

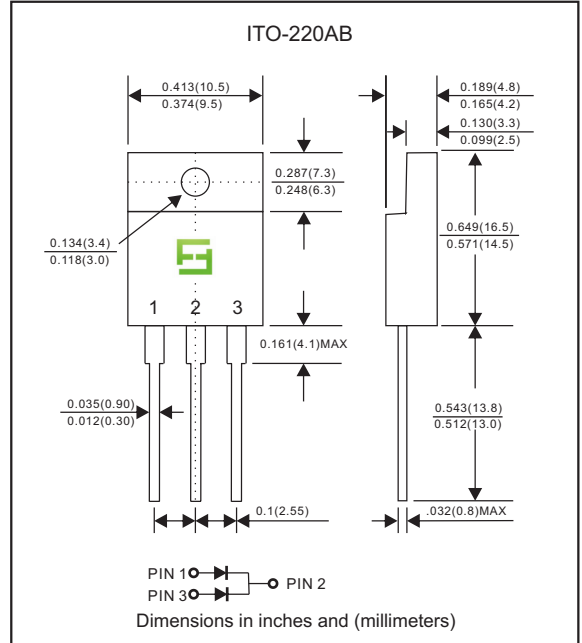
### Features

- 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. MBR3040FCT-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

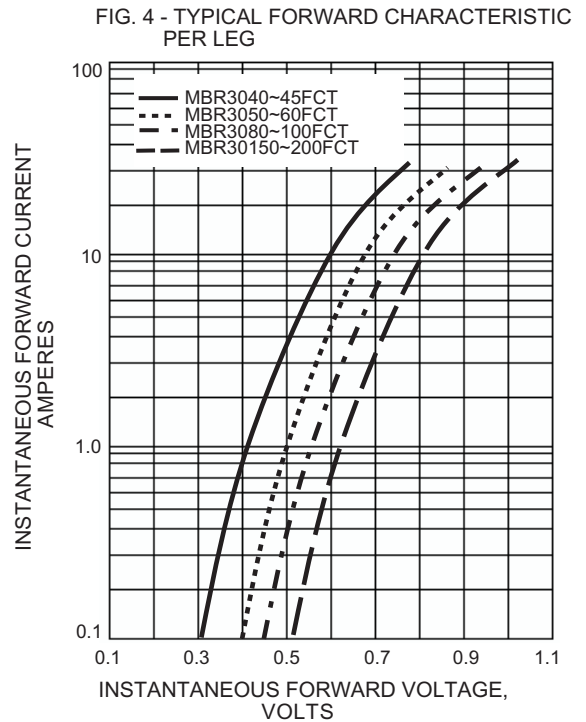
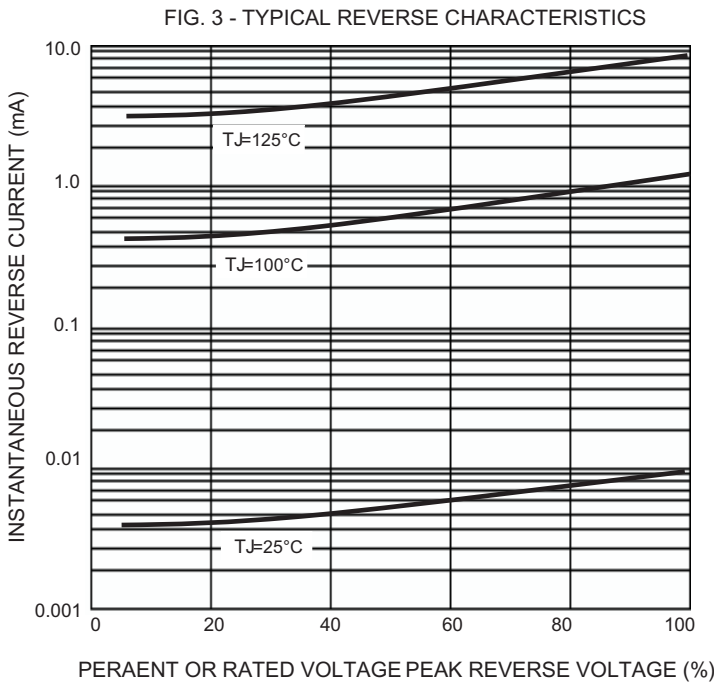
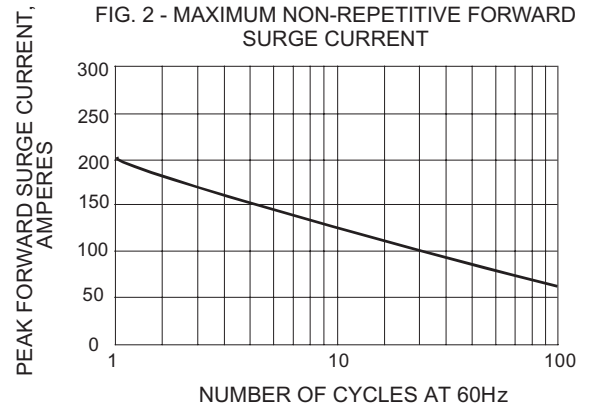
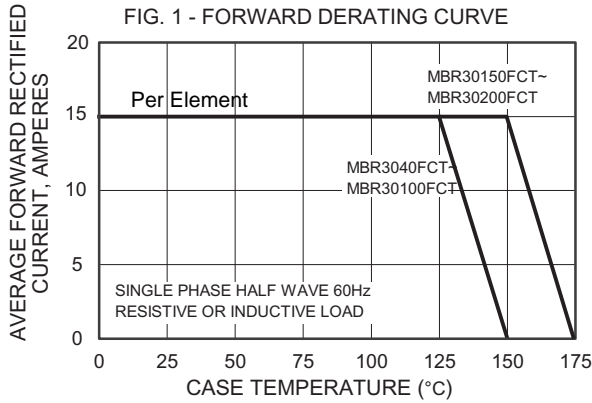
### Package outline



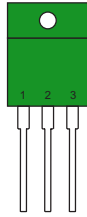
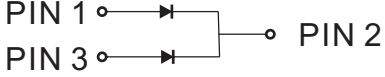
### Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBR3040FCT	MBR3045FCT	MBR3050FCT	MBR3060FCT	MBR3080FCT	MBR3090FCT	MBR30100FCT	MBR30150FCT	MBR30200FCT	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)	$I_{F(AV)}$	30									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	200									A
Maximum Forward Voltage at15A, 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	$R_{\theta JC}$	1.5									$^{\circ}\text{C} / \text{W}$
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
MBR3040FCT	MBR3040FCT
MBR3045FCT	MBR3045FCT
MBR3050FCT	MBR3050FCT
MBR3060FCT	MBR3060FCT
MBR3080FCT	MBR3080FCT
MBR30100FCT	MBR30100FCT
MBR30150FCT	MBR30150FCT
MBR30200FCT	MBR30200FCT

## 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

