Features

- Halogen Free. “Green” Device (Note 1)
- High Surge Forward Current Capability
- Low Power Loss, High Efficiency
- Lead Free Finish/RoHS Compliant(Note 2)("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

5 Amp Trench Schottky Barrier Rectifier 100 Volts

Maximum Ratings

- Operating Junction Temperature Range: -55ºC to +150ºC
- Storage Temperature Range: -55ºC to +150ºC
- Typical Thermal Resistance: 8.0 ºC/W Junction to Case

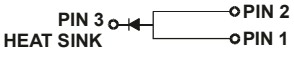
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR5U100	5U100	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

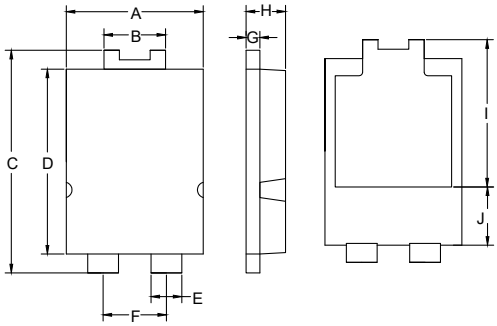
Average Forward Current	$I_{F(AV)}$	5A	Tc = 125°C
Peak Forward Surge Current	I_{FSM}	120A	8.3ms,Half Sine
Forward Voltage	V_F	0.45V(Typ.) 0.51V(Max.) 0.54V(Typ.) 0.60V(Max.)	I_F=3A T_J=25ºC I_F=5A T_J=25ºC
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	0.1mA 20mA	T_J=25ºC T_J=100ºC
Reverse Breakdown Voltage	V_{BR}	100V(Min.)	I_R=0.5mA
Current Squared Time	I^2T	60 A^2s	1ms≤t＜8.3ms T_J=25ºC

Notes:
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

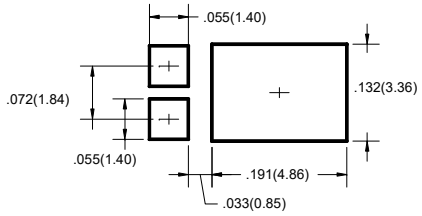


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DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.154	0.161	3.90	4.10	
B	0.067	0.075	1.70	1.90	
C	0.252	0.260	6.40	6.60	
D	0.209	0.217	5.30	5.50	
E	0.031	0.039	0.80	1.00	
F	0.071	0.075	1.80	1.90	
G	0.014	0.018	0.35	0.45	
H	0.043	0.047	1.10	1.20	
I	0.161	0.177	4.10	4.50	
J	0.059	0.075	1.50	1.90	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

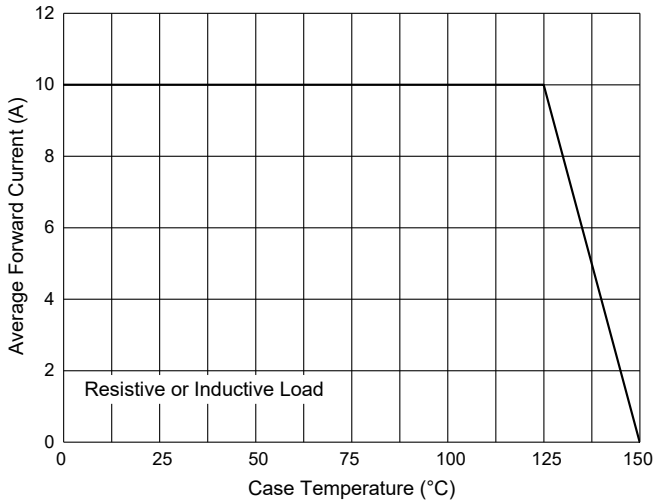


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

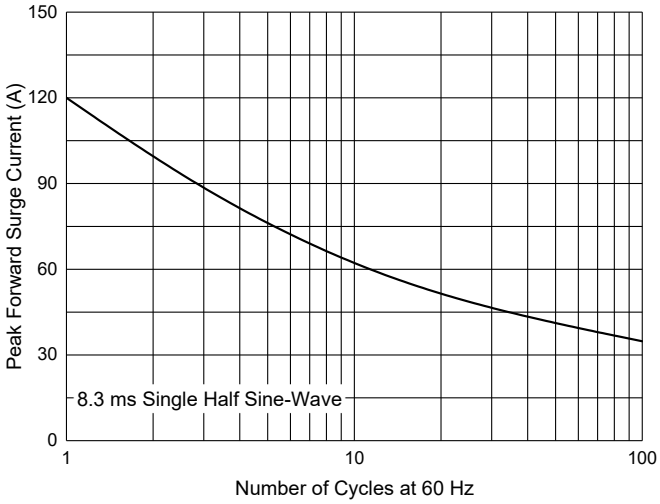


Fig. 3 - Typical Instantaneous Forward Characteristics

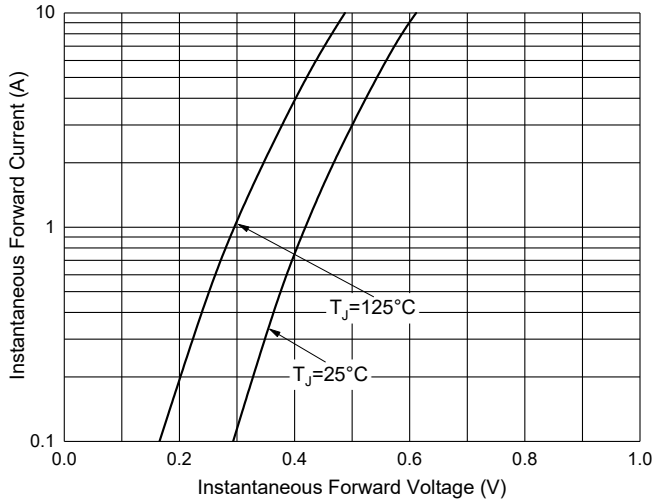
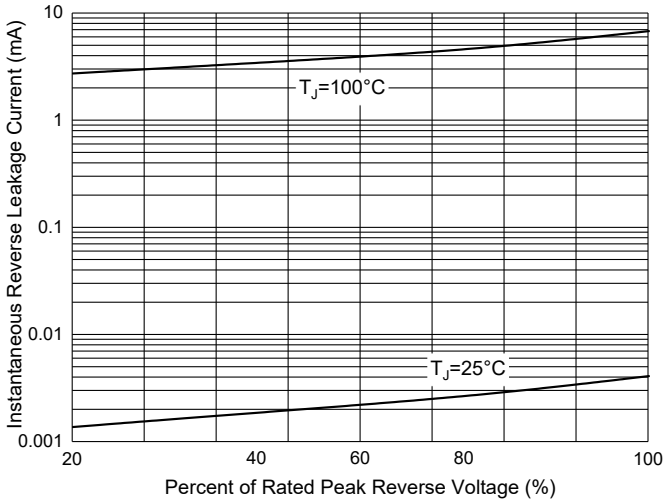


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel

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