

# MBR2040FCT SERIES

## 20 AMPERES SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 40 to 200 Volt **CURRENT** 20 Ampere

### FEATURES

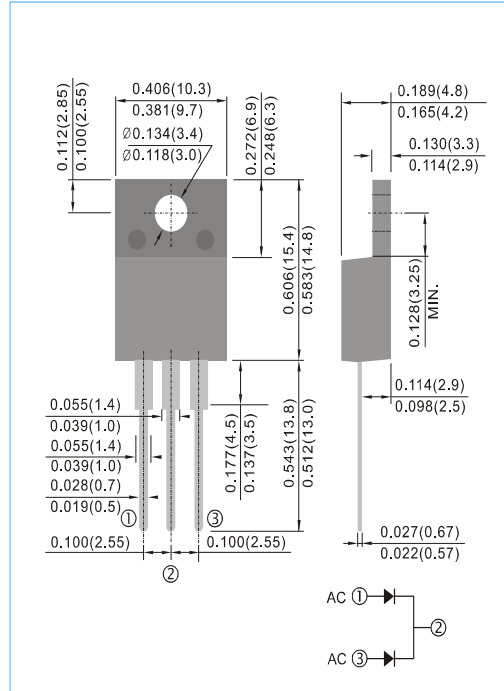
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.056 ounces, 1.6 grams

### ITO-220AB

Unit : inch(mm)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

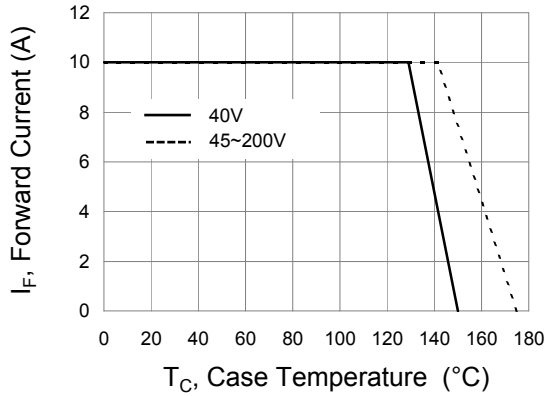
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	MBR2040FCT	MBR2045FCT	MBR2050FCT	MBR2060FCT	MBR2080FCT	MBR2090FCT	MBR20100FCT	MBR20150FCT	MBR20200FCT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current (See fig.1)	I <sub>F(AV)</sub>	20									A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	200									A
Maximum Forward Voltage at 10A, per leg	V <sub>F</sub>	0.7		0.75		0.8			0.9		V
Maximum DC Reverse Current at Rated DC T <sub>J</sub> =25°C Blocking Voltage T <sub>J</sub> =125°C	I <sub>R</sub>	0.05 20									mA
Typical Thermal Resistance	R <sub>θJC</sub>	2									°C / W
Operating and Storage Junction Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150	-65 to +175								°C

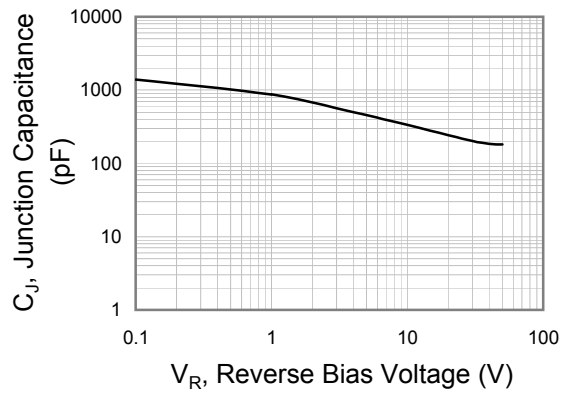
Notes :

Both Bonding and Chip structure are available.

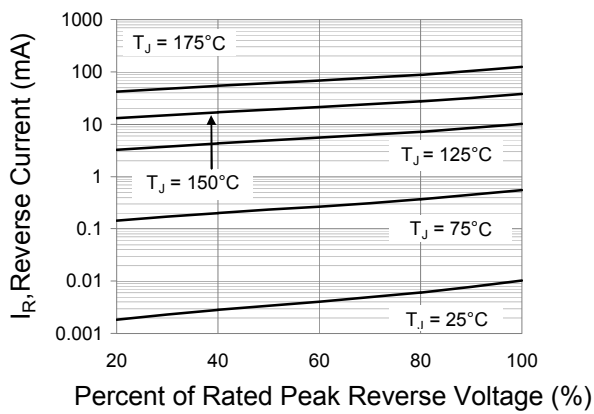
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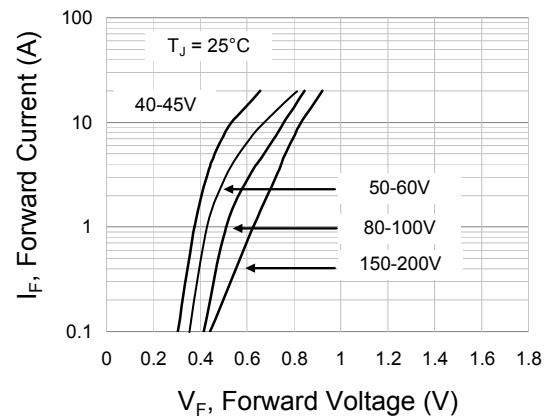
**Fig.1 Forward Current Derating Curve**



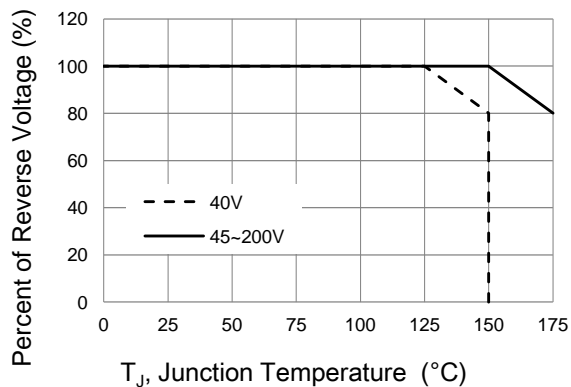
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**



## MBR2040FCT SERIES

Part No\_packing code\_Version

MBR2040FCT\_T0\_00001

For example :

RB500V-40\_R2\_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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