

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 ($T_A = 25^\circ\text{C}$ 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

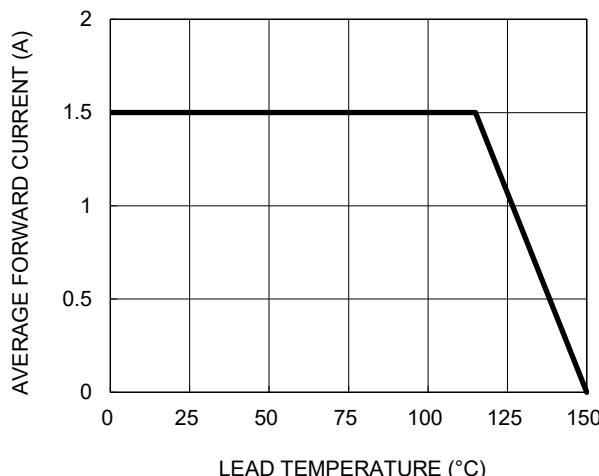


Fig.2 Typical Junction Capacitance

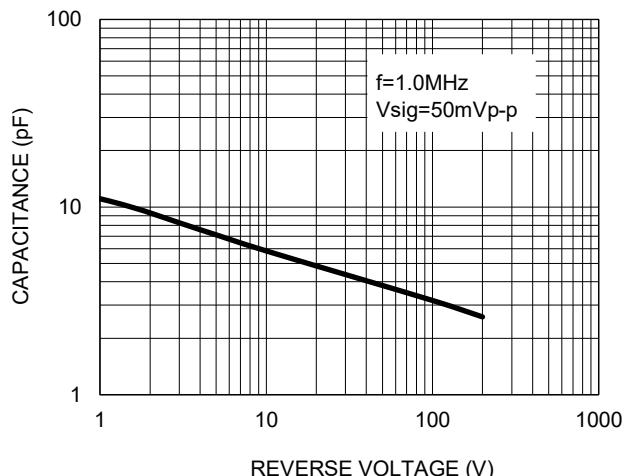


Fig.3 Typical Reverse Characteristics

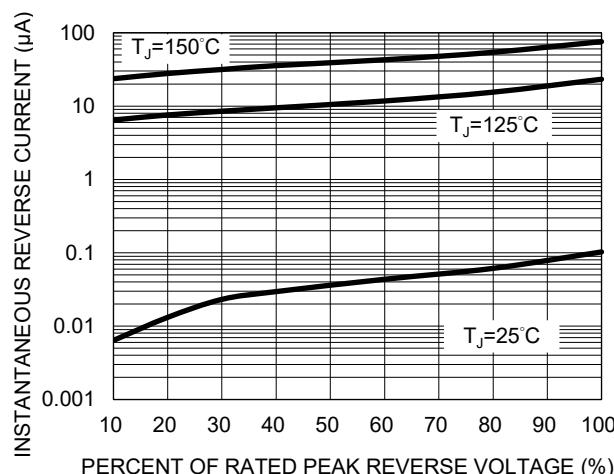


Fig.4 Typical Forward Characteristics

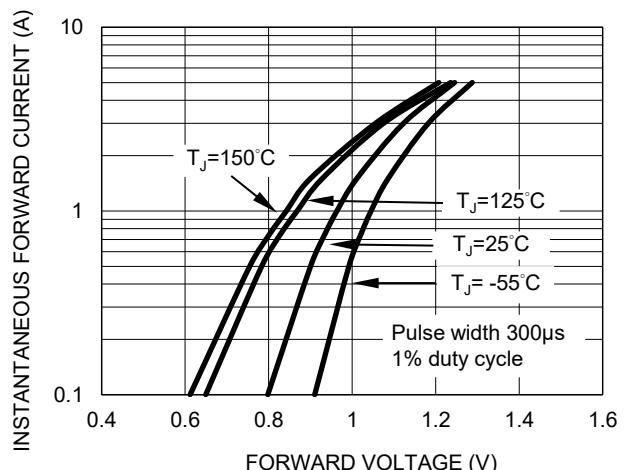
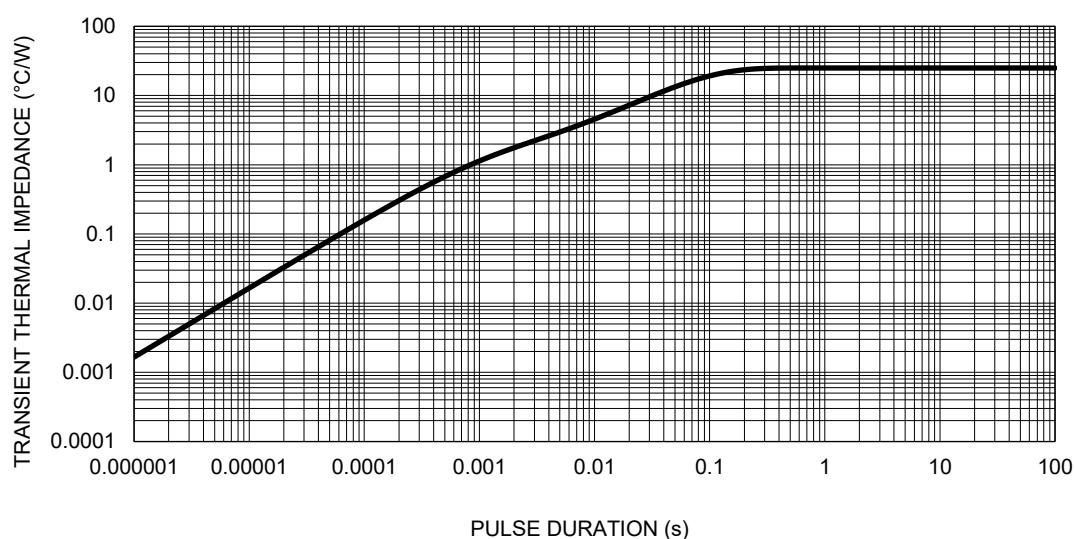
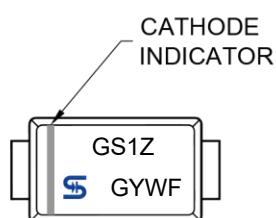
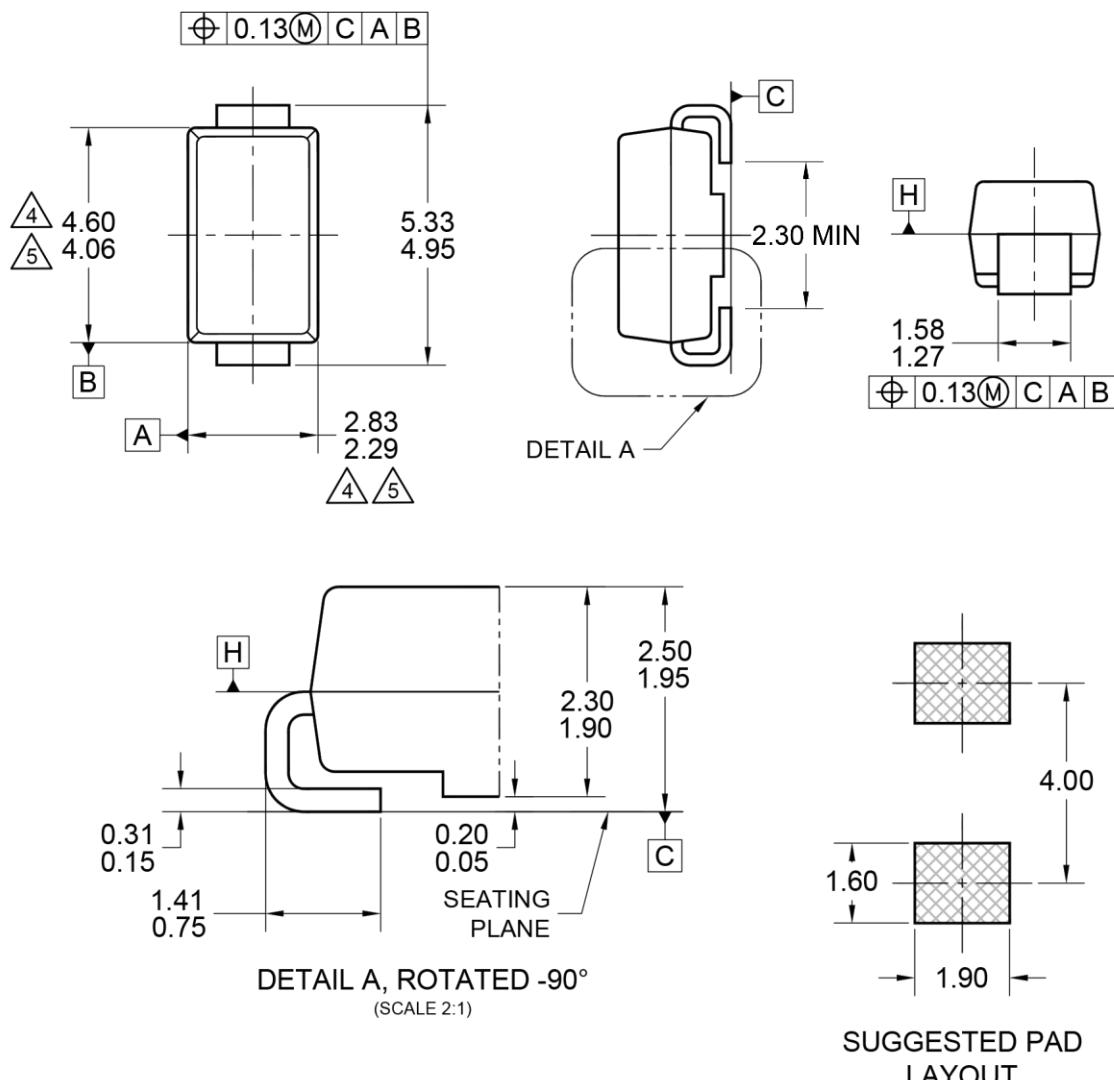


Fig.5 Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS

DO-214AC (SMA)



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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