

# GSUS1A thru GSUS1M

Surface Mount Ultrafast Recovery Rectifiers  
 Reverse Voltage 50V to 1000V Forward Current 1.0 A

## Features

- Glass passivated junction chip
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Ultra fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed 250 °C/10 seconds at terminals



Package: DO-214AC (SMA)

## Mechanical Data

- Case: JEDEC DO-214AC molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

## Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

PARAMETER	Symbol	GSUS 1A	GSUS 1B	GSUS 1D	GSUS 1G	GSUS 1J	GSUS 1K	GSUS 1M	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage Maximum	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine- wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30.0							A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0		1.3		1.7		V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$				5.0		50.0		uA
Maximum reverse recovery time <sup>1</sup>	$t_{rr}$	50				75			ns
Typical Junction Capacitance <sup>2</sup>	$C_J$	15.0							pF
Typical Thermal Resistance <sup>3</sup>	$R_{\theta JA}$	50.0							°C/W
Operating Junction Temperature Range	$T_J$	-65 to +150							°C
Storage Temperature Range	$T_{STG}$	-65 to +150							°C

### Notes:

- 1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
- 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
- 3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

## Ratings and Characteristics Curves

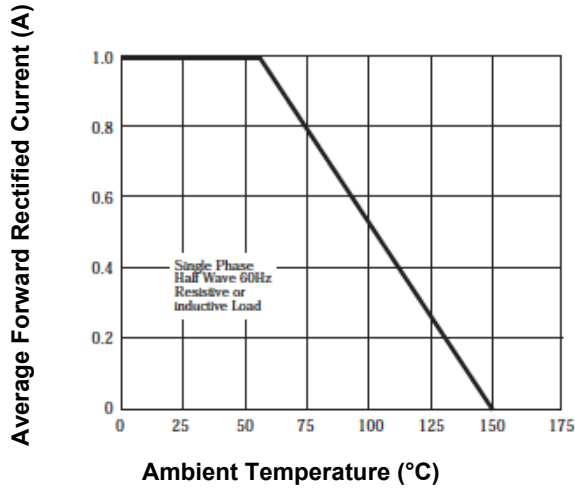


Figure 1. Forward Current Derating Curve

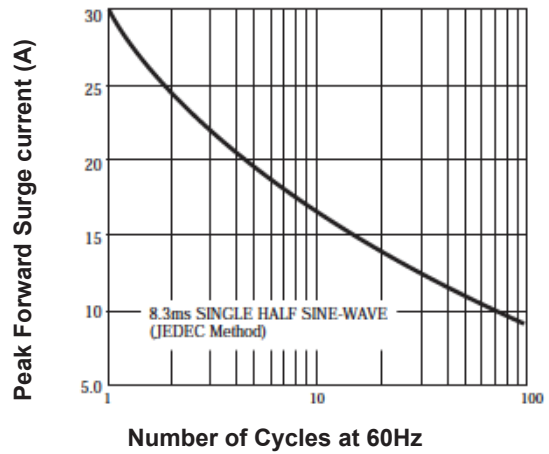


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

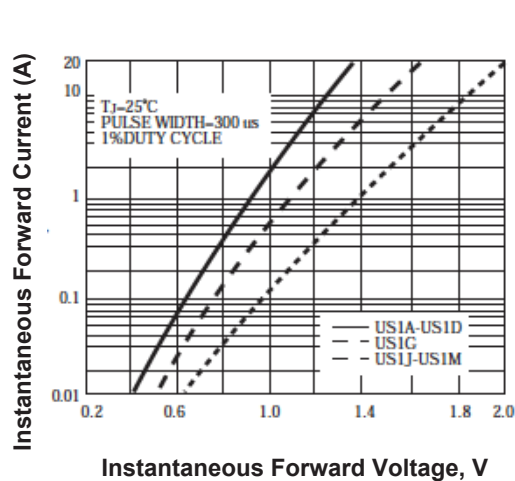


Figure 3. Typical Instantaneous Forward Characteristics

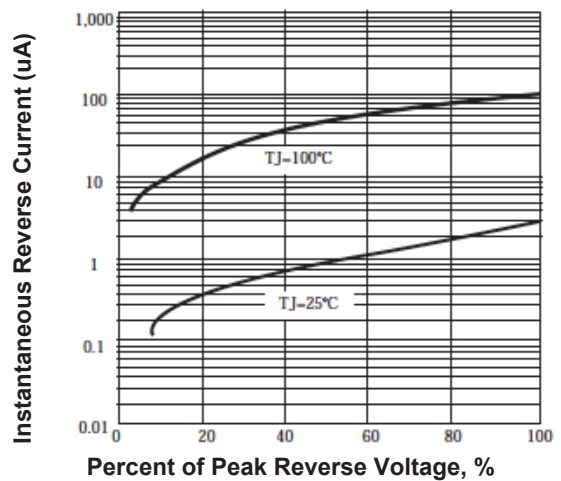


Figure 4. Typical Reverse Characteristics

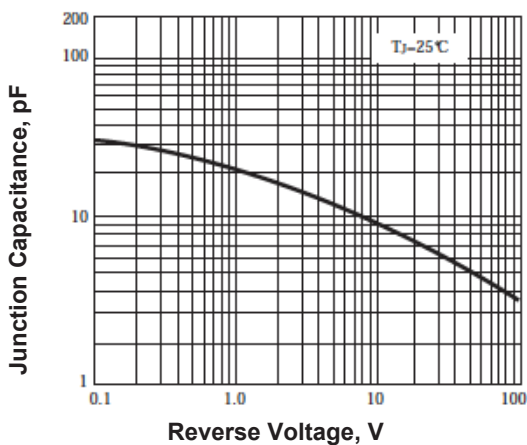


Figure 5. Typical Junction Characteristics

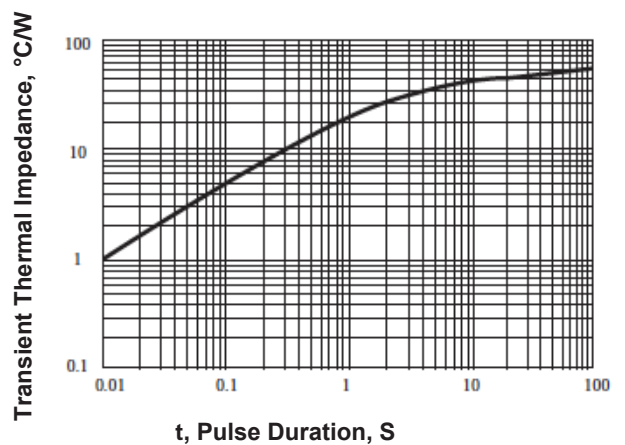
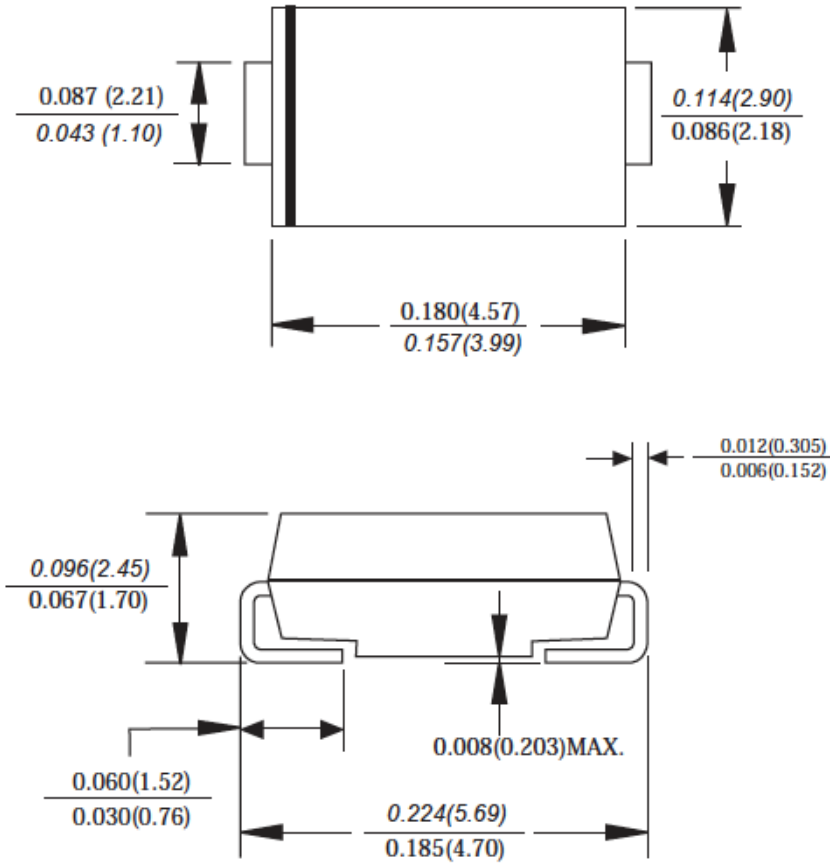


Figure 6. Typical Transient Thermal Impedance

# GSUS1A thru GSUS1M

Surface Mount Ultrafast Recovery Rectifiers  
 Reverse Voltage 50V to 1000V Forward Current 1.0 A

## Package Outline Dimensions DO-214AC (SMA)



Dimensions in inches and (millimeters)