

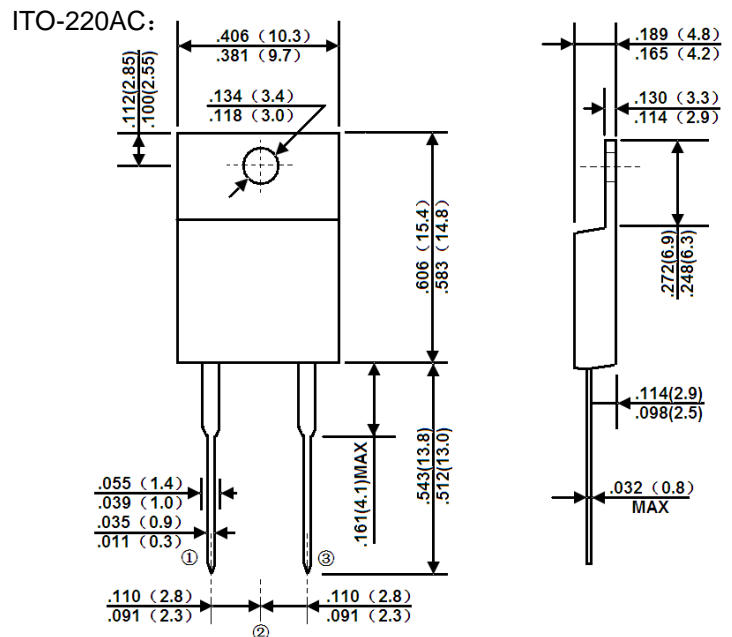
Features

- * Low power loss, high efficiency
- * Guard-ring for overvoltage protection
- * High surge current capability
- * Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT

Package Outline Dimensions in inches (millimeters)



Mechanical Data

- * Case: ITO-220AC
- * Molding compound, UL flammability classification rating 94V-0
- * Terminal: Matte tin plated leads, solderable per JESD 22-B102 Meet JESD 201 class 1A whisker test
- * Polarity: As marked
- * Mounting torque: 5 in-lbs maximum

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	MBRF 1635	MBRF 1645	MBRF 1650	MBRF 1660	MBRF 1690	MBRF 16100	MBRF 16150	Unit			
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	35	45	50	60	90	100	150	V			
Maximum RMS Voltage	V_{RMS}	24	31	35	42	63	70	105	V			
Maximum D.C Blocking Voltage	V_{DC}	35	45	50	60	90	100	150	V			
Maximum Average Forward Rectified Current	$I_{F(AV)}$	16							A			
Peak repetitive forward current (Rated VR, square wave, 20KHz)	I_{FRM}	32							A			
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	150							A			
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1.0		0.5				A				
Maximum instantaneous forward voltage (Note 2)	V_F	IF=16A, T _J =25°C IF=16A, T _J =125°C		0.63 0.57		0.75 0.65		0.85 0.75		0.95 0.92		V
Maximum reverse current @ Rated VR	I_R	T _J =25 °C T _J =125 °C		0.5			0.3		0.1		mA	
				15		10		7.5		5		
Voltage rate of change (Rated VR)	dV/dt	10000							V/μs			
Typical Thermal Resistance	$R_{θJC}$	3							°C/W			
Operating junction temperature range	T_J	-55 to +150							°C			
Storage Temperature Range	T_{STG}	-55 to +150							°C			

Note:1、tp = 2.0 μs, 1.0KHz 2、Pulse test with PW=300μs, 1% duty cycle

Ratings and Characteristic Curves

FIG.1 FORWARD CURRENT DERATING CURVE

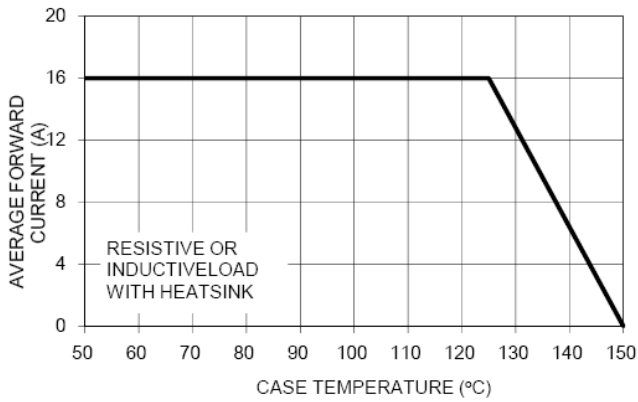


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

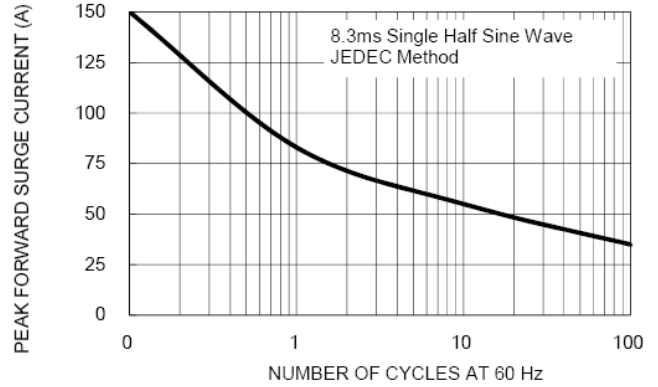


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

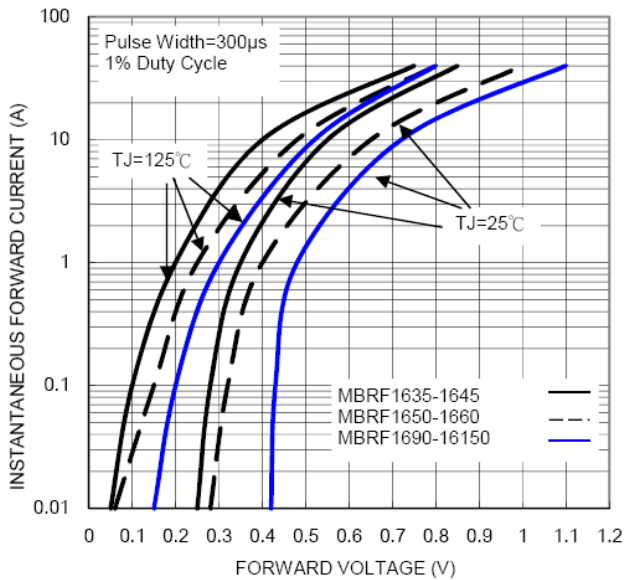


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

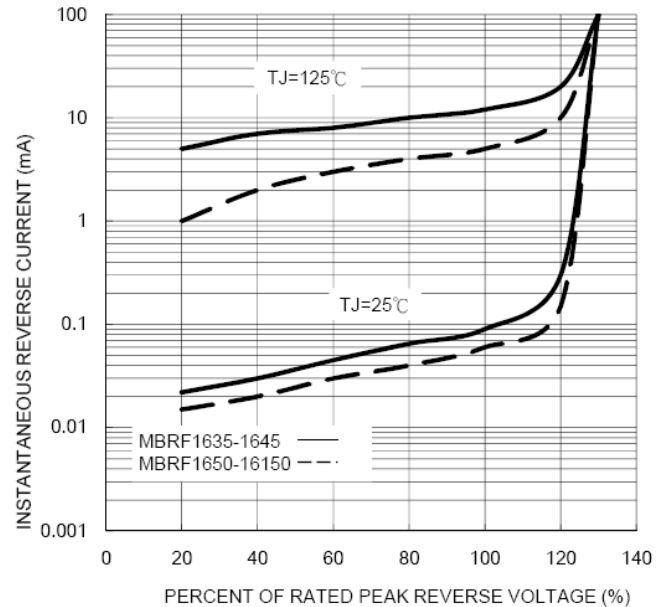


FIG. 5 TYPICAL JUNCTION CAPACITANCE

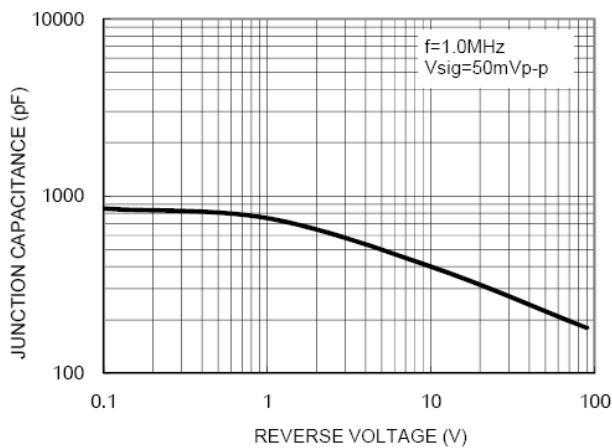
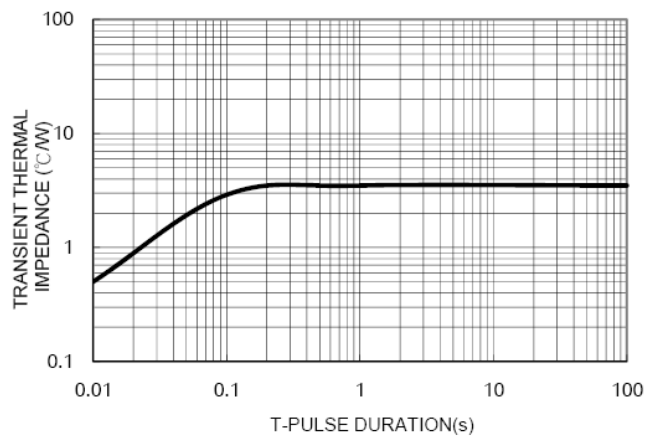


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE





MBRF1635 THRU MBRF16150

Isolated Schottky Barrier Rectifiers

Ordering Information

Part No.	Package	Packing
MBRF1635~MBRF16150	ITO-220AC	50pcs/Tube