

### Features

- High Frequency Operation
- Low Forward Voltage Drop
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating

### Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 2.0°C/W Junction to Case

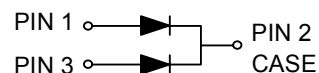
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRL40100CT	MBRL40100CT	100V	70V	100V

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

Average Forward Current	$I_{F(AV)}$	40A	$T_C=100^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	300A	8.3ms, Half Sine
Current Squared Time	$I^2t$	373A <sup>2</sup> S	1ms ≤ t < 8.3ms
Instantaneous Forward Voltage	$V_F$	0.65V(Typ.) 0.71V(Max.) 0.61V(Typ.) 0.75V(Max.)	$I_{FM}=20A T_J=25^\circ\text{C}$ $I_{FM}=20A T_J=25^\circ\text{C}$ $I_{FM}=20A T_J=125^\circ\text{C}$ $I_{FM}=20A T_J=125^\circ\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.08mA 20mA	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$
Typical Junction Capacitance	$C_J$	1nF	Measured at 1.0MHz, $V_R=4.0V$

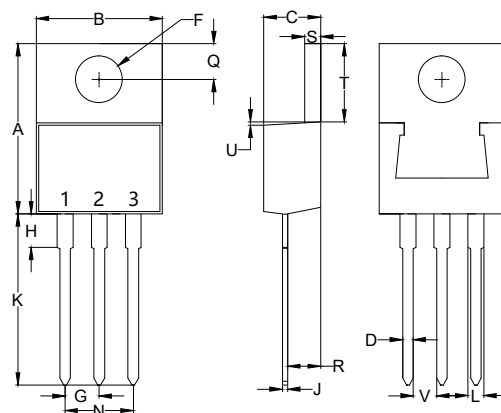
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure:



# 40 Amp Low VF Schottky Barrier Rectifier 100 Volts

## TO-220AB



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.429	9.65	10.90	
C	0.140	0.201	3.56	5.10	
D	0.020	0.045	0.51	1.14	
F	0.131	0.170	3.34	4.31	Φ
G	0.079	0.121	2.01	3.07	
H	-----	0.250	-----	6.35	
J	0.011	0.025	0.28	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.158	0.242	4.02	6.14	
Q	0.087	0.135	2.22	3.43	
R	0.080	0.126	2.04	3.19	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

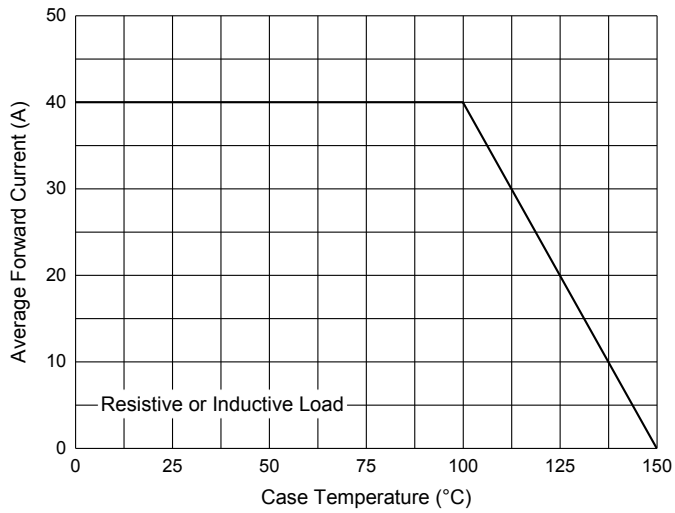


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

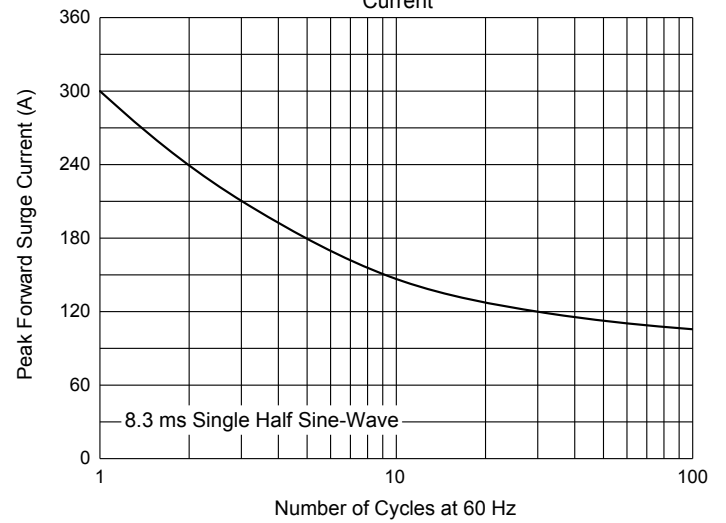


Fig. 3 - Typical Instantaneous Forward Characteristics

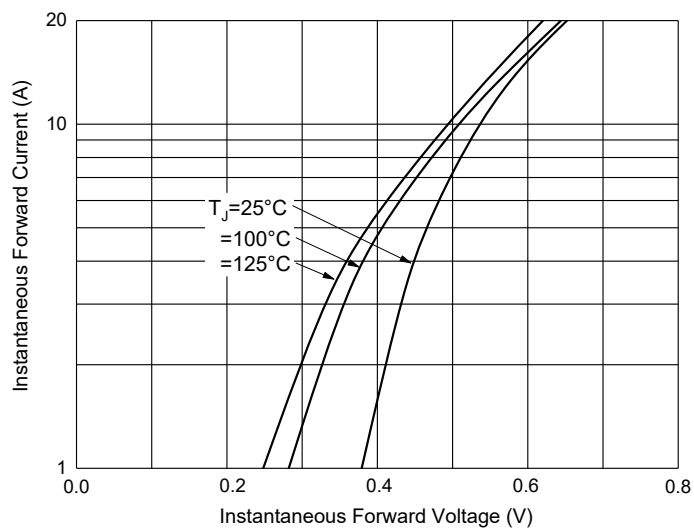
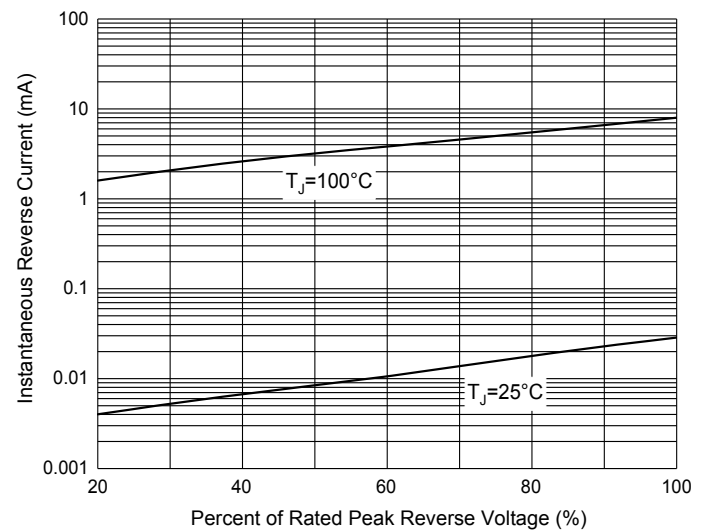


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-BP	Bulk;1Kpcs/Box

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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