

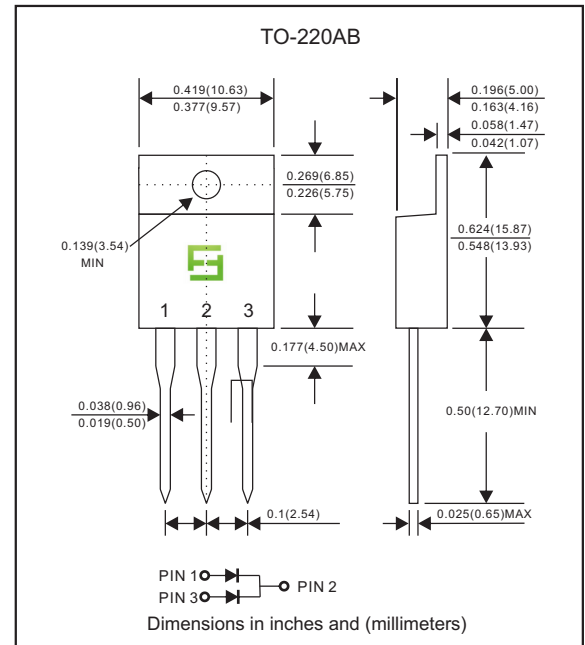
Features

- 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. MBR1040CT-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

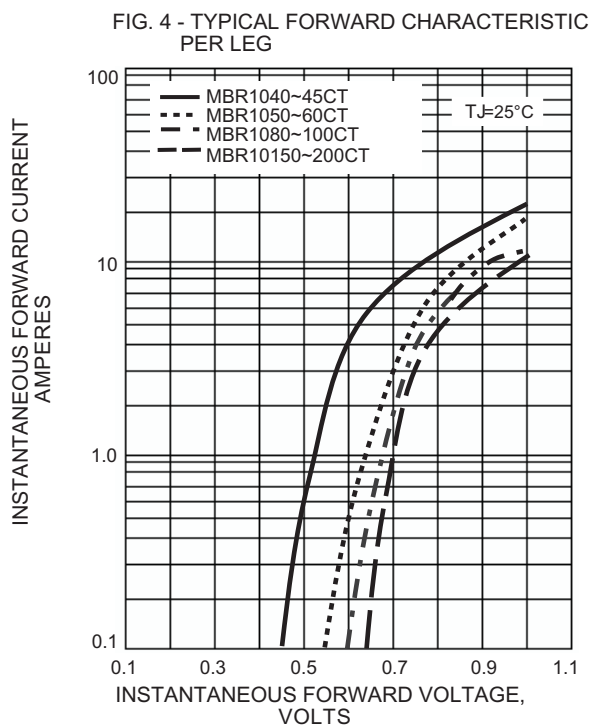
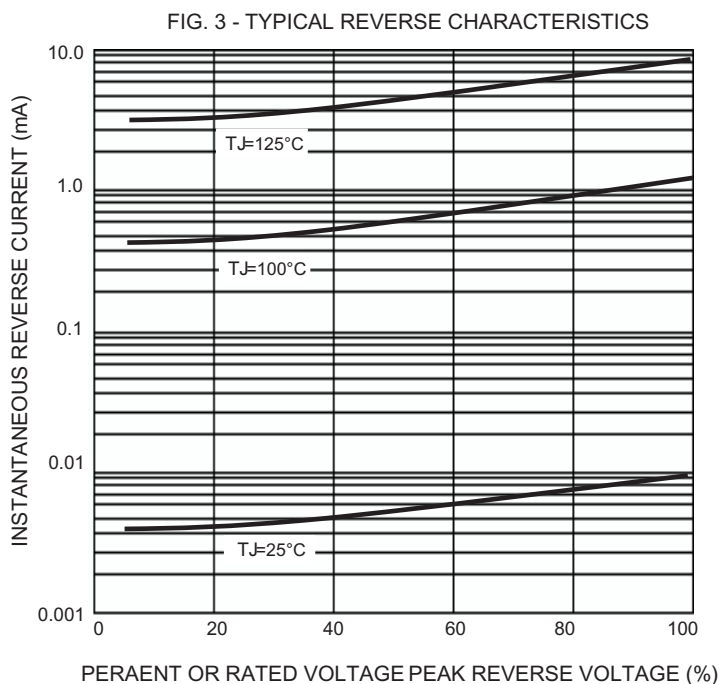
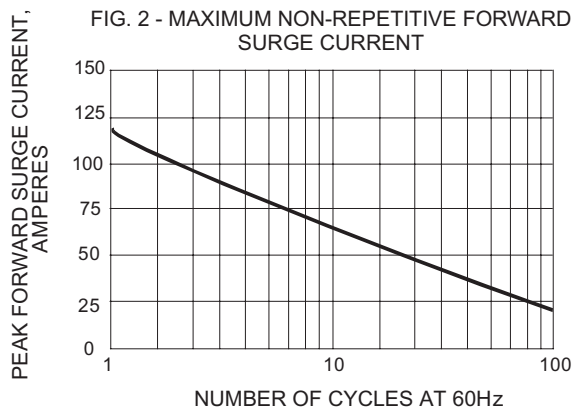
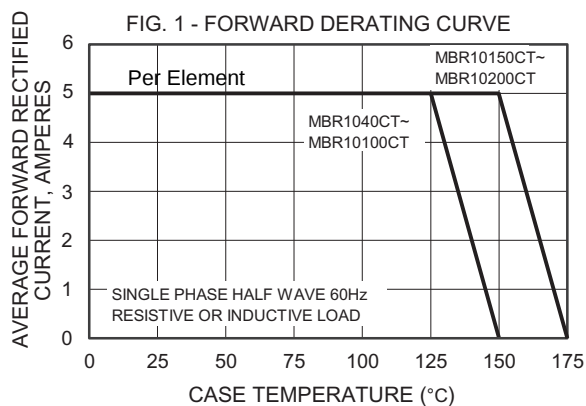
Package outline



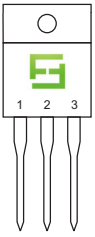
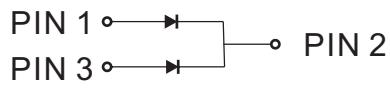
Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBR1040CT	MBR1045CT	MBR1050CT	MBR1060CT	MBR1080CT	MBR1090CT	MBR10100CT	MBR10150CT	MBR10200CT	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)}	10									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	120									A
Maximum Forward Voltage at 5A, per leg	V _F	0.70		0.80		0.85			0.92		V
Maximum DC Reverse Current T _J =25 °C at Rated DC Blocking Voltage T _J =125°C	I _R	0.05 20									mA
Typical Thermal Resistance	R _{θJC}	2.5									°C / W
Operating and Storage Junction Temperature Range	T _J ,T _{STG}	-55 to + 150							-55 to + 175		°C

Rating and characteristic curves



Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBR1040CT	MBR1040CT
MBR1045CT	MBR1045CT
MBR1050CT	MBR1050CT
MBR1060CT	MBR1060CT
MBR1080CT	MBR1080CT
MBR10100CT	MBR10100CT
MBR10150CT	MBR10150CT
MBR10200CT	MBR10200CT

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

