



# DATA SHEET

SEMICONDUCTOR

MBR1020FCT THRU MBR10200FCT

## 10A SCHOTTKY BARRIER RECTIFIER

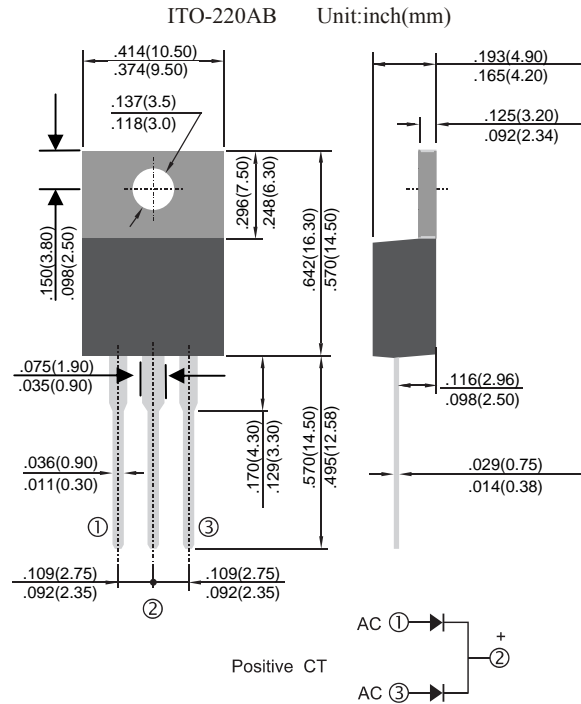


### FEATURES

- Schottky Barrier Chip
- Guard Ring for Transient Protection
- High Current Capability, Low Forward
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability
- Classification 94V-0
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

### MECHANICAL DATA

- Case: ITO-220AB Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: As Marked on Body
- Mounting Position: Any



Ordering Information	
Part Number	Remark
MBR10xxxFCT-F	General
MBR10xxxFCT-H	Halogen Free
MBR10xxxFCT-A	AEC-Q101 qualified

### Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified

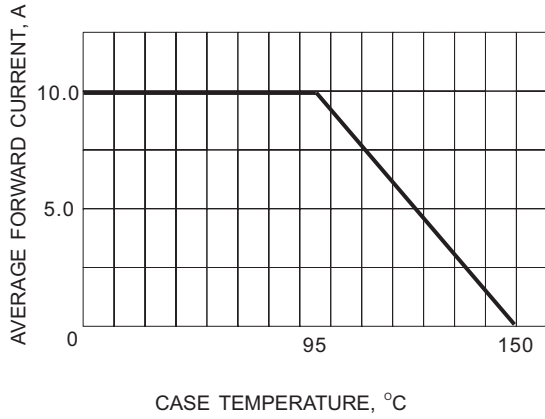
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	Units		
		1020FCT	1030FCT	1040FCT	1045FCT	1050FCT	1060FCT	1065FCT	1080FCT	10100FCT	10150FCT	10200FCT			
Peak Repetitive Reverse Voltage	VRRM	20	30	40	45	50	60	65	80	100	150	200	Volts		
Working Peak Reverse Voltage	VRWM														
DC Blocking Voltage	VR														
RMS Reverse Voltage	VR(RMS)	14	21	28	31.5	35	42	45.5	56	70	105	140	Volts		
Average Rectified Output Current @TC = 95°C	IF	10											Amps		
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	150											Amps		
Forward Voltage @IF = 5.0A	VF	0.55		0.7		0.75			0.80		0.90		Volts		
Peak Reverse Current @TA = 25°C At Rated DC Blocking Voltage @TA = 100°C	IRM	0.1			0.1			0.025		15			6.0	1.0	mA
Typical Junction Capacitance (Note 1)	Cj	350				280				200				pF	
Typical Thermal Resistance	RθJC	4.5											/W		
Operating and Storage Temperature Range	Tj, TSTG	-55 to +150													

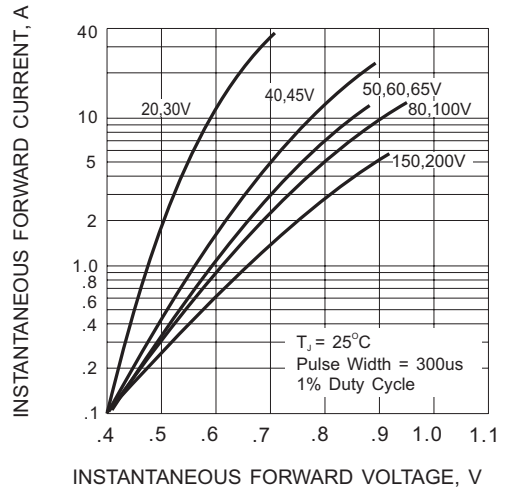
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

# DEVICE CHARACTERISTICS

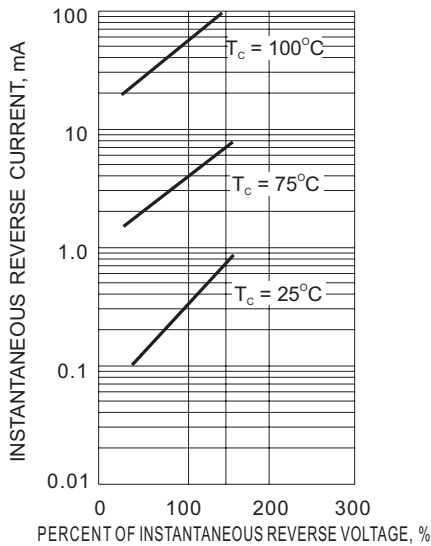
## MBR1020FCT THRU MBR10200FCT



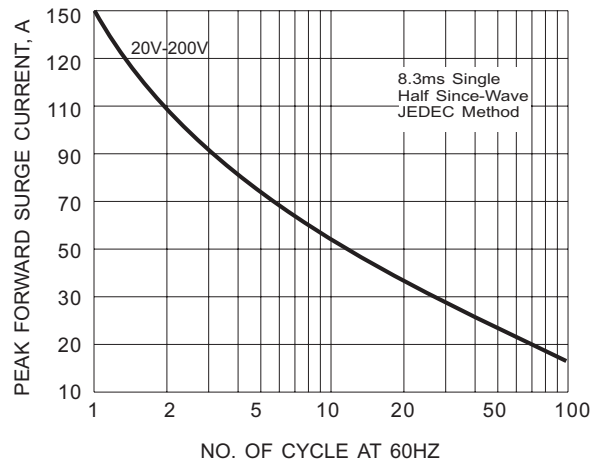
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig.3- TYPICAL REVERSE CHARACTERISTIC**

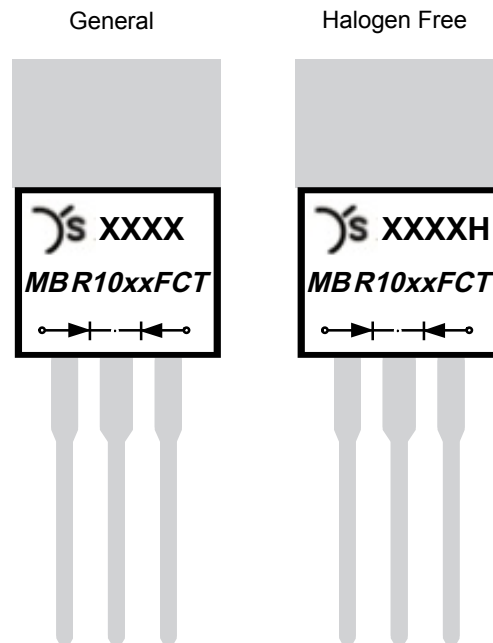


**Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT**



## Marking Information

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Line 1: YS Logo and Date code

The first half of Line 1: YS logo



The second half of Line 1:

YYWW: Year,

YYWW: Week.

Line 2 : Device name and Package type

MBR: Schottky Barrier Rectifier

10xx: 10 Ampere Series product.

10xx: The peak reverse Voltage of product.

Line 3 : Device Structure symbol