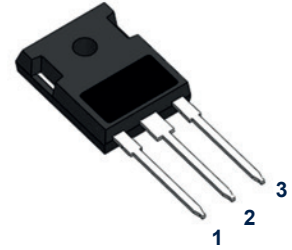


# GSMUR6020PT thru GSMUR6060PT

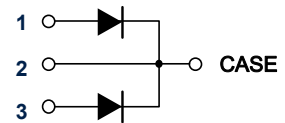
Super Fast Recovery Rectifiers  
 Reverse Voltage 200V to 600V Forward Current 60A

## Features

- FRED chip planar construction
- Super fast switching high efficiency
- Low power loss high efficiency
- Low reverse leakage current
- High surge current capability
- Plastic material has UL flammability classification 94V-0



TO-247AB



Schematic Diagram

## Mechanical Data

- Case: TO-247AB, molded plastic
- Terminals: Pure tin plated, lead free solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any

## Applications

For use in high frequency rectifier of switching mode power supplies, freewheeling diode, DC/DC converters or polarity protection application.

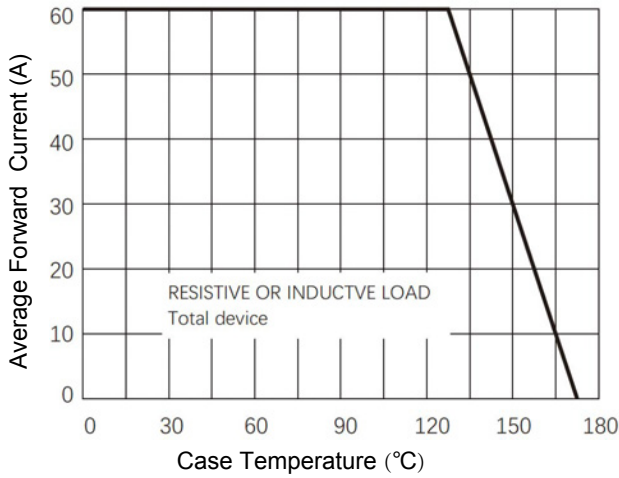
**Maximum Ratings and Electrical Characteristics** ( $T_J=25^{\circ}\text{C}$  unless otherwise noted. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

Parameters	Symbol	GSMUR 6020PT	GSMUR 6030PT	GSMUR 6040PT	GSMUR 6060PT	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	200	300	400	600	V
Maximum Average Forward (See Figure 1)	$I_{F(AV)}$	60				A
Peak Forward Surge Current: 8.3ms single Half Sine-Wave Superimposed on Rated Load (JEDEC Method, Total Device)	$I_{FSM}$	350				A
Maximum Forward Voltage at 30A per leg <sup>2</sup>	$V_F$	1.05	1.35	1.70		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^{\circ}\text{C}$	5				$\mu\text{A}$
	$T_J=125^{\circ}\text{C}$	50				
Maximum Reverse Recovery Time (Measured With $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{RR}=0.25\text{A}$ )	$T_{rr}$	35	50			nS
Typical Thermal Resistance <sup>1</sup>	$R_{\theta JC}$	1.0				$^{\circ}\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +175				$^{\circ}\text{C}$

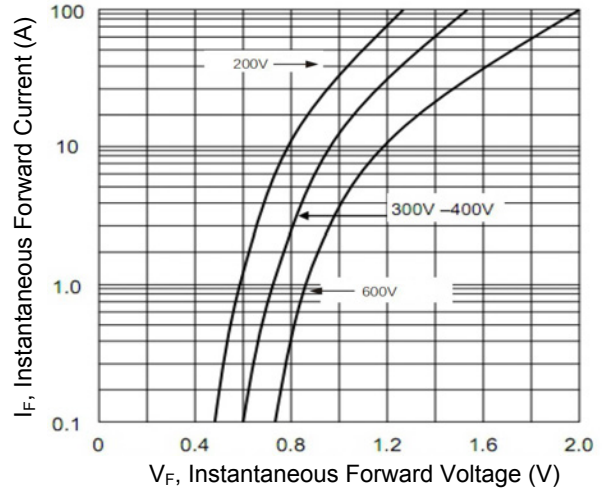
Notes:

1. Thermal resistance from junction to case
2. Pulse test: 300us pulse width, 1% duty cycle

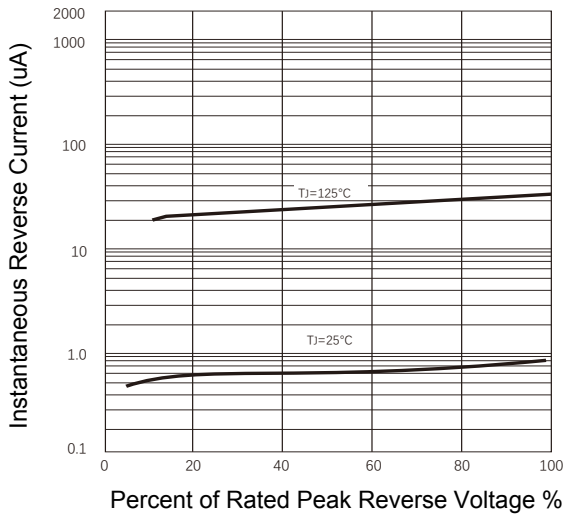
## Ratings and Characteristic Curves



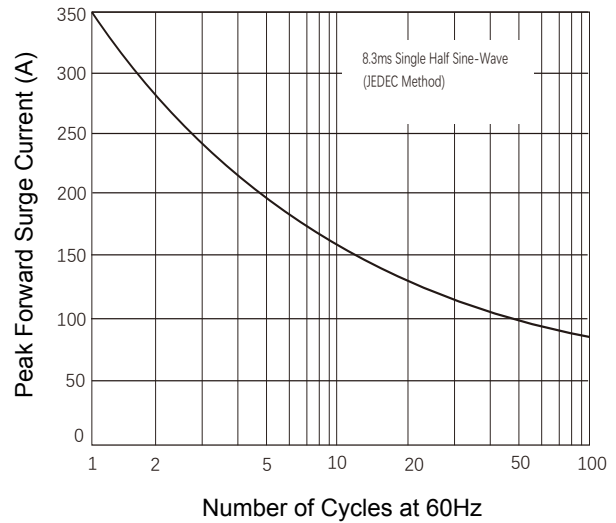
**Figure 1. Forward Current Derating Curve**



**Figure 2. Typical Instantaneous Forward Characteristics**

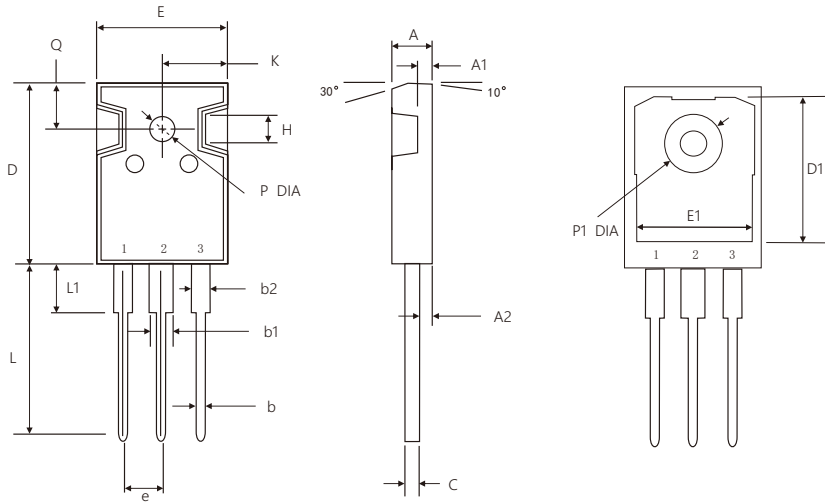


**Figure 3. Typical Reverse Characteristics**



**Figure 4. Maximum Non-Repetitive Surge Current**

## Package Outline Dimensions (TO-247AB)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.70	5.30	0.185	0.209
A1	1.80	2.20	0.071	0.087
A2	2.24	2.58	0.088	0.102
b	1.00	1.40	0.039	0.055
b1	2.60	3.60	0.102	0.142
b2	1.60	2.60	0.063	0.102
C	0.40	0.80	0.016	0.031
D	20.00	22.00	0.787	0.866
D1	16.25	16.85	0.640	0.663
E	15.4	16.4	0.606	0.646
E1	13.10	13.50	0.516	0.531
L	19.60	20.40	0.772	0.803
e	5.20	5.70	0.205	0.224
L1	3.80	4.50	0.150	0.177
P	3.30	3.70	0.130	0.146
P1	-	7.30	-	0.287
Q	5.40	6.40	0.213	0.252
K	7.40	8.20	0.291	0.323
H	4.60 TYP		0.181 TYP	

## Order Information

Device	Package	Marking	Carrier	Quantity
GSMUR6020PT	TO-247AB	MUR6020PT	Tube	30 Units / Tube
GSMUR6030PT	TO-247AB	MUR6030PT	Tube	30 Units / Tube
GSMUR6040PT	TO-247AB	MUR6040PT	Tube	30 Units / Tube
GSMUR6060PT	TO-247AB	MUR6060PT	Tube	30 Units / Tube