

1.5A, 2000V Surface Mount Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

APPLICATIONS

- General purpose
- Switching mode converters and inverters
- Lighting application

MECHANICAL DATA

- Case: DO-214AC (SMA)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.069g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I _F	1.5	A
V _{RRM}	2000	V
I _{FSM}	40	A
T _{J MAX}	150	°C
Package	DO-214AC (SMA)	
Configuration	Single die	



DO-214AC (SMA)



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage	V _{RRM}	2000	V
Reverse voltage, total rms value	V _{R(RMS)}	1400	V
Forward current	I _F	1.5	A
Surge peak forward current single half sine-wave superimposed on rated load	t = 8.3ms	40	A
	t = 1.0ms	90	
Junction temperature	T _J	-55 to +150	°C
Storage temperature	T _{STG}	-55 to +150	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	25	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	75	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	23	°C/W

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ C$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 0.75A, T_J = 25^\circ C$	V_F	0.94	-	V
	$I_F = 1.50A, T_J = 25^\circ C$		1.01	1.15	V
	$I_F = 0.75A, T_J = 125^\circ C$		0.83	-	V
	$I_F = 1.50A, T_J = 125^\circ C$		0.93	-	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ C$	I_R	-	5	µA
	$T_J = 125^\circ C$		23	-	µA
Junction capacitance	1MHz, $V_R = 4.0V$	C_J	7.6	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
GS1Z	DO-214AC (SMA)	7,500/ Tape & Reel

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

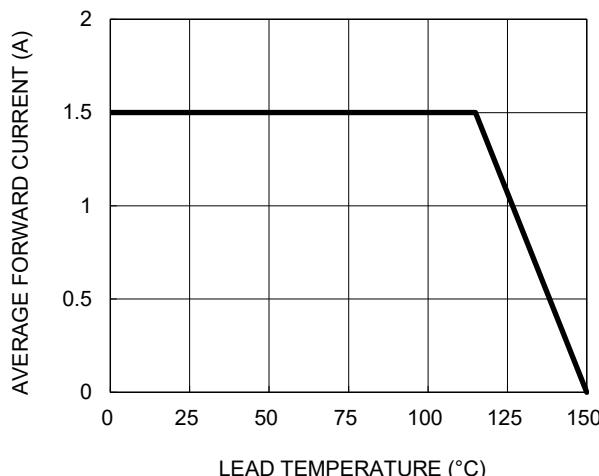


Fig.2 Typical Junction Capacitance

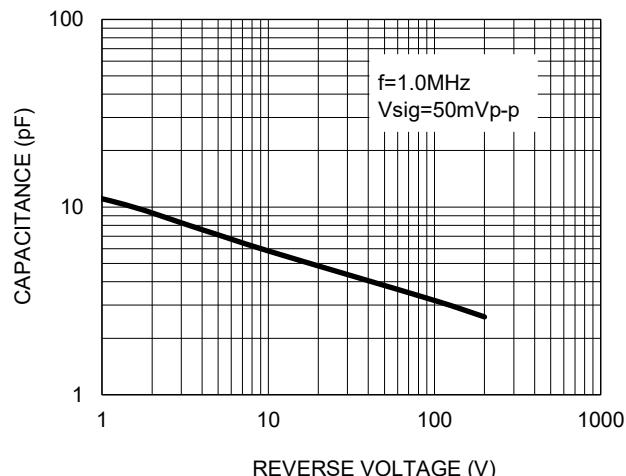


Fig.3 Typical Reverse Characteristics

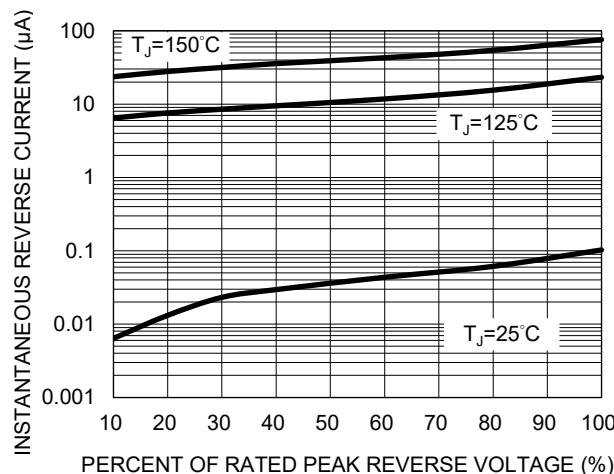


Fig.4 Typical Forward Characteristics

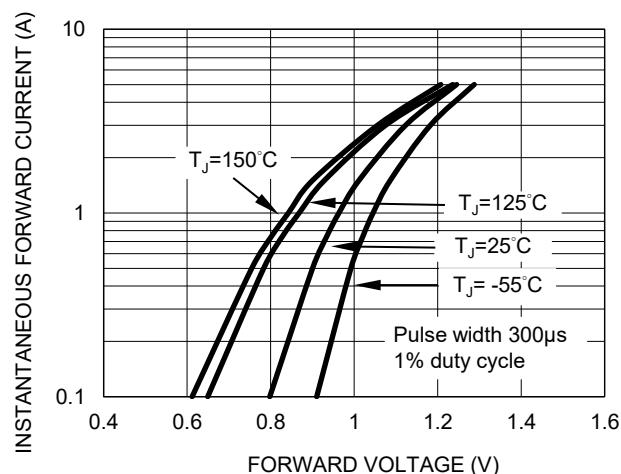
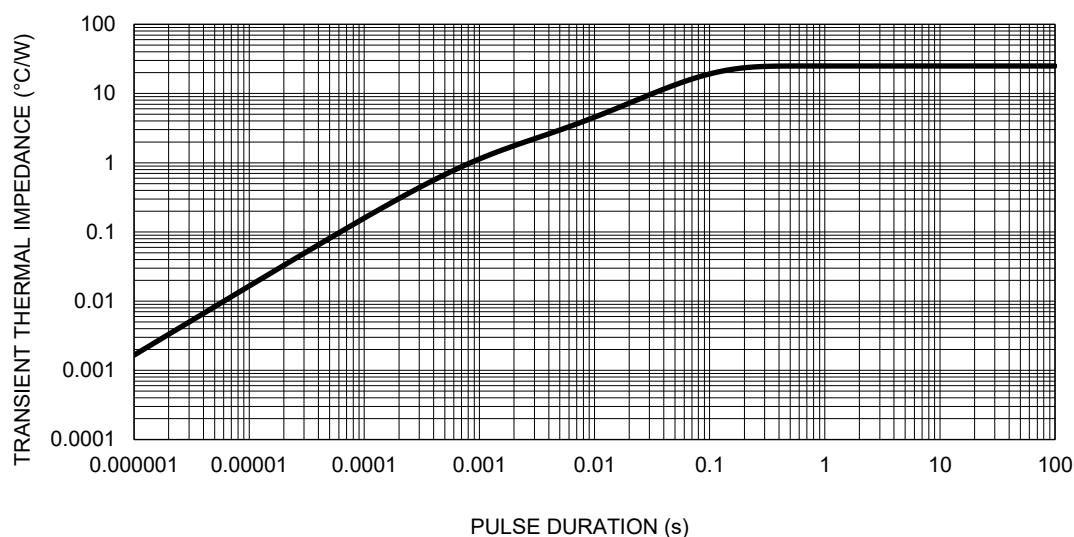
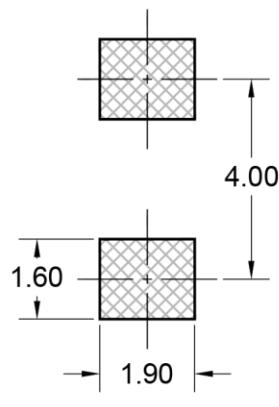
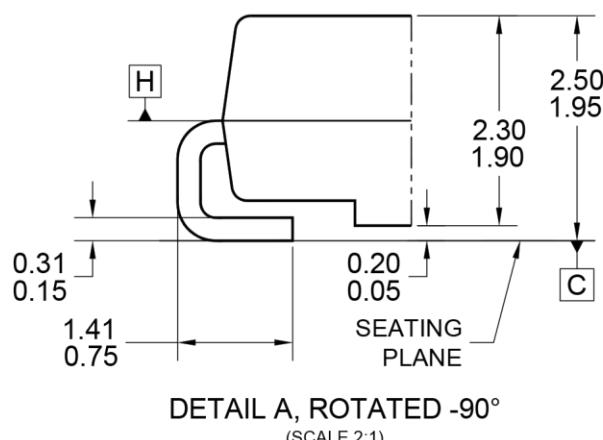
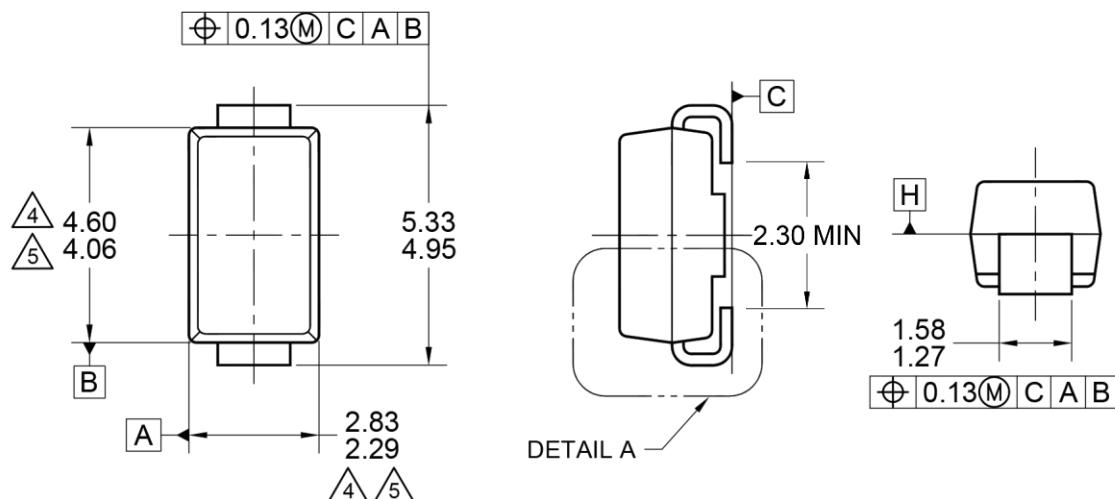
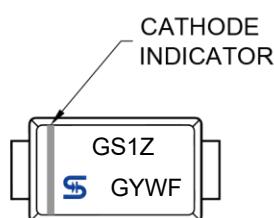


Fig.5 Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS
DO-214AC (SMA)

**SUGGESTED PAD
LAYOUT**

MARKING DIAGRAM

P/N = DEVICE MARKING
 G = GREEN COMPOUND
 YW = DATE CODE
 F = FACTORY CODE

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-214, VARIATION AC, ISSUE D.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
6. DWG NO. REF: HQ2SD07-DO214SMA-034 REV B.

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