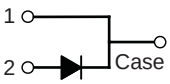
16 Amp. Schottky Barrier Rectifier

TO-220AC



Case Positive

Voltage	Current
45 to 150 V	16 A

- Plastic material used carries Underwriters Laboratory Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 6.35mm from case

Mechanical Data

- Cases: JEDEC TO-220AC molded plastic body
- Terminals: Pure tim plated, lead free, solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 5 in. - lbs. max
- Weight: 2.24 grams

Absolute Maximum Ratings, according to IEC publication No. 134

		MBR 1645	MBR 1660	MBR 16100	MBR 16150
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	45	60	100	150
V_{RMS}	Maximum RMS Voltage (V)	31	42	70	105
V_{DC}	Maximum DC Blocking Voltage (V)	45	60	100	150
$I_{F\ (AV)}$	Maximum Average Forward Rectified Current at T_C = 125 °C	16 A			
I_{FSM}	Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	150 A			
I_{RRM}	Peak Repetitive Reverse Surge Current (Note 1)	1.0 A	0.5 A		
T_j	Operating Junction Temperature Range	– 65 to + 150 °C			
T_{stg}	Storage Temperature Range	– 65 to + 175 °C			

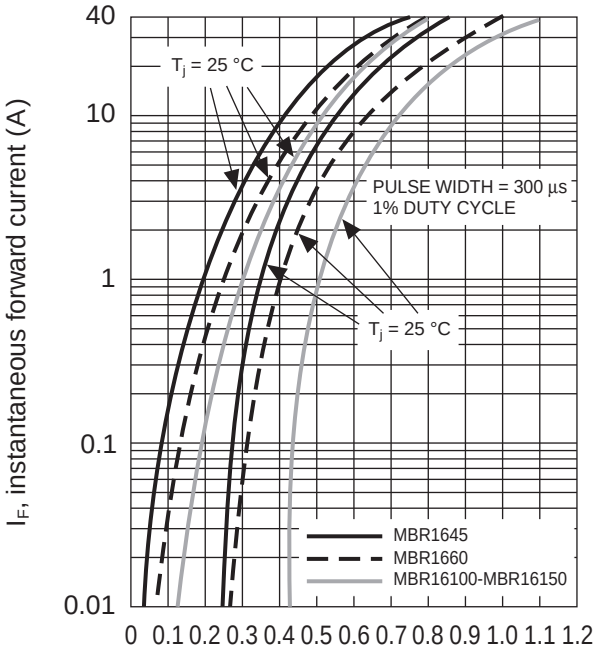
Electrical Characteristics

			MBR 1645	MBR 1660	MBR 16100	MBR 16150
V_F	Max.Instantaneous Forward Voltage (Note 2) at I_F = 16 A	Tc = 25 °C	0.63 V	0.75 V	0.85 V	0.95 V
		Tc = 125 °C	0.57 V	0.65 V	0.75 V	0.92 V
I_R	Max. Instantaneous Reverse Current at Rated DC Blocking Voltage (Note 2)	Tc = 25 °C	0.5 mA		0.3 mA	0.1 mA
		Tc = 125 °C	15 mA	10 mA	7.5 mA	5 mA
R_{thj-c}	Maximun Typical Thermal Resistance (Note 3)		3.0 °C/W			

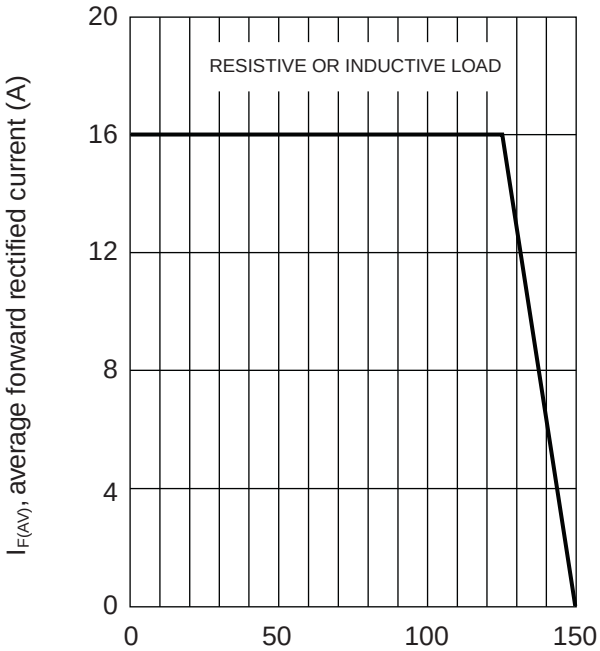
Notes: 1. 2.0µs Pulse Width, f=1.0 KHz
2. Pulse Test: 300µs Pulse Width, 1% Duty Cycle
3. Thermal Resistance from junction to Case Per Leg with Heatsink Size of 50.8 mm x 76.2 mm x 6.35 mm Al-Plate.

Rating And Characteristic Curves

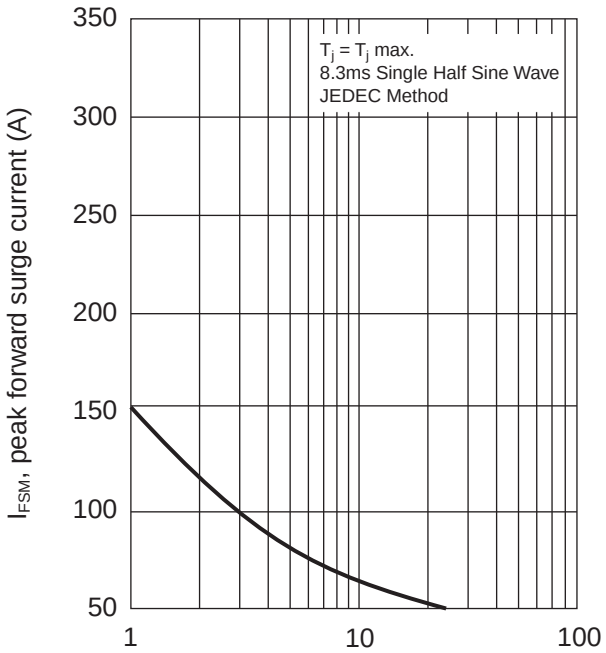
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



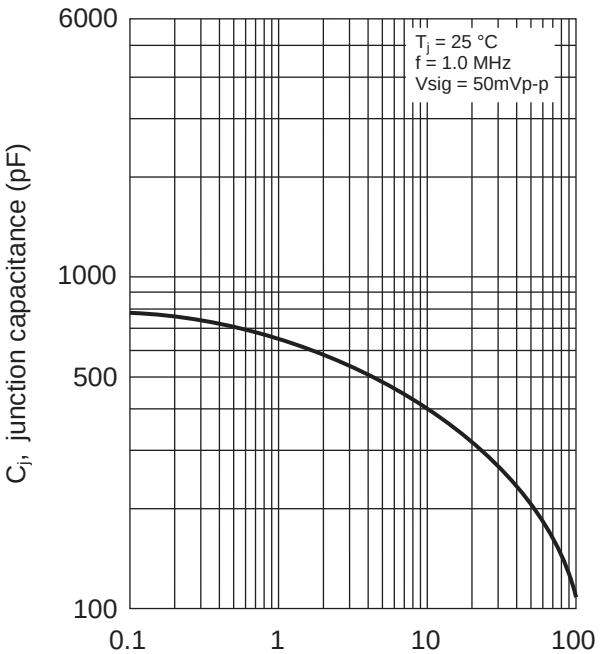
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

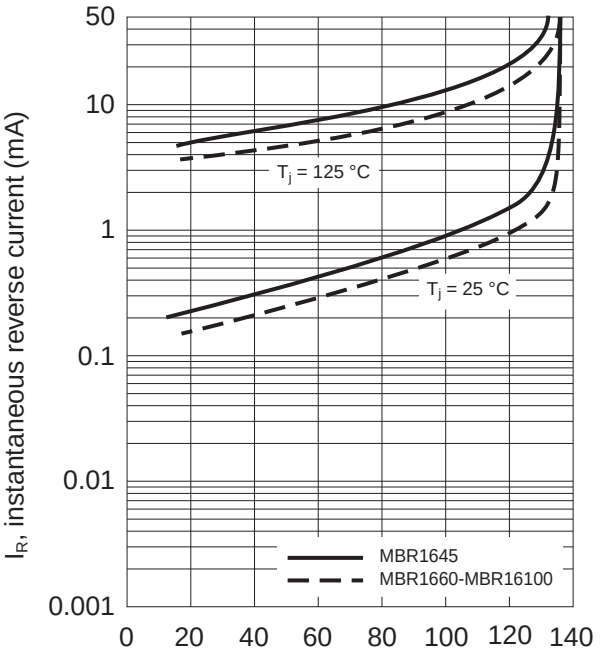


TYPICAL JUNCTION CAPACITANCE

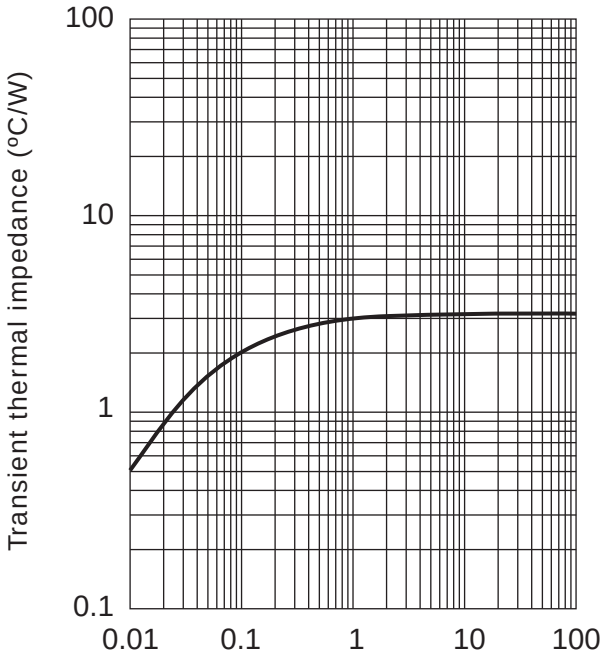


Rating And Characteristic Curves

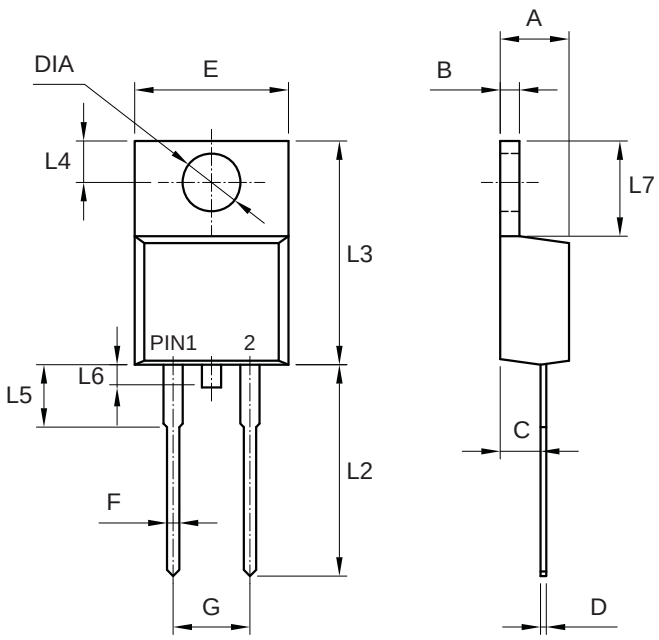
TYPICAL REVERSE CHARACTERISTICS



TYPICAL TRANSIENT THERMAL CHARACTERISTICS



PACKAGE MECHANICAL DATA TO-220AC



REF.	DIMENSIONS Milimeters	
	Min.	Max.
A	4.44	4.70
B	1.14	1.40
C	2.54	2.79
D	0.35	0.64
E	-	10.50
F	0.68	0.94
G	4.95	5.20
L2	13.46	14.22
L3	14.9	15.10
L4	2.62	2.87
L5	3.56	4.06
L6	-	1.60
L7	5.84	6.86
DIA	3.74	3.91