

Features

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

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 2.0°C/W Junction to Case

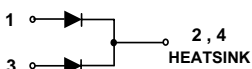
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB1520CT	MBRB1520CT	20V	14V	20V
MBRB1530CT	MBRB1530CT	30V	21V	30V
MBRB1535CT	MBRB1535CT	35V	24.5V	35V
MBRB1540CT	MBRB1540CT	40V	28V	40V
MBRB1545CT	MBRB1545CT	45V	31.5V	45V
MBRB1560CT	MBRB1560CT	60V	42V	60V
MBRB1580CT	MBRB1580CT	80V	56V	80V
MBRB15100CT	MBRB15100CT	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	15A	$T_C=105^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	V_F		
1520CT-1545CT		0.84V	$I_{FM}=15A;$
1560CT		0.75V	$I_{FM}=7.5A;$
1580CT-15100CT		0.92V	$T_J=25^\circ\text{C}^*$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R		
1520CT-1545CT		0.1mA	$T_J=25^\circ\text{C}$
1560CT-15100CT		0.01mA	
1520CT-1545CT		20mA	$T_J=125^\circ\text{C}$
1560CT		10mA	
1580CT-15100CT		2mA	

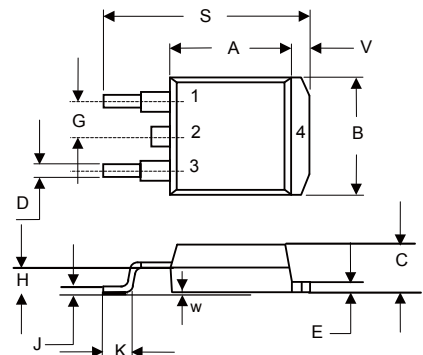
*Pulse Test: Pulse Width 300µsec, Duty Cycle 2%
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 7a.

Internal Structure



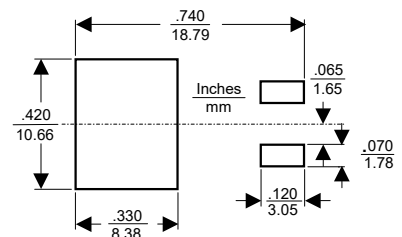
15 Amp Schottky Barrier Rectifier 20 to 100 Volts

D²-PAK



DIM	INCHES		MM		NOTE
	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

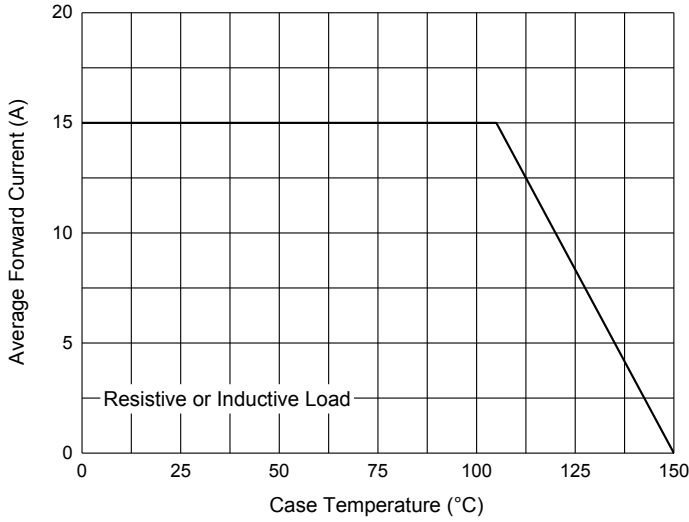


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

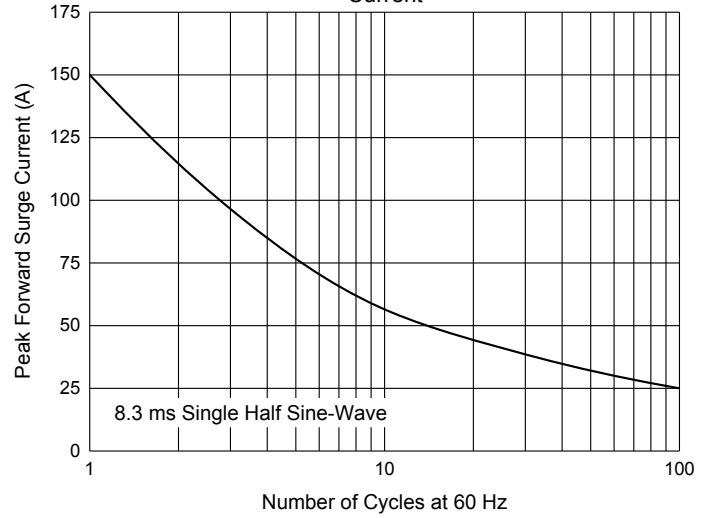


Fig. 3 - Typical Instantaneous Forward Characteristics

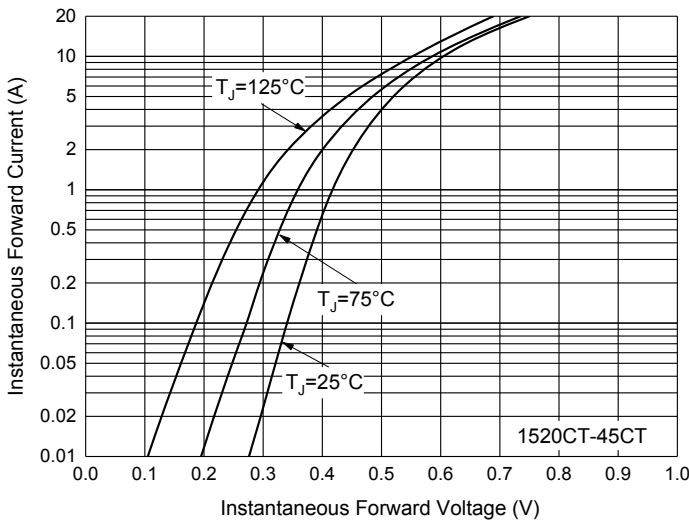


Fig. 4 - Typical Instantaneous Forward Characteristics

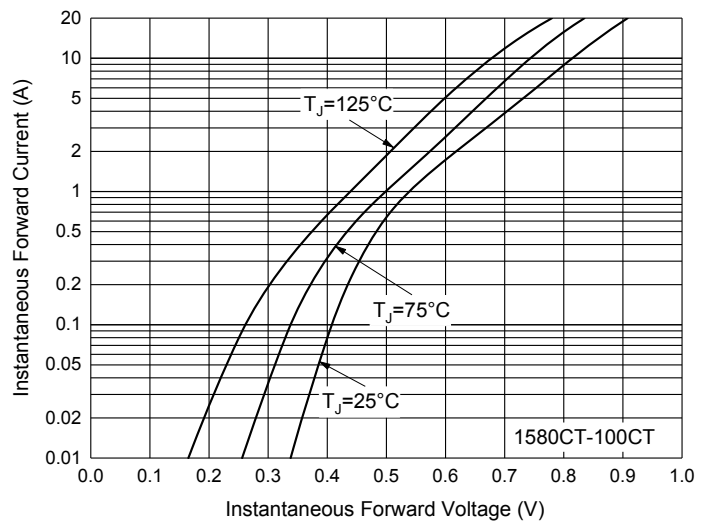


Fig. 5 - Typical Reverse Leakage Characteristics

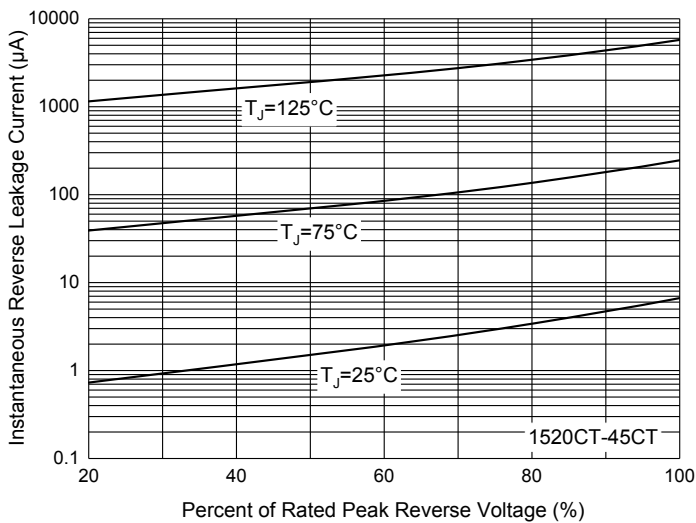
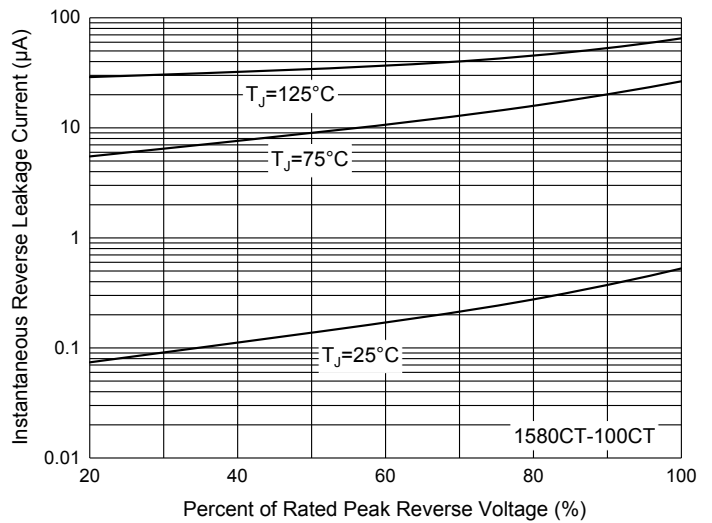


Fig. 6 - Typical Reverse Leakage Characteristics



Ordering Information

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

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

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