

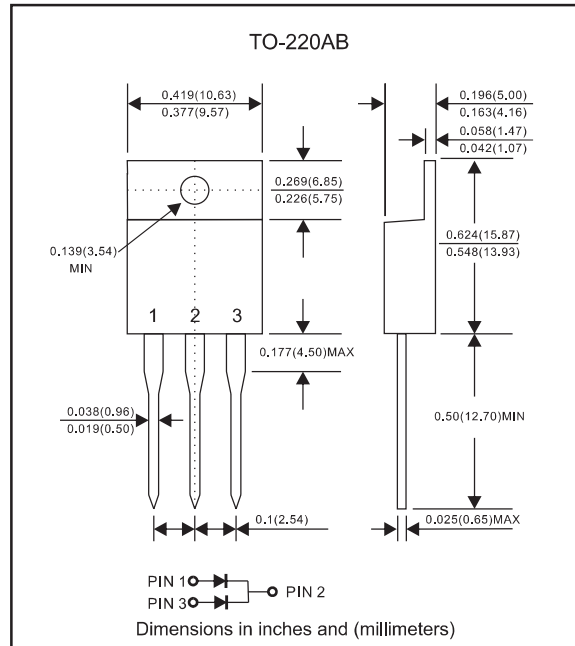
Features

- 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 part, ex.MBR1640CT-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			16.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			150	A
Reverse current	$V_R = V_{RRM} T_J = 25^\circ\text{C}$	I_R			0.05	mA
	$V_R = V_{RRM} T_J = 125^\circ\text{C}$				10	
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 , ($^\circ\text{C}$)
MBR1640CT	40	28	40	0.70	-55 to +150
MBR1645CT	45	31.5	45		
MBR1650CT	50	35	50	0.80	
MBR1660CT	60	42	60		
MBR1680CT	80	56	80	0.85	
MBR16100CT	100	70	100		
MBR16150CT	150	105	150	0.92	-55 to +175
MBR16200CT	200	140	200		

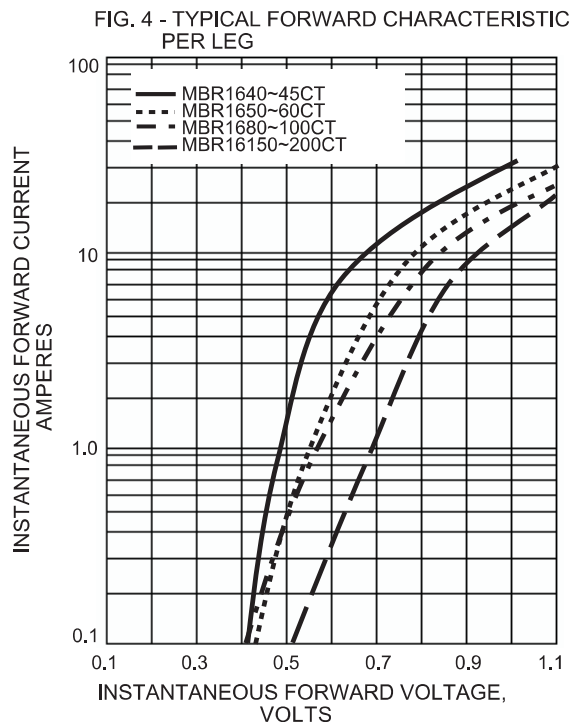
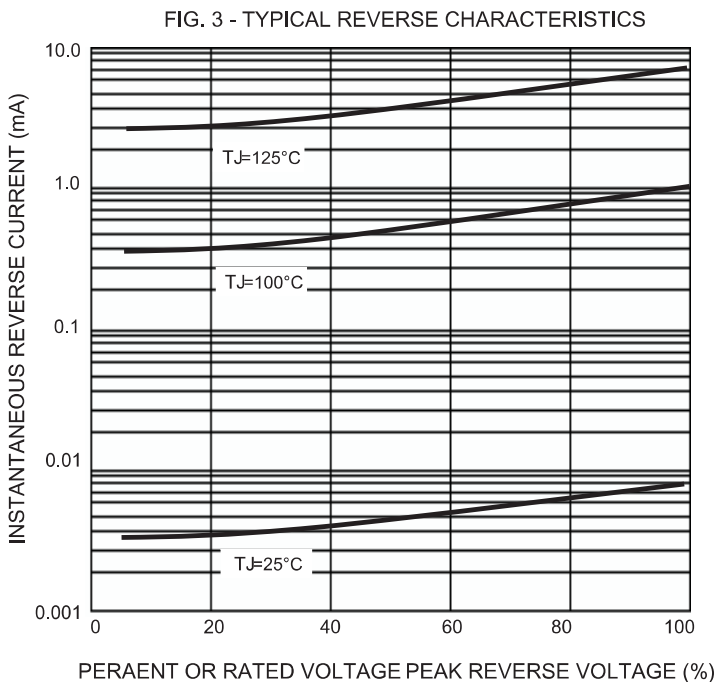
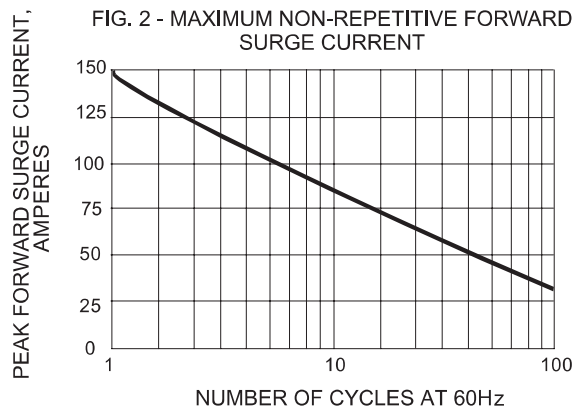
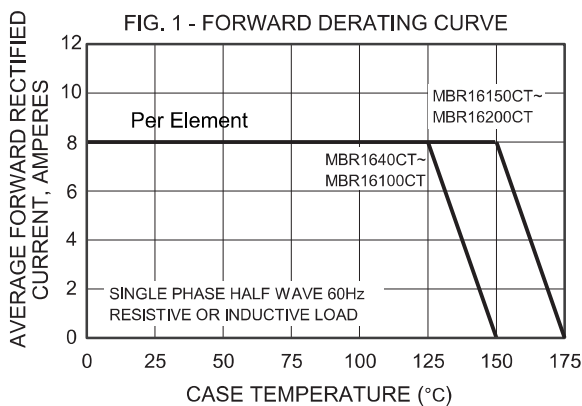
*1 Repetitive peak reverse voltage

*2 RMS voltage

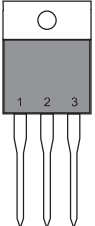
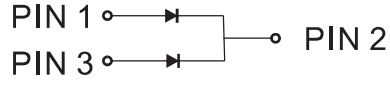
*3 Continuous reverse voltage

*4 Maximum forward voltage
IF = 8.0A, 25 $^\circ\text{C}$

Rating and characteristic curves (MBR1640CT THRU MBR16200CT)



Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBR1640CT	MBR1640CT
MBR1645CT	MBR1645CT
MBR1650CT	MBR1650CT
MBR1660CT	MBR1660CT
MBR1680CT	MBR1680CT
MBR16100CT	MBR16100CT
MBR16150CT	MBR16150CT
MBR16200CT	MBR16200CT