

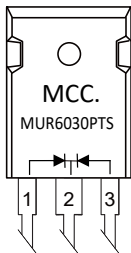
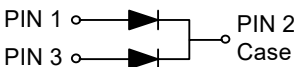
Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Ultrafast Recovery Time
- Planar Structure Die and Soft Recovery Characteristics

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	210	V
Average Rectified Forward Current	$I_{F(AV)}$	30	A
Per Diode Per Device		60	
Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave(Per Diode)	I_{FSM}	350	A
Current Squared Time @ 1ms≤t≤8.3ms(Per Diode)	I^2t	508	A ² s

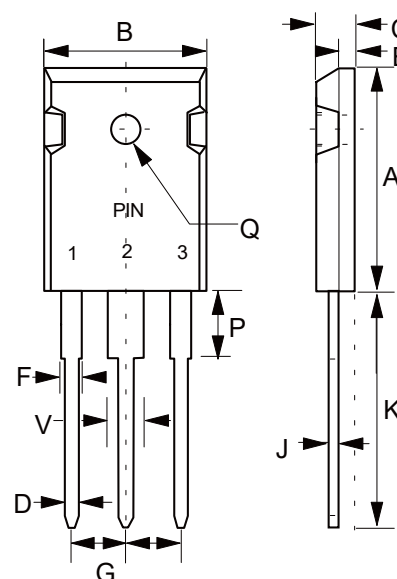
Internal Structure

Simplified Outline	Graphic Symbol
	

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

60 Amp FRED Rectifiers 300 Volts

TO-247



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.787	0.866	20.00	22.00	
B	0.598	0.638	15.20	16.20	
C	0.185	0.208	4.70	5.30	
D	0.035	0.059	0.90	1.50	
E	0.059	0.094	1.50	2.40	
F	0.067	0.091	1.70	2.30	
J	0.019	0.031	0.48	0.80	
K	0.748	0.833	19.00	21.15	
P	0.122	0.189	3.10	4.80	
Q	0.118	0.150	3.00	3.80	Φ
V	0.106	0.134	2.70	3.40	
G	0.197	0.224	5.00	5.70	

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		175	°C
T_{stg}	Storage Temperature Range		-55		175	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Per Diode		0.6		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient			38		°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=30A; T_J=25^{\circ}C$			1.40	V
		$I_F=30A; T_J=125^{\circ}C$			1.20	
Reverse Current	I_R	$V_R=300V; T_J=25^{\circ}C$			10	μA
		$V_R=300V; T_J=125^{\circ}C$			200	
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		235		pF

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit	
Reverse Recovery Time	t _{rr}	I _F =0.5A; I _R =1.0A; I _{RR} =0.25A; T _J =25°C			29	40	ns	
		I _F =1A; di/dt=-50A/μs; V _R =30V; T _J =25°C			40			
			T _J =25°C		39			
			T _J =125°C		62			
Peak Recovery Current	I _{RRM}	I _F =30A di/dt=-200A/μs V _R =200 V	T _J =25°C		2.7		A	
			T _J =125°C		9.0			
Reverse Recovery Charge	Q _{rr}			T _J =25°C		52		nC
				T _J =125°C		275		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

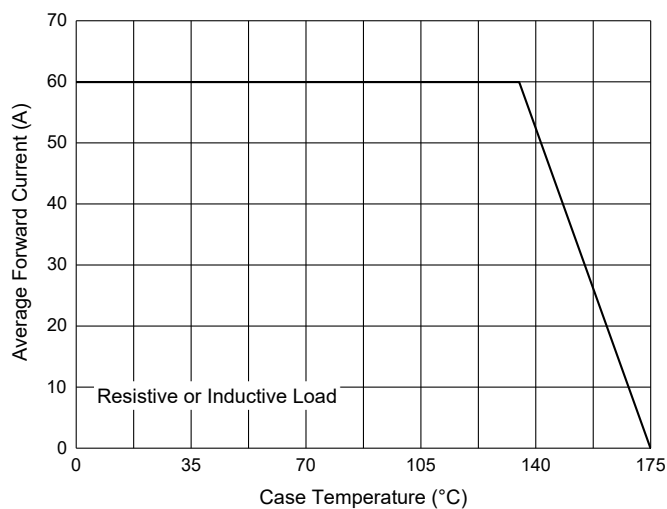


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

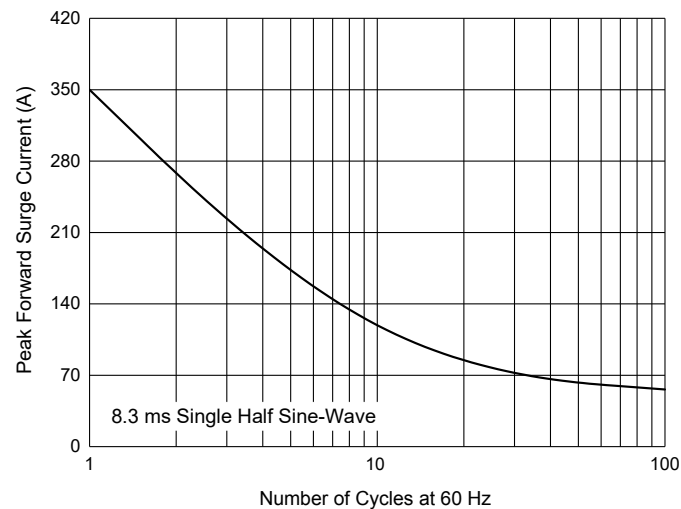


Fig. 3 - Typical Forward Characteristics

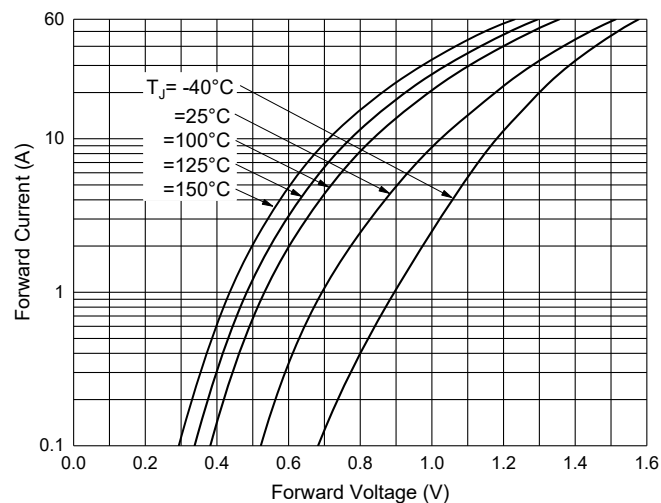


Fig. 4 - Typical Reverse Leakage Characteristics

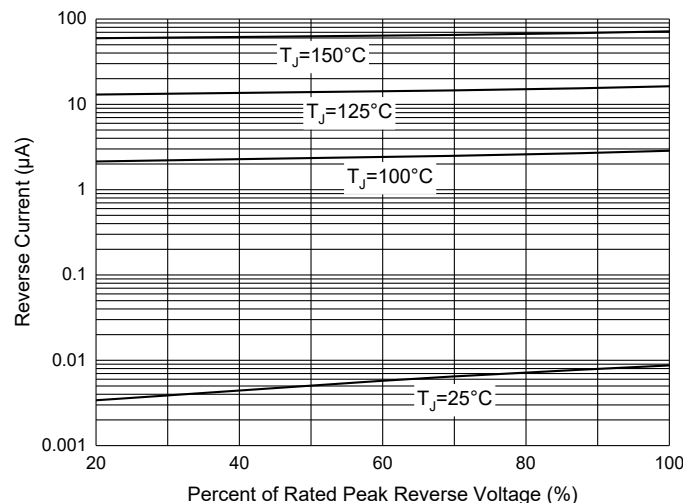


Fig. 5 - Typical Capacitance Characteristics

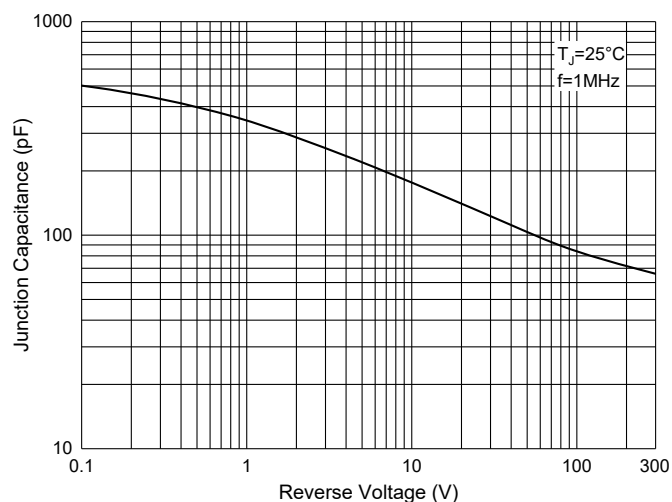
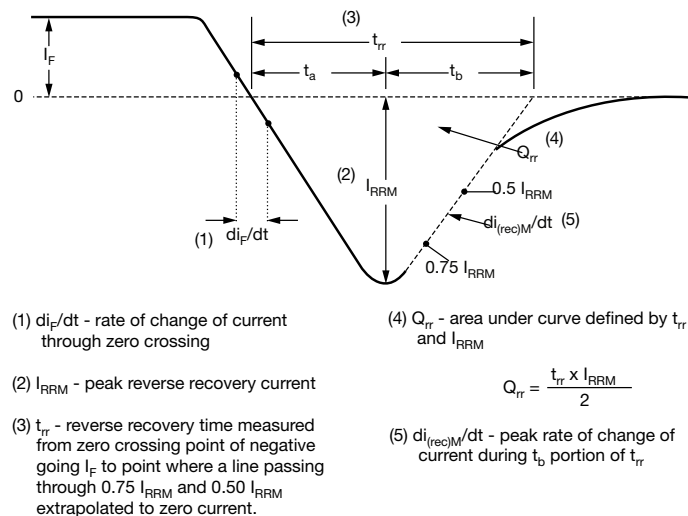


Fig. 6 - Reverse Recovery Waveform and Definitions



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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