

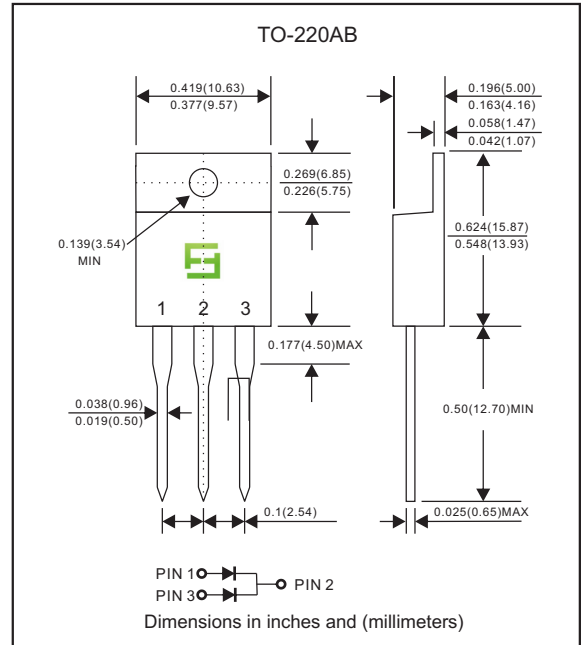
### Features

- 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. MBR3040CT-H.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, TO-220AB
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

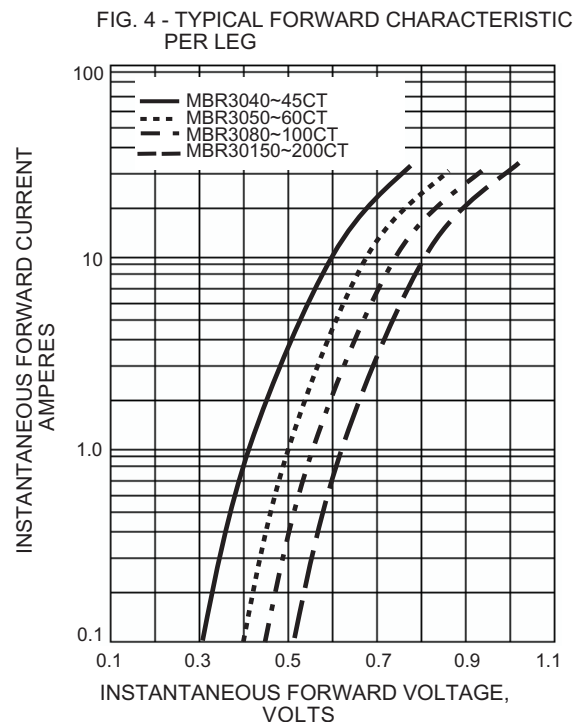
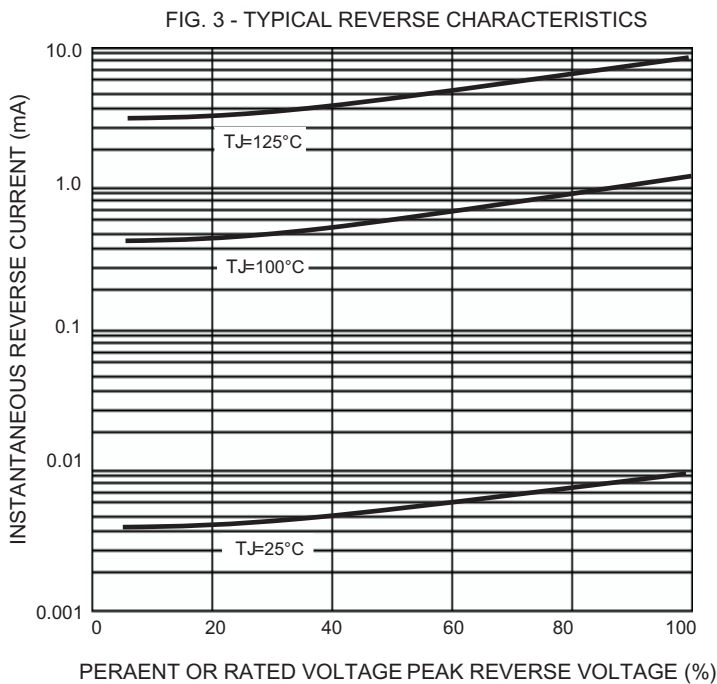
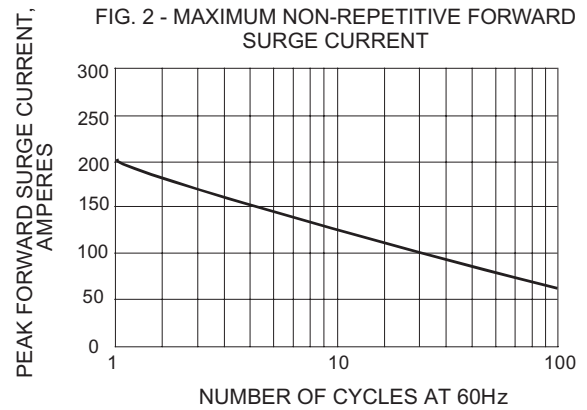
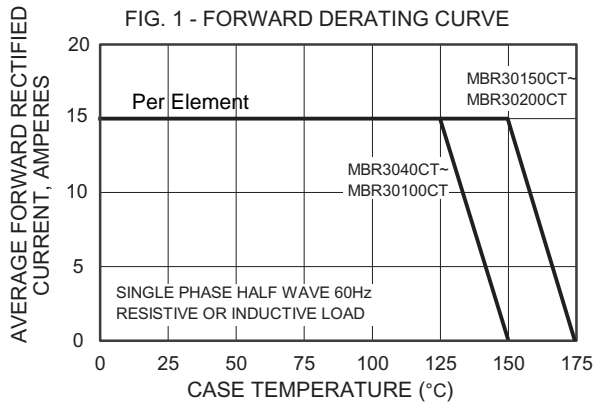
### Package outline



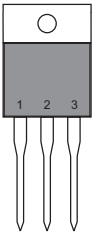
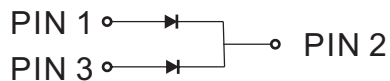
### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBR3040CT	MBR3045CT	MBR3050CT	MBR3060CT	MBR3080CT	MBR3090CT	MBR30100CT	MBR30150CT	MBR30200CT	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 at 15A, 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
MBR3040CT	MBR3040CT
MBR3045CT	MBR3045CT
MBR3050CT	MBR3050CT
MBR3060CT	MBR3060CT
MBR3080CT	MBR3080CT
MBR30100CT	MBR30100CT
MBR30150CT	MBR30150CT
MBR30200CT	MBR30200CT

**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)
TO-220AB	50	525*32*7.5	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

