# MBR1635F THRU MBR16150F
Schottky Diodes

Features

- High efficiency operation
- Guard ring for enhanced ruggedness and long term reliablity
- High purity,high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Solder dip maximum peak of 275 °C /7s, per JESD 22-B106

Typical Application

For use in switching power supplies,converters, freewheeling diodes and reverse battery protection.

Mechanical Data

- Package: ITO-220AC
  Molding compound meets UL 94 V-0 flammability rating,RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color Band denotes cathode end
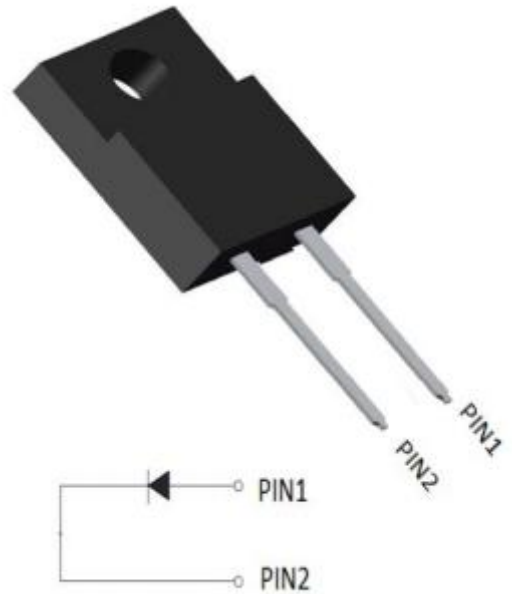
■ Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	MBR16-F						
				35	45	50	60	90	100	150
Repetitive Peak Reverse Voltage	V_{RRM}	V		35	45	50	60	90	100	150
Average Rectified Output Current	I_O	A	60HZ Half-sine wave, Resistance load, Tc(Fig.1)	16						
Surge(Nonrepetitive)Forward Current	I_{FSM}	A	60HZ sine wave, 1 cycle, Ta=25℃	125						
Storage Temperature	T_{stg}	℃		-55 ~ +150						
Junction Temperature	T_j	℃		-55 ~ +150						

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	Symbol	Unit	Conditions		MBR16-F						
					35	45	50	60	90	100	150
Peak Forward Voltage	V_{FM}	V	I_{FM}=16.0A		0.65		0.75		0.85		0.95
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	Ta=25℃	0.2						
	I_{RRM2}			Ta=100℃	15		10		5		
Thermal Resistance	$R_{θJ-C}$	$R_{θJ-C}$	Between junction and case		3.0[1]						

NOTES:

[1]Thermal resistance from junction to case per leg with heat-sink size of 2"x3"x0.25"A-L plate

■ Characteristics（Typical）

FIG1: Forward Current Derating Curve
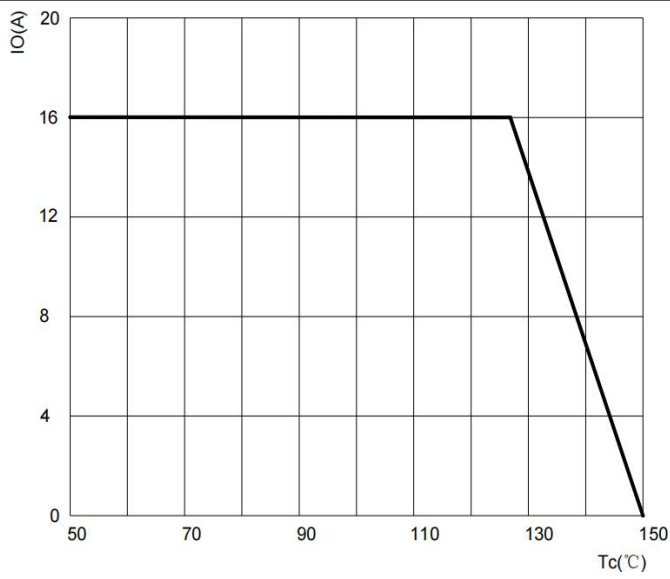
FIG2:Maximum Non-Repetitive Forward Surge Current

8.3ms Single Half Sine Wave
JEDEC Method
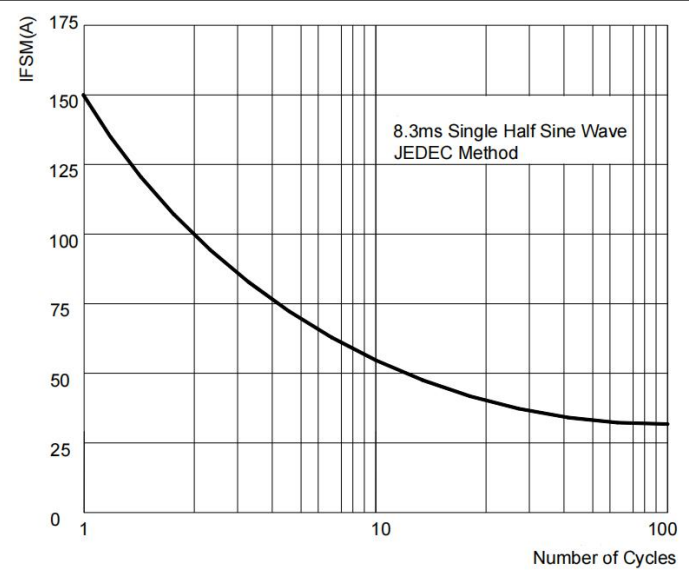
FIG3:Typical Forward Characteristics
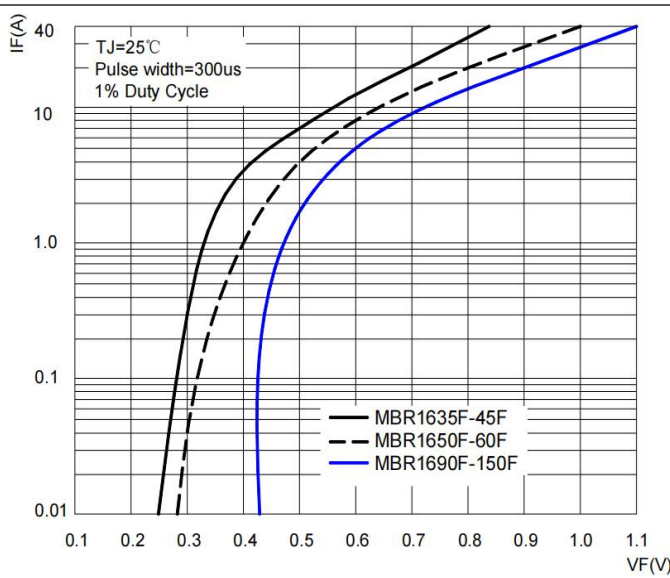

TJ=25℃
Pulse width=300us
1% Duty Cycle

MBR1635F-45F
MBR1650F-60F
MBR1690F-150F

FIG4:Typical Reverse Characteristics

Tj=100℃
Tj=75℃
Tj=25℃

361° Circuit Protection System

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■ Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR1635F ~ MBR16150F	ITO-220AC	50	1000	5000	Tube

■ Outline Dimensions

ITO-220AC

Dimensions in inches and (millimeters)

Revised: 2021-11-29