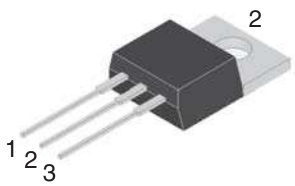
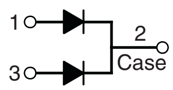
16.0 Amp. Schottky Barrier Rectifier

TO-220AB





Common Cathode
Suffix "C"

Voltage	Current
20 to 150 V	16.0 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
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C

RoHS
COMPLIANT

MECHANICAL DATA

- **Case:** TO-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

		MBR 1620CT	MBR 1640CT	MBR 1660CT	MBR 16100CT	MBR 16150CT
Marking Code		MBR1620CT	MBR1640CT	MBR1660CT	MBR16100CT	MBR16150CT
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	40	60	100	150
V_{RMS}	Maximum RMS Voltage (V)	14	28	42	70	105
V_{DC}	Maximum DC blocking voltage (V)	20	40	60	100	150
$I_{F(AV)}$	Maximum Average Forward Rectified Current See Fig.	16 A				
I_{FSM}	Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	170 A				
C_j	Typical Junction Capacitance at 1MHz and Applied Reverse Voltage of 4.0V D.C.	440 pF		320 pF		
T_j	Operating Junction Temperature Range	– 65 to + 125 °C			– 65 to + 150 °C	
T_{stg}	Storage Temperature Range	– 65 to + 150 °C				

Electrical Characteristics at Tamb = 25 °C

V_F	Maximum Instantaneous Forward Voltage @ 8.0 A (Note 1)	0.55 V		0.70 V	0.90 V	1.05 V
I_R	Maximum D.C. Reverse Current (Note 3) @ T_C=25°C at Rated DC Blocking Voltage	0.5 mA			0.1 mA	
	@ T_C=100°C	15 mA		10 mA	5 mA	
R_{thj-c}	Typical Thermal Resistance (Note 2)	2.5 °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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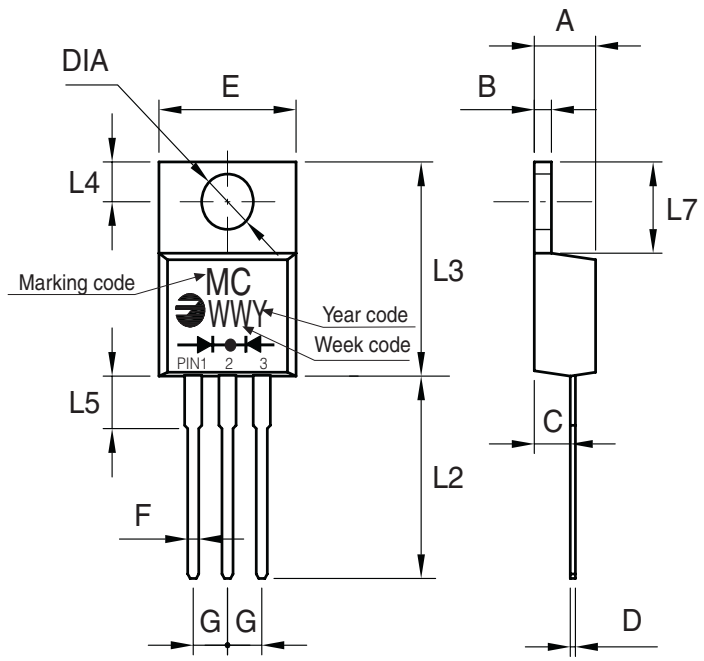
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
MBR1660CTC 00TUC	TU	TUBE	2,000	1.89

Package Outline Dimensions: (mm) TO-220AB



REF.	DIMENSIONS Milimeters	
	Min.	Max.
A	4.44	4.76
B	1.14	1.40
C	2.54	2.80
D	0.35	0.64
E	--	10.50
F	0.68	0.94
G	2.41	2.67
L2	13.46	14.22
L3	14.90	16.00
L4	2.62	3.44
L5	3.56	4.20
L7	5.84	6.86
DIA	3.74	3.91

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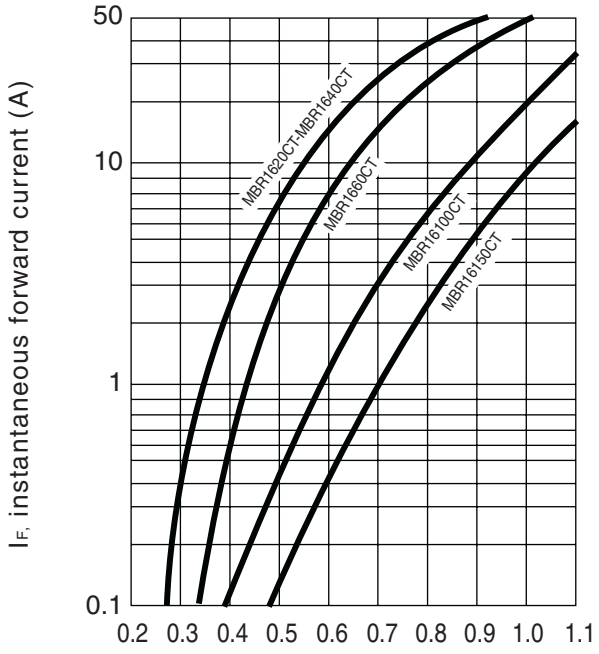
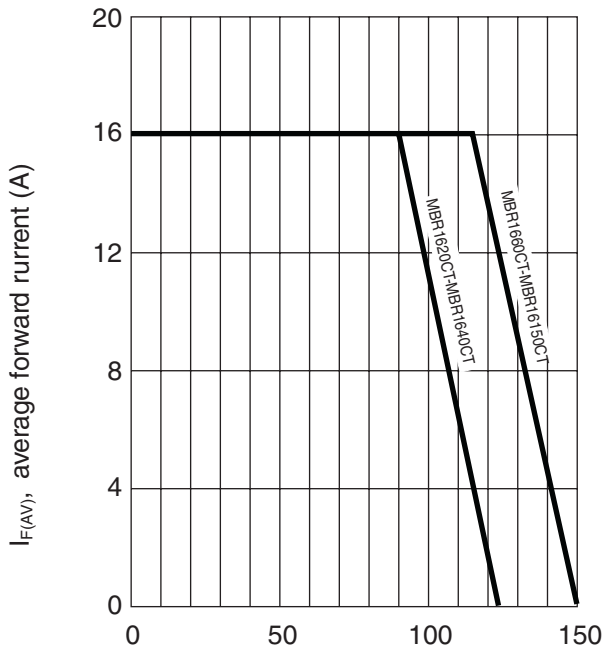
Ratings and Characteristics (Ta 25 ºC unless otherwise noted)

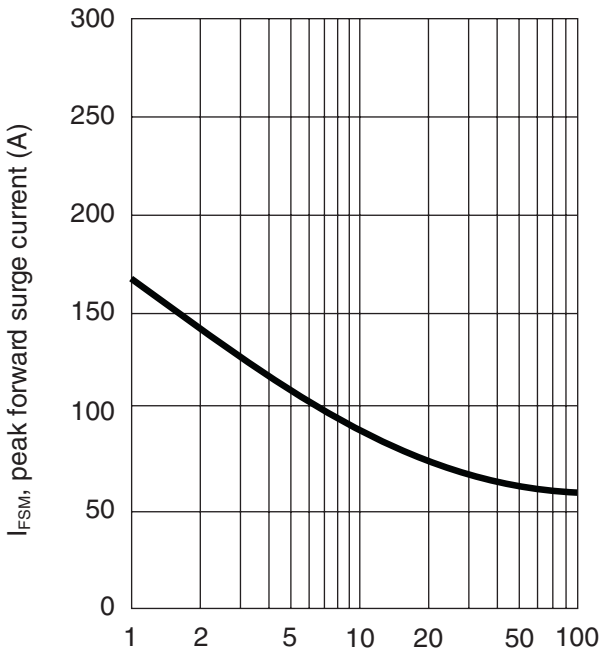
TYPICAL FORWARD CHARACTERISTICS PER DIODE



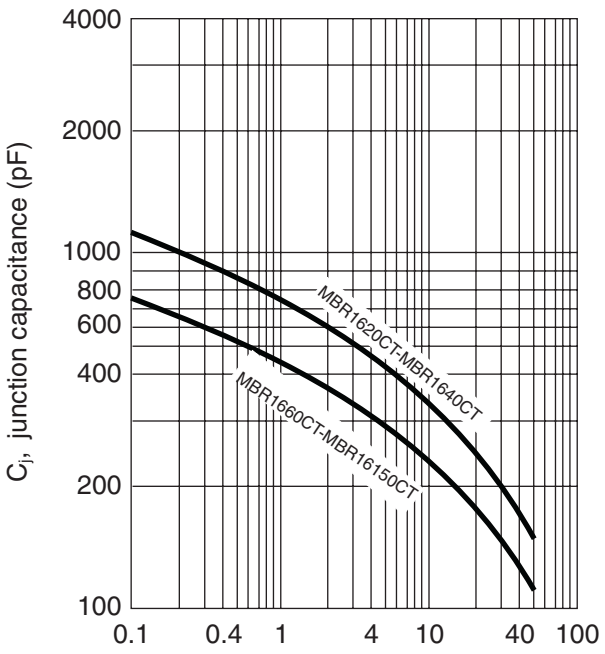
MAXIMUM FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER DIODE



TYPICAL JUNCTION CAPACITANCE PER DIODE



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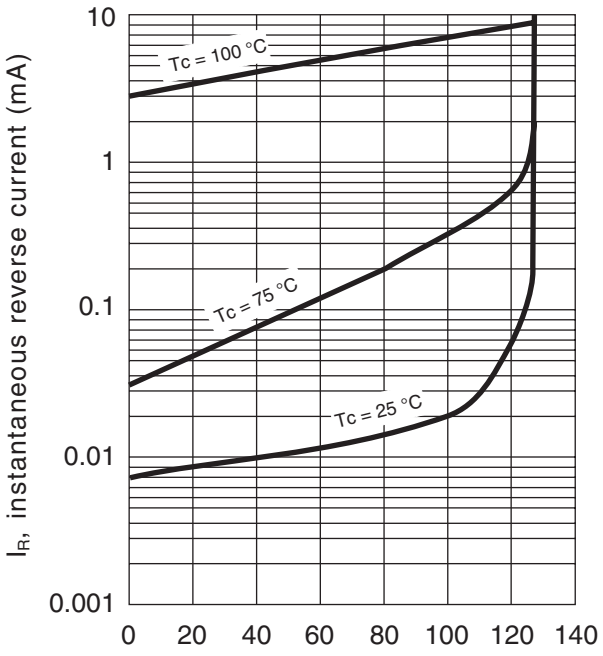
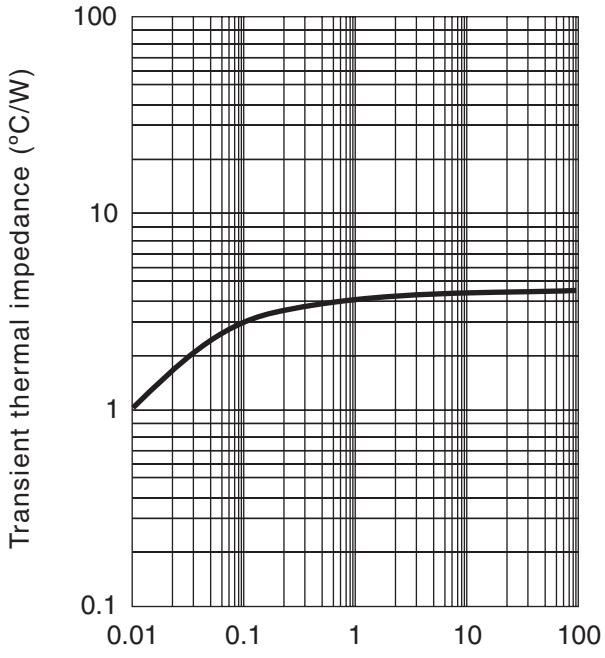
Ratings and Characteristics (Ta 25 ºC unless otherwise noted)

TYPICAL REVERSE CHARACTERISTICS
PER DIODE



TYPICAL TRANSIENT THERMAL
CHARACTEREISTICS



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