

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Ultrafast Recovery Time
- Planar Structure Die and Soft Recovery Characteristics

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
MUR15120L	MUR15120L	1200V	840V	1200V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	$I_{F(AV)}$	15A	$T_C=75^\circ C$	
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, Half Sine	
Instantaneous Forward Voltage	V_F	2.5V(Typ) 3.2V(Max) 2.5V(Max)	$I_F=15A; T_J=25^\circ C$ $I_F=15A; T_J=25^\circ C$ $I_F=15A; T_J=125^\circ C$	
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5uA 200uA	$T_J=25^\circ C;$ $T_J=125^\circ C$	
Typical Junction Capacitance	C_J	48pF	Measured at 1.0MHz, $V_R=4.0V$	
Reverse Recovery Time	t_{rr}	30ns(Typ.) 50ns(Max.)	$I_F=0.5A; I_R=1.0A;$ $I_{RR}=0.25A$	
		180ns(Typ.) 240ns(Typ.)	$T_J=25^\circ C$ $T_J=125^\circ C$	
Peak recovery current	I_{RRM}	3.75A(Typ.) 8.35A(Typ.)	$T_J=25^\circ C$ $T_J=125^\circ C$ $I_F=15A$ $di_f/dt=-200A/\mu s$ $V_R=400 V$	
Reverse recovery charge	Q_{rr}	340nC(Typ.) 1015nC(Typ.)	$T_J=25^\circ C$ $T_J=125^\circ C$	

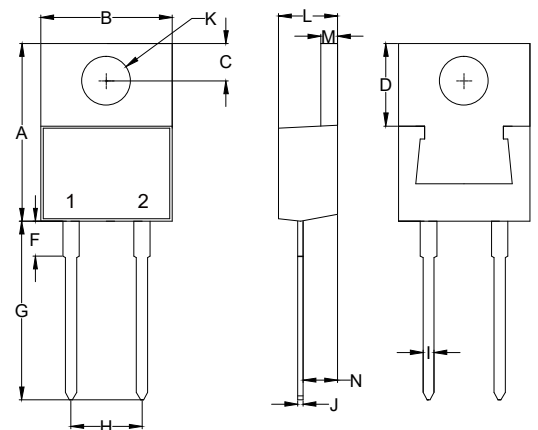
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure



**15 Amp
FRED Rectifiers
1200 Volts**

TO-220AC



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.420	9.65	10.67	
C	0.100	0.135	2.54	3.43	
D	0.230	0.270	5.84	6.86	
F	-----	0.250	-----	6.35	
G	0.500	0.580	12.70	14.73	
H	0.190	0.210	4.83	5.33	
I	0.020	0.045	0.51	1.14	
J	0.012	0.025	0.30	0.64	
K	0.139	0.161	3.53	4.09	Φ
L	0.140	0.190	3.56	4.83	
M	0.045	0.055	1.14	1.40	
N	0.080	0.115	2.03	2.92	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

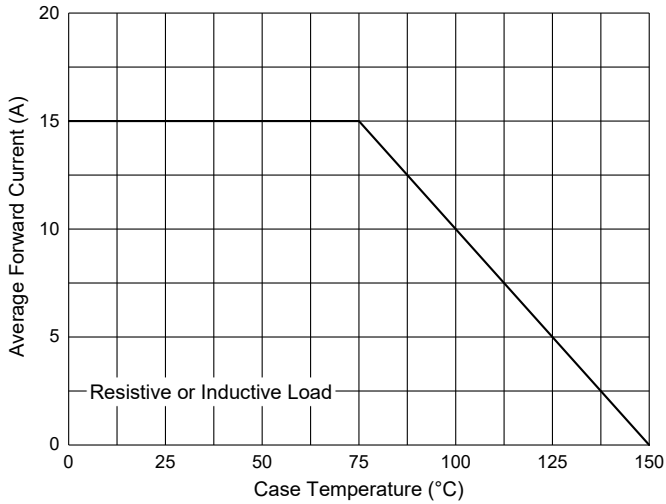


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

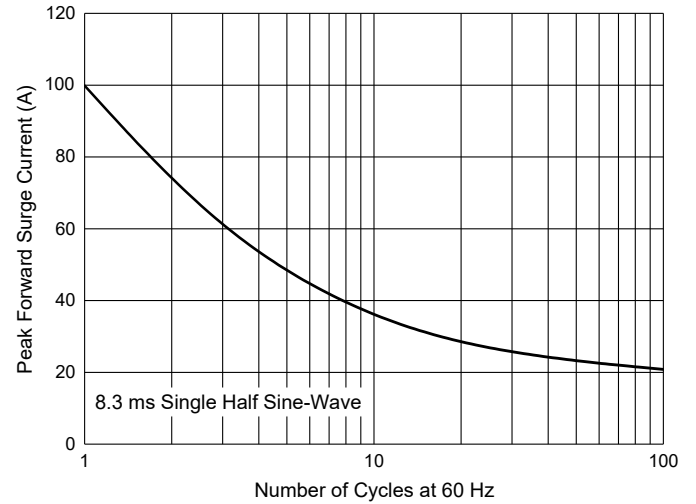


Fig. 3 - Typical Instantaneous Forward Characteristics

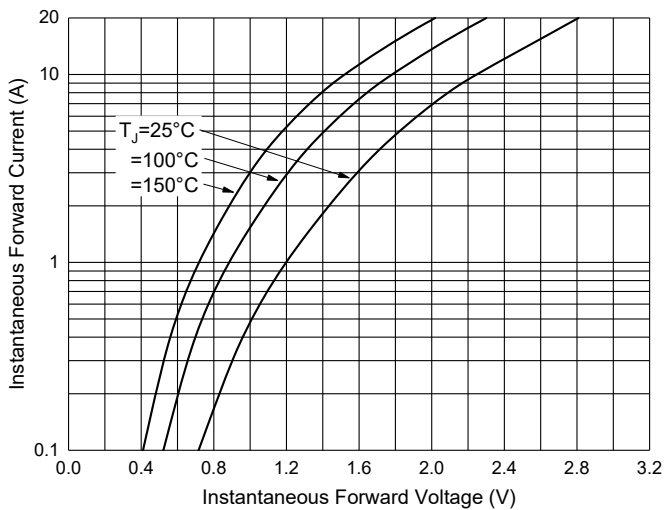


Fig. 4 - Typical Reverse Leakage Characteristics

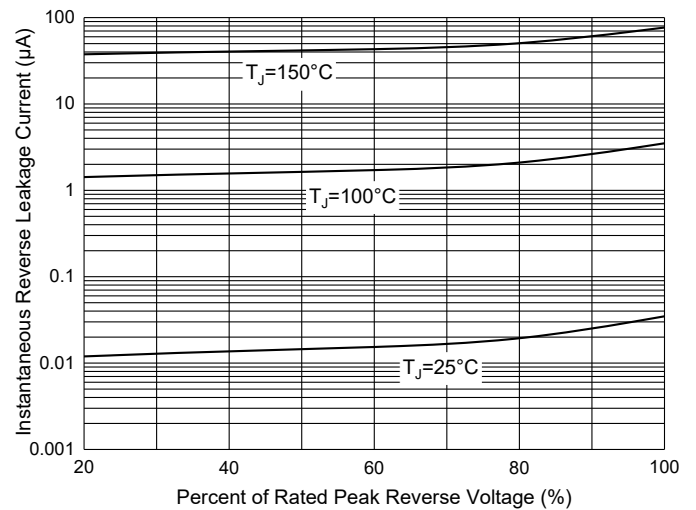
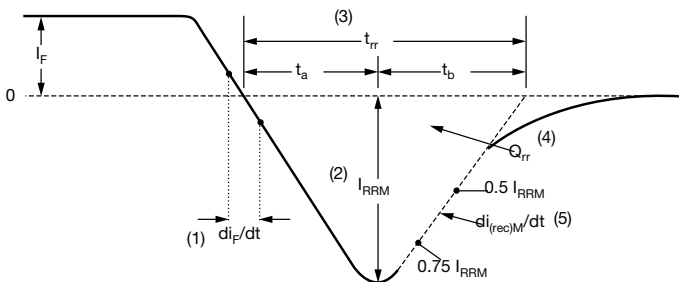


Fig. 5 - Reverse Recovery Waveform and Definitions



- (1) di_F/dt - rate of change of current through zero crossing
- (2) I_{RRM} - peak reverse recovery current
- (3) t_{rr} - reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through $0.75 I_{RRM}$ and $0.50 I_{RRM}$ extrapolated to zero current.
- (4) Q_{rr} - area under curve defined by t_{rr} and I_{RRM}
- (5) $di_{(rec)M}/dt$ - peak rate of change of current during t_b portion of t_{rr}

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$

Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube, 1Kpcs/Box,5Kpcs/Carton

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

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