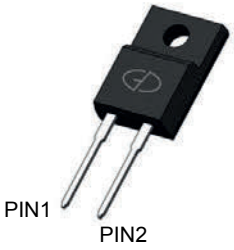
GSMURF1020 thru GSMURF1060

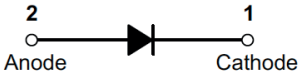
Super Fast Recovery Rectifiers
Reverse Voltage 200V-600V Forward Current 10A

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, 0.25" (6.35mm) from case
- Component in accordance to RoHS 2011/65/EU



ITO-220AC



Schematic Diagram

Mechanical Data

- Case: JEDEC ITO-220AC molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any
- Weight: 0.08ounce, 2.24 gram

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	GSMURF1020	GSMURF1040	GSMURF1060	Units
Maximum Repetitive 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)		$I_{F(AV)}$	10.0			A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	120.0			A
Maximum Instantaneous Forward Voltage at 10.0A[1]		V_F	0.975	1.3	1.7	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage	T_A=25°C	I_R	5			uA
	T_A=125°C		50			
Maximum Reverse Recovery Time[2]		Trr	35			nS
Typical Thermal Resistance[3]		$R_{\theta JC}$	3.0			°C/W
Typical Junction Capacitance[4]		C_J	63			pF
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to +150			°C

Notes:
1. Pulse test: 300μs pulse width, 1% duty cycle.
2. Reverse recovery test conditions I_F=0.5A, I_R=1.0A, I_{rr}=0.25A.
3. Thermal resistance from junction to case.
4. Measured at 1MHZ and applied reverse voltage of 4.0Volts.

Ratings and Characteristics Curves

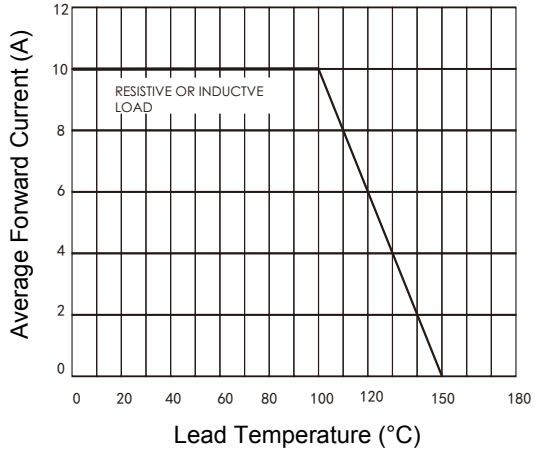


Figure 1. Forward Current Derating Curve

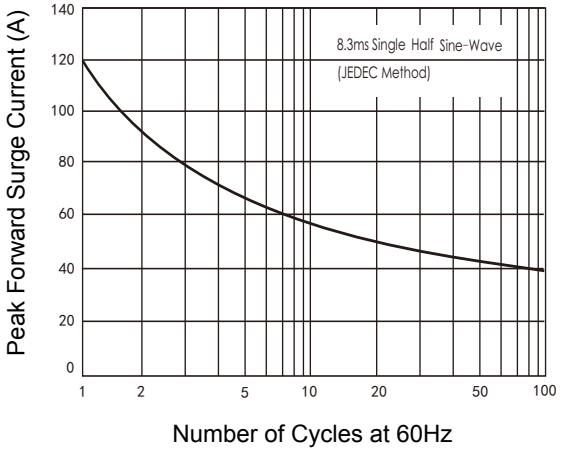


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

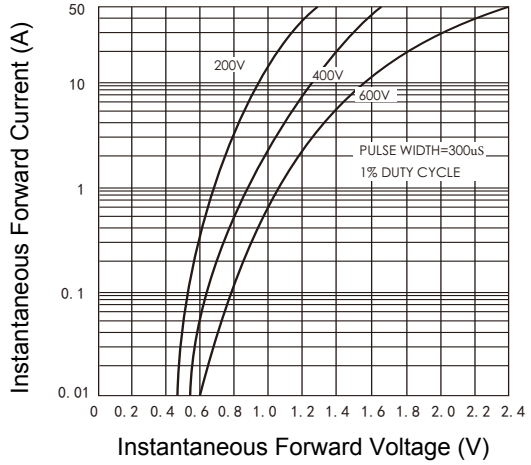


Figure 3. Typical Instantaneous Forward Characteristics

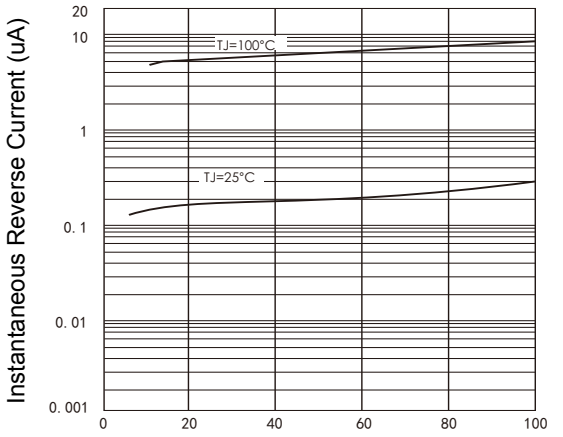


Figure 4. Typical Reverse Characteristics

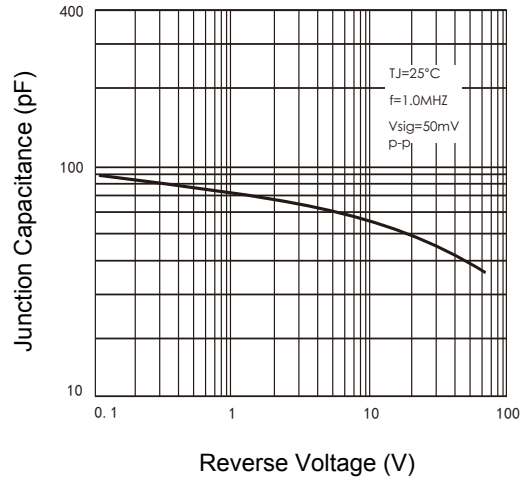


Figure 5. Typical Junction Capacitance

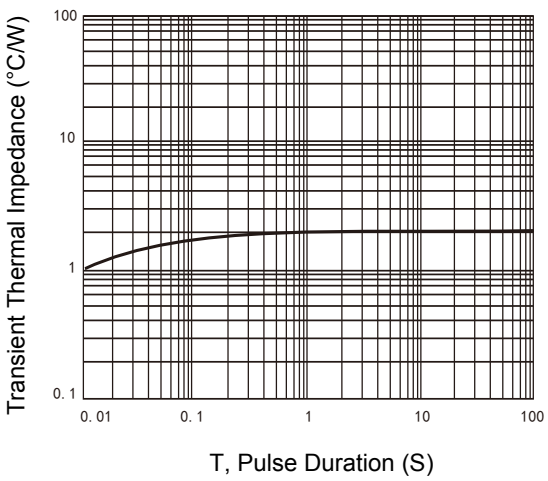


Figure 6. Typical Transient Thermal Impedance

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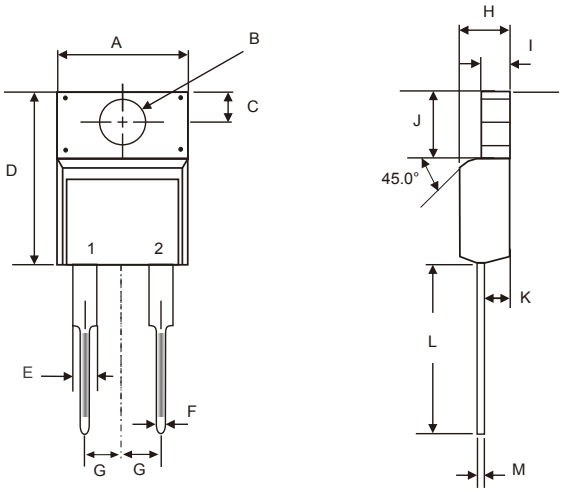
Package Outline Dimensions (ITO-220AC)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	9.91	10.41	0.390	0.410
B	3.15	3.45	0.124	0.132
C	3.05	3.45	0.120	0.136
D	15.40	16.40	0.606	0.646
E	1.10	1.43	0.043	0.056
F	0.67	0.93	0.026	0.037
G	2.44	2.64	0.096	0.104
H	4.49	4.89	0.177	0.192
I	2.28	2.88	0.090	0.113
J	6.45	6.85	0.254	0.270
K	2.50	2.90	0.098	0.114
L	12.50	13.50	0.492	0.531
M	0.37	0.63	0.015	0.025

Order Information

Device	Package	Marking	Carrier	Quantity
GSMURF1020	ITO-220AC	MURF1020	Tube	50pcs / Tube
GSMURF1040	ITO-220AC	MURF1040	Tube	50pcs / Tube
GSMURF1060	ITO-220AC	MURF1060	Tube	50pcs / Tube