

Features

- High Current Capability and High Efficiency
- 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
- Typical Thermal Resistance: 2 °C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB3030CT	MBRB3030CT	30V	21V	30V
MBRB3040CT	MBRB3040CT	40V	28V	40V
MBRB3045CT	MBRB3045CT	45V	31.5V	45V
MBRB3060CT	MBRB3060CT	60V	42V	60V

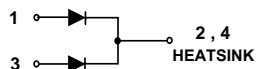
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	30A	$T_C=110^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	250A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage MBRB3030CT-3045CT MBRB3060CT	V_F	0.60V 0.72V	$I_{FM}=15A$; $T_J=25^\circ\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA 10mA	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	420pF	Measured at 1.0MHz, $V_R=4.0V$

Note:

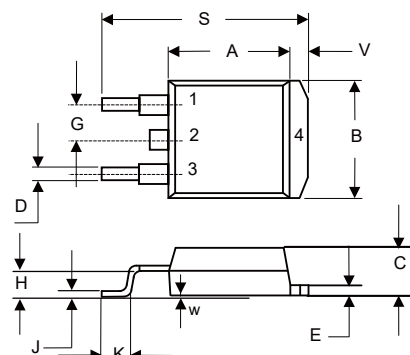
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High temperature solder exemption applied, see EU directive annex 7a.

Internal Structure



30 Amp Schottky Barrier Rectifier 30 to 60 Volts

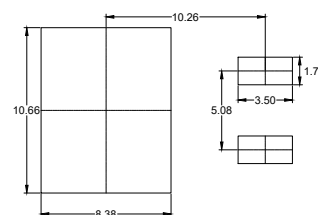
D²-PAK



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

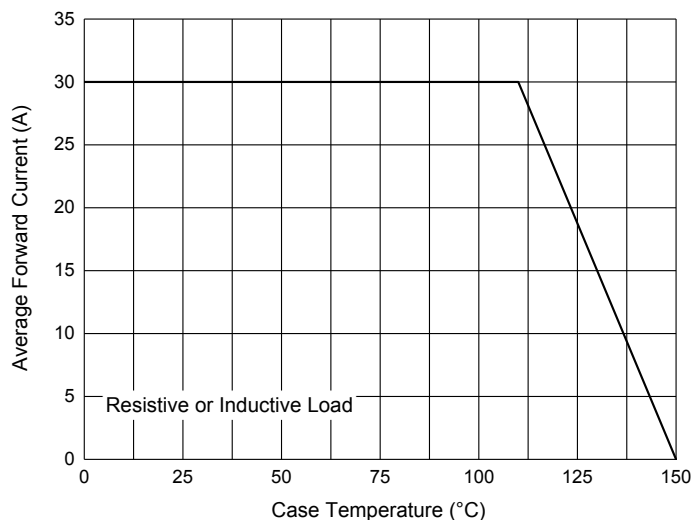


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

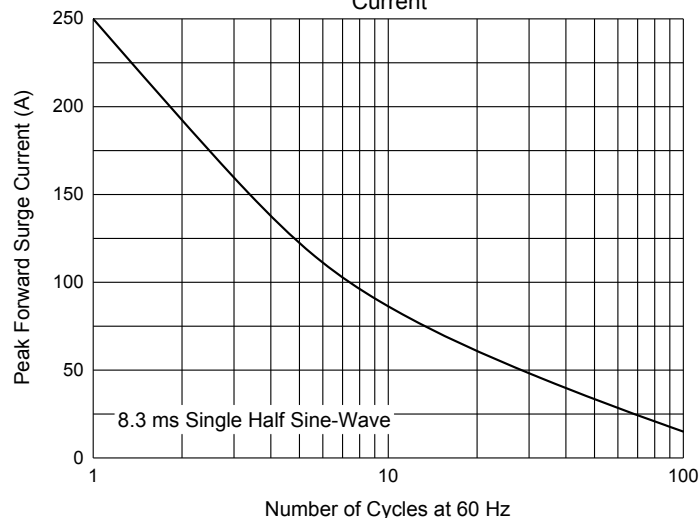


Fig. 3 - Typical Instantaneous Forward Characteristics

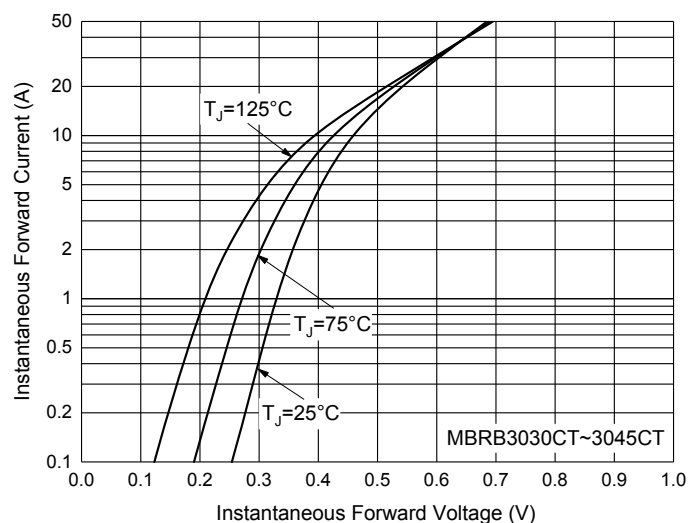


Fig. 4 - Typical Instantaneous Forward Characteristics

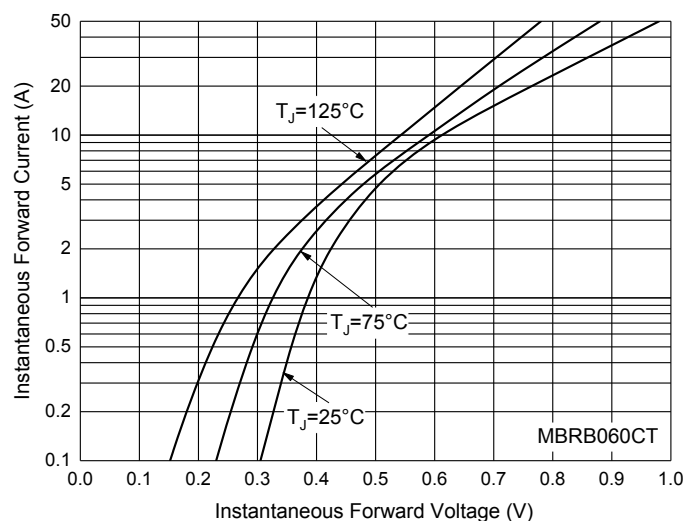


Fig. 5 - Typical Reverse Leakage Characteristics

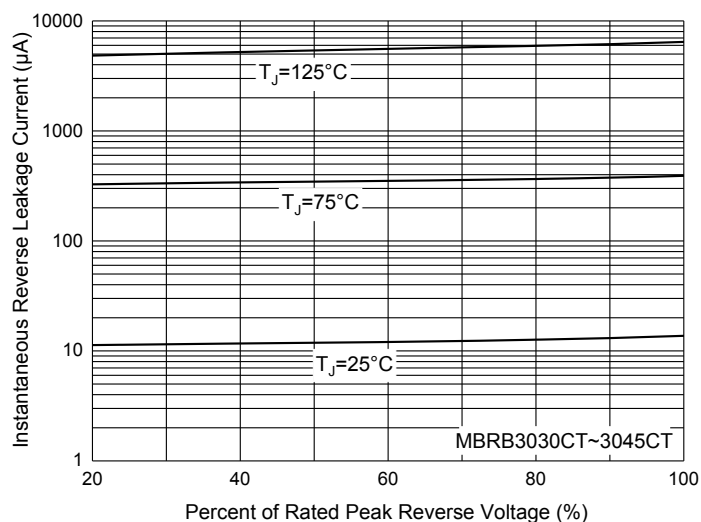
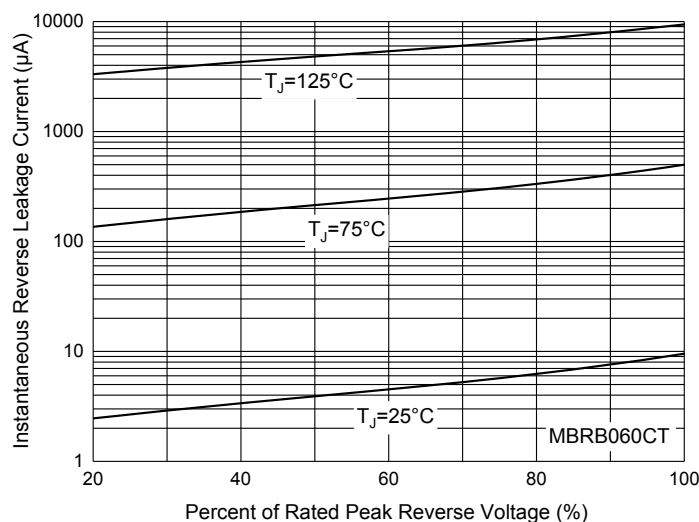


Fig. 6 - Typical Reverse Leakage Characteristics



Ordering Information

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

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