

**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

**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

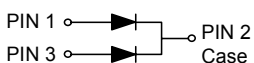
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR2020CT	MBR2020CT	20V	14V	20V
MBR2030CT	MBR2030CT	30V	21V	30V
MBR2035CT	MBR2035CT	35V	24.5V	35V
MBR2040CT	MBR2040CT	40V	28V	40V
MBR2045CT	MBR2045CT	45V	31.5V	45V
MBR2060CT	MBR2060CT	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

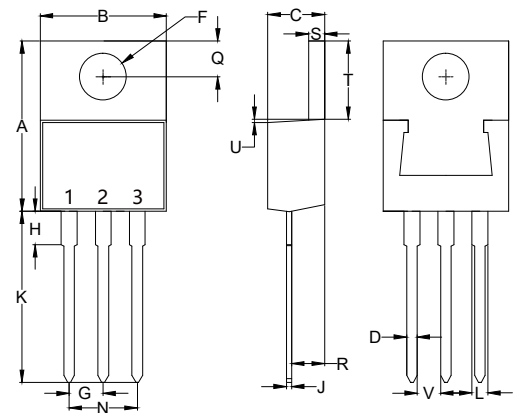
\*Pulse Test: Pulse Width 300µsec, Duty Cycle 2%  
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

**Internal Structure**



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

**TO-220AB**



**DIMENSIONS**

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

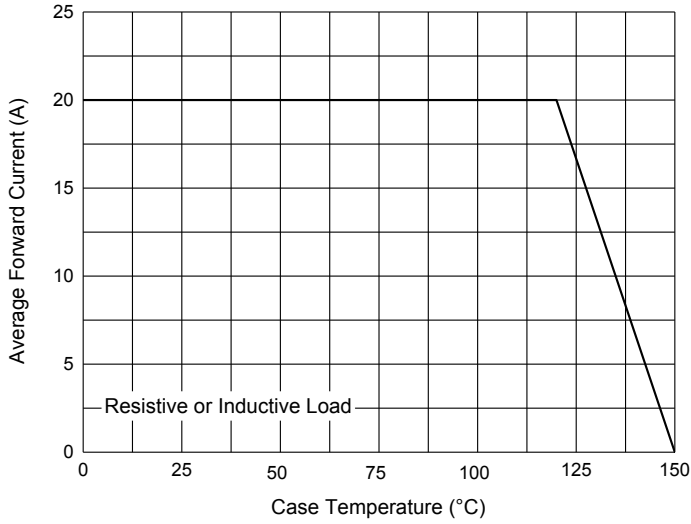


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

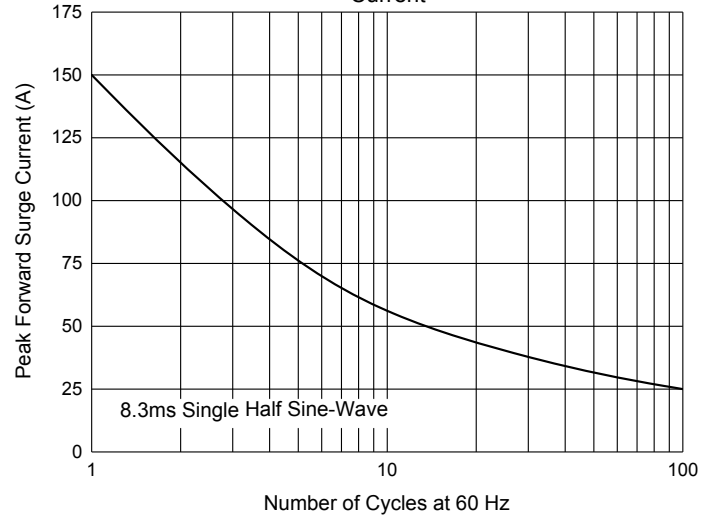


Fig. 3 - Typical Instantaneous Forward Characteristics

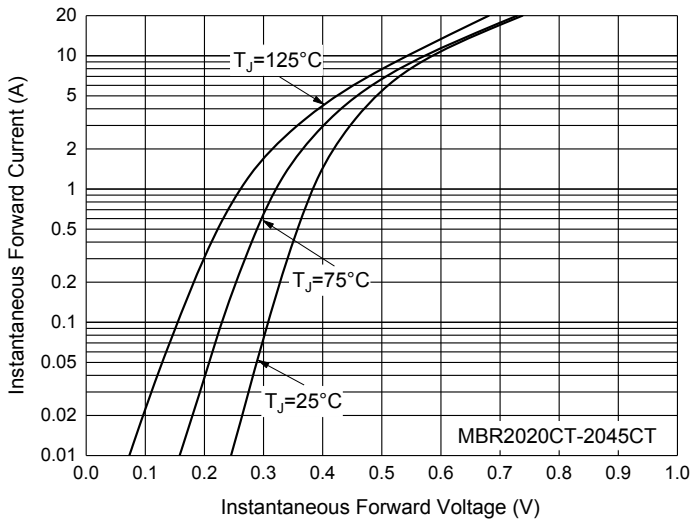


Fig. 4 - Typical Instantaneous Forward Characteristics

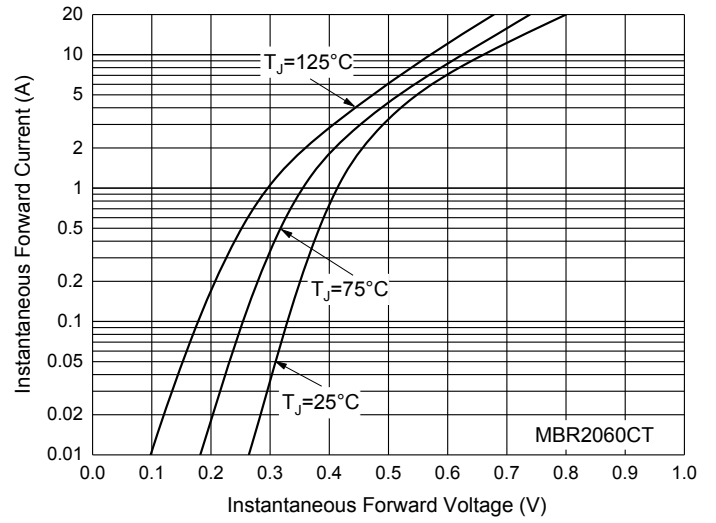


Fig. 5 - Typical Instantaneous Forward Characteristics

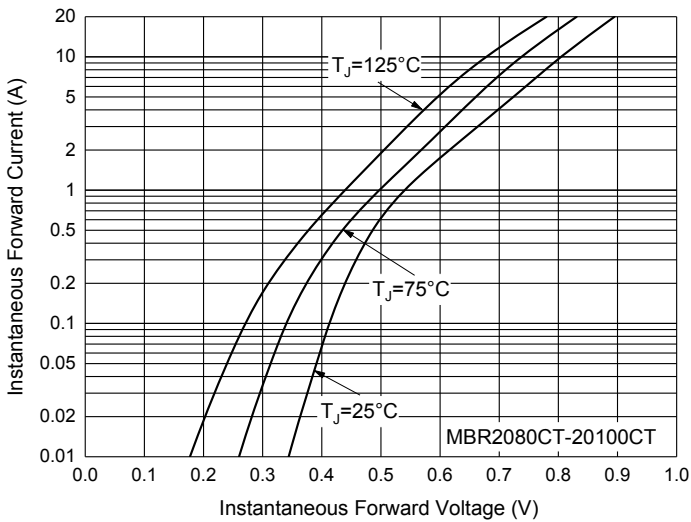
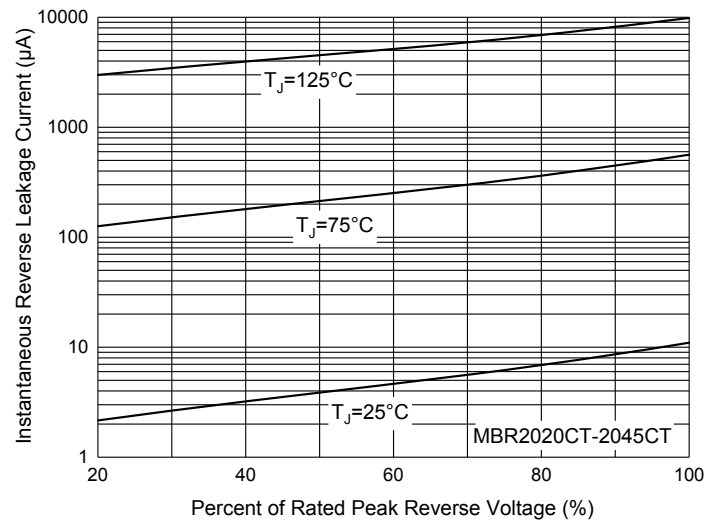


Fig. 6 - Typical Reverse Leakage Characteristics



**Curve Characteristics**

Fig. 7 - Typical Reverse Leakage Characteristics

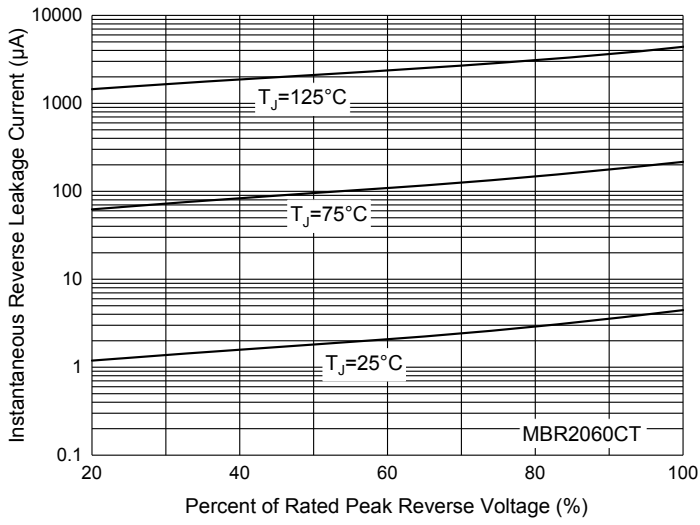
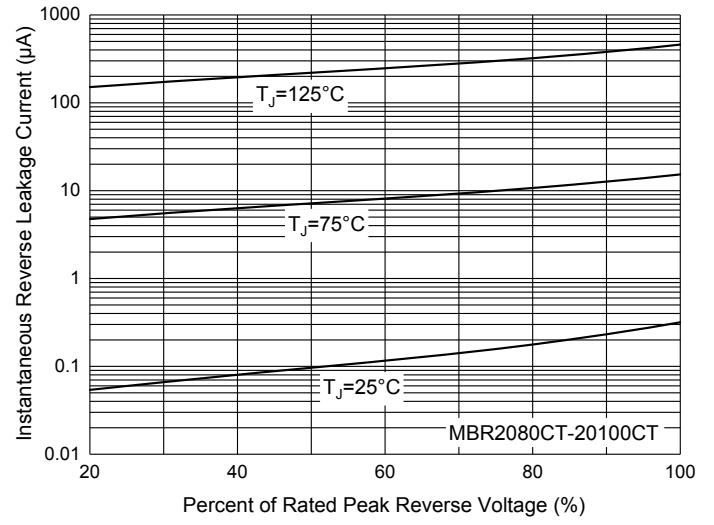


Fig. 8 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube, 1Kpcs/Box,5Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp** . and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp.** products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.