

Features

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

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance Per Leg: 2 °C/W Junction to Case

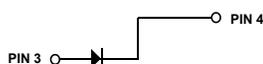
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRBL30120	MBRBL30120	120V	84V	120V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	$I_{F(AV)}$	30A	$T_C=110^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	320A	8.3ms, Half Sine Wave
Maximum Instantaneous Forward Voltage	V_F	0.49V(Typ.) 0.43V(Typ.) 0.69V(Typ.) 0.60V(Typ.) 0.88V(Typ.) 0.95V(Max.) 0.80V(Max.)	$I_F=5A; T_J=25^\circ\text{C}$ $I_F=5A; T_J=125^\circ\text{C}$ $I_F=15A; T_J=25^\circ\text{C}$ $I_F=15A; T_J=125^\circ\text{C}$ $I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=125^\circ\text{C}$
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	0.05mA 10mA	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$

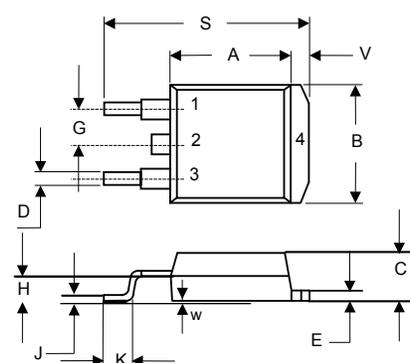
Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex Notes 7a.

Internal Structure



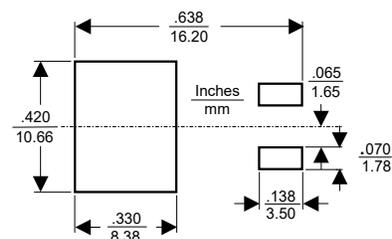
30 Amp Low VF Schottky Barrier Rectifier 120 Volts

D²-PAK



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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

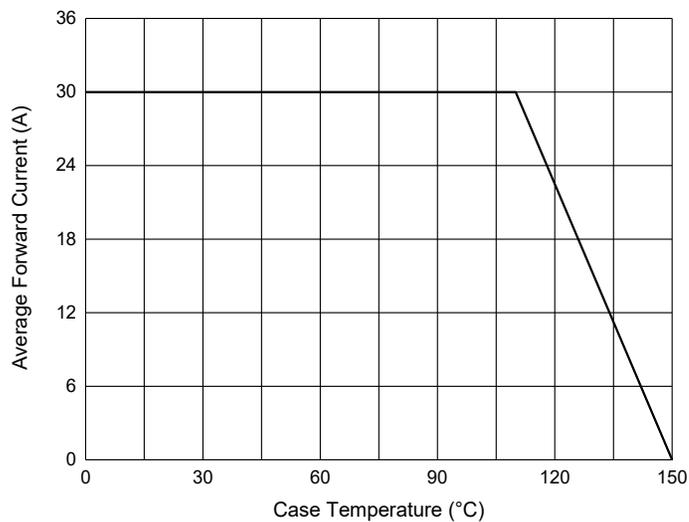


Fig. 2 - Typical Instantaneous Forward Characteristics

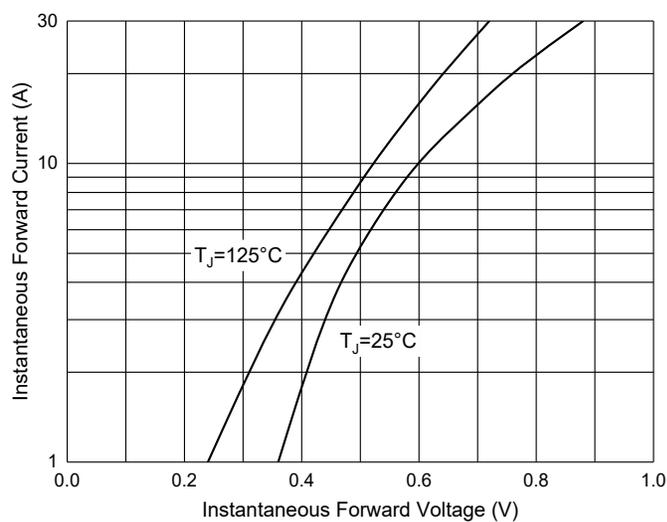
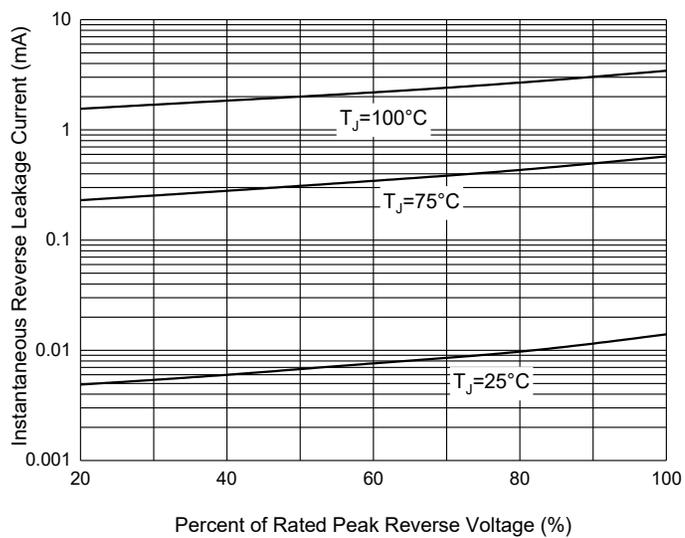


Fig. 3 - Typical Reverse Leakage Characteristics



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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