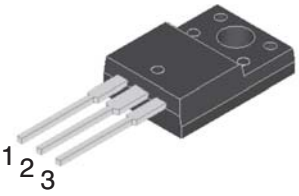
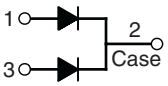
20 Amp. Schottky Barrier Rectifier

ITO-220AB





Common Cathode
Suffix "C"

Voltage	Current
45 to 200 V	20 A

FEATURES

- Ideal for automated placement
- Low power losses, high efficiency
- High surge current capability
- Guarding for overvoltage protection
- Low forward voltage drop
- Solder dip 260°C, 10s / 0.25" (6.35 mm) from case
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C

Pb e3 **RoHS** COMPLIANT

MECHANICAL DATA

- **Case:** ITO-220AB. Epoxy meets UL 94V-0 flammability rating.
- **Polarity:** As marked on the body.
- **Mounting Torque:** 5 in-lbs maximum.
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test.

TYPICAL APPLICATIONS

Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

Maximun Ratings and Electrical Characteristics at 25°C

		MBRF2045CT	MBRF2060CT	MBRF20100CT	MBRF20150CT	MBRF20200CT
Marking Code		MBRF2045CT	MBRF2060CT	MBRF20100CT	MBRF20150CT	MBRF20200CT
V_{RRM}	Peak recurrent reverse voltage (V)	45	60	100	150	200
V_{RMS}	Maximum RMS voltage (V)	31	42	70	105	140
V_{DC}	Maximum DC blocking voltage (V)	45	60	100	150	200
$I_{F\ (AV)}$	Maximum average Forward Rectified Current	20 A				
I_{FSM}	Peak Forward Surge Current 8.3 ms. Single Half Sine-wave Superimposed on Rated Load (Jedec Method)	150 A				
C_j	Typical Junction Capacitance at 1MHz and reverse voltage of $4V_{DC}$	400 pF	310 pF			
T_j	Operating temperature range	– 55 to + 150 °C				
T_{stg}	Storage temperature range	– 55 to + 150 °C				

Electrical Characteristics at Tamb = 25 °C

V_F	Max. forward voltage drop at I_F = 10 A (Note 1)	Tc = 25 °C	0.80 V	0.80 V	0.85 V	0.95 V
		Tc = 125 °C	0.57 V	0.70 V	0.75 V	0.85 V
	Max. forward voltage drop at I_F = 20 A	Tc = 25 °C	0.84 V	0.95 V	0.95 V	1.05 V
		Tc = 125 °C	0.72 V	0.85 V	0.85 V	0.95 V
I_R	Max. Instantaneous reverse current at $V_R = V_{RRMax}$ (Note 3)	Tc = 25 °C	0.10 mA			
		Tc = 125 °C	15 mA	10 mA	5 mA	2 mA
R_{thj-C}	Typical Thermal Resistance (Note 2)		3 °C/W		4 °C/W	

Notes: 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
2. Thermal Resistance from Junction to Case per diode
3. Pulse test: Pulse width ≤ 40ms

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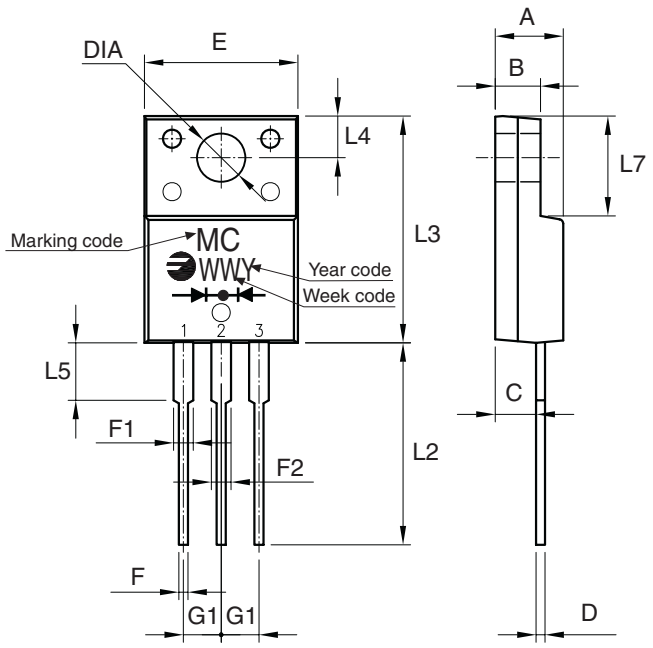
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
MBRF2060CTC 00TUC	TU	TUBE	1,000	2.02

Package Outline Dimensions: (mm) ITO-220AB



REF.	DIMENSIONS Milimeters		
	Min.	Nominal	Max.
A	4.6	-	4.8
B	2.44	-	2.64
C	2.5	-	2.8
D	0.5	-	0.76
E	9.9	-	10.3
F	0.5	-	0.9
F1	1.1	-	1.4
F2	-	-	1.8
G1	2.4	2.55	2.7
L2	13.2	-	13.8
L3	15.6	-	16.0
L4	3.2	-	3.4
L5	4.0	-	4.4
L7	6.3	-	6.9
DIA	3.0	-	3.4

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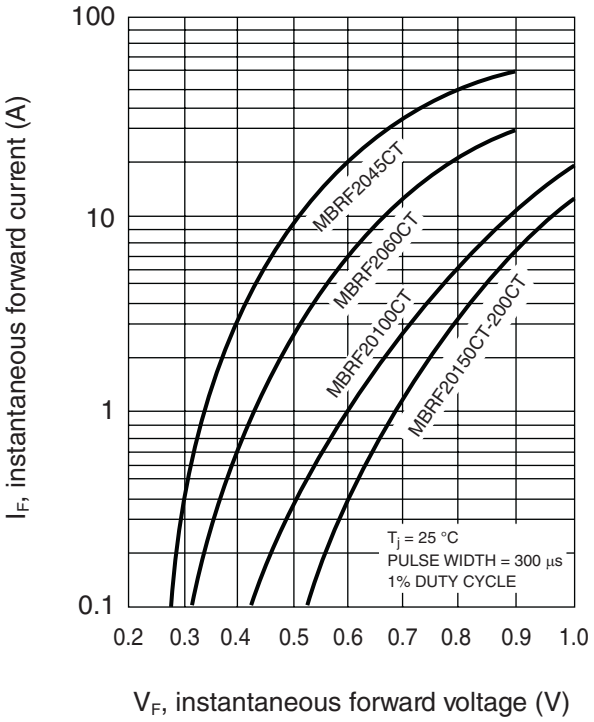
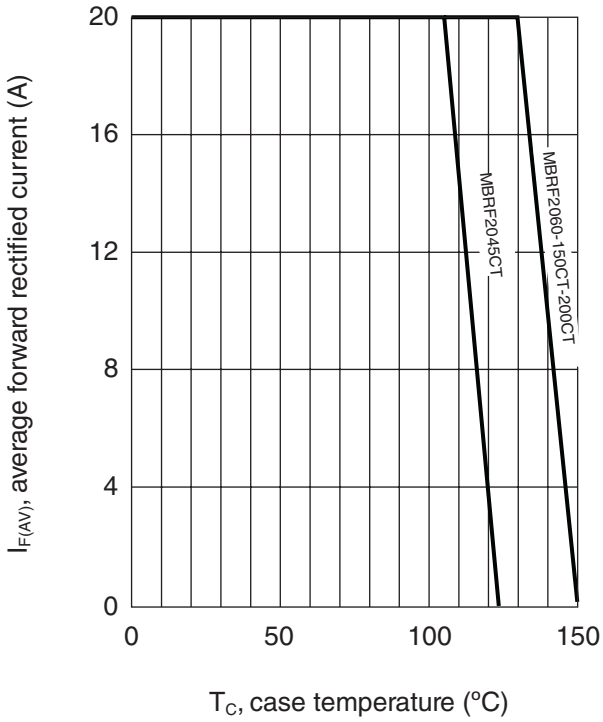
Ratings and Characteristics (Ta 25 ºC unless otherwise noted)

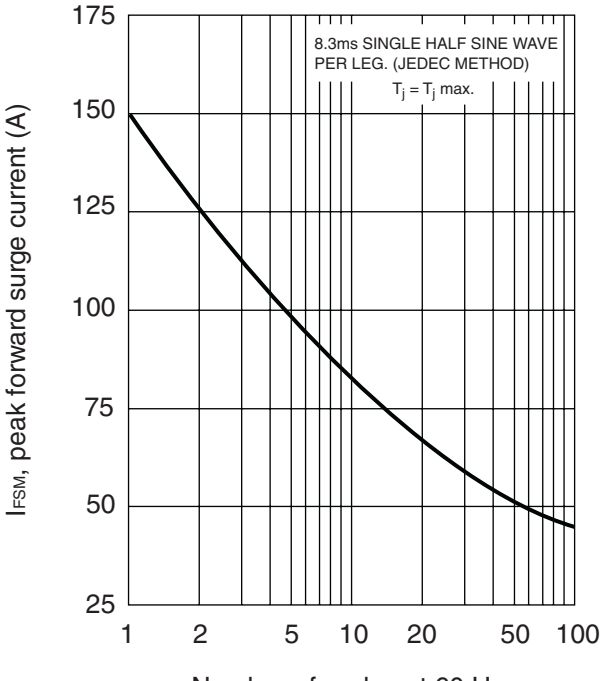
TYPICAL FORWARD CHARACTERISTIC PER LEG



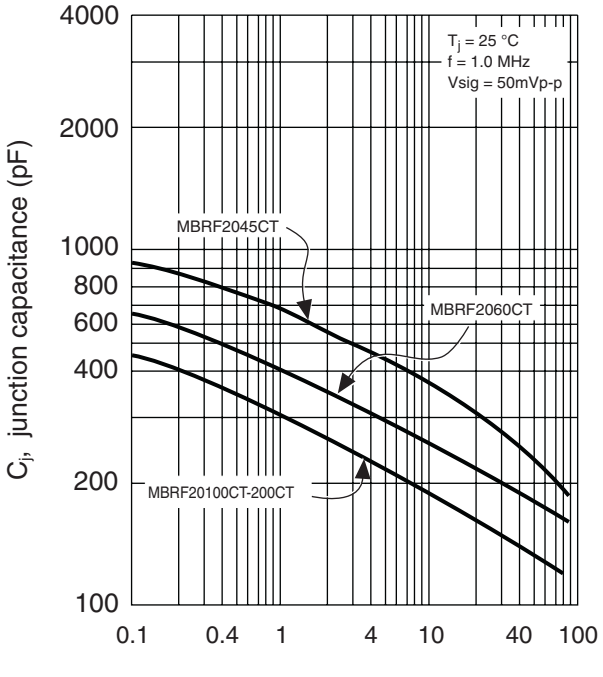
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG



TYPICAL JUNCTION CAPACITANCE PER LEG



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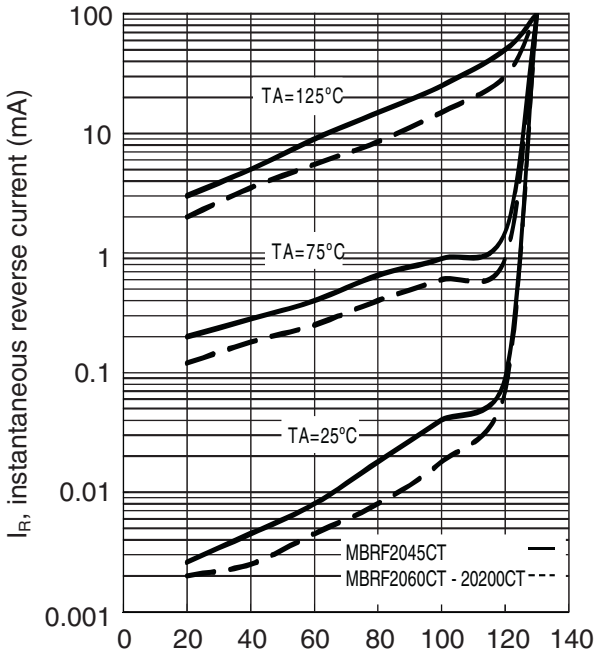
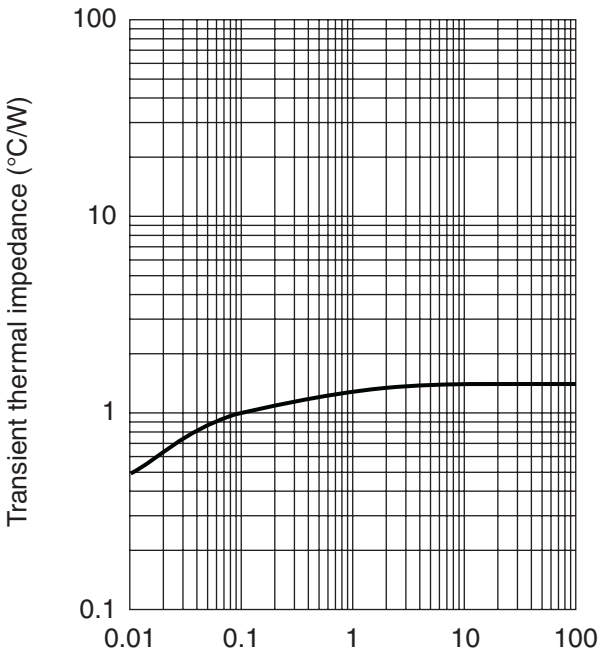
TYPICAL REVERSE CHARACTERISTIC PER LEG



TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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Revision History

Date	Revision	Description of Changes
14-Apr-2007	0	Original Data Sheet
04-Jun-2013	1	200V included
21-Jun-2013	2	Change values of: T_j / T_{stg} / $R_{th(j-c)}$ / Base Quantity

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