

### 20A High Barrier Power Schottky Rectifiers - 40V-200V

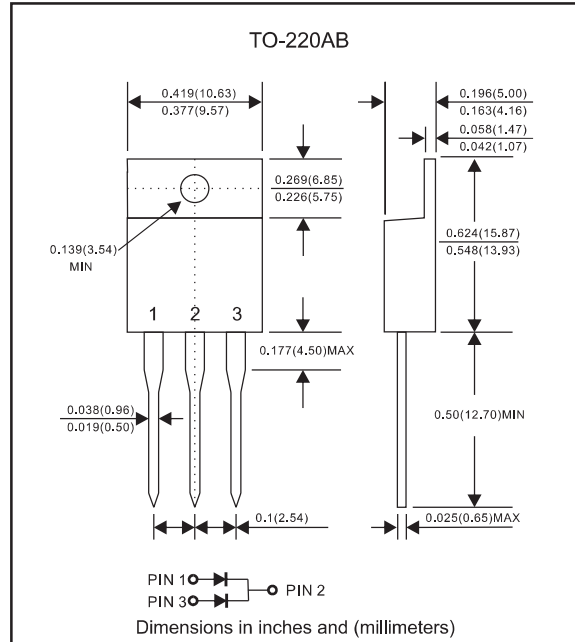
#### Features

- 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. MBR2040CT-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
- Weight : Approximated 2.10 gram

#### 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	$I_o$			20.0	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	Junction to case	$R_{\theta JC}$		2.0		$^\circ\text{C}/\text{W}$
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$V_F^{*5}$ (V)	Operating temperature $T_J$ , ( $^\circ\text{C}$ )
MBR2040CT	40	28	40	0.70	0.84	-55 to +150
MBR2045CT	45	31.5	45			
MBR2050CT	50	35	50	0.80	0.90	
MBR2060CT	60	42	60			
MBR2080CT	80	56	80	0.85	0.95	
MBR20100CT	100	70	100			
MBR20150CT	150	105	150	0.92	1.00	-55 to +175
MBR20200CT	200	140	200			

\*1 Repetitive peak reverse voltage

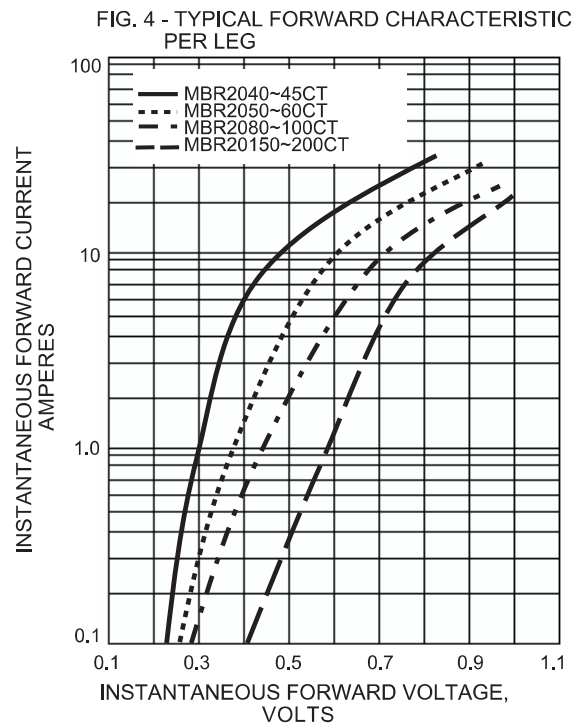
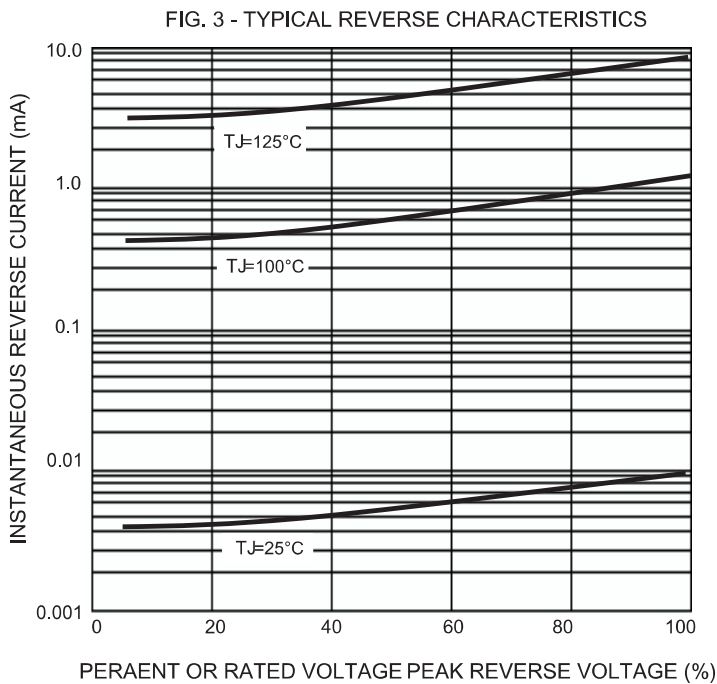
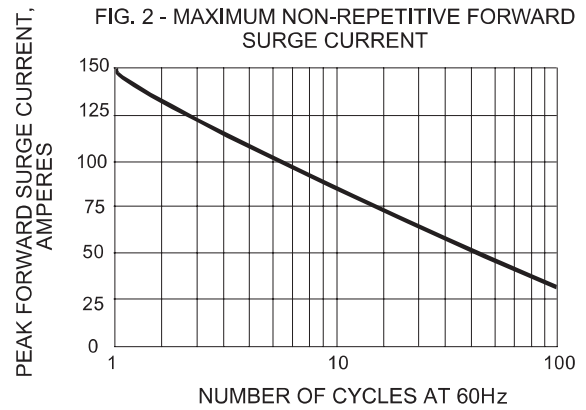
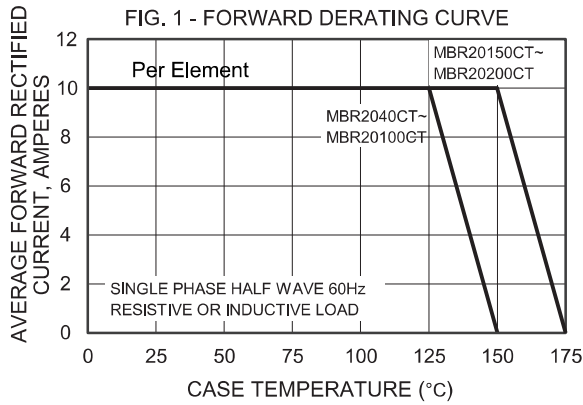
\*2 RMS voltage

\*3 Continuous reverse voltage

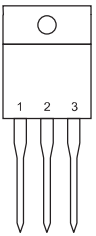
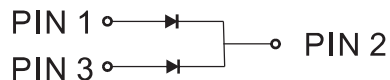
\*4 Maximum forward voltage  
IF = 10.0A, 25°C

\*5 Maximum of forward voltage  
IF = 20.0A, 25°C

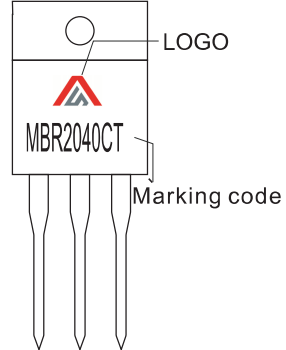
## Rating and characteristic curves (MBR2040CT THRU MBR20200CT)



## Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

## Marking

Type number	Marking code	Example
MBR2040CT	MBR2040CT	
MBR2045CT	MBR2045CT	
MBR2050CT	MBR2050CT	
MBR2060CT	MBR2060CT	
MBR2080CT	MBR2080CT	
MBR20100CT	MBR20100CT	
MBR20150CT	MBR20150CT	
MBR20200CT	MBR20200CT	

## 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

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