Micro Commercial Components

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

15 Amp FRED Rectifiers 600 Volts

Maximum Ratings

- Operating Junction Temperature Range: -55ºC to +150ºC
- Storage Temperature Range: -55ºC to +150ºC
- 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
MURS1560FA	MURS1560FA	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

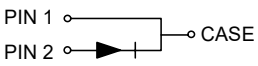
Average Rectified Forward Current	$I_{F(AV)}$	15A	T_C = 55°C
Peak Forward Surge Current	I_{FSM}	160A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage	V_F	1.32V(Typ) 1.6V(Max) 1.4V(Max)	I_F=15A;T_J=25ºC I_F=15A;T_J=25ºC I_F=15A;T_J=125ºC
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5μA 50μA	T_J=25ºC; T_J=125ºC
Typical Junction Capacitance	C_J	100pF	Measured at 1.0MHz, V_R=4.0V

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

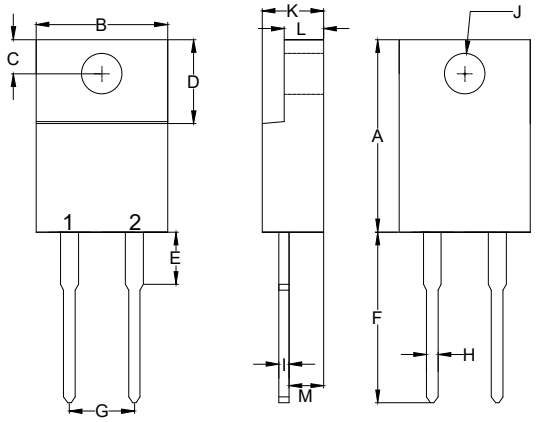
Reverse Recovery Time	t_{rr}	31ns(Typ.) 40ns(Max.)	I_F=0.5A; I_R=1.0A; I_{RR}=0.25A	
		95ns(Typ.) 145ns(Typ.)	T_J=25ºC T_J=125ºC	I_F = 15 A di_F/dt = 200 A/μs V_R = 400 V
Peak recovery current	I_{RRM}	5.0A(Typ.) 9.5A(Typ.)	T_J=25ºC T_J=125ºC	
Reverse recovery charge	Q_{rr}	245nC(Typ.) 710nC(Typ.)	T_J=25ºC T_J=125ºC	

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

Internal Structure



ITO-220AC



DIMENSIONS					
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

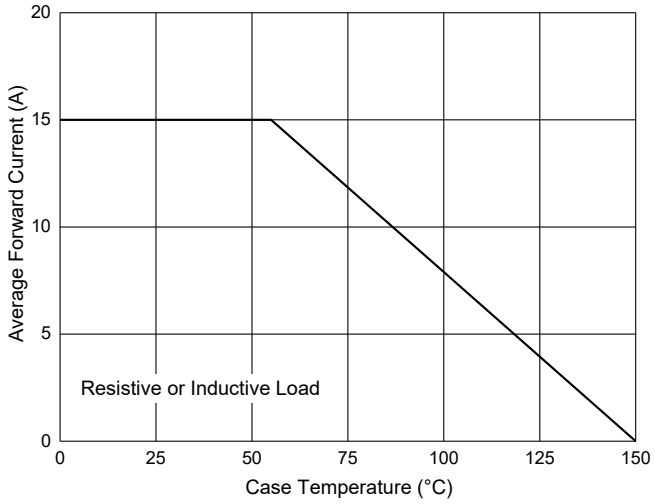


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

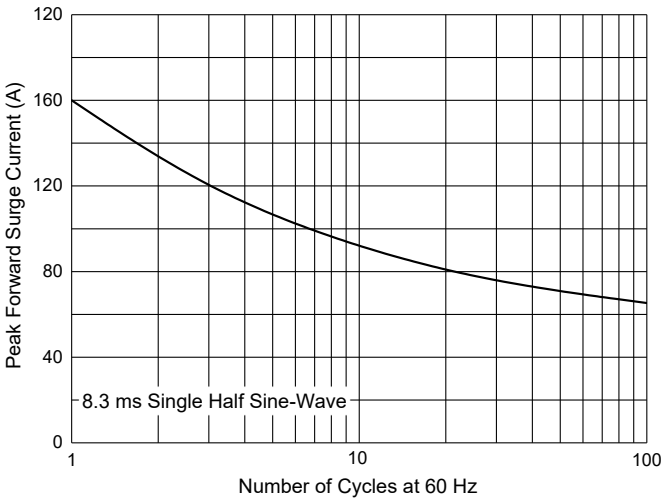


Fig. 3 - Typical Instantaneous Forward Characteristics

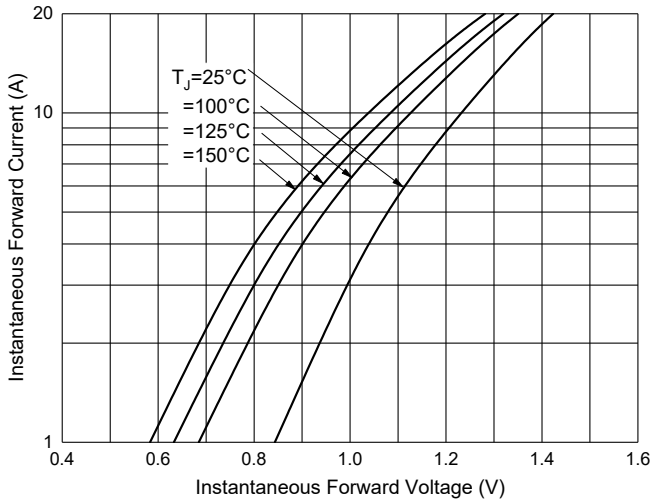


Fig. 4 - Typical Reverse Leakage Characteristics

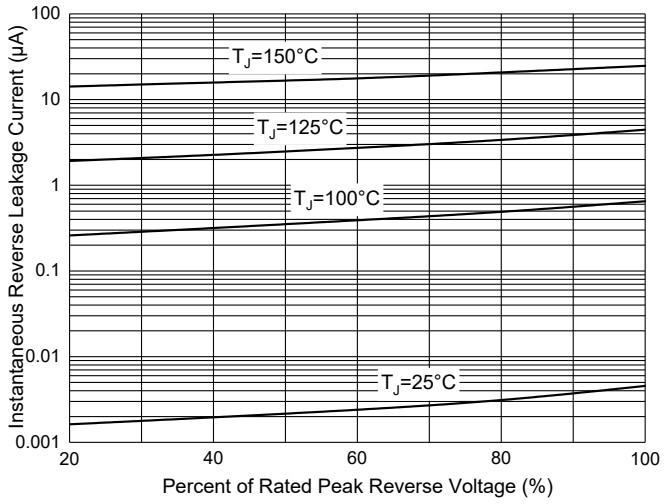


Fig. 5 - Capacitance Characteristics

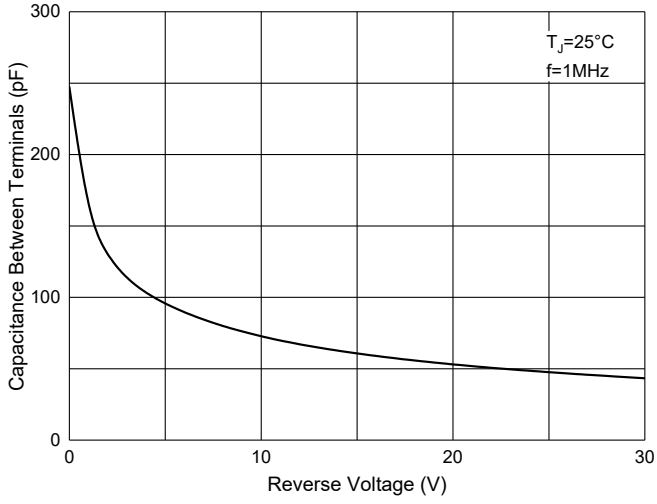
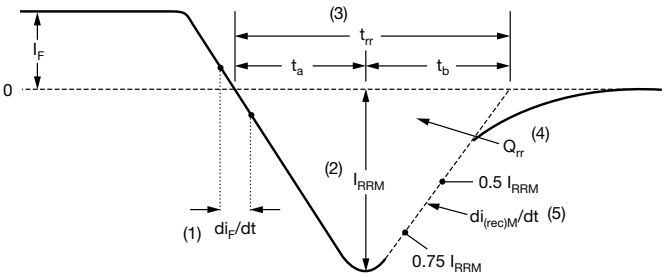


Fig. 6 - Reverse Recovery Waveform and Definitions



(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}

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

(5) $di_{(rec)M}/dt$ - peak rate of change of current during t_b portion of t_{rr}

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