

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
- Moisture Sensitivity Level 1
- 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: 0.8°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MUR3060B	MUR3060B	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	I _{F(AV)}	30A	T _C =120°C	
Peak Forward Surge Current	I _{FSM}	300A	8.3ms,Half Sine	
Instantaneous Forward Voltage	V _F	2.3V(Max.) 1.95V(Typ.)	I _F =30A; T _J =25°C	
Maximum Reverse Current At Rated DC Blocking Voltage	I _R	10μA 500μA	T _J =25°C; T _J =125°C	
Typical Junction Capacitance	CJ	180pF	Measured at 1.0MHz, V _R =4V	

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

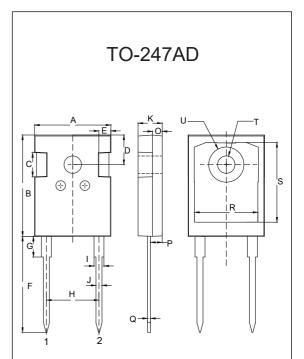
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Reverse Recovery	t _{rr}	31ns(Typ.) 35ns(Max.)	I _F =0.5A; I _R =1.0A; I _{RR} =0.25A	
Time		60ns(Typ.) 110ns(Typ.)	T _J =25°C T _J =125°C	L = 20 A
Peak recovery current	I _{RRM}	3.4A(Typ.) 9.7A(Typ.)	T _J =25°C T _J =125°C	$I_F = 30 \text{ A}$ $di_F/dt = 200 \text{ A/}\mu\text{s}$ $V_R = 200 \text{ V}$
Reverse recovery charge	Q _{rr}	100nC(Typ.) 535nC(Typ.)	T _J =25°C T _J =125°C	

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

Internal Structure



30 Amp Ultra Fast Recovery Rectifier 600 Volts



DIM	INCHES		MM		NOTE
וועו	MIN	MAX	MIN	MAX	INOTE
Α	0.602	0.642	15.30	16.30	
В	0.799	0.839	20.30	21.30	
С	0.189	0.205	4.80	5.20	
D	0.2	242	6.	15	BSC.
Е	0.091	0.106	2.30	2.70	
F	0.768	0.807	19.50	20.50	
G		0.189		4.80	
Н	0.428		10.88		BSC.
ı	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	
0	0.073	0.085	1.85	2.15	
Р	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	Ф
U		0.287		7.30	Ф



Curve Characteristics

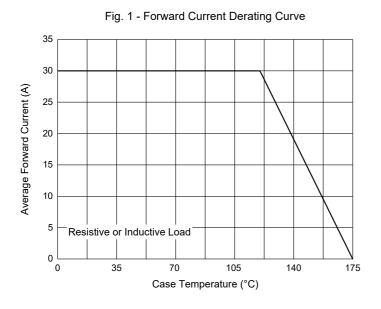


Fig. 3 - Typical Instantaneous Forward Characteristics

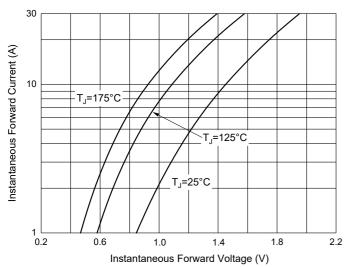


Fig. 5 - Capacitance Characteristics

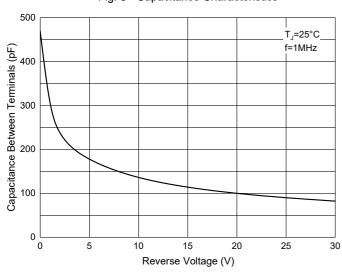


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge

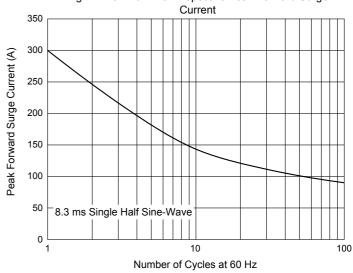


Fig. 4 - Typical Reverse Leakage Characteristics

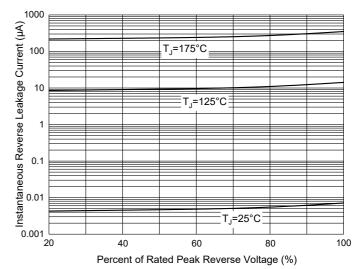
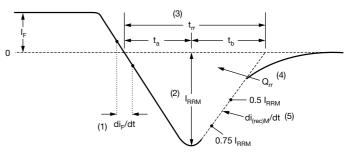


Fig. 6 - Reverse Recovery Waveform and Definitions



- (1) di_F/dt rate of change of current through zero crossing
- (2) I_{RRM} peak reverse recovery current
- (3) t_{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) ${\rm Q_{rr}}$ area under curve defined by ${\rm t_{rr}}$ and ${\rm I_{RRM}}$
 - $Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$
- (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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