

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 +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 4°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MURS2060FS	MURS2060FS	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	$I_{F(AV)}$	20A	$T_C = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	160A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	V_F	1.4V(Typ) 1.7V(Max) 1.5V(Max)	$I_F=20\text{A}; T_J=25^\circ\text{C}$ $I_F=20\text{A}; T_J=25^\circ\text{C}$ $I_F=20\text{A}; T_J=125^\circ\text{C}$
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 50 μA	$T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	100pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Reverse Recovery Time	t_{rr}	31ns(Typ.) 40ns(Max.)	$I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{RR}=0.25\text{A}$	$I_F = 20\text{ A}$ $di_F/dt = 300\text{ A}/\mu\text{s}$ $V_R = 400\text{ V}$
Peak recovery current	I_{RRM}	6.5A(Typ.) 12A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	310nC(Typ.) 920nC(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	

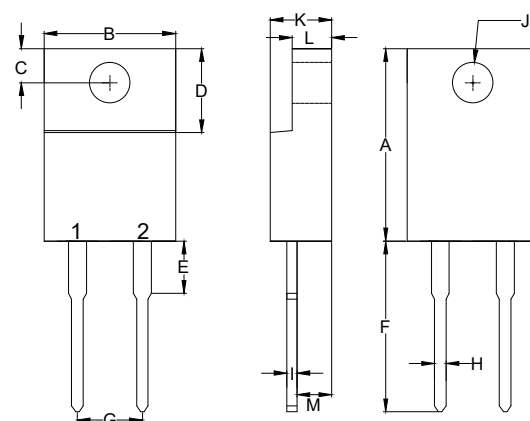
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure



20 Amp FRED Rectifiers 600 Volts

ITO-220AC



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.567	0.606	14.40	15.40	
B	-----	0.406	-----	10.30	
C	0.100	0.112	2.55	2.85	
D	0.248	0.272	6.30	6.90	
E	-----	0.161	-----	4.10	
F	0.500	0.543	12.70	13.80	
G	0.200		5.10		
H	-----	0.035	-----	0.90	
I	-----	0.032	-----	0.80	
J	0.102	0.134	2.60	3.40	Φ
K	-----	0.189	-----	4.80	
L	-----	0.123	-----	3.10	
M	0.098	0.114	2.50	2.90	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

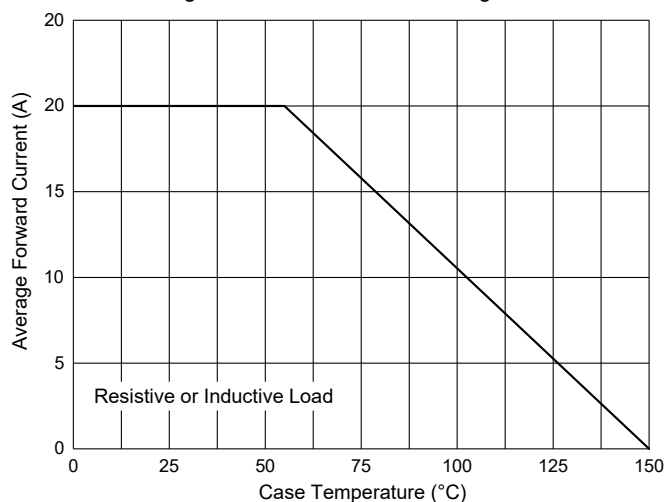


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

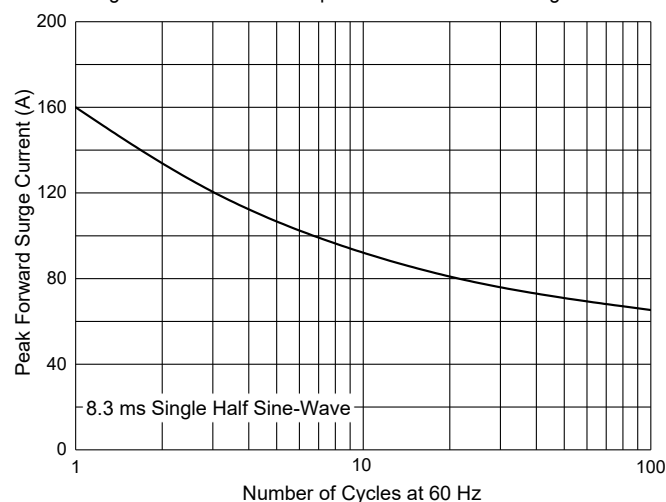


Fig. 3 - Typical Instantaneous Forward Characteristics

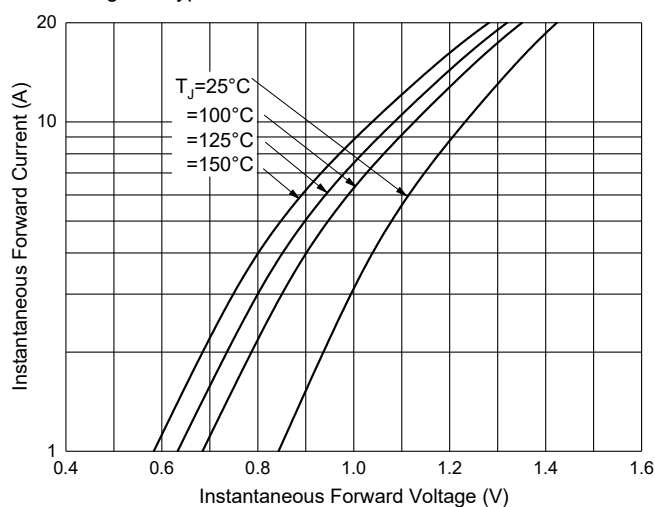


Fig. 4 - Typical Reverse Leakage Characteristics

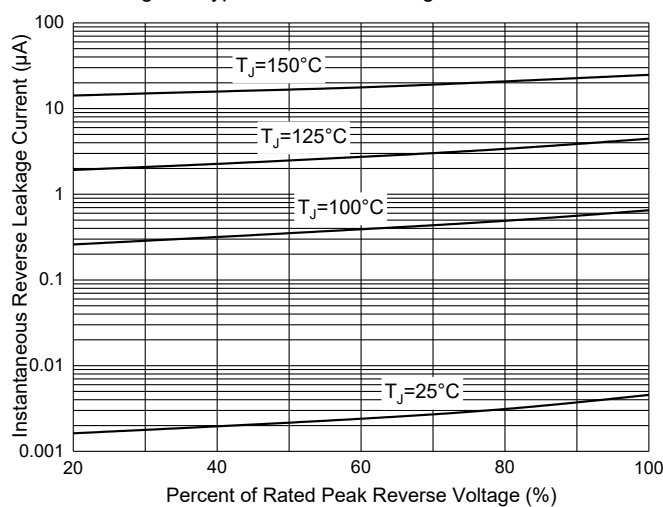


Fig. 5 - Capacitance Characteristics

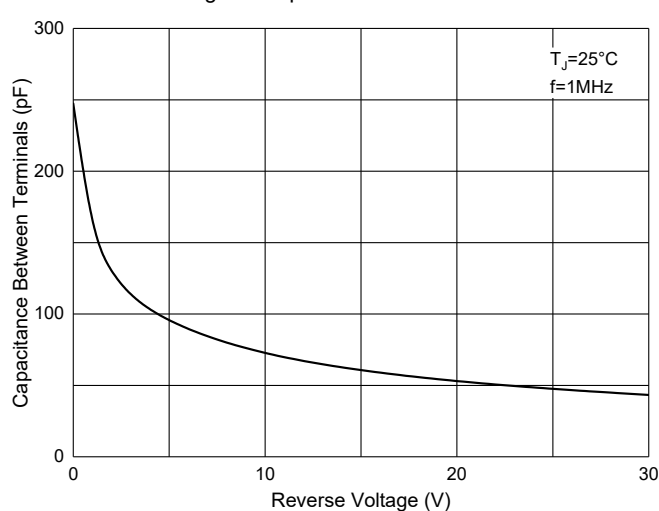
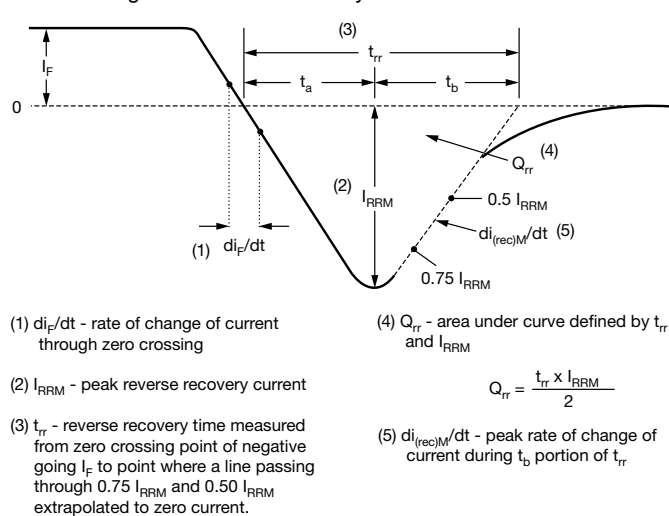


Fig. 6 - Reverse Recovery Waveform and Definitions



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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