

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 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
- 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
MURS1560B	MURS1560B	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	I _{F(AV)}	15A	T _C = 95°C	
Peak Forward Surge Current	I _{FSM}	160A	8.3ms,Half Sine	
Maximum Instantaneous Forward Voltage	V _F	1.9V(Typ) 2.8V(Max) 1.5V(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	92pF	Measured at 1.0MHz, V _R =4.0V	

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

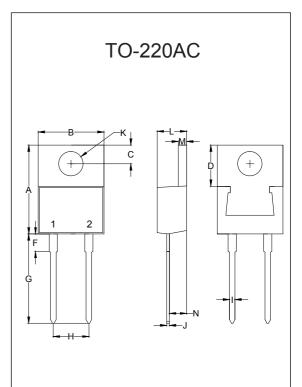
Reverse Recovery	t _{rr}	20ns(Typ.) 25ns(Max.)	I _F =0.5A; I _R =1.0A; I _{RR} =0.25A	
Time		38ns(Typ.) 70ns(Typ.)	T _J =25°C T _J =125°C	L = 45 A
Peak recovery current	I _{RRM}	2.45A(Typ.) 5.75A(Typ.)	T _J =25°C T _J =125°C	$I_F = 15 \text{ A}$ $di_F/dt = 200 \text{ A/}\mu\text{s}$ $V_R = 200 \text{ V}$
Reverse recovery charge	Q _{rr}	75nC(Typ.) 200nC(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
Dilvi	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	
М	0.045	0.055	1.14	1.40	
N	0.080	0.115	2.03	2.92	



Curve Characteristics

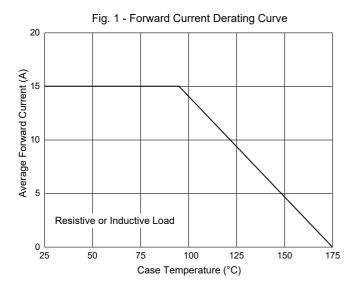


Fig. 3 - Typical Instantaneous Forward Characteristics

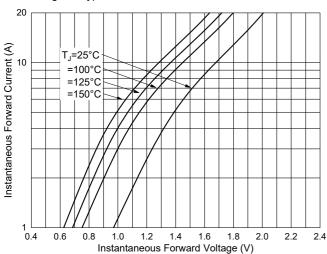


Fig. 5 - Capacitance Characteristics

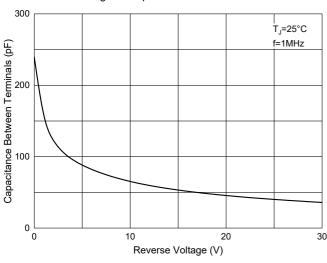


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

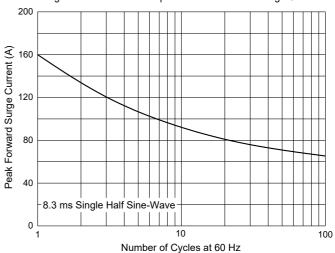


Fig. 4 - Typical Reverse Leakage Characteristics

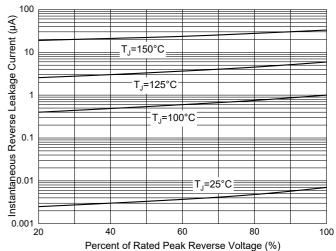
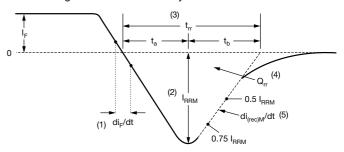


Fig. 6 - Reverse Recovery Waveform and Definitions



- (1) di_F/dt rate of change of current through zero crossing
- (2) I_{RRM} peak reverse recovery current
- (3) $t_{\rm rr}$ reverse recovery time measured from zero crossing point of negative going $I_{\rm F}$ to point where a line passing through 0.75 $I_{\rm RBM}$ and 0.50 $I_{\rm RBM}$ 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

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