

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Planar Structure Die and Soft Recovery Characteristics

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance: 0.7°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MURS3060A	MURS3060A	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	$I_{F(AV)}$	30A	$T_C = 130^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	V_F	1.6V(Typ) 2.0V(Max) 1.35V(Typ)	$I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=150^\circ\text{C}$
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 1mA	$T_J=25^\circ\text{C};$ $T_J=150^\circ\text{C}$
Typical Junction Capacitance	C_J	180pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Reverse Recovery Time	t_{rr}	35ns(Typ.) 45ns(Max.)	$I_F=0.5A; I_R=1.0A;$ $I_{RR}=0.25A$	$I_F = 30A$ $di_F/dt = -200 A/\mu\text{s}$ $V_R = 400 V$
		75ns(Typ.) 135ns(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	
Peak recovery current	I_{RRM}	4.5A(Typ.) 14.3A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	170nC(Typ.) 980nC(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	

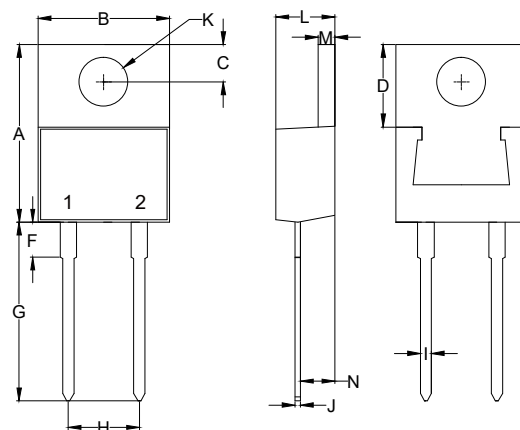
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure



30 Amp FRED Rectifiers 600 Volts

TO-220AC



DIMENSIONS

DIM	INCHES		MM		NOTE
	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

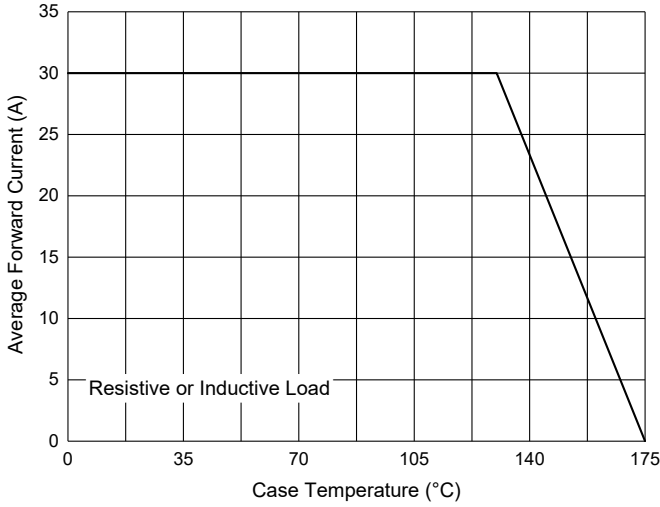


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

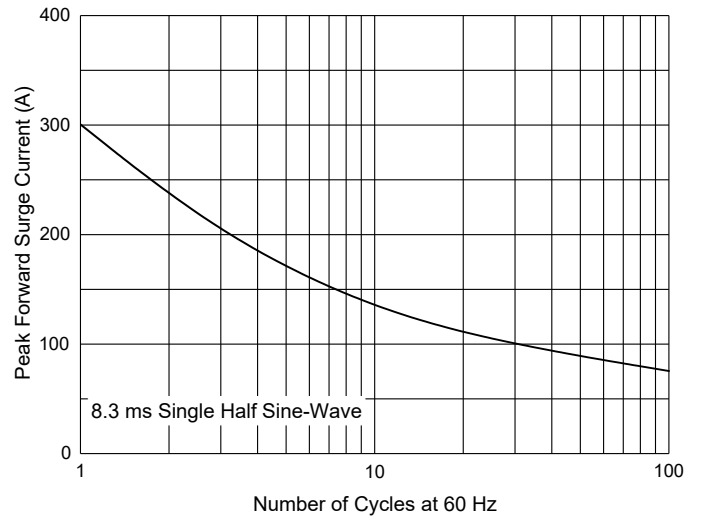


Fig. 3 - Typical Instantaneous Forward Characteristics

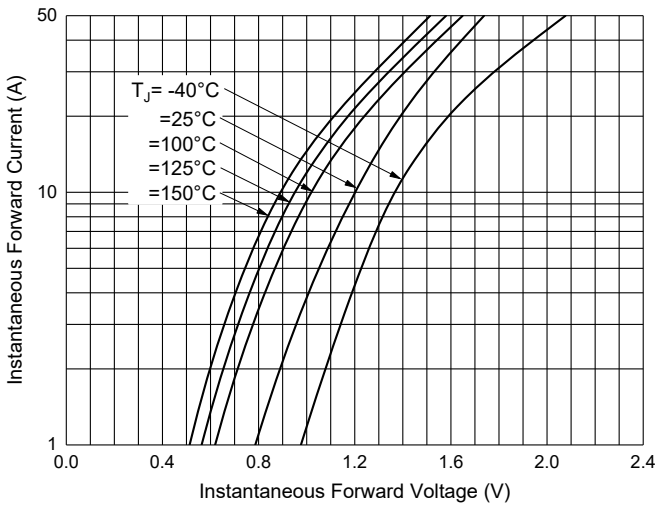


Fig. 4 - Typical Reverse Leakage Characteristics

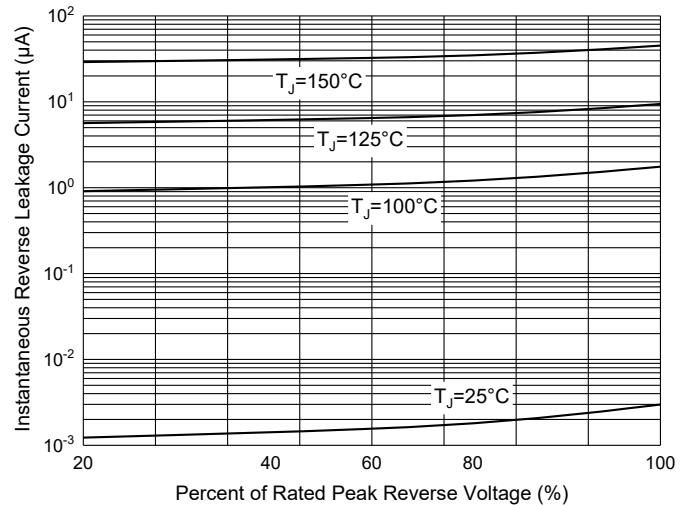


Fig. 5 - Typical Capacitance Characteristics

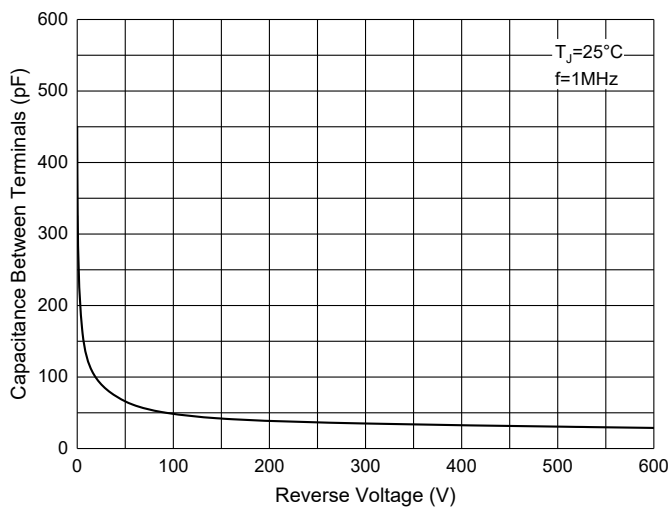
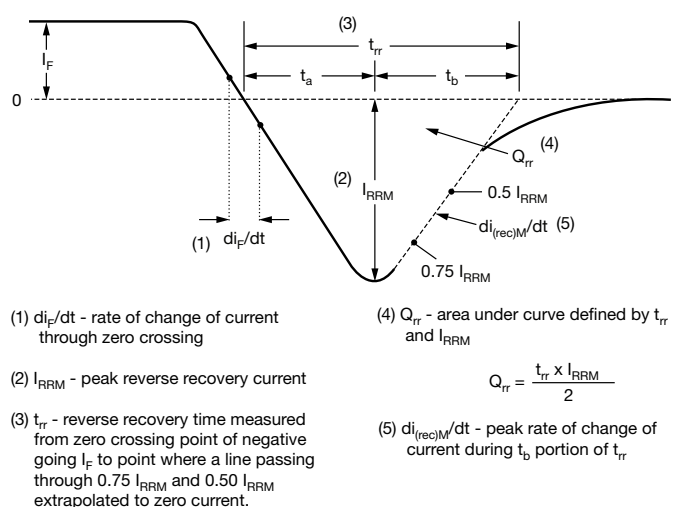


Fig. 6 - Reverse Recovery Waveform and Definitions



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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