

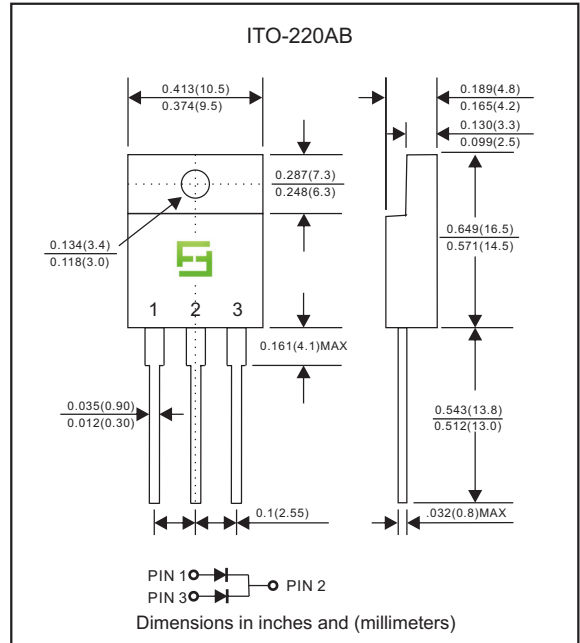
Features

- 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. MBR2040FCT-H.

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 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

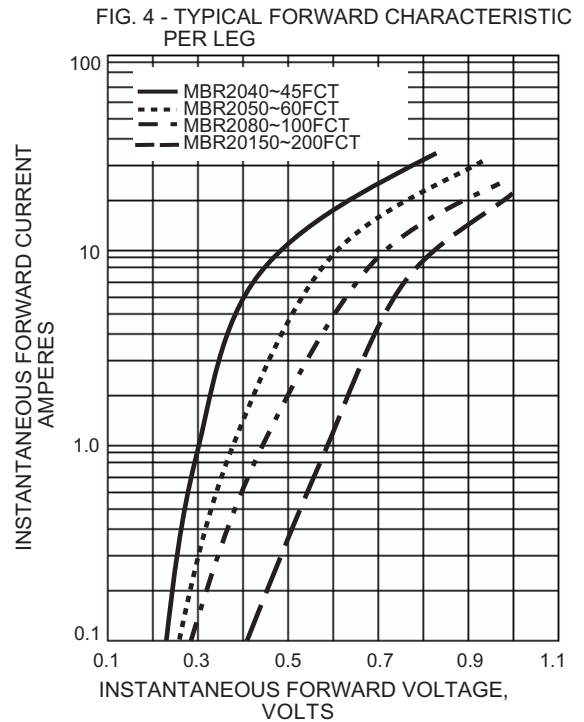
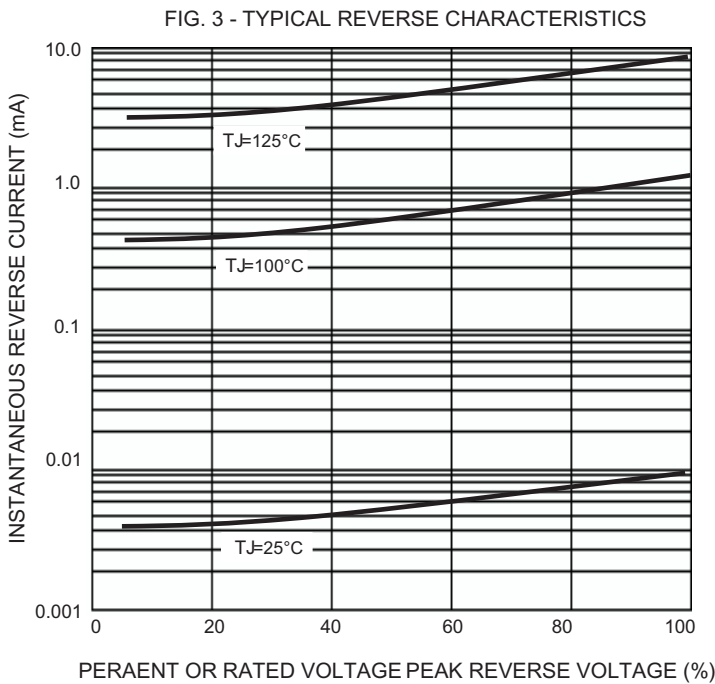
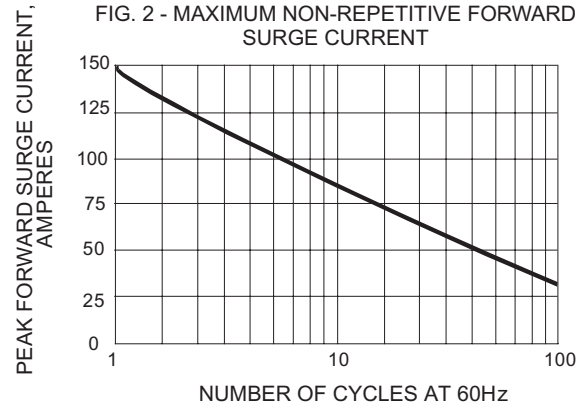
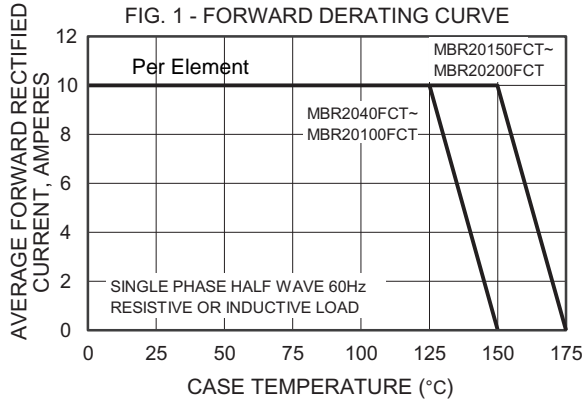
Package outline



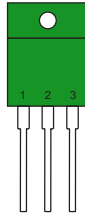
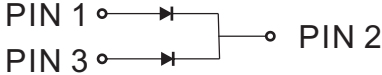
Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBR2040FCT	MBR2045FCT	MBR2050FCT	MBR2060FCT	MBR2080FCT	MBR2090FCT	MBR20100FCT	MBR20150FCT	MBR20200FCT	UNITS	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	90	100	150	200	V	
Maximum RMS Voltage	V_{RMS}	28	31.5	35	42	56	63	70	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	90	100	150	200	V	
Maximum Average Forward Current (See fig.1)	$I_{F(AV)}$	20									A	
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	150									A	
Maximum Forward Voltage at 10A, per leg	V_F	0.70	0.80	0.85				0.92			V	
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	I_R						0.05	20				mA
Typical Thermal Resistance	$R_{\theta JC}$						2					$^\circ\text{C} / \text{W}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to + 150							-55 to + 175		$^\circ\text{C}$	

Rating and characteristic curves



Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBR2040FCT	MBR2040FCT
MBR2045FCT	MBR2045FCT
MBR2050FCT	MBR2050FCT
MBR2060FCT	MBR2060FCT
MBR2080FCT	MBR2080FCT
MBR20100FCT	MBR20100FCT
MBR20150FCT	MBR20150FCT
MBR20200FCT	MBR20200FCT

Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
ITO-220AB	50	525*32*7.0	1,000	555*150*40	580*230*175	5,000	15.0

Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave-soldering

