

# DG1S4

## Schottky Barrier Diodes

40V, 1A

### Feature

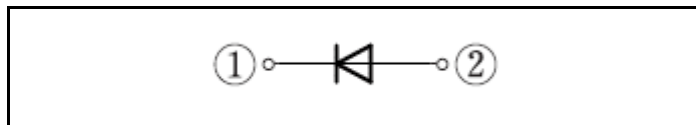
- Ultra-small SMD
- Ultra thin PKG
- Low  $V_F$
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

### OUTLINE

**Package (House Name):** G1F  
**Package (JEDEC Code):** DO-219AB similar  
**Package (JEITA Code):** SC-109



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	$V_{RRM}$		40	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, Ta=36°C ※	1	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, Ta=27°C ※	0.7	A
Surge forward current	$I_{FSM}$	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, Tj=25°C	30	A

※ :See the original Specifications

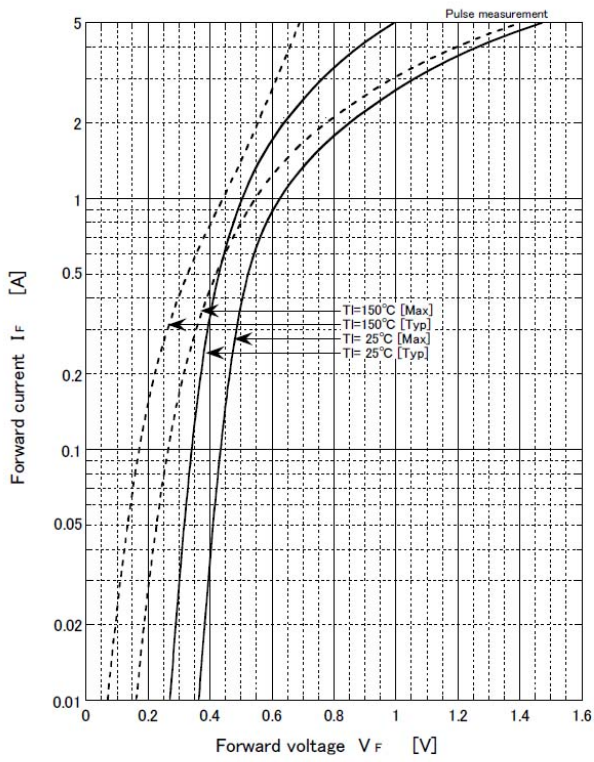
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	$V_F$	$I_F=0.7A$ , Pulse measurement			0.55	V
Reverse current	$I_R$	$V_R=40V$ , Pulse measurement			0.8	mA
Total capacitance	$C_t$	$f=1MHz$ , $V_R=10V$		37		pF
Thermal resistance	$R_{th(j-l)}$	Junction to lead, On alumina substrate ※			20	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate ※			70	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On paper phenol substrate ※			120	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On paper phenol substrate ※			210	°C/W

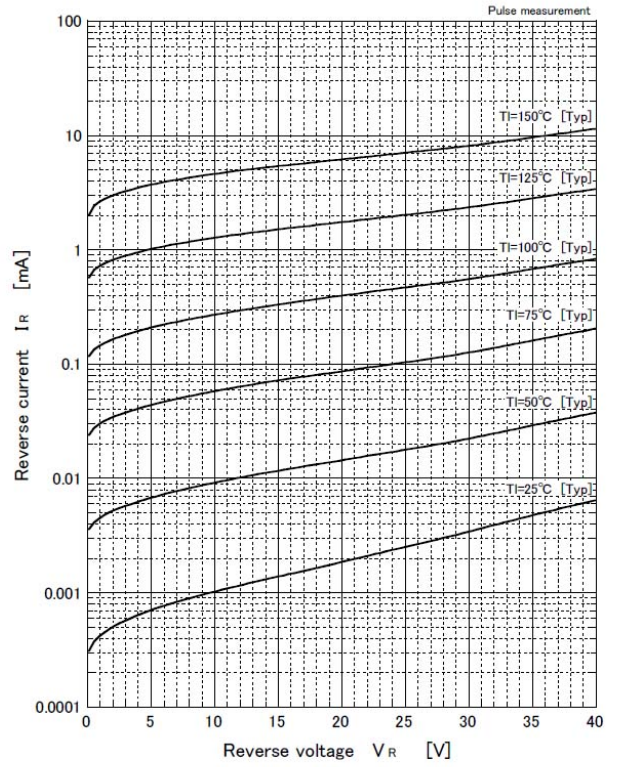
※ :See the original Specifications

# CHARACTERISTIC DIAGRAMS

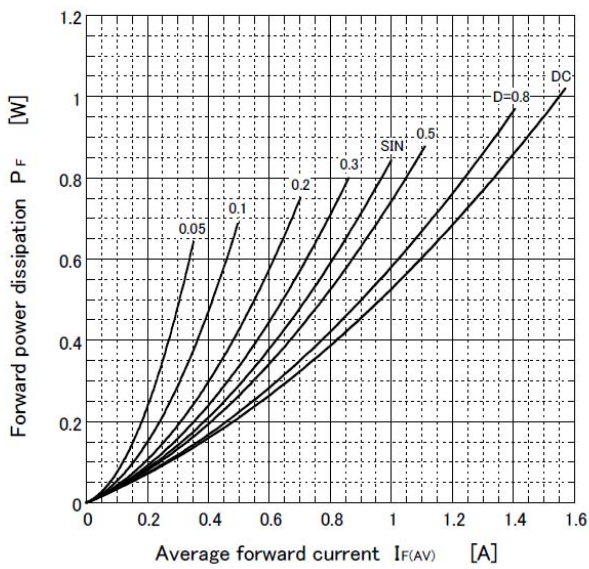
Forward voltage



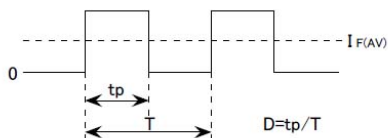
Reverse current



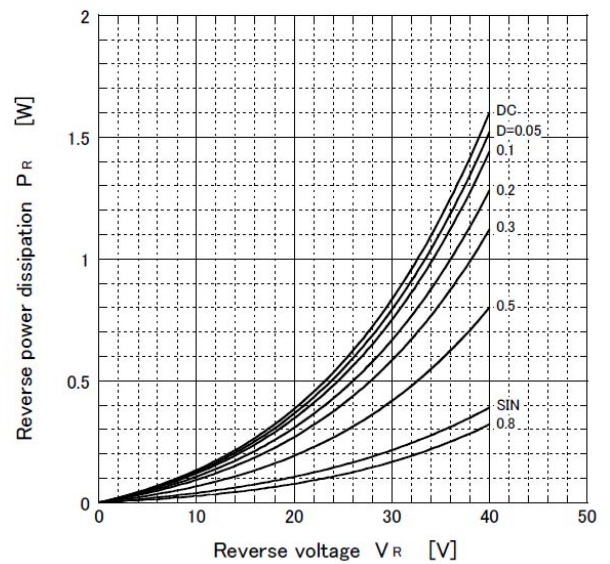
Forward power dissipation



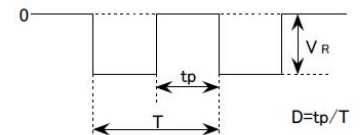
●  $T_J = 150^\circ\text{C}$



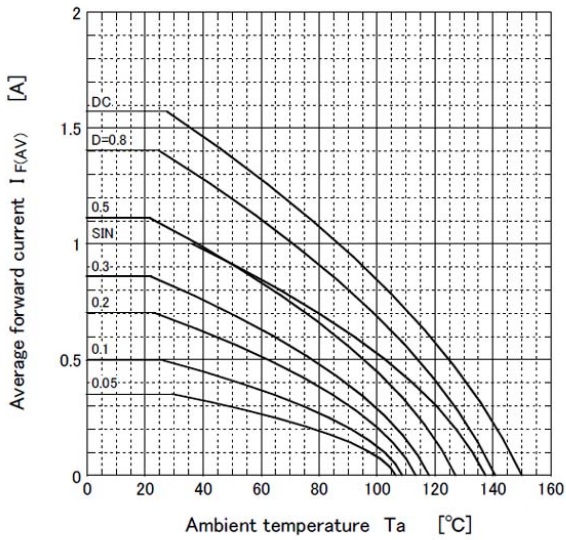
Reverse power dissipation



●  $T_J = 150^\circ\text{C}$



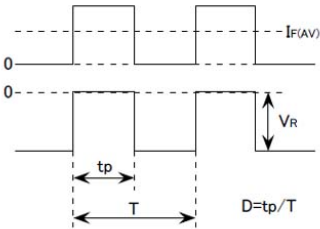
Derating curve



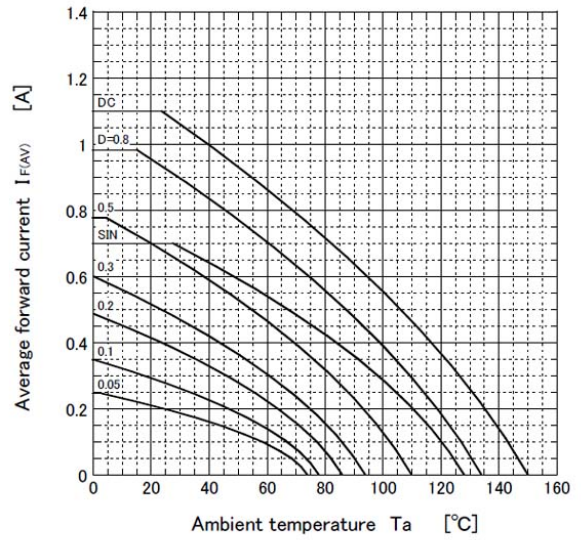
●  $V_R = 20V$   
R-load  
Free in air

● Substrate detail

Type	Paper phenol
Size	1 inch <sup>2</sup>
Thickness	1.6mm
Conductor thickness	35μm
Pattern area	160mm <sup>2</sup>



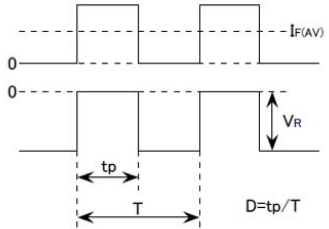
Derating curve



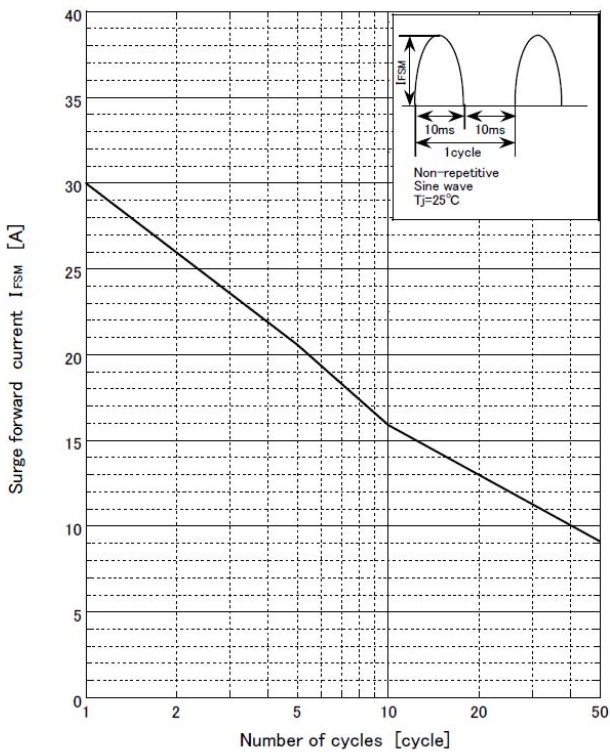
●  $V_R = 20V$   
R-load  
Free in air

● Substrate detail

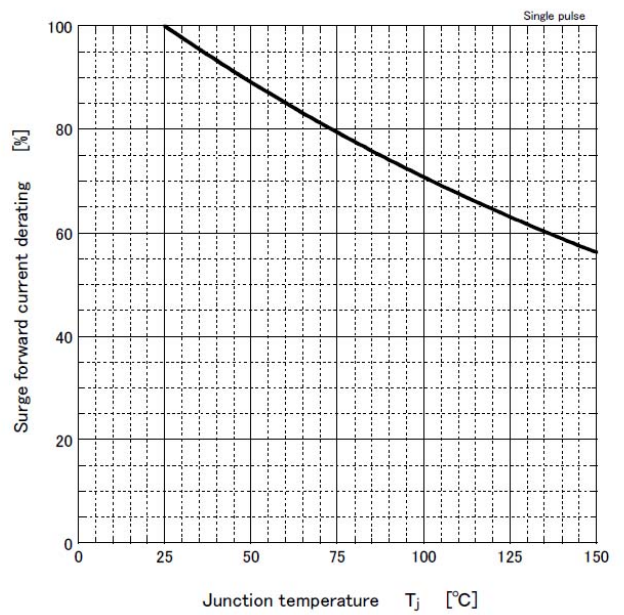
Type	Paper phenol
Size	1 inch <sup>2</sup>
Thickness	1.6mm
Conductor thickness	35μm
Pattern area	326mm <sup>2</sup>

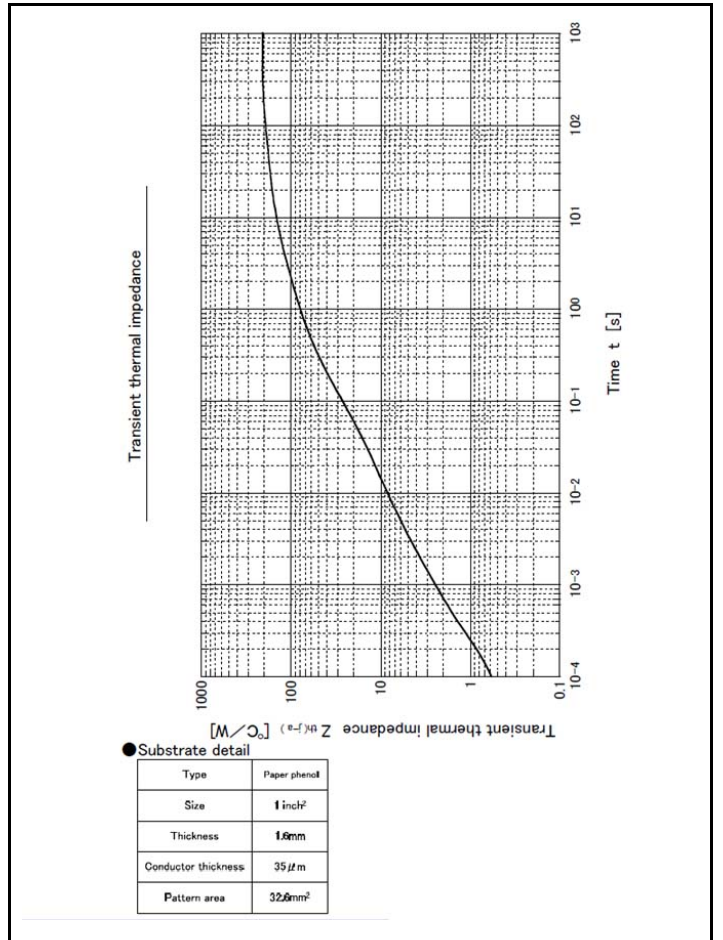
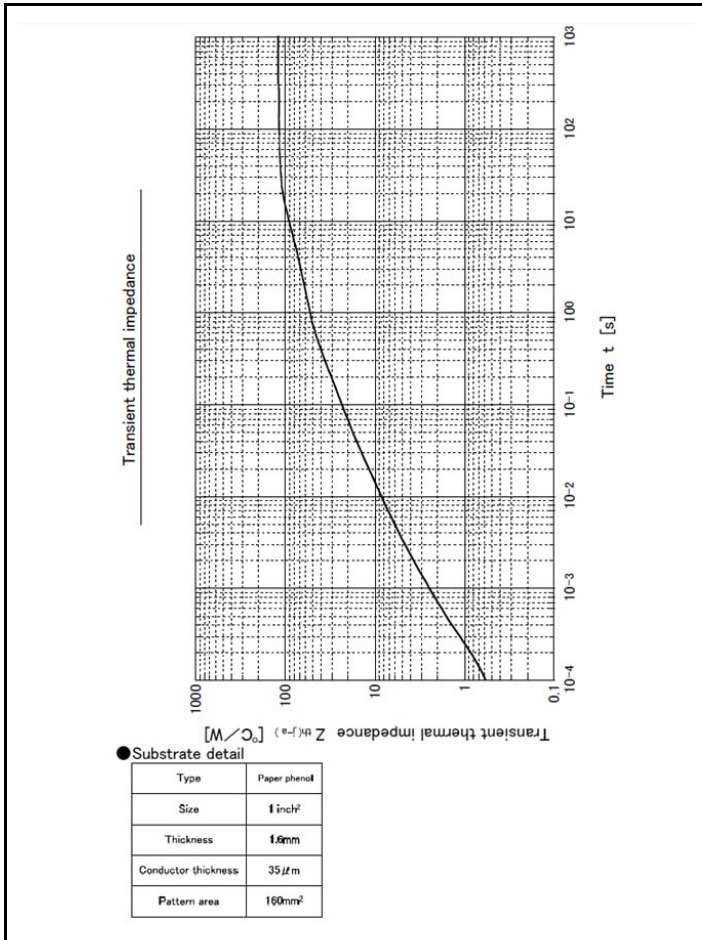
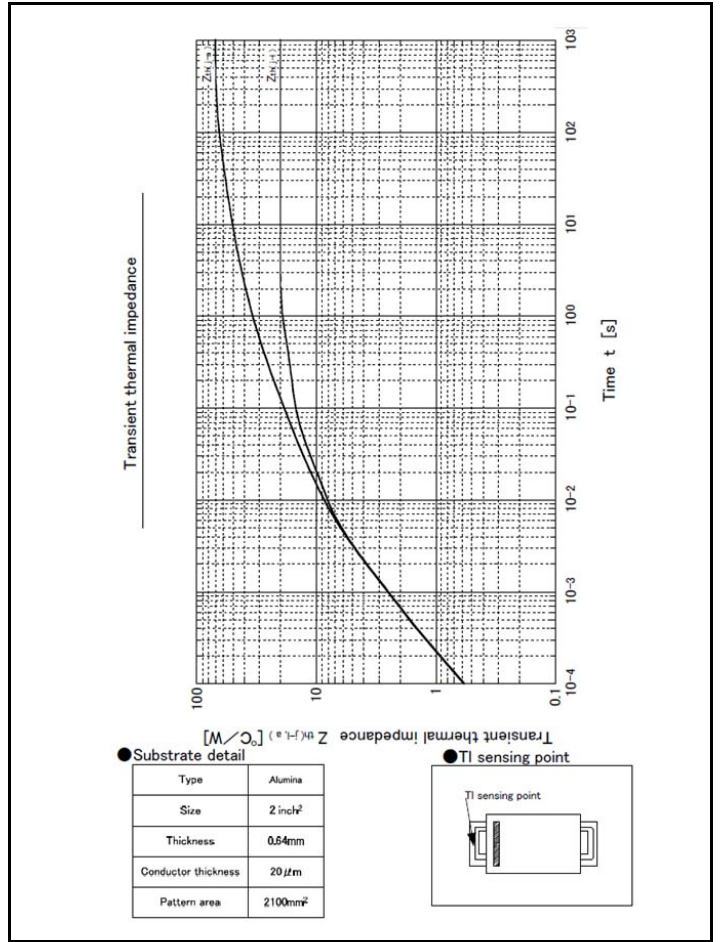
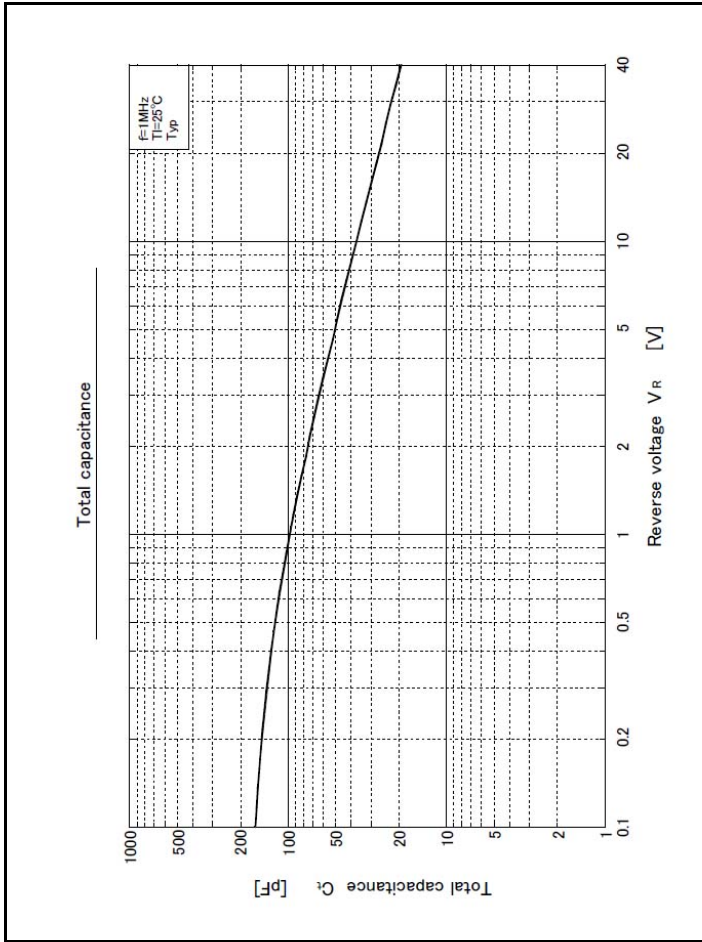


Surge forward current capability



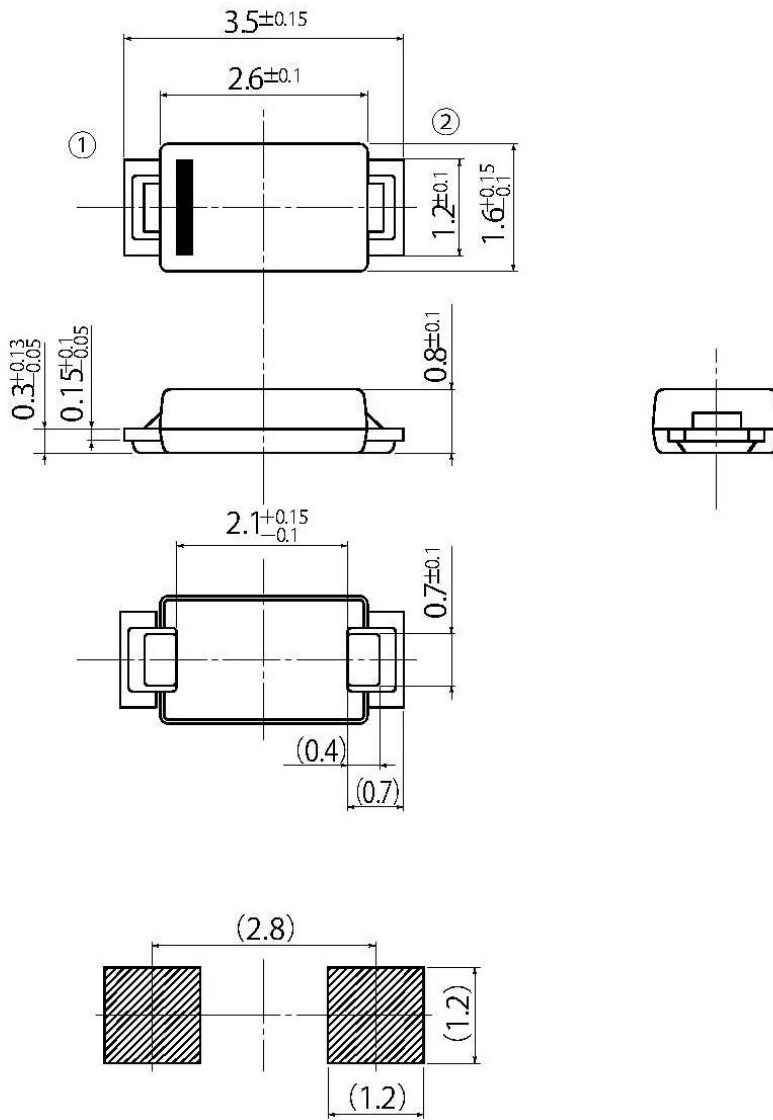
Surge forward current derating vs Junction temperature





B1

JEDEC Code	DO-219AB similar
JEITA Code	SC-109
House Name	G1F



Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

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