

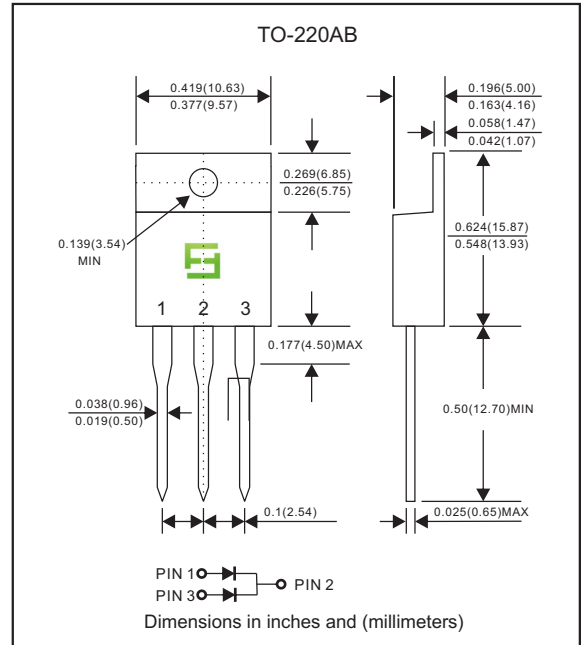
Features    

- 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

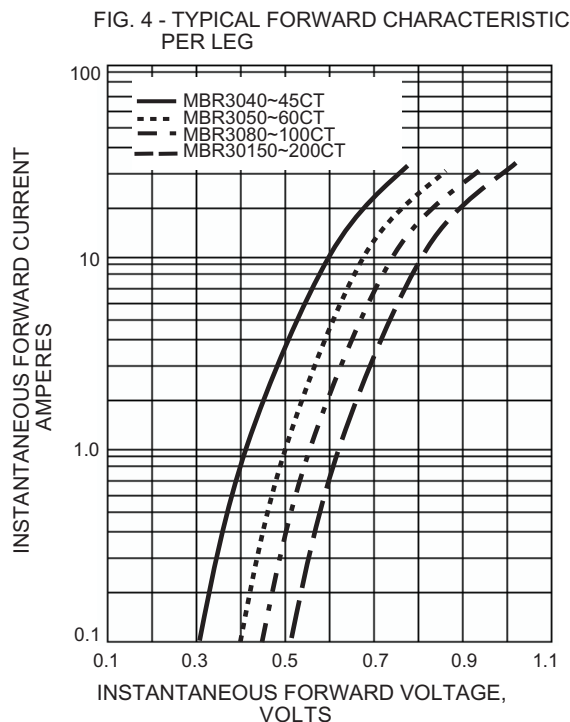
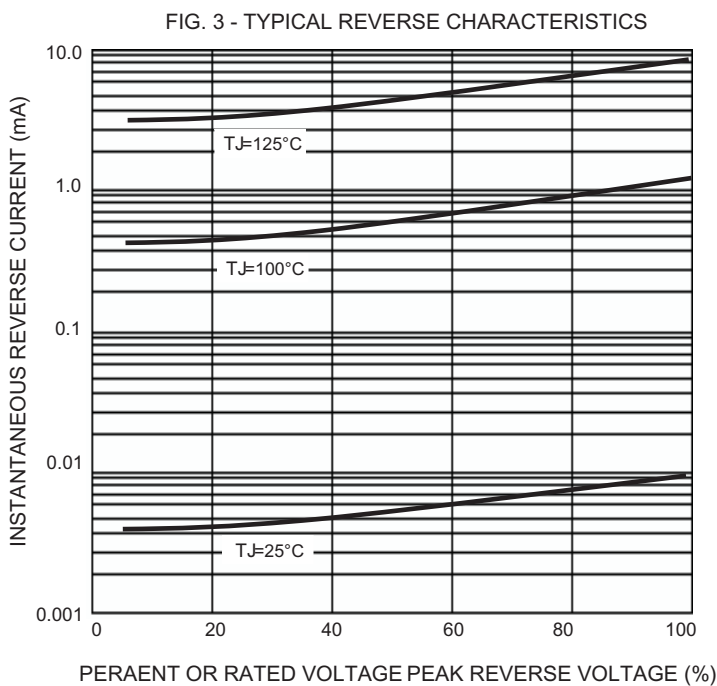
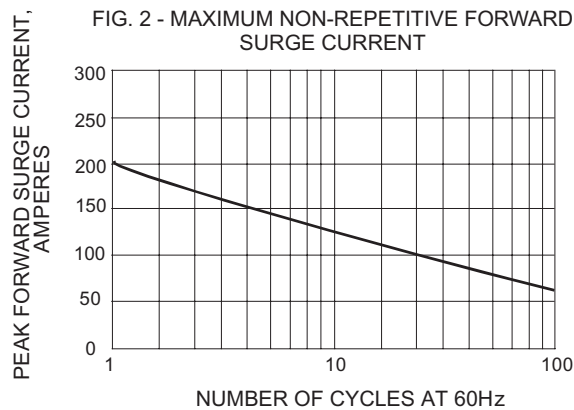
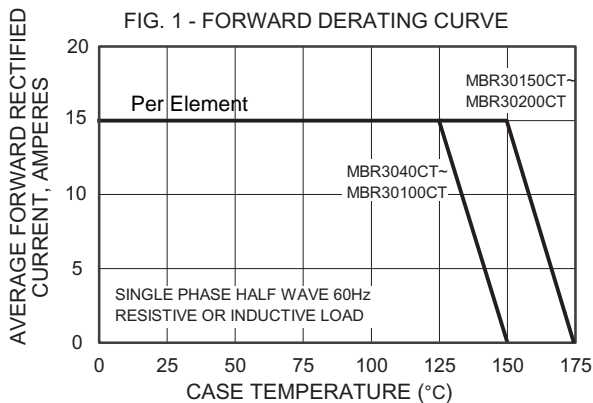
Package outline



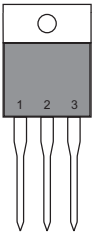
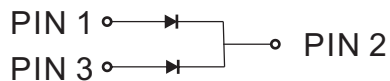
Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

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 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
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

