

**Features**

- Halogen Free. "Green" Device (Note 1)
- Low Forward Voltage Drop
- Super Long Operating Life
- 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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 27°C/W Junction to Ambient<sup>(Note 3)</sup>
- Typical Thermal Ambient: 3°C/W Junction to Lead<sup>(Note 4)</sup>

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR12120LPS	12120L	120V	84V	120V

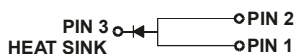
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	12A	$T_L = 120^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	200A	8.3ms, Half Dine
Forward Voltage	$V_F$	0.8V(Max)	$I_F=12A T_J = 25^\circ\text{C}$
Reverse Current	$I_R$	40µA(Typ) 70µA(Max)	$T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$	500pF	Measured at 1.0MHz , $V_R=4.0V$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

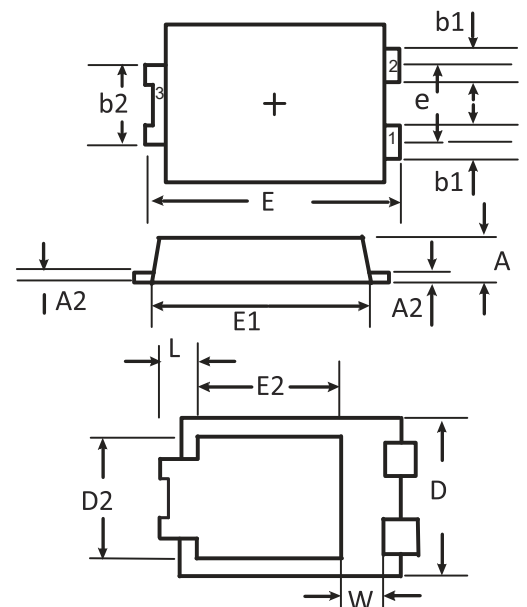
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Mounted on FR-4 P.C.B with 30\*30mm Copper Pad Area.
4. On Aluminum Substrate PCB with Recommended copper Pad Area(Soldered to Cathode).

**Internal Structure**



**12 Amp Low VF Schottky Barrier Rectifier 120 Volts**

**TO-277B**



**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.039	0.047	1.00	1.20	
A2	0.006	0.017	0.15	0.43	
b1	0.030	0.041	0.75	1.05	
b2	0.065	0.077	1.65	1.95	
D	0.148	0.169	3.75	4.30	
D2	0.110	0.126	2.80	3.20	
E	0.250	0.264	6.35	6.70	
e	0.065	0.077	1.65	1.95	
E1	0.207	0.228	5.25	5.80	
E2	0.120	0.142	3.05	3.60	
L	0.028	0.051	0.70	1.30	
W	0.031	0.056	0.80	1.42	

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

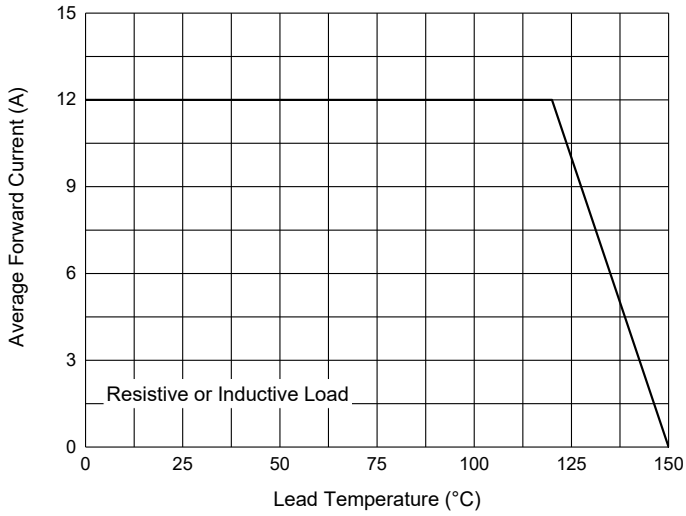


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

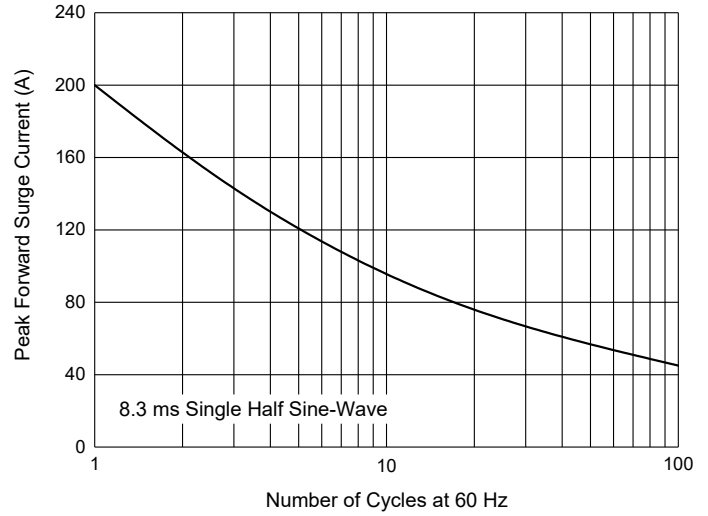


Fig. 3 - Typical Instantaneous Forward Characteristics

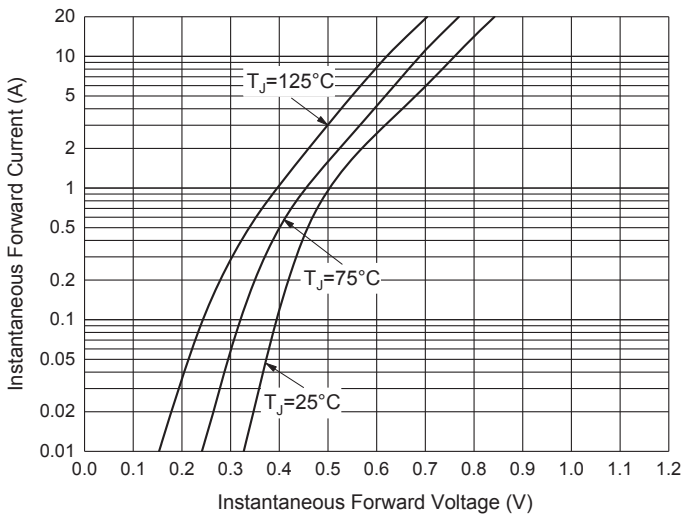


Fig. 4 - Typical Reverse Leakage Characteristics

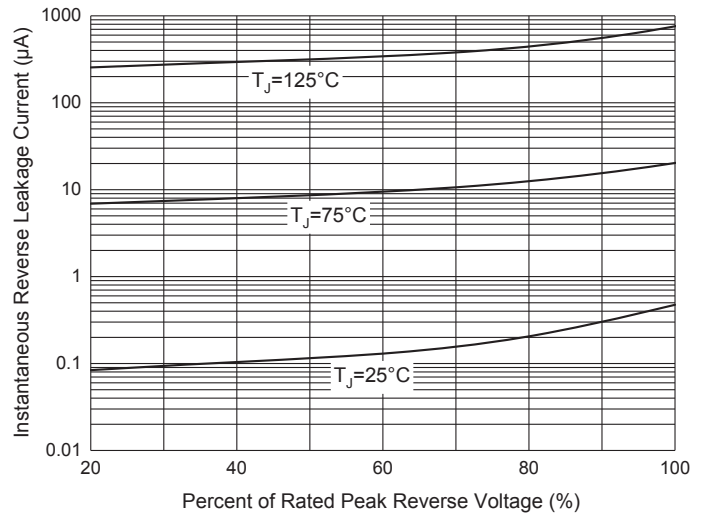
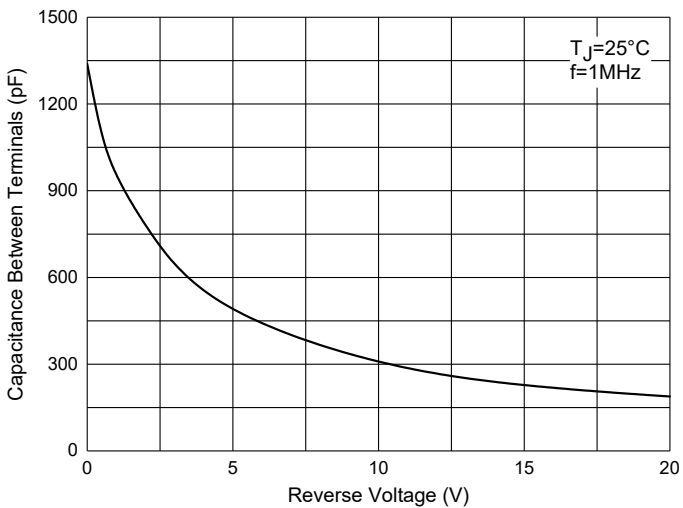


Fig. 5 - Capacitance Characteristics



**Ordering Information**

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel

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