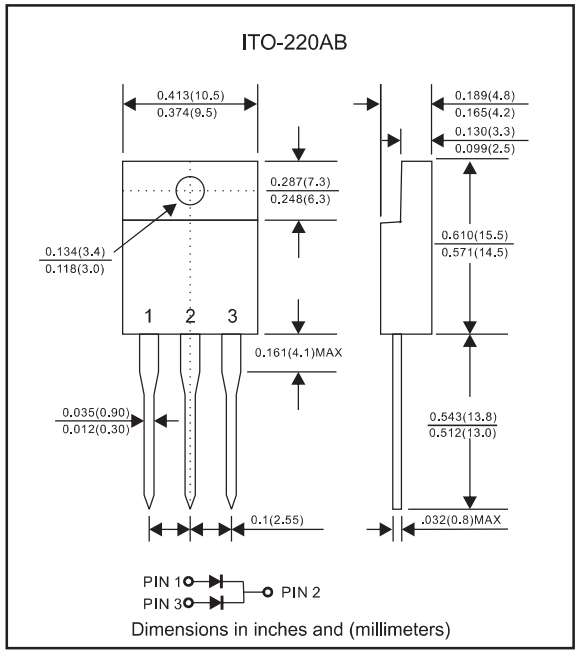
MBR1040FCT THRU MBR10200FCT

10A High Barrier Power Schottky Rectifiers - 40V-200V

Features

- Low power loss, high efficiency.
- High current capability
- High surge capability.
- Guardring for overvoltage protection.
- Low stored charge majority carrier conduction
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free parts, ex. MBR1040FCT-H.

Package outline



Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : JEDEC ITO-220AB molded plastic body over passivated chip
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			10.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	A
Reverse current	$V_R = V_{RRM}$ T_J = 25°C	I_R			0.05	mA
	$V_R = V_{RRM}$ T_J = 125°C				10	
Thermal resistance	Junction to case	$R_{\theta JC}$		3.0		°C/W
Storage temperature		T_{STG}	-65		+175	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	V_F *5 (V)	Operating temperature T_J, (°C)
MBR1040FCT	40	28	40	0.70	0.84	-55 to +150
MBR1045FCT	45	31.5	45			
MBR1050FCT	50	35	50	0.80	0.90	
MBR1060FCT	60	42	60			
MBR1080FCT	80	56	80	0.85	0.95	
MBR10100FCT	100	70	100			
MBR10150FCT	150	105	150	0.92	1.00	-55 to +175
MBR10200FCT	200	140	200			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage IF = 5.0A

*5 Maximum of forward voltage IF=10.0A

Rating and characteristic curves (MBR1040FCT THRU MBR10200FCT)

FIG. 1 - FORWARD DERATING CURVE

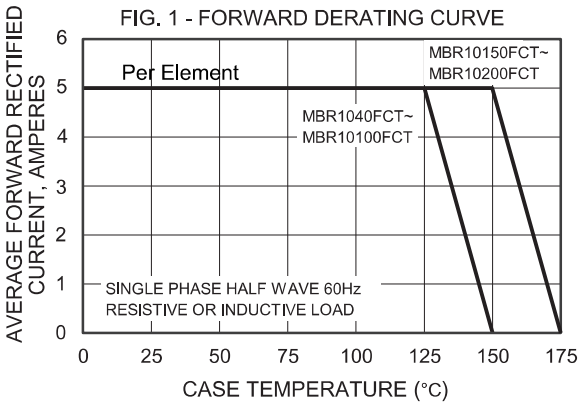


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

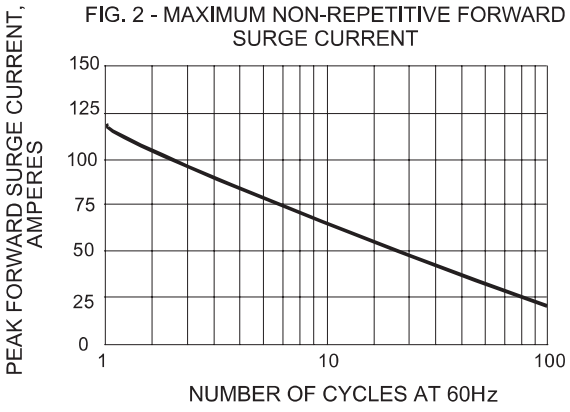


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

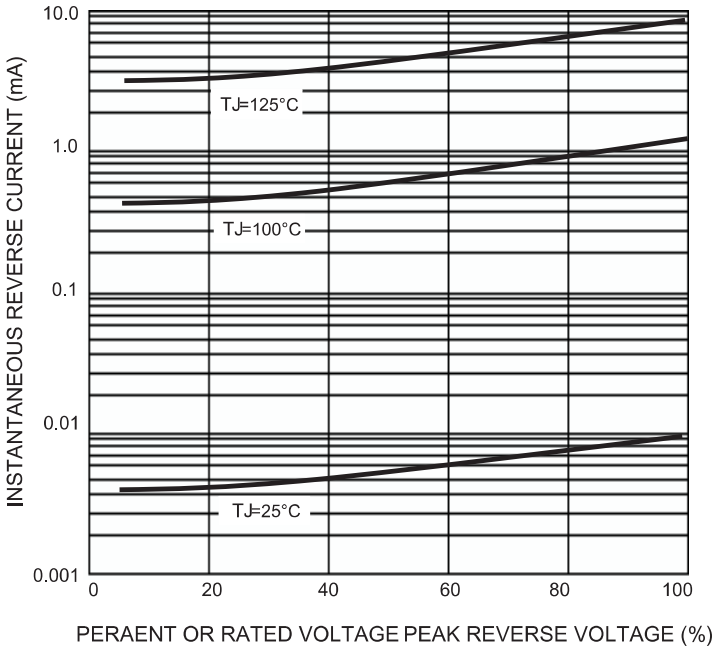
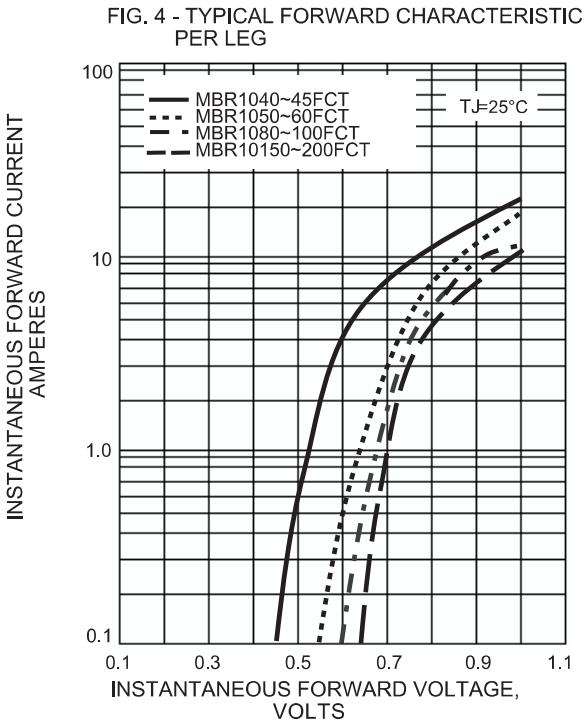


FIG. 4 - TYPICAL FORWARD CHARACTERISTIC PER LEG



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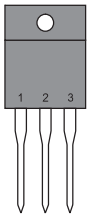
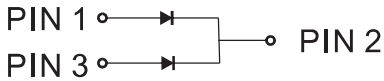
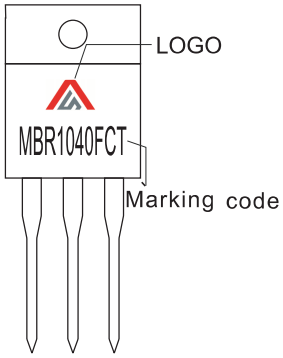
Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code	Example
MBR1040FCT	MBR1040FCT	
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MBR1050FCT	MBR1050FCT	
MBR1060FCT	MBR1060FCT	
MBR1080FCT	MBR1080FCT	
MBR10100FCT	MBR10100FCT	
MBR10150FCT	MBR10150FCT	
MBR10200FCT	MBR10200FCT	