

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
- Moisture Sensitivity Level 1
- Low Switching Losses and High Efficiency
- Low Forward Voltage Drop
- 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
- Maximum Thermal Resistance: 2°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MURS1560L	MURS1560L	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	I _{F(AV)}	15A	T _C = 130°C
Peak Forward Surge Current	I _{FSM}	160A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage	V _F	1.3V(Typ) 1.5V(Max) 1.1V(Typ)	I _F =15A;T _J =25°C I _F =15A;T _J =25°C I _F =15A;T _J =150°C
Maximum Reverse Current At Rated DC Blocking Voltage	I _R	10μA 200μA	T _J =25°C; T _J =150°C
Typical Junction Capacitance	CJ	95pF	Measured at 1.0MHz, V _R =4.0V

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

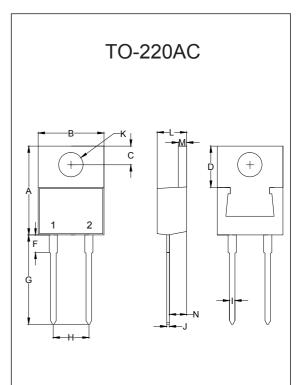
Reverse Recovery Time	t _{rr}	40ns(Typ.) 75ns(Max.)	I _F =0.5A; I _R =1.0A; I _{RR} =0.25A		
		82ns(Typ.) 128ns(Typ.)	T _J =25°C T _J =125°C	I - 15 A	
Peak recovery current	I _{RRM}	6.5A(Typ.) 12A(Typ.)	T _J =25°C T _J =125°C	$I_F = 15 \text{ A}$ $di_F/dt = 200 \text{ A/}\mu\text{s}$ $V_R = 400 \text{ V}$	
Reverse recovery charge	Q _{rr}	265nC(Typ.) 770nC(Typ.)	T _J =25°C T _J =125°C		

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

Internal Structure



15 Amp FRED Rectifiers 600 Volts



	DIMENSIONS				
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	NOTE
Α	0.560	0.625	14.22	15.88	
В	0.380	0.420	9.65	10.67	
С	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	
Н	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	Ф
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

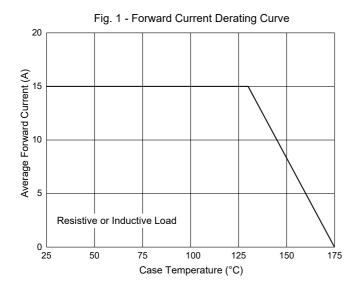
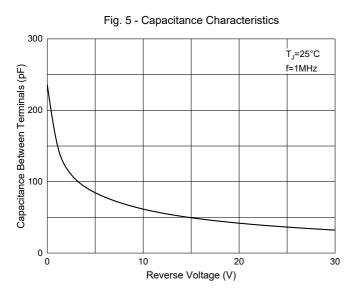
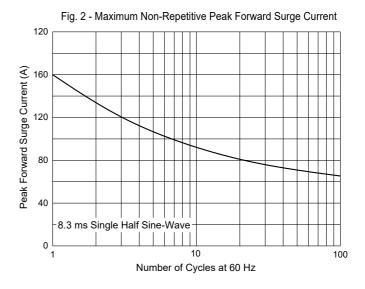


Fig. 3 - Typical Instantaneous Forward Characteristics 20 Instantaneous Forward Current (A) T_J=25°C ⊆ =100°C =125°C =150°C 0.4 0.6 0.8 1.4 1.6

Instantaneous Forward Voltage (V)





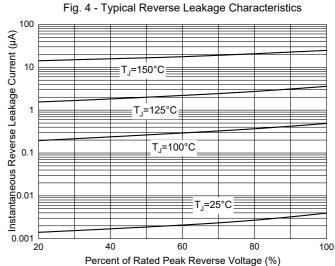
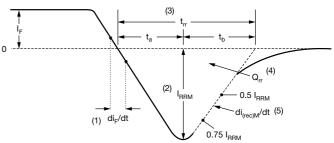


Fig. 6 - Reverse Recovery Waveform and Definitions



- (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) $\mathbf{Q}_{\rm rr}$ area under curve defined by $\mathbf{t}_{\rm rr}$ 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

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