

Features

- Guard Ring For Transient Protection
- Low Forward Voltage Drop
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 1) ("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

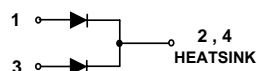
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB2020CT	MBRB2020CT	20V	14V	20V
MBRB2030CT	MBRB2030CT	30V	21V	30V
MBRB2035CT	MBRB2035CT	35V	24.5V	35V
MBRB2040CT	MBRB2040CT	40V	28V	40V
MBRB2045CT	MBRB2045CT	45V	31.5V	45V
MBRB2060CT	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	V_F		
MBRB2020CT-2045CT		0.70V	$I_{FM}=10\text{A}$
MBRB2060CT		0.80V	$T_J=25^\circ\text{C}$
MBRB2080CT-20100CT		0.85V	
MBRB2020CT-2045CT	V_F	0.84V	$I_{FM}=20\text{A}$
MBRB2060CT		0.95V	$T_J=25^\circ\text{C}$
MBRB2080CT-20100CT		0.95V	
MBRB2020CT-2045CT	V_F	0.80V	$I_{FM}=20\text{A}$
MBRB2060CT		0.85V	$T_J=125^\circ\text{C}$
MBRB2080CT-20100CT		0.85V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA	$T_J=25^\circ\text{C}$

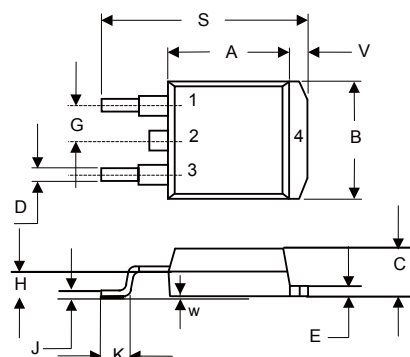
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

Internal Structure



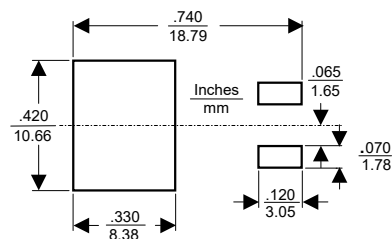
**20 Amp Schottky Barrier Rectifier
20 to 100 Volts**

D²-PAK



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.320	0.359	8.13	9.14	
B	0.374	0.453	9.50	11.50	
C	0.160	0.200	4.06	5.10	
D	0.020	0.038	0.51	0.96	
E	0.045	0.055	1.14	1.40	
G	0.083	0.110	2.10	2.80	
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.090	0.131	2.29	3.32	
S	0.575	0.652	14.22	16.55	
V	0.042	0.058	1.07	1.47	
W	0.000	0.008	0.00	0.20	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

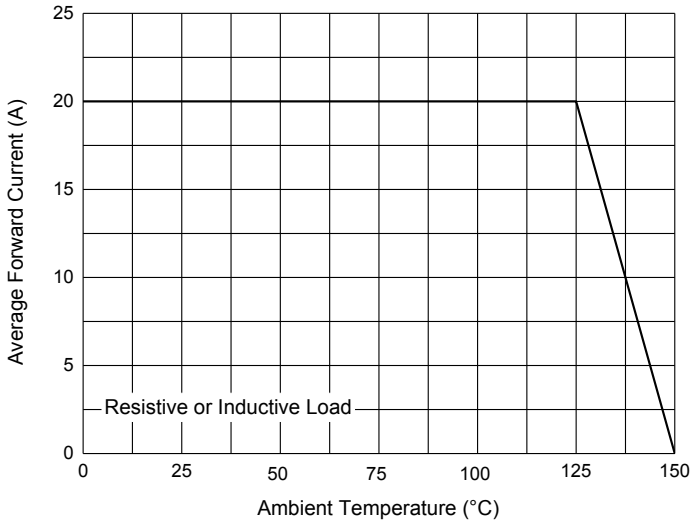


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

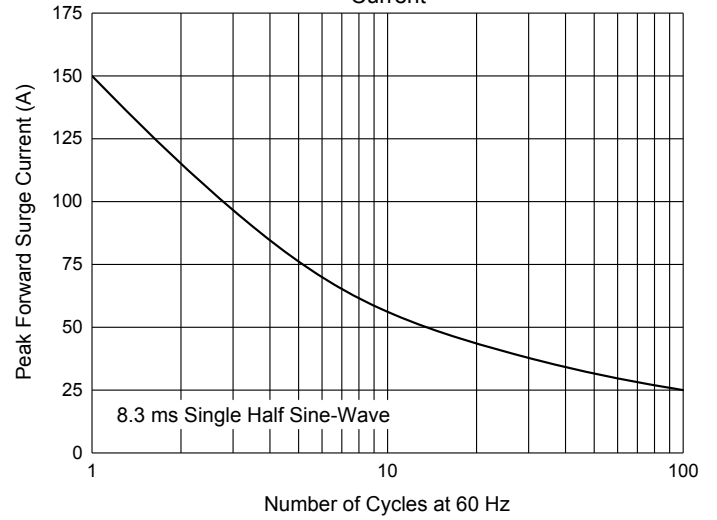


Fig. 3 - Typical Instantaneous Forward Characteristics

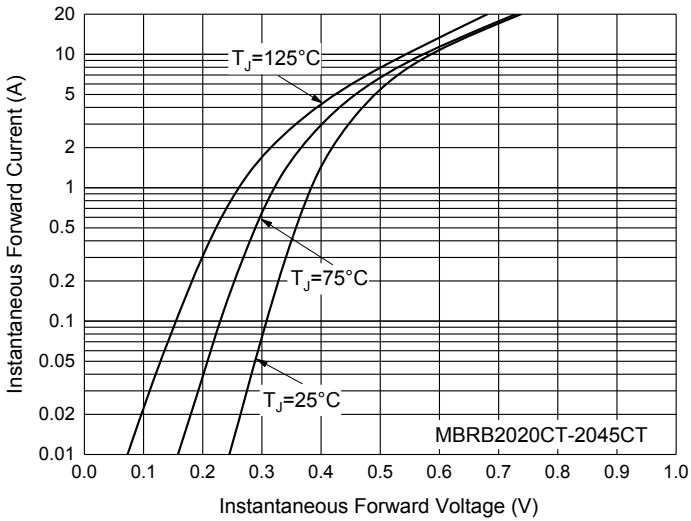


Fig. 4 - Typical Instantaneous Forward Characteristics

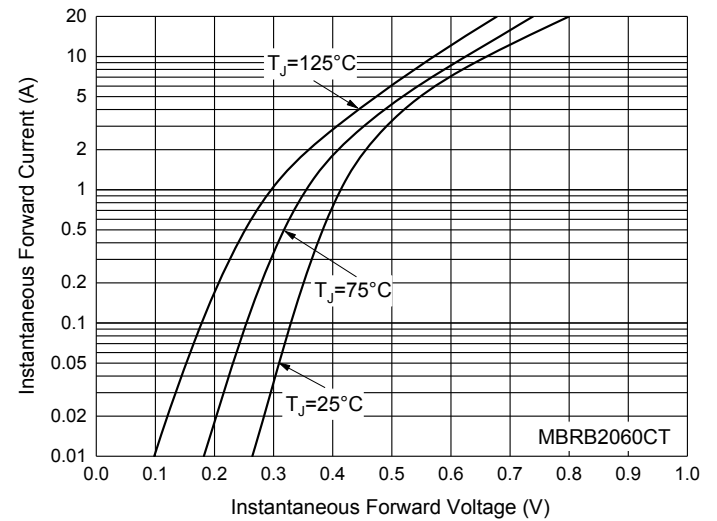


Fig. 5 - Typical Instantaneous Forward Characteristics

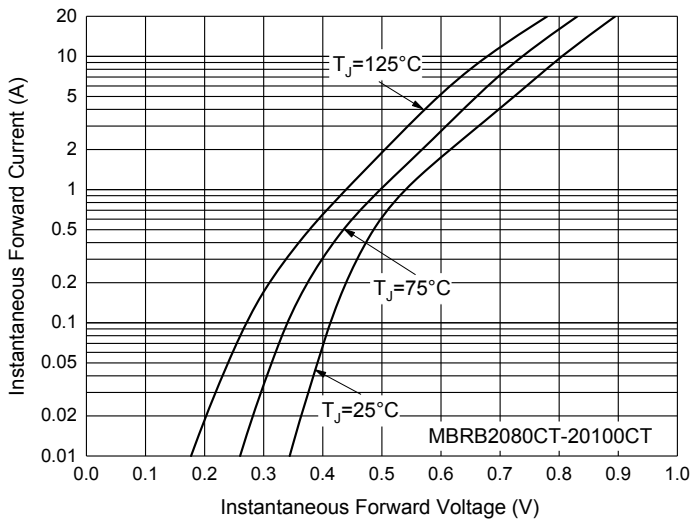
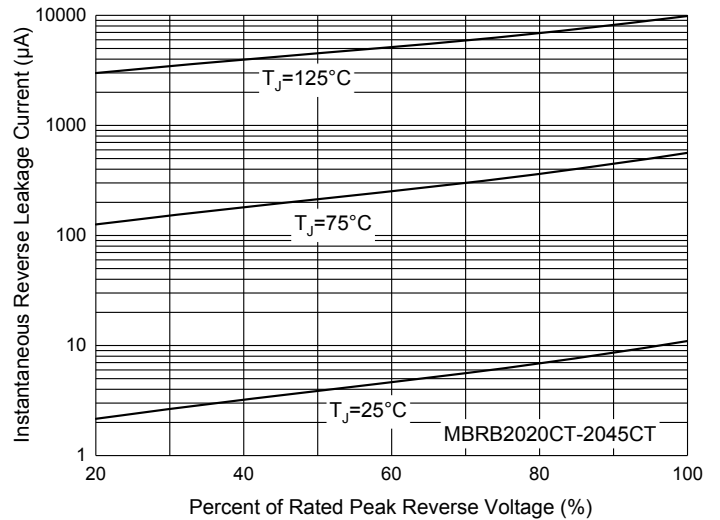


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

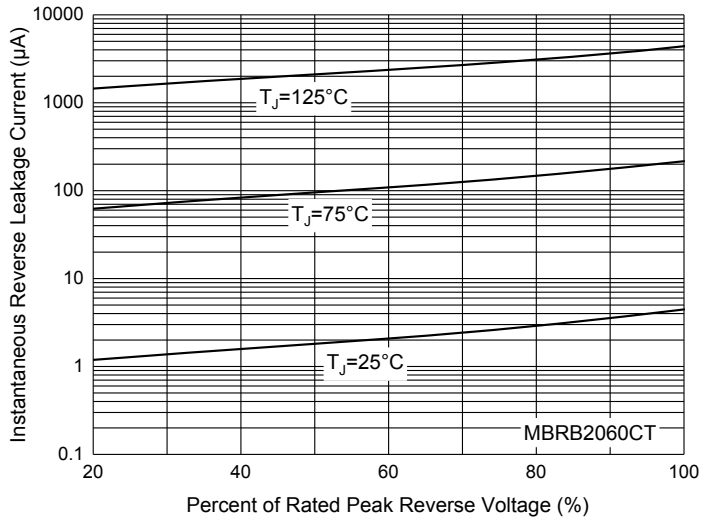
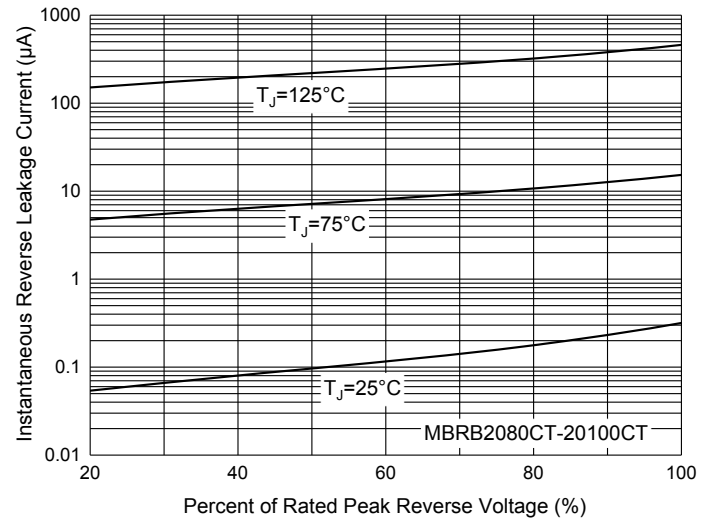


Fig. 8 - Typical Reverse Leakage Characteristics



Ordering Information

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

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

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