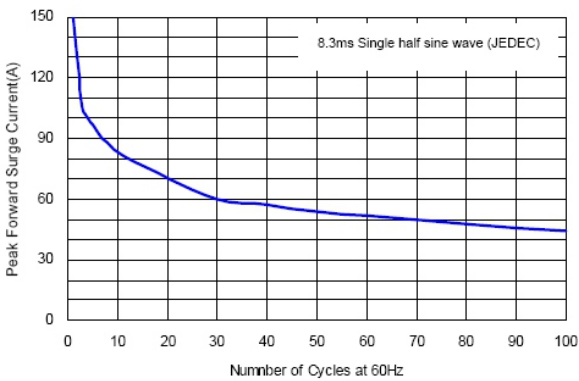


Fig 4 Typical Reverse Characteristics Per Leg

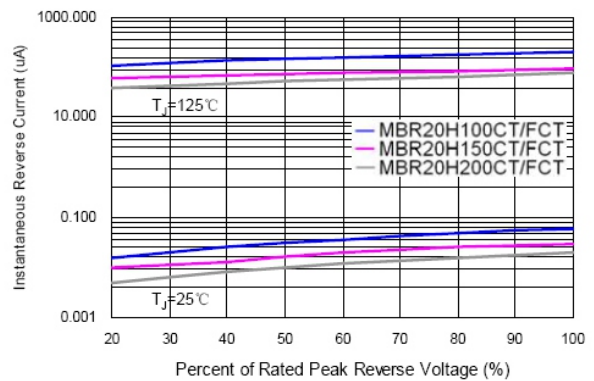
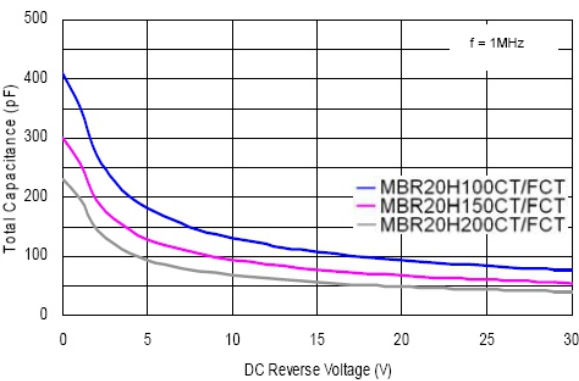
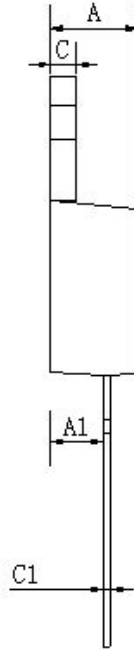
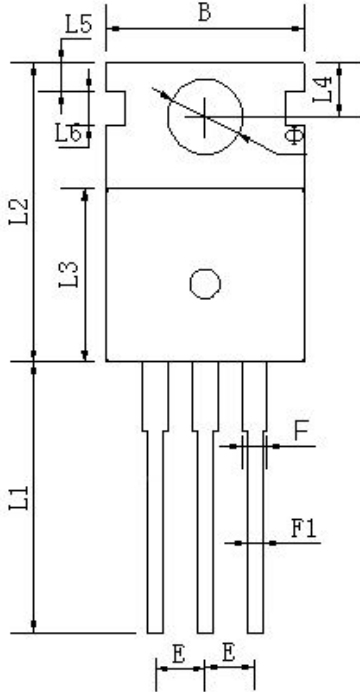


Fig 5 Junction Capacitance vs. Reverse Voltage per Leg

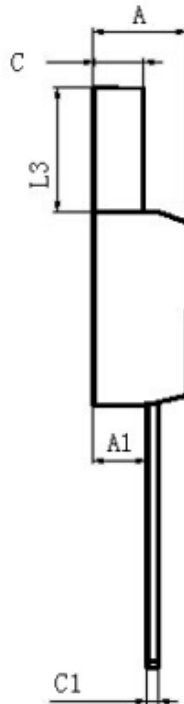
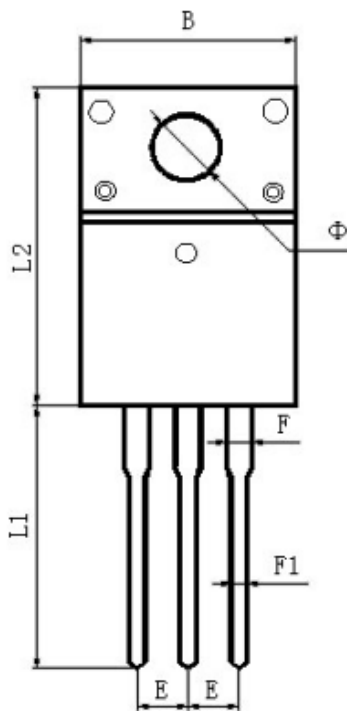


TO-220 PACKAGE OUTLINE DIMENSIONS



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			