

Features

- Guard Ring For Transient Protection
- Low Forward Voltage Drop
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 2.0°C/W Junction to Case
- Maximum Thermal Resistance: 50°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB2020CT	MBRB2020CT	20V	14V	20V
MBRB2030CT	MBRB2030CT	30V	21V	30V
MBRB2035CT	MBRB2035CT	35V	24.5V	35V
MBRB2040CT	MBRB2040CT	40V	28V	40V
MBRB2045CT	MBRB2045CT	45V	31.5V	45V
MBRB2060CT	MBRB2060CT	60V	42V	60V
MBRB2080CT	MBRB2080CT	80V	56V	80V
MBRB20100CT	MBRB20100CT	100V	70V	100V

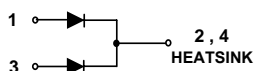
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	20A	$T_A=125^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT	V_F	0.70V 0.80V 0.85V	$I_{FM}=10A$ $T_J=25^\circ\text{C}$
MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT	V_F	0.84V 0.95V 0.95V	$I_{FM}=20A$ $T_J=25^\circ\text{C}$
MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT	V_F	0.80V 0.85V 0.85V	$I_{FM}=20A$ $T_J=125^\circ\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA	$T_J=25^\circ\text{C}$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

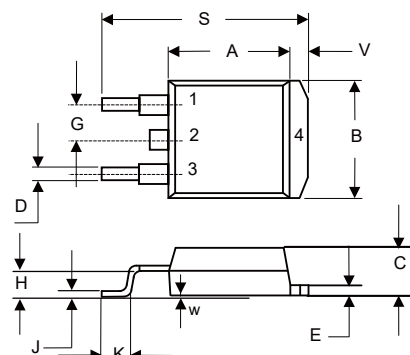
2. High temperature solder exemption applied, see EU directive annex 7a.

Internal Structure



20 Amp Schottky Barrier Rectifier 20 to 100 Volts

D²-PAK

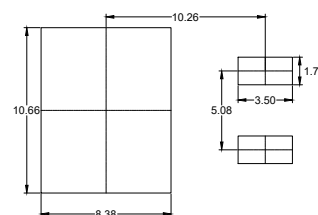


DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.331	0.370	8.40	9.40	
B	0.378	0.417	9.60	10.60	
C	0.165	0.189	4.20	4.80	
D	0.027	0.037	0.68	0.94	
E	0.045	0.055	1.14	1.40	
G	0.10		2.54		TYP.
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.071	0.131	1.80	3.32	
S	0.575	0.625	14.60	15.87	
V	0.042	0.058	1.07	1.47	
W	0.000	0.010	0.00	0.25	

Suggested Solder Pad Layout

Unit:mm



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

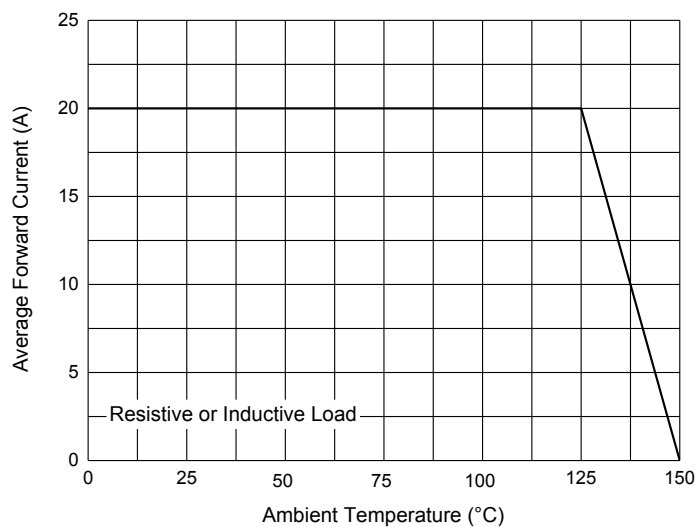


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

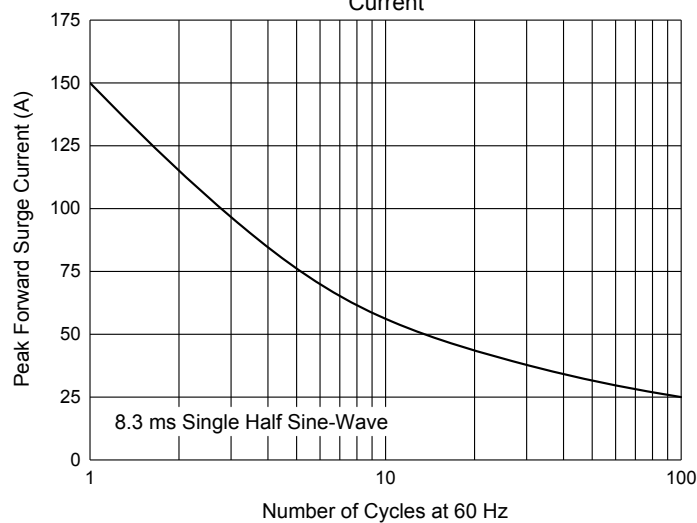


Fig. 3 - Typical Instantaneous Forward Characteristics

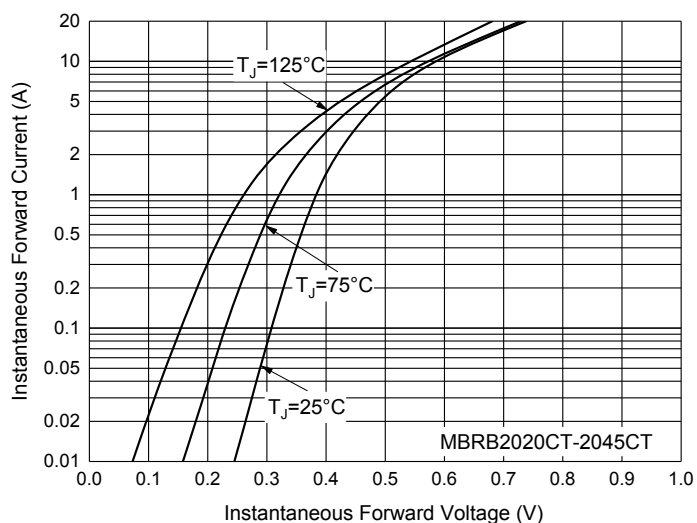


Fig. 4 - Typical Instantaneous Forward Characteristics

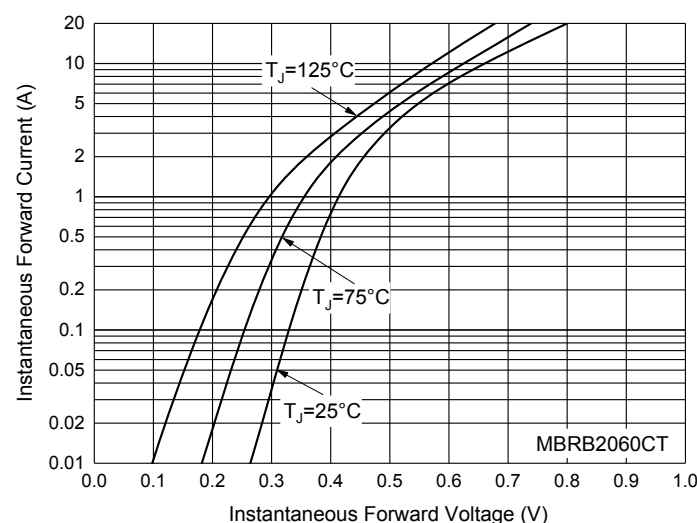


Fig. 5 - Typical Instantaneous Forward Characteristics

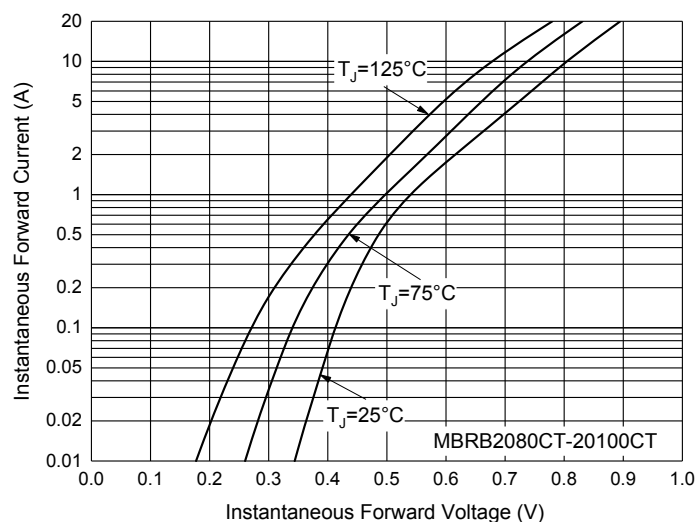
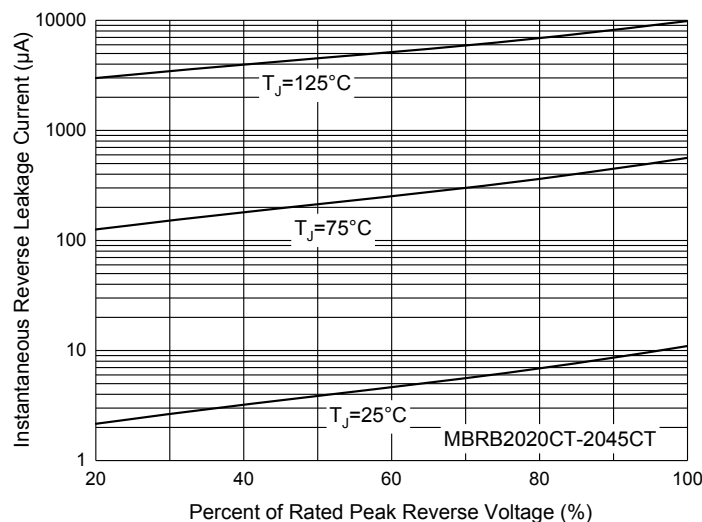


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

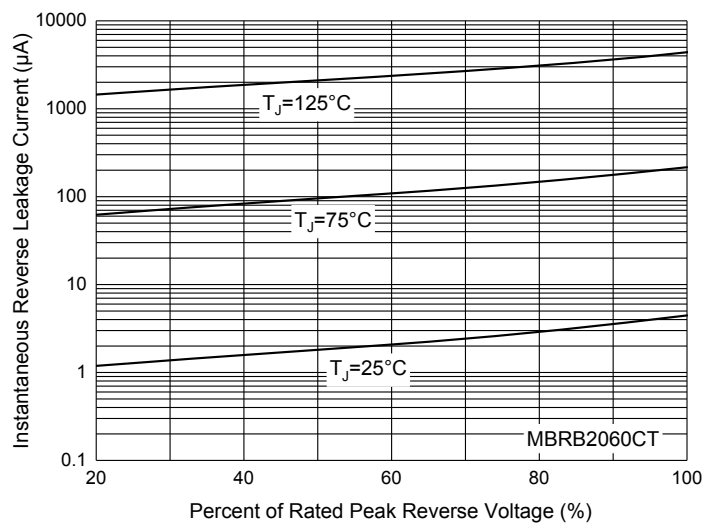
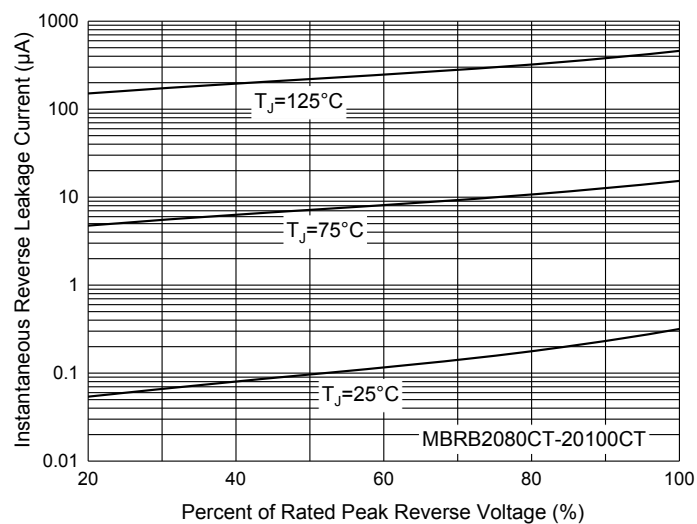


Fig. 8 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 800pcs/Reel
Part Number-BP	Tube: 5Kpcs/Ctn

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