15 Amp Schottky Barrier Rectifier 45 Volts

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

Maximum Ratings

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

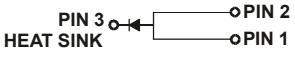
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR15U45	15U45	45V	31.5V	45V

Electrical Characteristics @ 25°C Unless Otherwise Specified

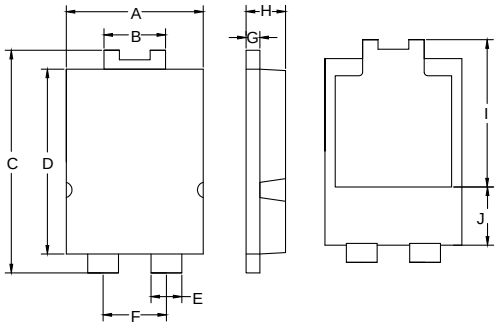
Average Forward Current	I_O	15A	Tc = 90°C
Peak Forward Surge Current	I_{FSM}	275A	8.3ms,Half Sine
Forward Voltage	V_F	0.43V(Typ) 0.47V(Max) 0.37V(Typ) 0.40V(Max)	I_F=15A T_J=25ºC I_F=15A T_J=125ºC
Reverse Current	I_R	0.5mA(Max) 100mA(Max)	V_R=45; T_J=25ºC V_R=45; T_J=125ºC
Reverse Breakdown Voltage	V_{BR}	45V(Min)	I_R=0.5mA
Current Squared Time	I^2T	313 A^2s	1ms≤t＜8.3ms T_J=25ºC

Note: 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

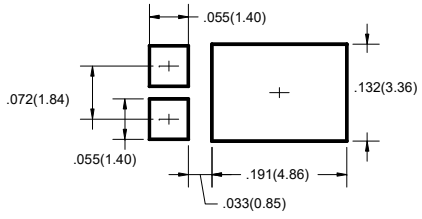


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DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.154	0.161	3.90	4.10	
B	0.067	0.075	1.70	1.90	
C	0.252	0.260	6.40	6.60	
D	0.209	0.217	5.30	5.50	
E	0.031	0.039	0.80	1.00	
F	0.071	0.075	1.80	1.90	
G	0.014	0.018	0.35	0.45	
H	0.043	0.047	1.10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

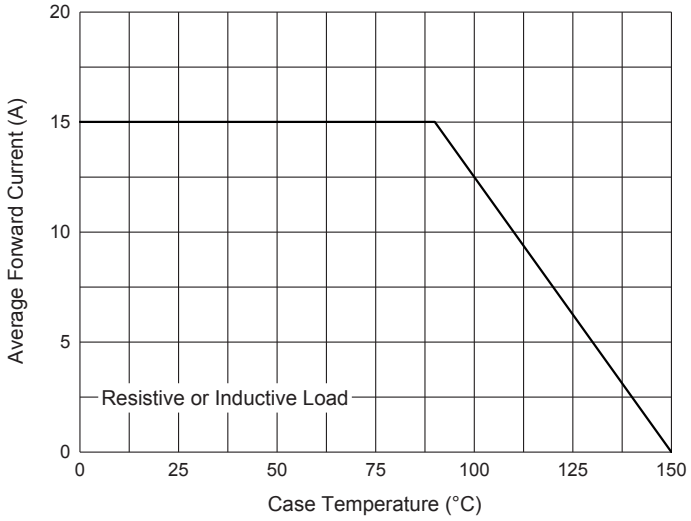


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

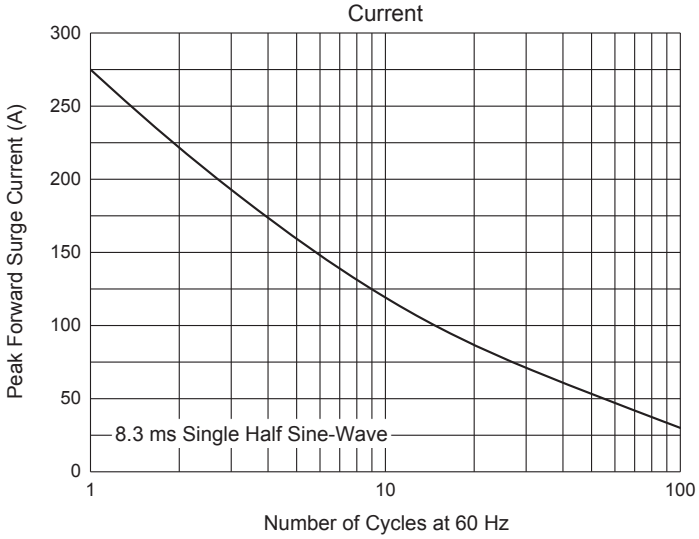


Fig. 3 - Typical Instantaneous Forward Characteristics

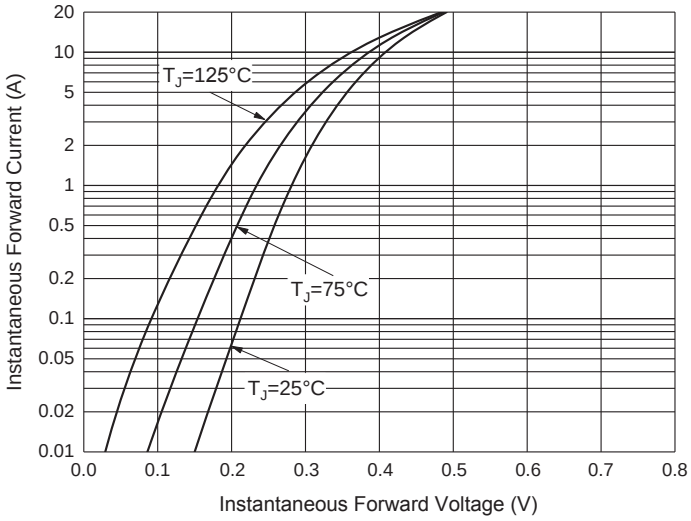
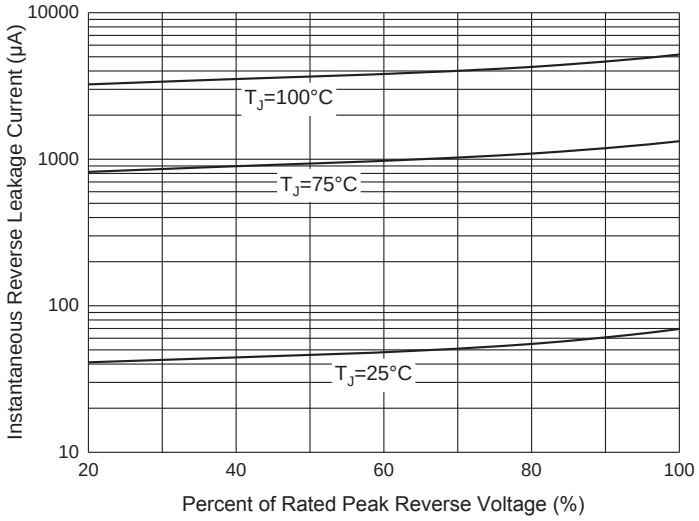


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

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

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