

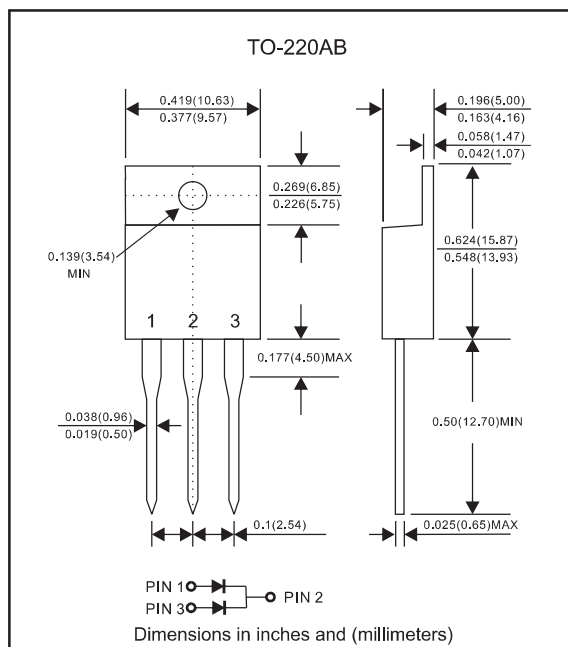
Features

- 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 : JEDEC TO-220AB molded plastic body over passivated chip
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- Mounting Position : Any

Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			30.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			200	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	I_R			0.05	mA
	$V_R = V_{RRM}$ $T_J = 125^{\circ}\text{C}$				15	
Thermal resistance (1)	Junction to case	$R_{\theta JC}$		2		$^{\circ}\text{C/W}$
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$

NOTE : (1) Device mounted on additional heatsink, (50mm x 50mm x 23mm Al heatsink).

SYMBOLS	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	Operating temperature T _J , (°C)
MBR3040CT	40	28	40	0.70	-55 to +150
MBR3045CT	45	31.5	45		
MBR3050CT	50	35	50	0.80	
MBR3060CT	60	42	60		
MBR3080CT	80	56	80	0.85	
MBR30100CT	100	70	100		
MBR30150CT	150	105	150	0.95	-55 to +175
MBR30200CT	200	140	200		

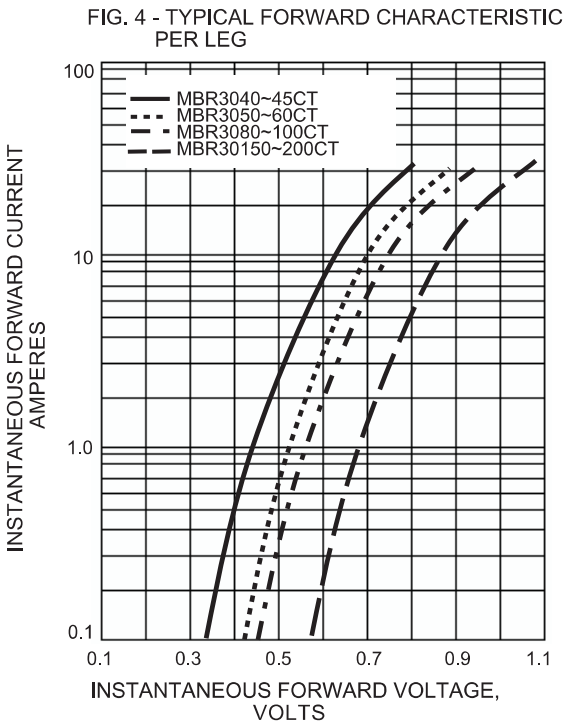
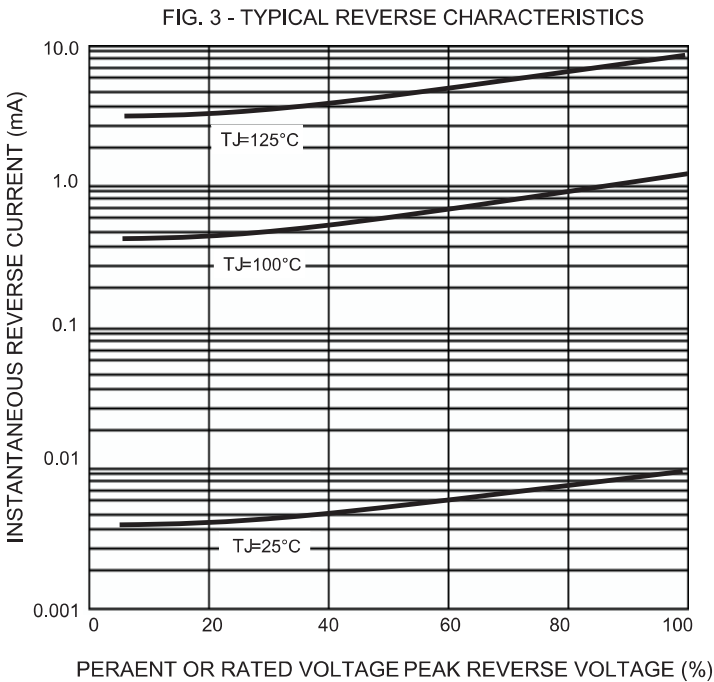
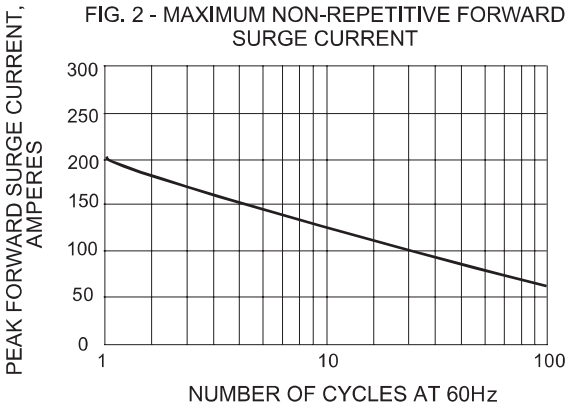
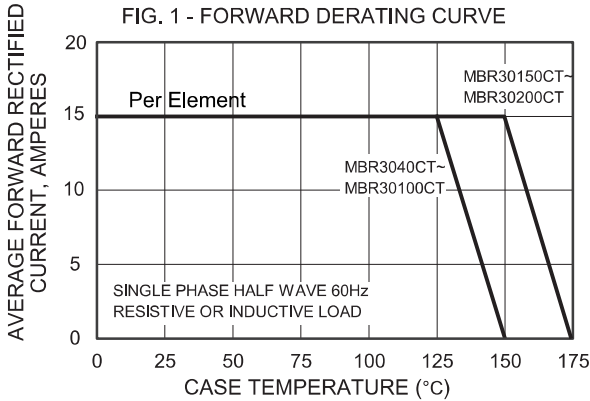
*1 Repetitive peak reverse voltage

*2 RMS voltage

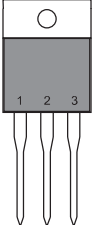
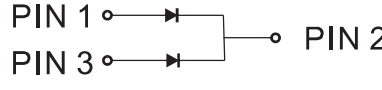
*3 Continuous reverse voltage

*4 Maximum forward voltage
IF = 15.0A, 25°C

Rating and characteristic curves (MBR3040CT THRU MBR30200CT)



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