

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Frequency Operation
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- 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: 1 °C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MUR6060BS	MUR6060BS	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

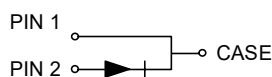
Average Rectified Forward Current	$I_{F(AV)}$	60A	$T_C=55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	500A	8.3ms, Half Sine
Instantaneous Forward Voltage	V_F	2.5V(Max.) 1.9V(Typ.)	$I_F=60\text{A}; T_J=25^\circ\text{C}$
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 200 μA	$T_J=25^\circ\text{C}; T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	200pF	Measured at 1.0MHz, $V_R=4\text{V}$

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Reverse Recovery Time	t_{rr}	35ns(Typ.) 50ns(Max.)	$I_F=0.5\text{A}; I_R=1.0\text{A}; I_{RR}=0.25\text{A}$	
		48ns(Typ.) 91ns(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_F = 30\text{ A}$ $di_F/dt = 200\text{ A}/\mu\text{s}$ $V_R = 200\text{ V}$
Peak recovery current	I_{RRM}	3.5A(Typ.) 12A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	83nC(Typ.) 545nC(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	

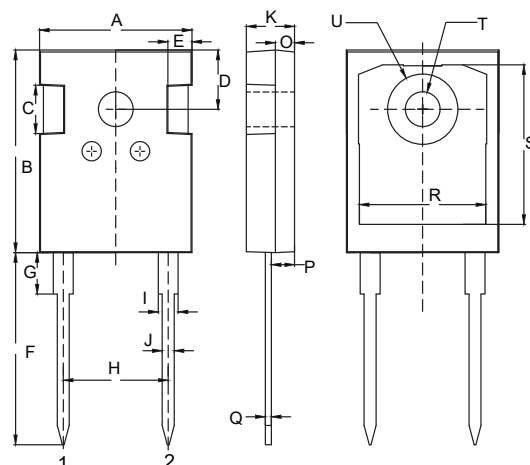
Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

Internal Structure



60 Amp Ultra Fast Recovery Rectifier 600 Volts

TO-247AD



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.602	0.642	15.30	16.30	
B	0.799	0.839	20.30	21.30	
C	0.189	0.205	4.80	5.20	
D	0.242		6.15		BSC.
E	0.091	0.106	2.30	2.70	
F	0.772	0.796	19.62	20.22	
G	----	0.169	----	4.30	
H	0.428		10.88		BSC.
I	0.075	0.087	1.91	2.21	
J	0.044	0.054	1.11	1.36	
K	0.189	0.205	4.80	5.20	
O	0.073	0.085	1.85	2.15	
P	0.087	0.103	2.21	2.61	
Q	0.020	0.030	0.51	0.75	
R	0.512	0.535	13.00	13.60	
S	0.640	0.663	16.25	16.85	
T	0.134	0.150	3.40	3.80	Φ
U	----	0.287	----	7.30	Φ

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

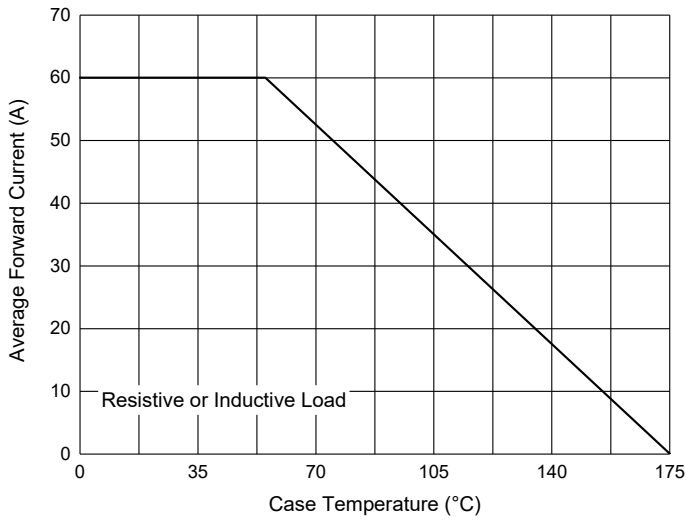


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

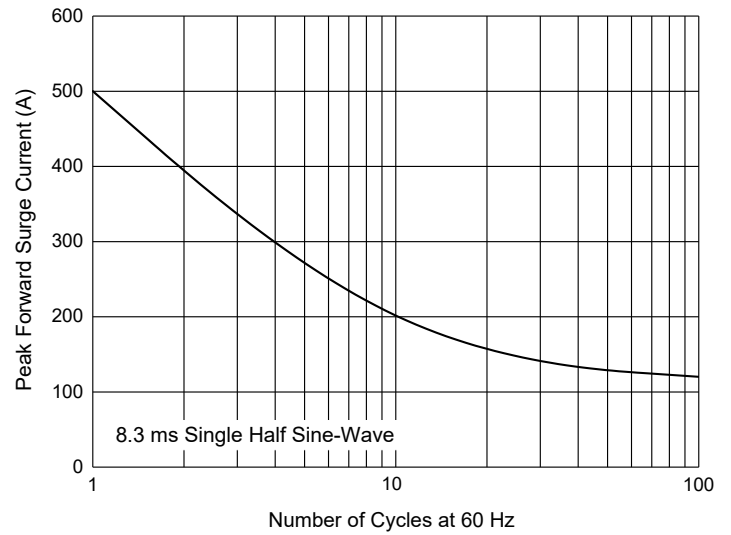


Fig. 3 - Typical Instantaneous Forward Characteristics

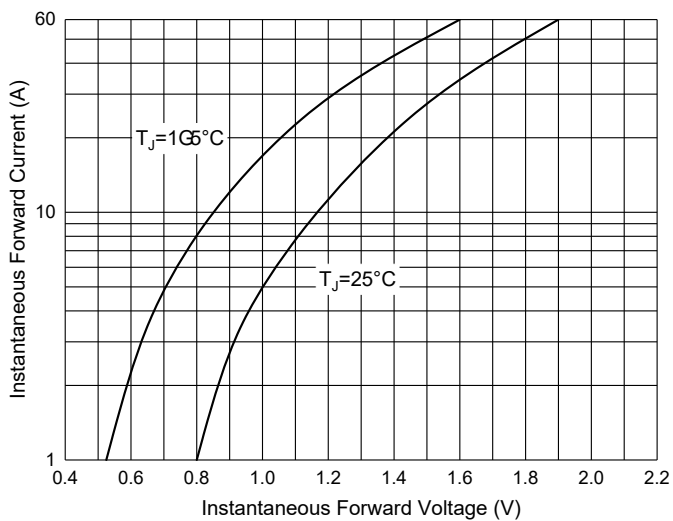


Fig. 4 - Typical Reverse Leakage Characteristics

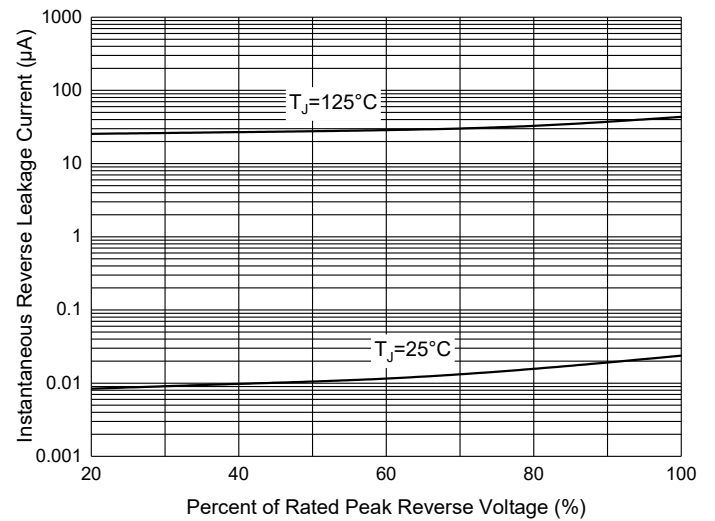
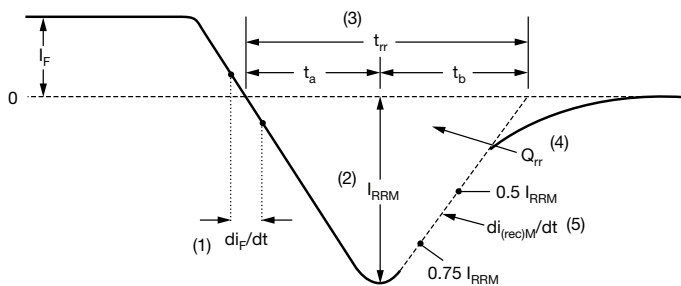


Fig. 5 - Reverse Recovery Waveform and Definitions



(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:30pcs/Tube,360pcs/Box,1.8Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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