



## 16 Amp. Schottky Barrier Rectifier

<p><b>TO-220AC</b></p>  <div style="text-align: center; margin-top: 20px;">  <p>Case Positive</p> </div>	<p><b>Voltage</b> 45 to 150 V</p> <p><b>Current</b> 16 A</p> <ul style="list-style-type: none"> <li>Plastic material used carries Underwriters Laboratory Classifications 94V-0</li> <li>Metal silicon junction, majority carrier conduction</li> <li>Low power loss, high efficiency</li> <li>High current capability, low forward voltage drop</li> <li>High surge capability</li> <li>For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> <li>Guardring for overvoltage protection</li> <li>High temperature soldering guaranteed: 260°C/10 seconds, 6.35mm from case</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>Cases: JEDEC TO-220AC molded plastic body</li> <li>Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026</li> <li>Polarity: As marked</li> <li>Mounting position: Any</li> <li>Mounting torque: 5 in. - lbs. max</li> <li>Weight: 2.24 grams</li> </ul>
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### Absolute Maximum Ratings, according to IEC publication No. 134

		<b>MBR 1645</b>	<b>MBR 1660</b>	<b>MBR 16100</b>	<b>MBR 16150</b>
$V_{RRM}$	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 $T_c = 125\text{ }^\circ\text{C}$	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			

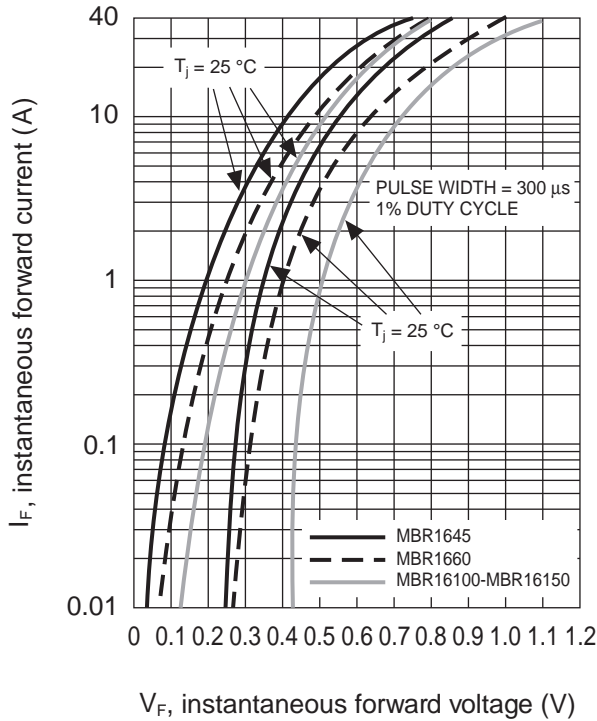
### Electrical Characteristics

		<b>MBR 1645</b>	<b>MBR 1660</b>	<b>MBR 16100</b>	<b>MBR 16150</b>
$V_F$	Max. Instantaneous Forward Voltage at $I_F = 16\text{ A}$ (Note 2)	$T_c = 25\text{ }^\circ\text{C}$ 0.63 V	0.75 V	0.85 V	0.95 V
		$T_c = 125\text{ }^\circ\text{C}$ 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)	$T_c = 25\text{ }^\circ\text{C}$ 0.5 mA		0.3 mA	0.1 mA
		$T_c = 125\text{ }^\circ\text{C}$ 15 mA	10 mA	7.5 mA	5 mA
$R_{thj-c}$	Maximun Typical Thermal Resistance (Note 3)	3.0 °C/W			

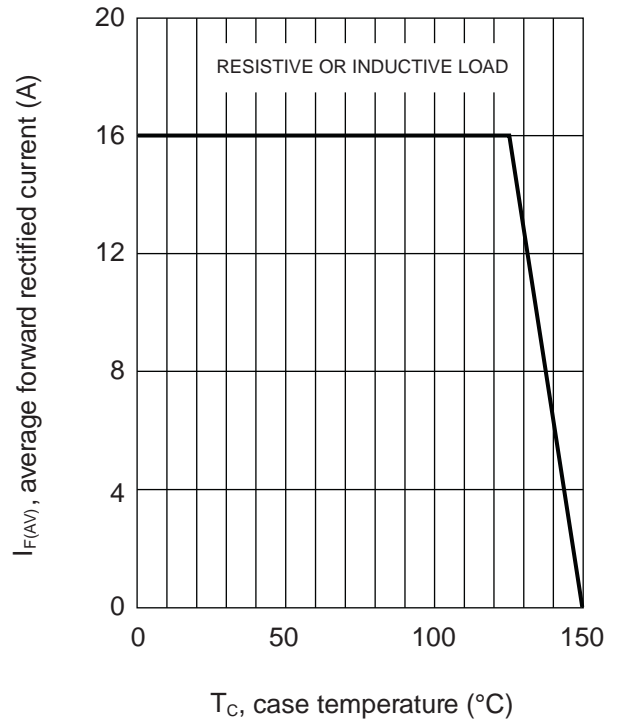
Notes: 1. 2.0µs Pulse Width, f=1.0 KHz  
 2. Pulse Test: 300µs Pulse Width, 1% Duty Cycle  
 3. Thermal Resistance from junction to Case Per Leg with Heatsink Size of 50.8 mm x 76.2 mm x 6.35 mm Al-Plate.

## Rating And Characteristic Curves

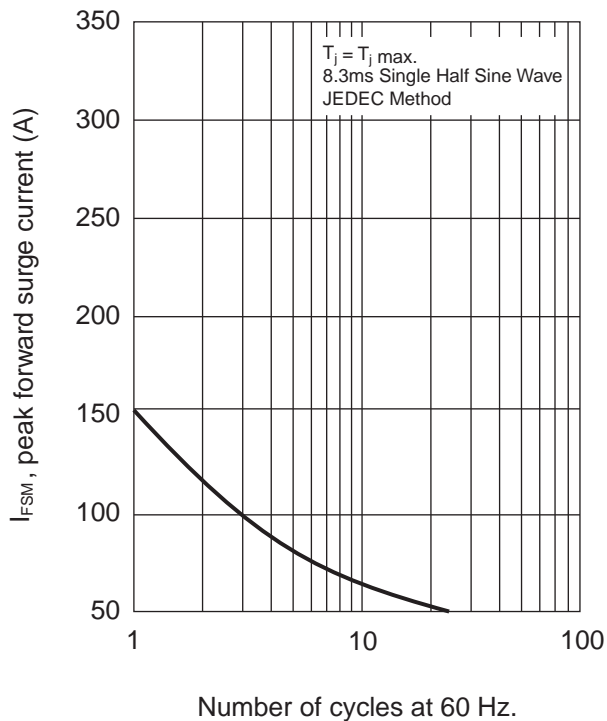
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



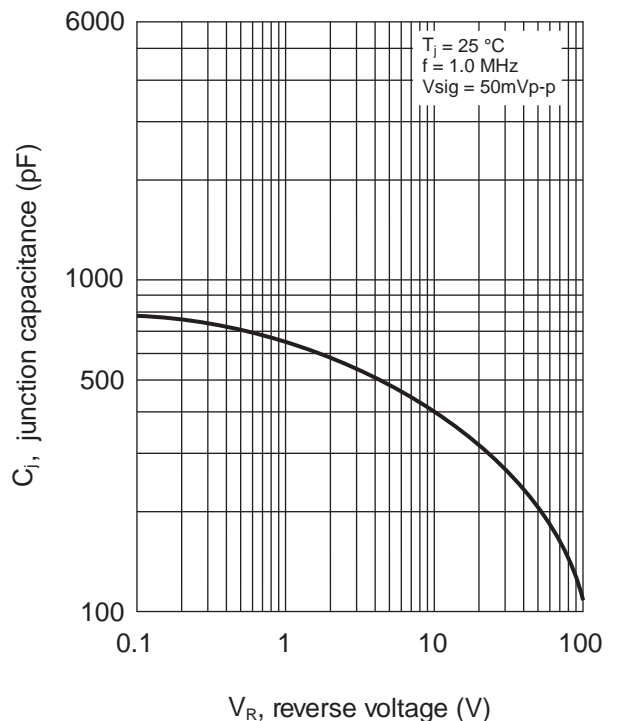
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

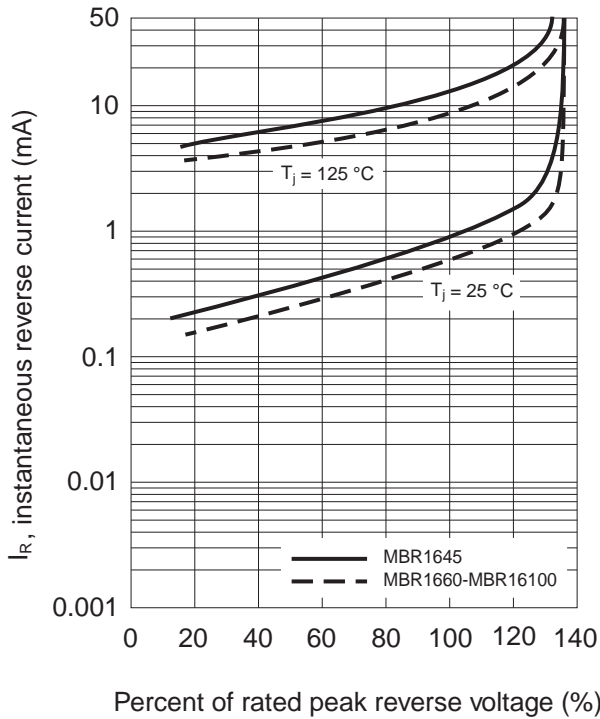


TYPICAL JUNCTION CAPACITANCE

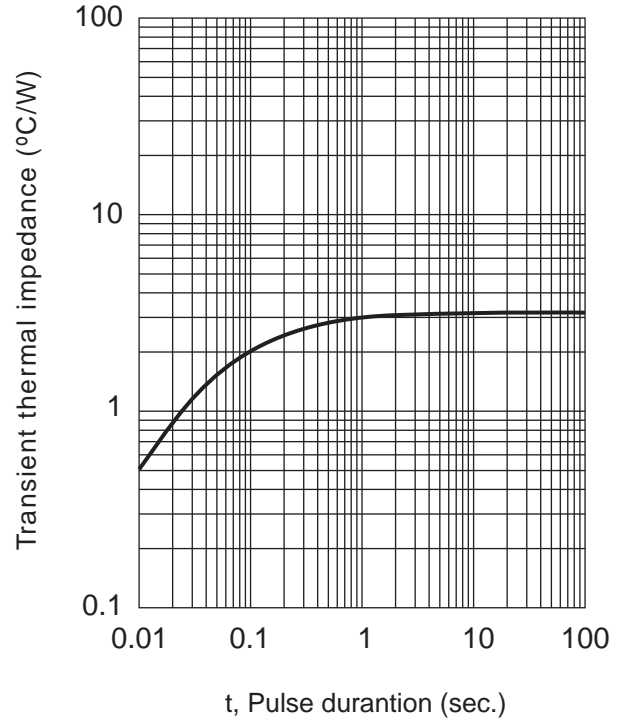


**Rating And Characteristic Curves**

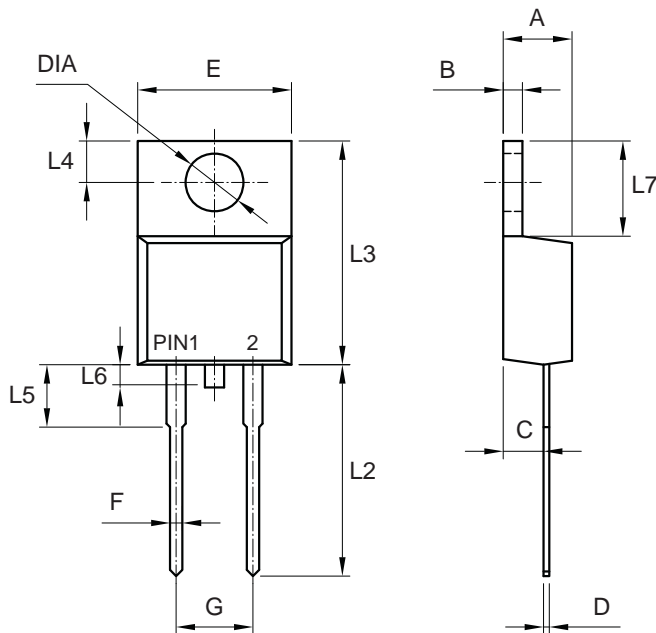
TYPICAL REVERSE CHARACTERISTICS



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