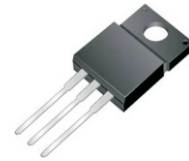


## MBR20D45FCT-G Thru. MBR20D200FCT-G

Forward current: 20A

Reverse voltage: 45 to 200V

RoHS Device



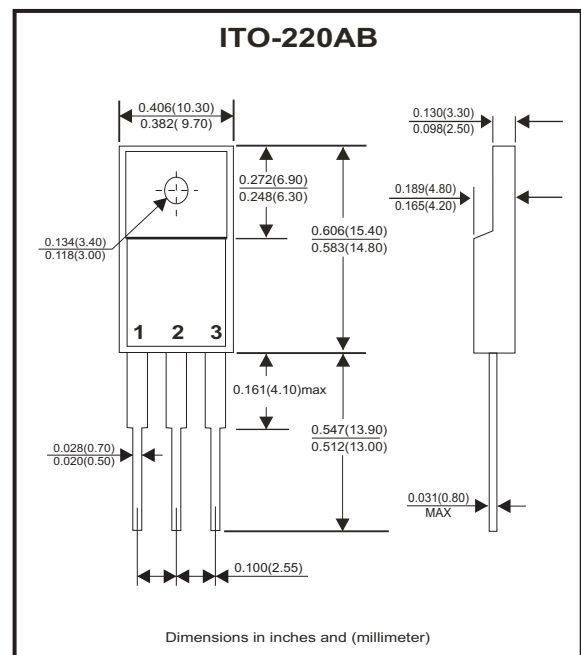
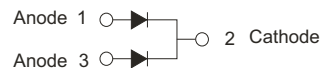
### Features

- Silicon epitaxial planar chip, metal silicon junction.
- Guard ring for overvoltage protection.
- Low stored charge, majority carrier conduction.
- Low power loss, high efficiency
- High current capability.
- High surge capability.

### Mechanical data

- Epoxy: UL94V-0 rated flame retardant.
- Case: JEDEC ITO-220AB molded plastic body over passivated chip.
- Leads: Axial leads, solderable per MIL-STD-202, method 208 guaranteed.
- Polarity: As marked
- Weight: 1.70 grams

### Circuit diagram



### Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.  
Single phase, half wave, 60Hz, resistive or inductive loaded.  
For capacitive load, derate current by 20% .

Parameter	Symbol	MBR20D						Units
		45FCT-G	60FCT-G	80FCT-G	100FCT-G	150FCT-G	200FCT-G	
Max. Repetitive peak reverse voltage	V <sub>RRM</sub>	45	60	80	100	150	200	V
Max. RMS voltage	V <sub>RMS</sub>	31.5	42	56	70	105	140	V
Continuous reverse voltage	V <sub>R</sub>	45	60	80	100	150	200	V
Max. forward voltage I <sub>F</sub> =10.0A, T <sub>A</sub> =25°C	V <sub>F</sub>	0.70	0.80	0.85		0.95		V
Operating Temperature	T <sub>J</sub>	-55 to +150						°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.1	I <sub>O</sub>			20.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I <sub>FSM</sub>			150	A
Reverse Current	V <sub>R</sub> =V <sub>RRM</sub> T <sub>A</sub> =25°C	I <sub>R</sub>			0.1	mA
	V <sub>R</sub> =V <sub>RRM</sub> T <sub>A</sub> =125°C	I <sub>R</sub>			10	mA
Thermal Resistance	Junction to case	R <sub>θJC</sub>		4.0		°C/W
Storage temperature		T <sub>STG</sub>	-65		+175	°C

Company reserves the right to improve product design , functions and reliability without notice.

REV: A

## Rating and characteristic curves (MBR20D45FCT-G Thru. MBR20D200FCT-G)

Fig.1 - Forward Current Derating Curve

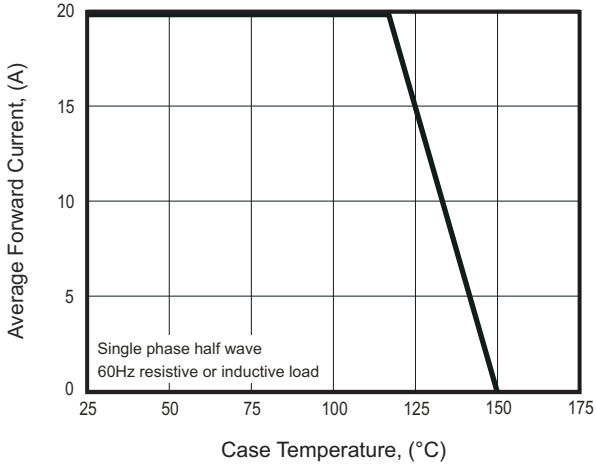


Fig.2 - Maximum Non-Repetitive Surge Current

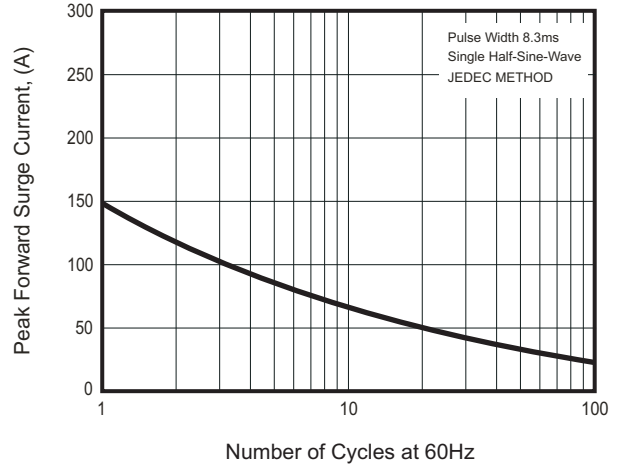


Fig.3 - Typical Reverse Characteristics

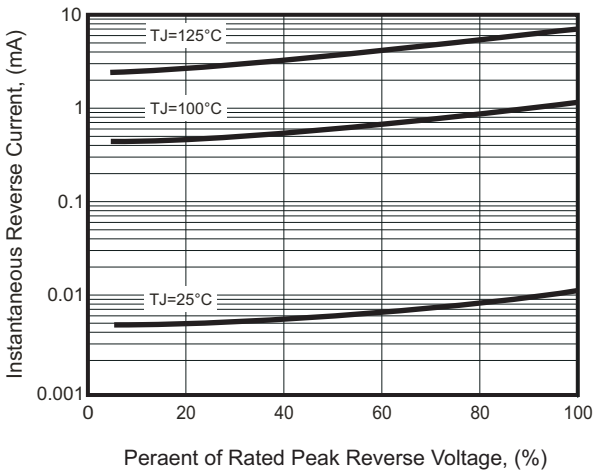
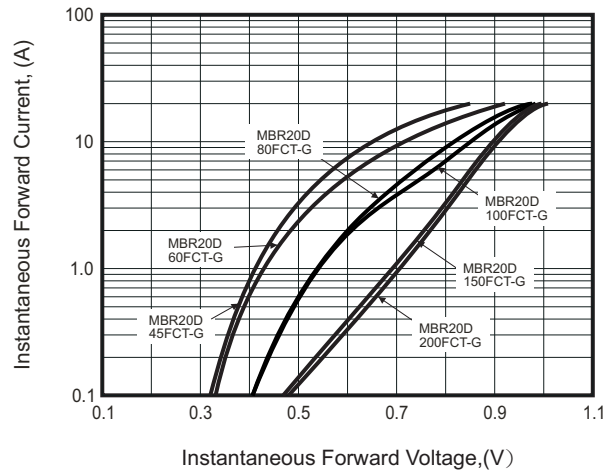


Fig.4 - Typical Forward Characteristics



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## Marking Code

Part Number	Marking code
MBR20D45FCT-G	MBR20D45FCT
MBR20D60FCT-G	MBR20D60FCT
MBR20D80FCT-G	MBR20D80FCT
MBR20D100FCT-G	MBR20D100FCT
MBR20D150FCT-G	MBR20D150FCT
MBR20D200FCT-G	MBR20D200FCT

## Standard Packaging

Case Type	TUBE PACK	
	TUBE ( pcs )	BOX ( pcs )
ITO-220AB	50	2,000

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