

**Features**

- Halogen Free. "Green" Device (Note 1)
- Ultra Low Forward Voltage Drop
- High Current Capability
- 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
- Maximum Thermal Resistance: 8.0°C/W Junction to Case

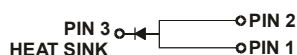
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR1045ULPS	1045UL	45V	31.5V	45V

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

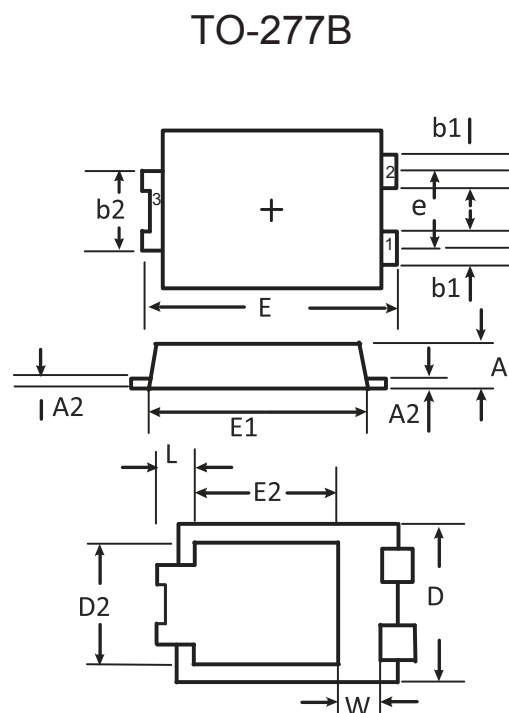
Average Forward Current	$I_{F(AV)}$	10A	$T_L = 90^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	275A	8.3ms, Half Sine
Forward Voltage	$V_F$	0.33V(Typ)	$I_F=2A$
		0.38V(Typ)	$I_F=5A$ $T_J = 25^\circ\text{C}$
		0.43V(Typ)	$I_F=10A$
		0.47V(Max)	
		0.22V(Typ)	$I_F=2A$
		0.28V(Typ)	$I_F=5A$ $T_J = 125^\circ\text{C}$
		0.39V(Typ)	$I_F=10A$
		0.42V(Max)	
Reverse Current	$I_R$	120µA(Max)	$V_R=36$ $T_J = 25^\circ\text{C}$
		0.25mA(Max)	$V_R=45$ $T_J = 25^\circ\text{C}$
		100mA(Max)	$V_R=45$ $T_J = 125^\circ\text{C}$

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**



**10 Amp Low VF Schottky Barrier Rectifier 45 Volts**



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

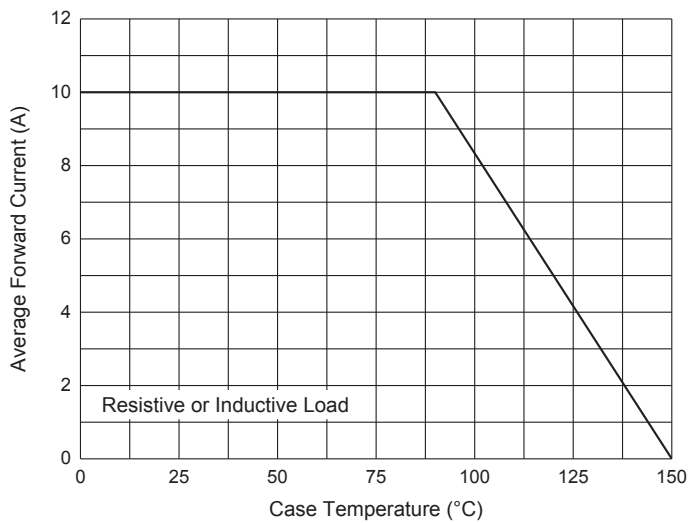


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

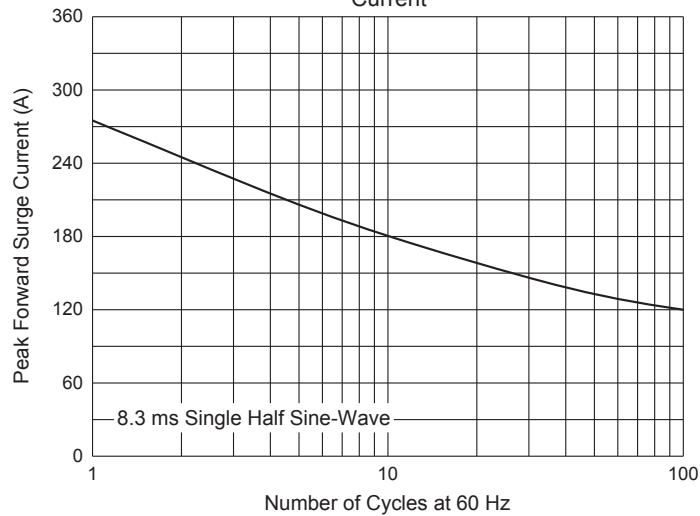


Fig. 3 - Typical Instantaneous Forward Characteristics

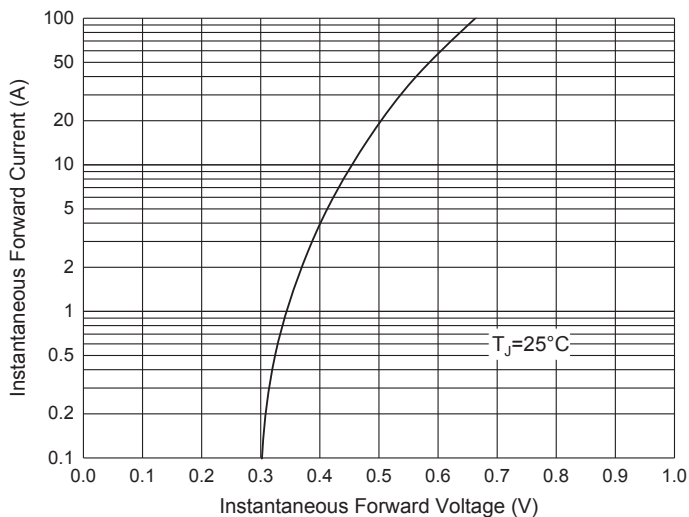
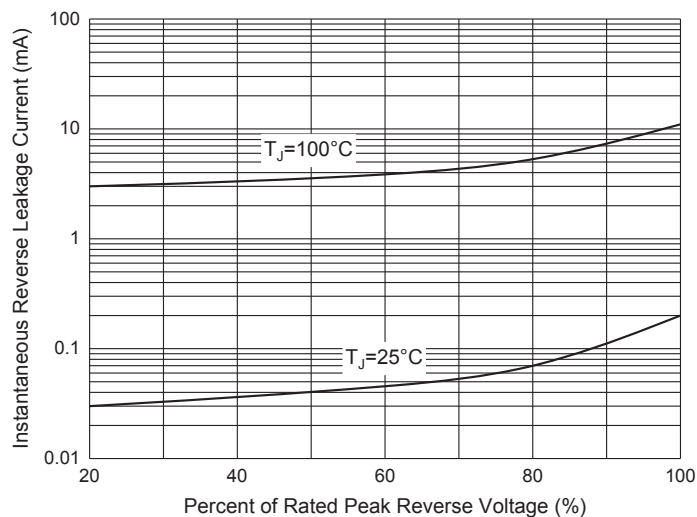


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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