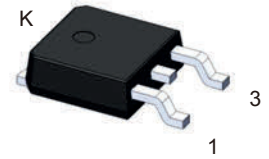
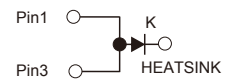


## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C/10 seconds
- Component in accordance to RoHS 2015/863/EU



TO-252



Schematic Diagram

## Mechanical Data

- Case: JEDEC TO-252 (DPAK) molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any

## Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.)

Parameter	Symbols	GSMUR 1020M3	GSMUR 1040M3	GSMUR 1060M3	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	V
Maximum Average Forward Rectified Current (see Fig.1)	$I_{(AV)}$	10.0			A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	120.0			A
Maximum Instantaneous Forward Voltage at 10.0A <sup>1</sup>	$V_F$	0.975	1.3	1.7	V
Maximum instantaneous Reverse Current at Rated DC Blocking Voltage <sup>1</sup>	$I_R$	$T_J=25^\circ\text{C}$			$\mu\text{A}$
		$T_J=125^\circ\text{C}$			
Maximum Reverse Recovery Time <sup>2</sup>	$T_{rr}$	35			nS
Typical Thermal Resistance <sup>3</sup>	$R_{\theta JC}$	2.5			°C/W
Operating Junction Temperature Range	$T_J$	-55 to +150			°C
Storage Temperature Range	$T_{STG}$	-55 to +150			°C

Notes:

1. Pulse test: 300μS pulse width, 1% duty cycle.
2. Reverse recovery test conditions  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
3. Thermal resistance from junction to case.

## Ratings and Characteristics Curves

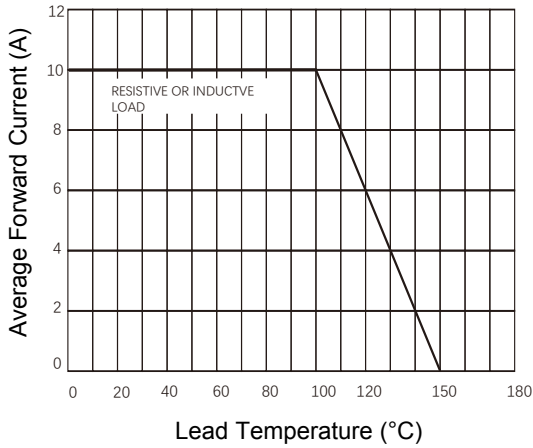


Figure 1. Forward Current Derating Curve

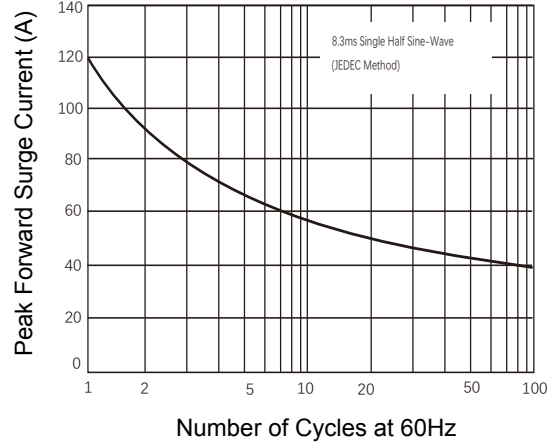


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

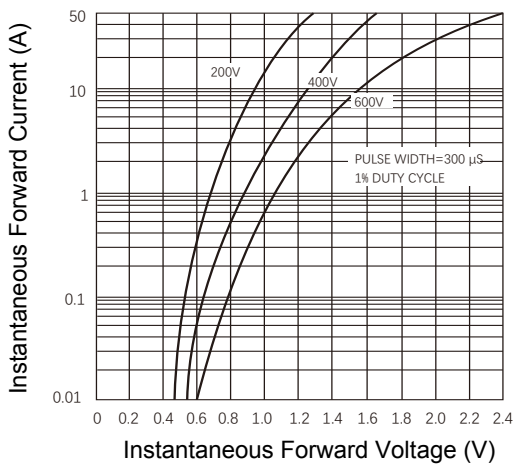


Figure 3. Typical Instantaneous Forward Characteristics

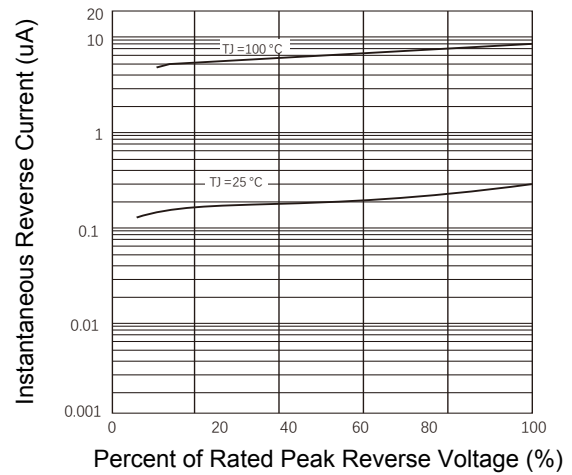


Figure 4. Typical Reverse Characteristics

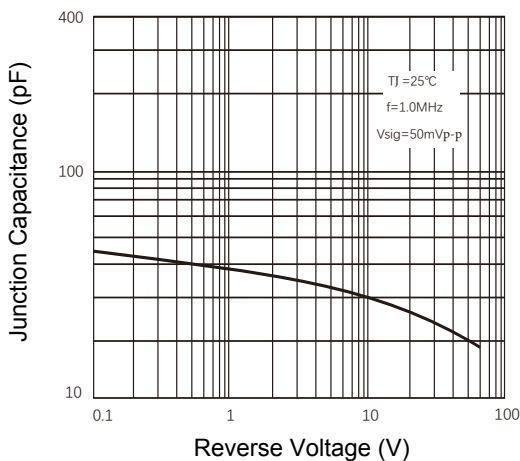
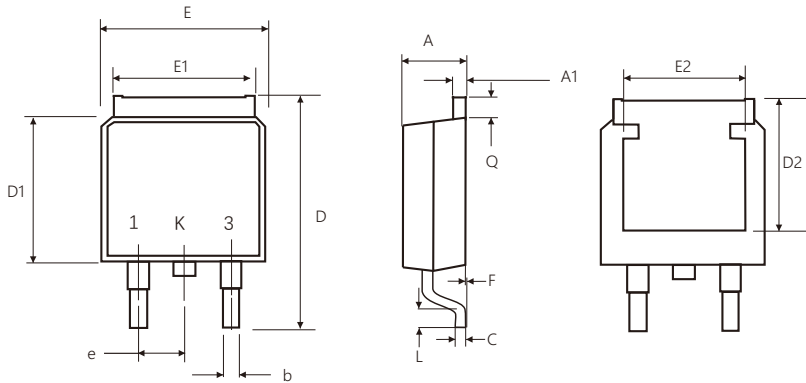


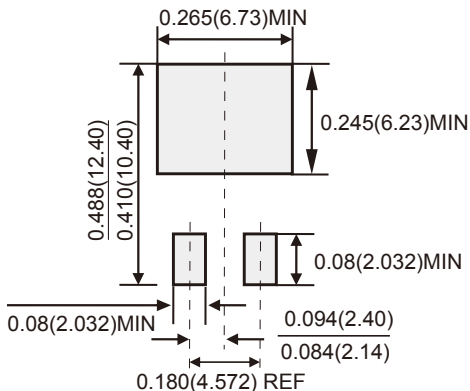
Figure 5. Typical Junction Capacitance

## Package Outline Dimensions (TO-252)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.15	2.65	0.085	0.104
A1	0.42	0.58	0.017	0.023
e	2.14	2.40	0.084	0.094
b	0.64	0.89	0.025	0.035
Q	0.88	1.27	0.035	0.050
C	0.42	0.58	0.017	0.023
D	9.00	10.41	0.354	0.410
D1	5.60	6.22	0.220	0.245
E	6.20	6.73	0.244	0.265
E1	5.21	5.46	0.205	0.215
L	1.00	-	0.039	-
F	0.01	0.11	0.000	0.004
D2	5.11	5.58	0.201	0.220
E2	4.31	5.33	0.170	0.210

## Recommended Pad Layout



Note:

1. Unit in inches (millimeters)
2. Pad layout for reference

## Order Information

Device	Package	Marking	Quantity	HSF Status
GSMUR1020M3	TO-252	MUR1020M3	2,500pcs / Reel	RoHS Compliant
GSMUR1040M3	TO-252	MUR1040M3	2,500pcs / Reel	RoHS Compliant
GSMUR1060M3	TO-252	MUR1060M3	2,500pcs / Reel	RoHS Compliant

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)