

**Features**

- Guard Ring For Transient Protection
- High Current Capability, High Efficiency
- Low Forward Voltage Drop
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Mounting Torque: 5 in-lbs Maximum
- Maximum Thermal Resistance : 2.0°C/W Junction to Case

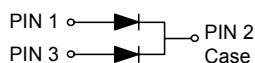
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR2020CT	MBR2020CT	20V	14V	20V
MBR2030CT	MBR2030CT	30V	21V	30V
MBR2035CT	MBR2035CT	35V	24.5V	35V
MBR2040CT	MBR2040CT	40V	28V	40V
MBR2045CT	MBR2045CT	45V	31.5V	45V
MBR2060CT	MBR2060CT	60V	42V	60V
MBR2080CT	MBR2080CT	80V	56V	80V
MBR20100CT	MBR20100CT	100V	70V	100V

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	20A	$T_C=120^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	2020CT-2045CT 2060CT	$I_{FM}=10A;$ $T_J=25^\circ\text{C}^*$
		2080CT-20100CT	
		2020CT-2045CT 2060CT	$I_{FM}=20A;$ $T_J=25^\circ\text{C}^*$
		2080CT-20100CT	
	2020CT-2045CT 2060CT 2080CT-20100CT	0.72V 0.85V 0.85V	$I_{FM}=20A;$ $T_J=125^\circ\text{C}^*$
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	2020CT-20100CT	$T_J=25^\circ\text{C}$
		2020CT-2060CT	$T_J=125^\circ\text{C}$
		2080CT-20100CT	5mA

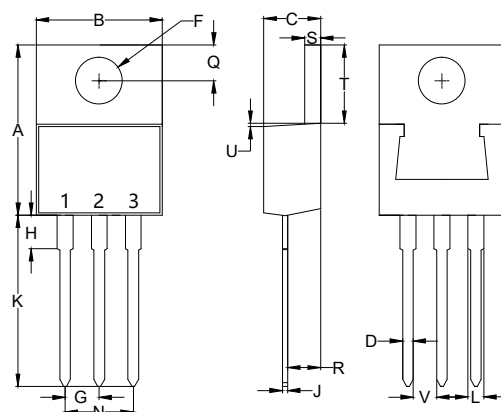
\*Pulse Test: Pulse Width 300µsec, Duty Cycle 2%  
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

**Internal Structure**



**20 Amp  
Schottky  
Barrier Rectifier  
20 to 100 Volts**

**TO-220AB**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.429	9.65	10.90	
C	0.140	0.201	3.56	5.10	
D	0.020	0.045	0.51	1.14	
F	0.131	0.170	3.34	4.31	Φ
G	0.079	0.121	2.01	3.07	
H	-----	0.250	-----	6.35	
J	0.011	0.025	0.28	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.158	0.242	4.02	6.14	
Q	0.087	0.135	2.22	3.43	
R	0.080	0.126	2.04	3.19	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

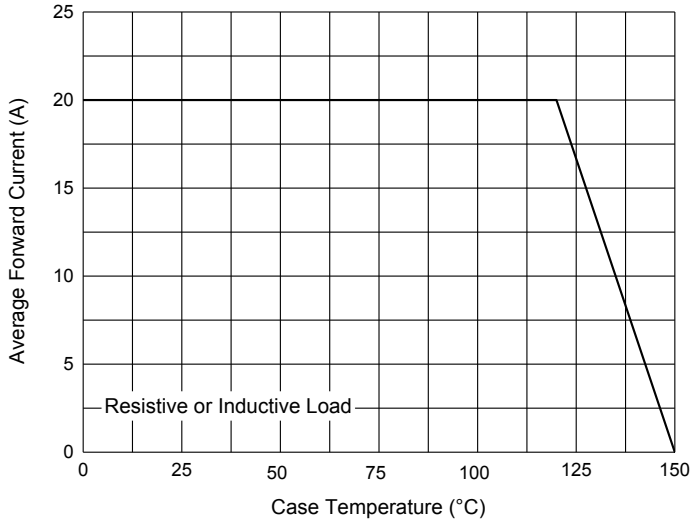


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

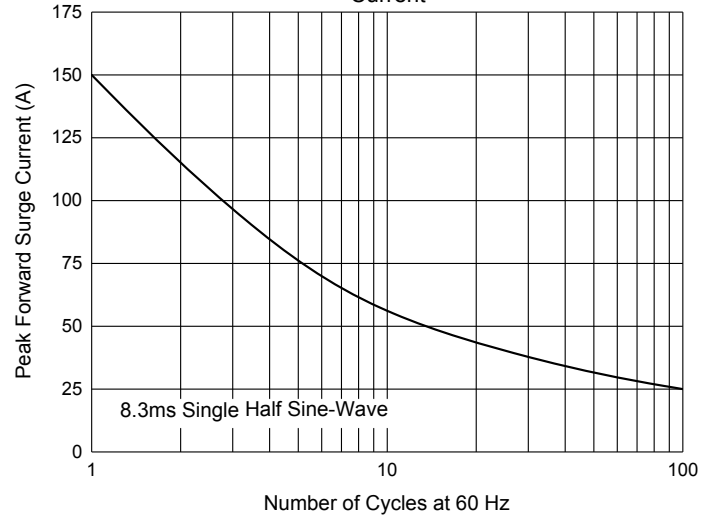


Fig. 3 - Typical Instantaneous Forward Characteristics

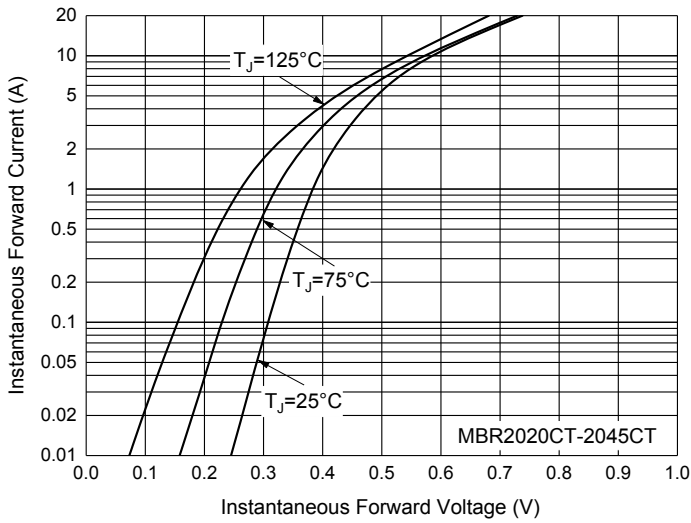


Fig. 4 - Typical Instantaneous Forward Characteristics

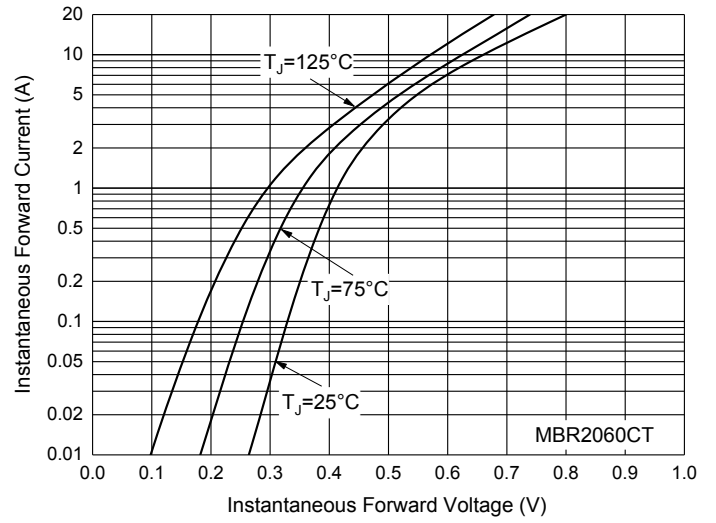


Fig. 5 - Typical Instantaneous Forward Characteristics

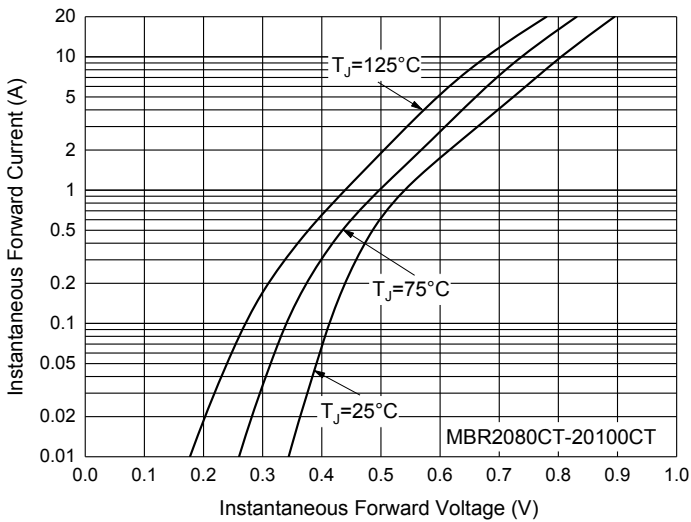
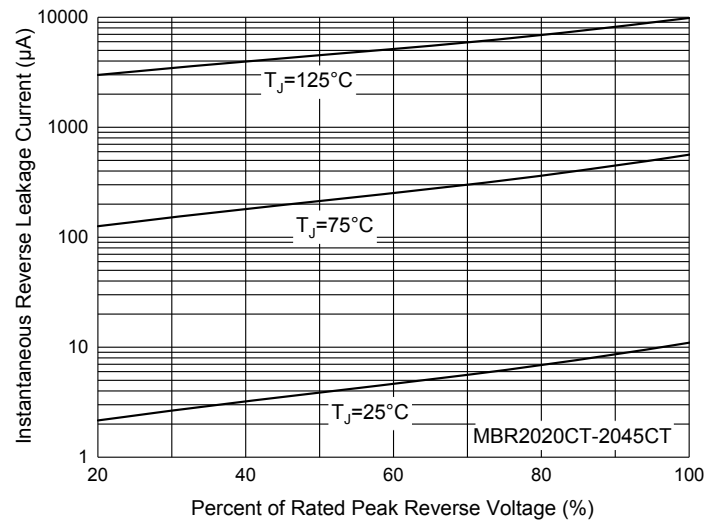


Fig. 6 - Typical Reverse Leakage Characteristics



**Curve Characteristics**

Fig. 7 - Typical Reverse Leakage Characteristics

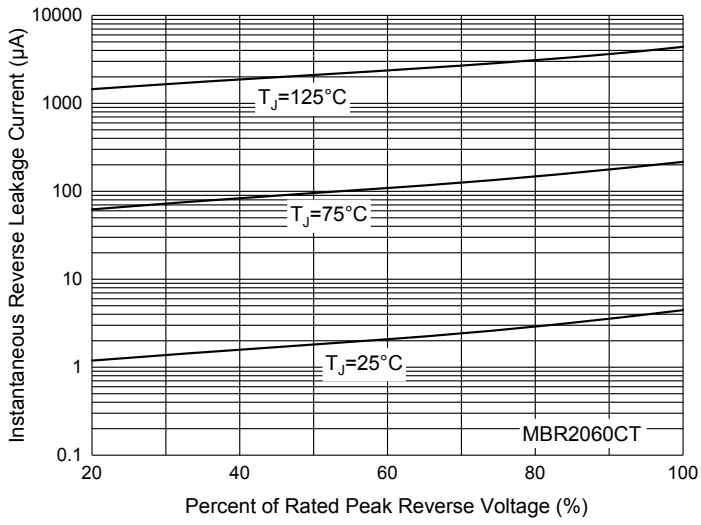


Fig. 8 - Typical Reverse Leakage Characteristics

