

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Extremely Fast Switching
- Extremely Low Forward Drop.
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 2.5°C/W Junction to Case

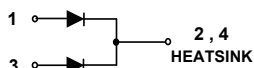
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRD1020CT	MBRD1020CT	20V	14V	20V
MBRD1030CT	MBRD1030CT	30V	21V	30V
MBRD1045CT	MBRD1045CT	45V	32V	45V
MBRD1050CT	MBRD1050CT	50V	35V	50V
MBRD1060CT	MBRD1060CT	60V	42V	60V
MBRD1080CT	MBRD1080CT	80V	57V	80V
MBRD10100CT	MBRD10100CT	100V	71V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Max average forward rectified current	$I_{F(AV)}$	10A	$T_L=100^\circ\text{C}$
Max surge current	I_{FSM}	150A	8.3ms, Half Sine
Peak Forward Voltage	V_{FM}	0.65V	$I_{FM}=5.0\text{A}$
MBRD1020CT-45CT		0.75V	
MBRD1050CT-60CT		0.80V	
MBRD1080CT		0.85V	
Peak Reverse Current	I_{RM}	0.01mA	$T_J=25^\circ\text{C}$
MBRD1020CT-100CT		10mA	$T_J=100^\circ\text{C}$
MBRD1020CT-45CT		5mA	$T_J=100^\circ\text{C}$
MBRD1050CT-100CT			

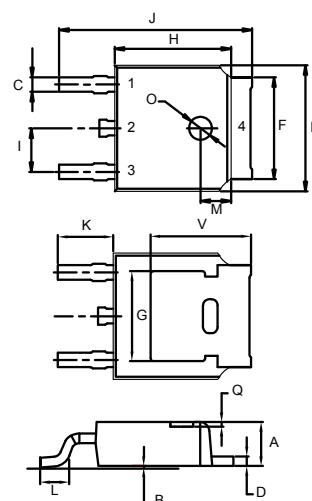
Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure:



10 Amp Schottky Rectifier 20-100 Volts

(TO-252) DPAK



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

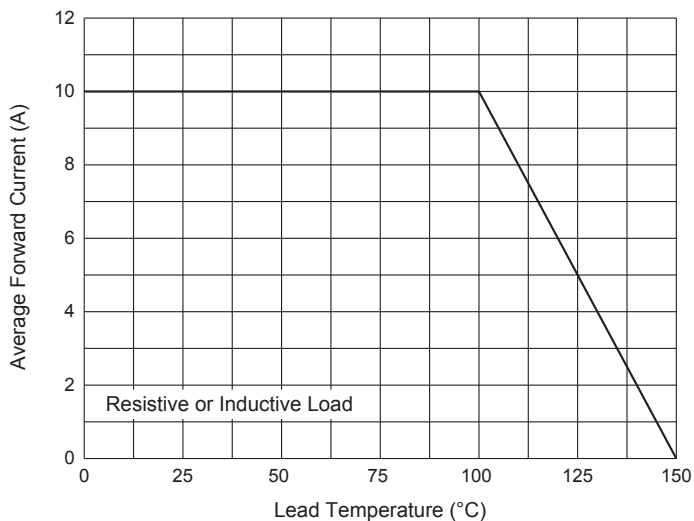


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

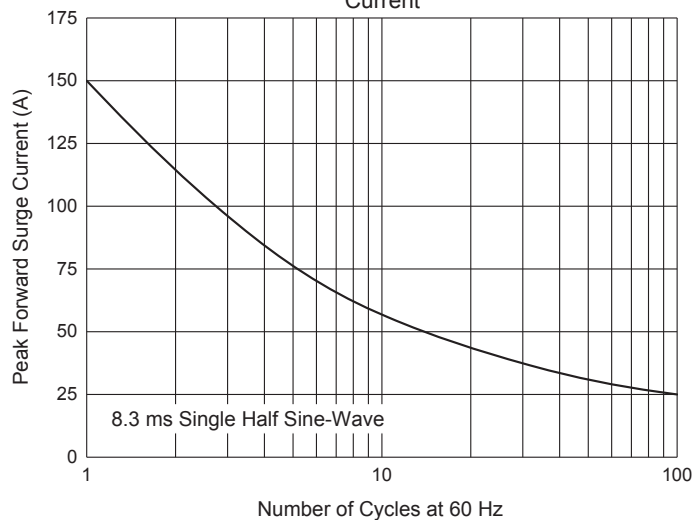


Fig. 3 - Typical Instantaneous Forward Characteristics

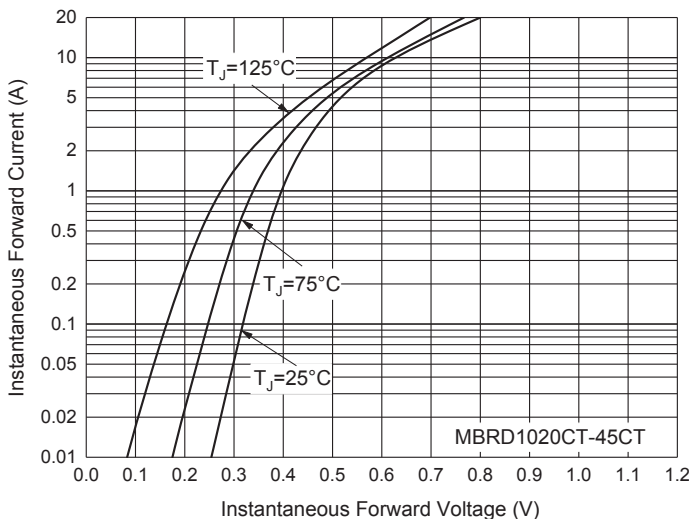


Fig. 4 - Typical Instantaneous Forward Characteristics

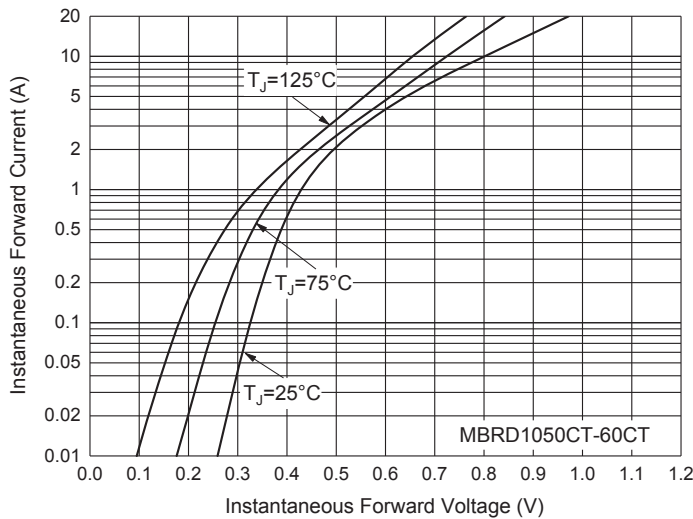


Fig. 5 - Typical Instantaneous Forward Characteristics

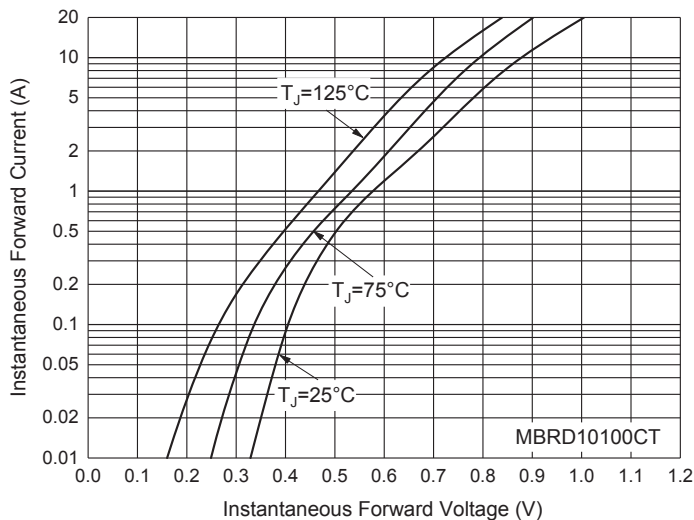
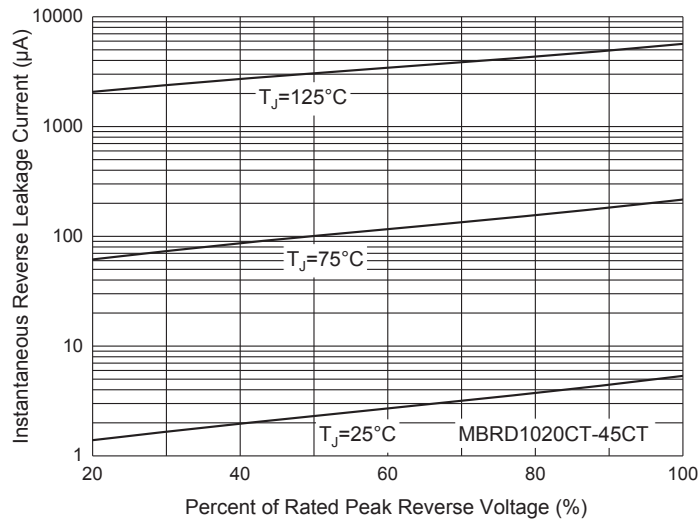


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

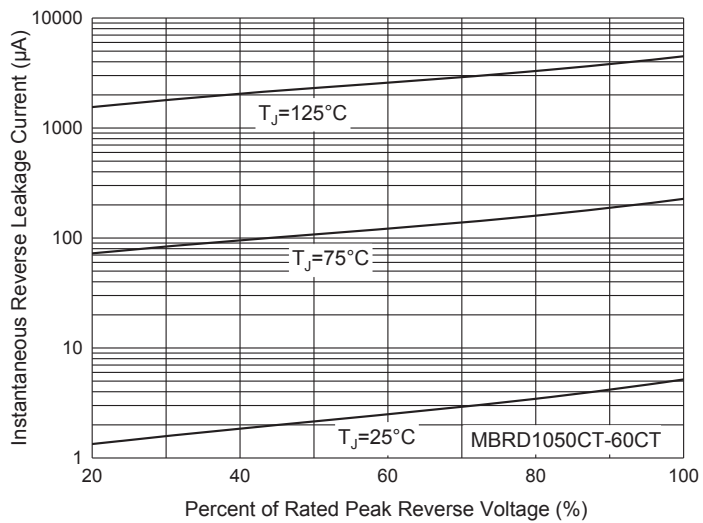
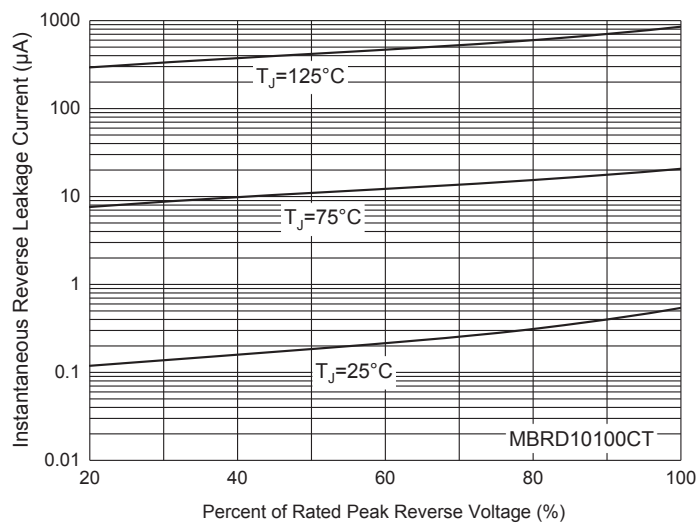


Fig. 8 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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

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