

Features

- High Frequency Operation
- 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 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

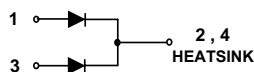
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRBL2045CT	MBRBL2045CT	45V	31.5V	45V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	20A	$T_C=125^\circ C$
Peak Forward Surge Current	I_{FSM}	180A	8.3ms, Half Sine Wave
Maximum Instantaneous Forward Voltage	V_F	0.55V	$I_{FM}=10A; T_A=25^\circ C$
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	0.1mA 50mA	$T_A=25^\circ C$ $T_A=100^\circ C$
Current Squared Time	I^2t	134A ² s	1ms ≤ t ≤ 8.3ms $T_A=25^\circ C$ Rating of Per Diode

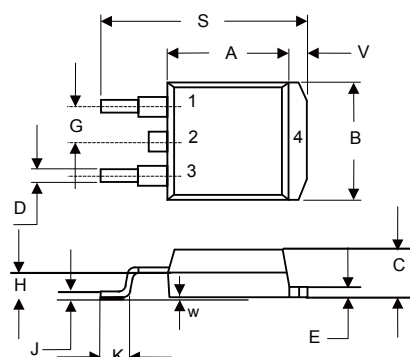
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 7a.

Internal Structure



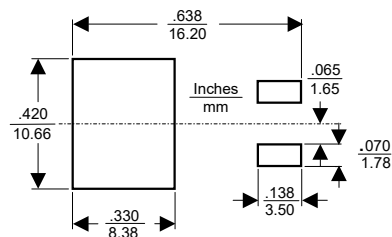
20 Amp Low VF Schottky Barrier Rectifier 45 Volts

D²-PAK



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	0.010		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



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

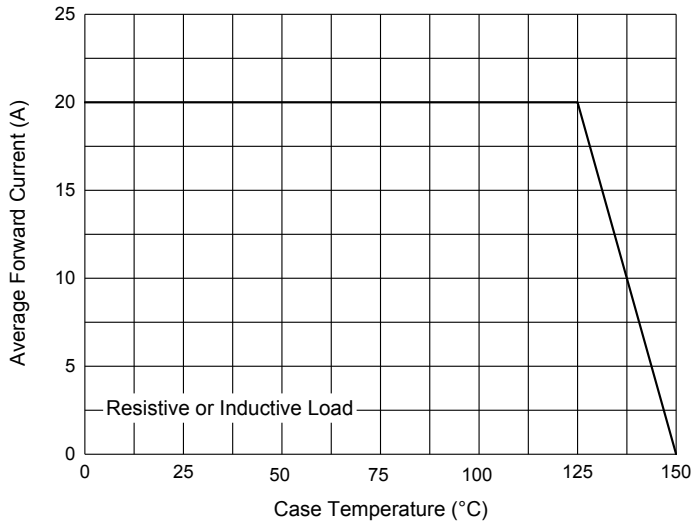


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

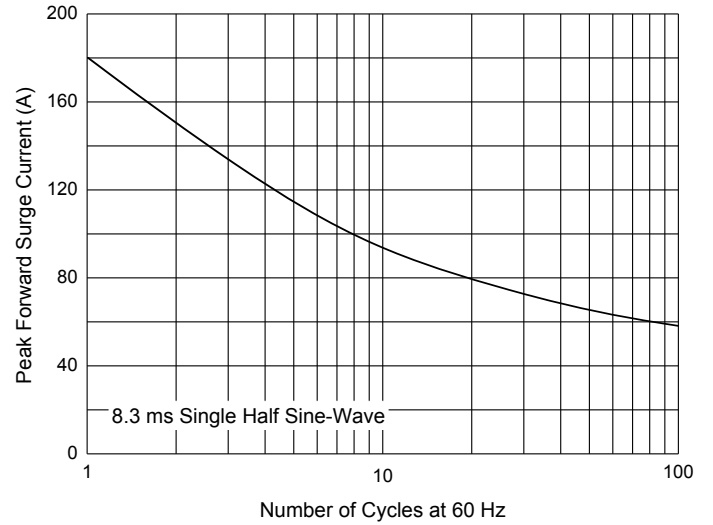


Fig. 3 - Typical Instantaneous Forward Characteristics

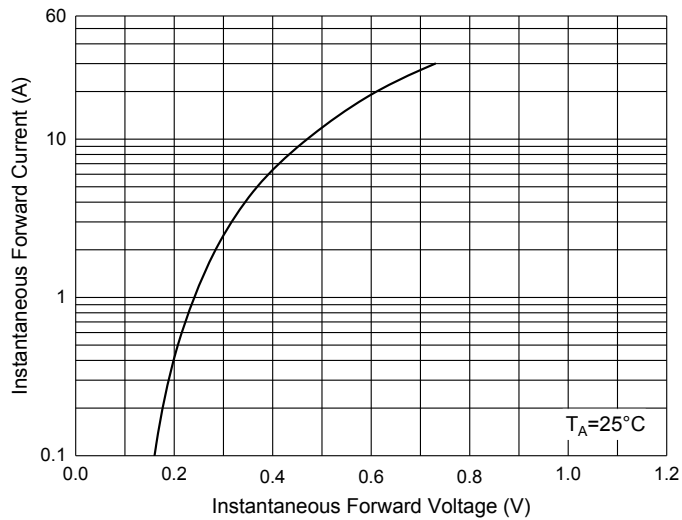
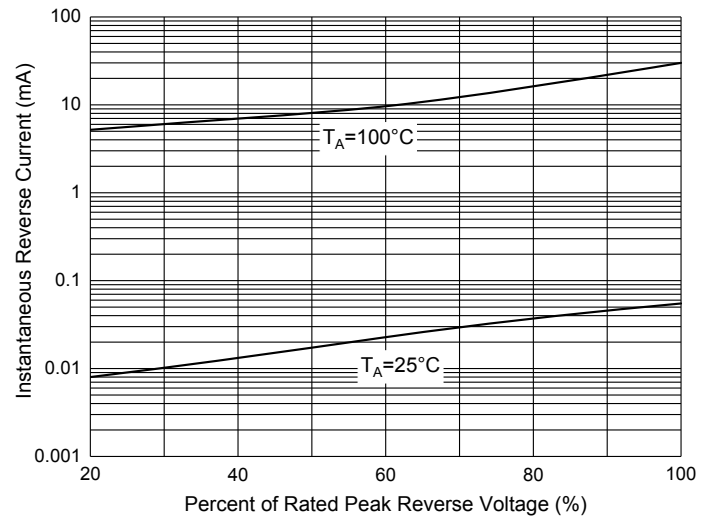


Fig. 4 - Typical Reverse Leakage Characteristics



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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