

# ST02-58G1

TVS

2.2A, 175W

## Feature

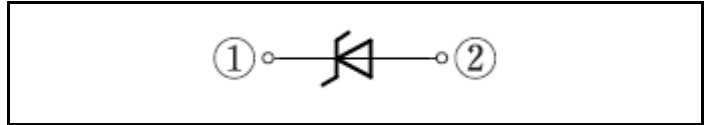
- Peak pulse power:175W
- Ultra-small SMD
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

## 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 175	°C
Operating junction temperature	Tj		-55 to 175	°C
Maximum surge reverse current	I <sub>RSM</sub>	10/1000µs, Non-repetitive *	2.2	A
Maximum surge reverse power	P <sub>RSM</sub>	10/1000µs, Non-repetitive *	175	W
Continuous (direct) reverse voltage	V <sub>R(DC)</sub>		45	V

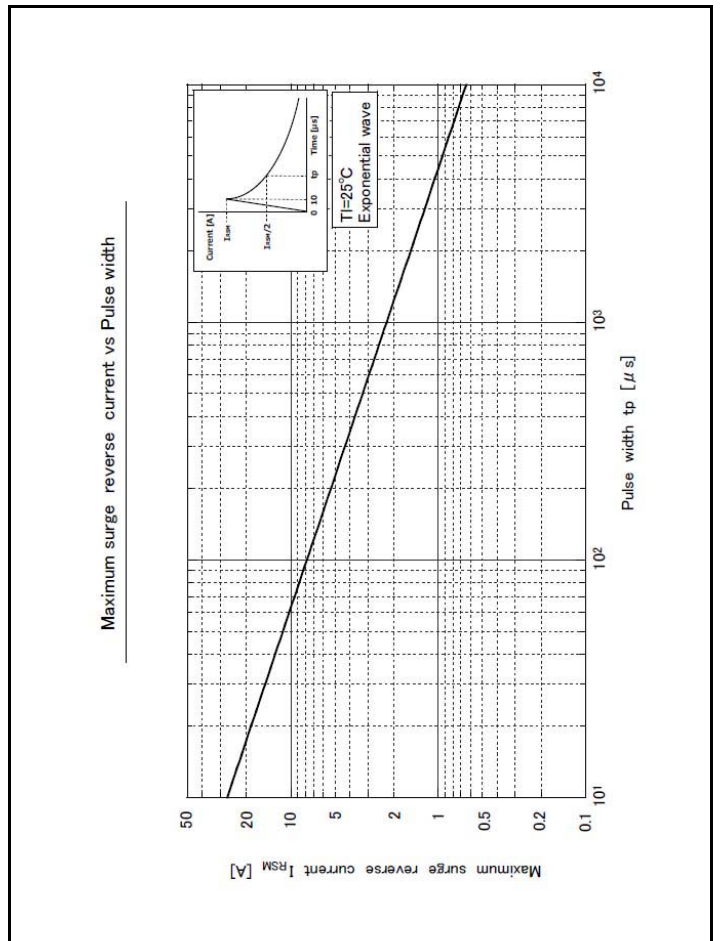
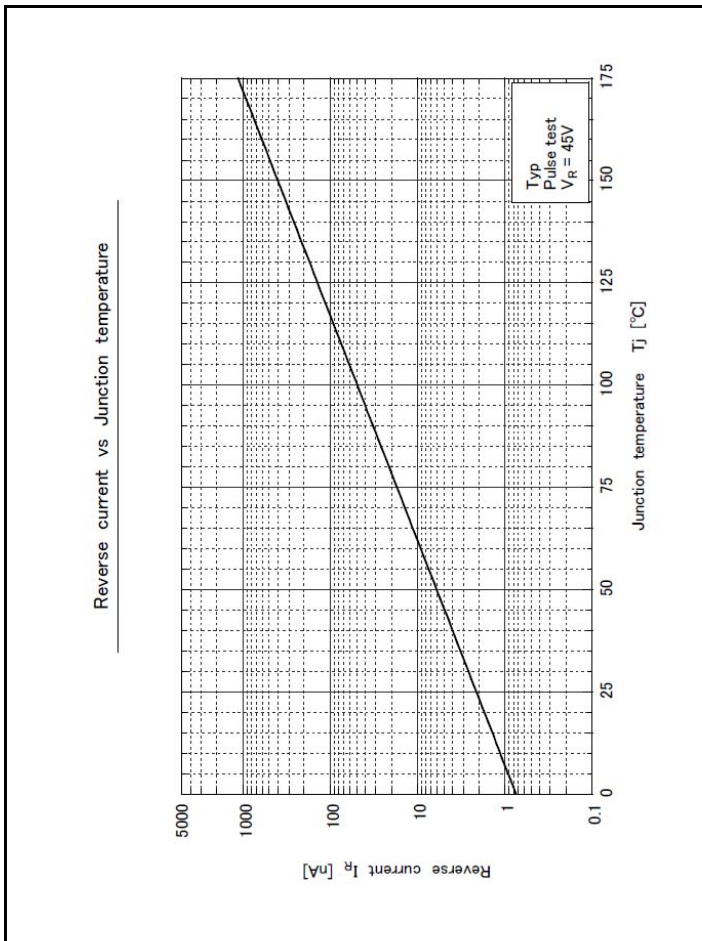
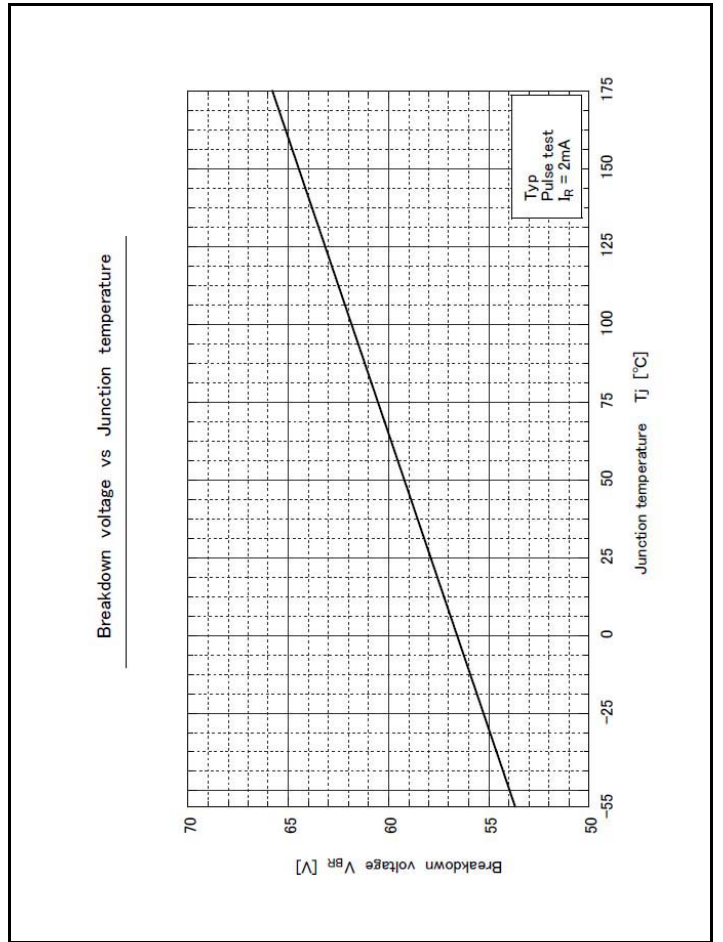
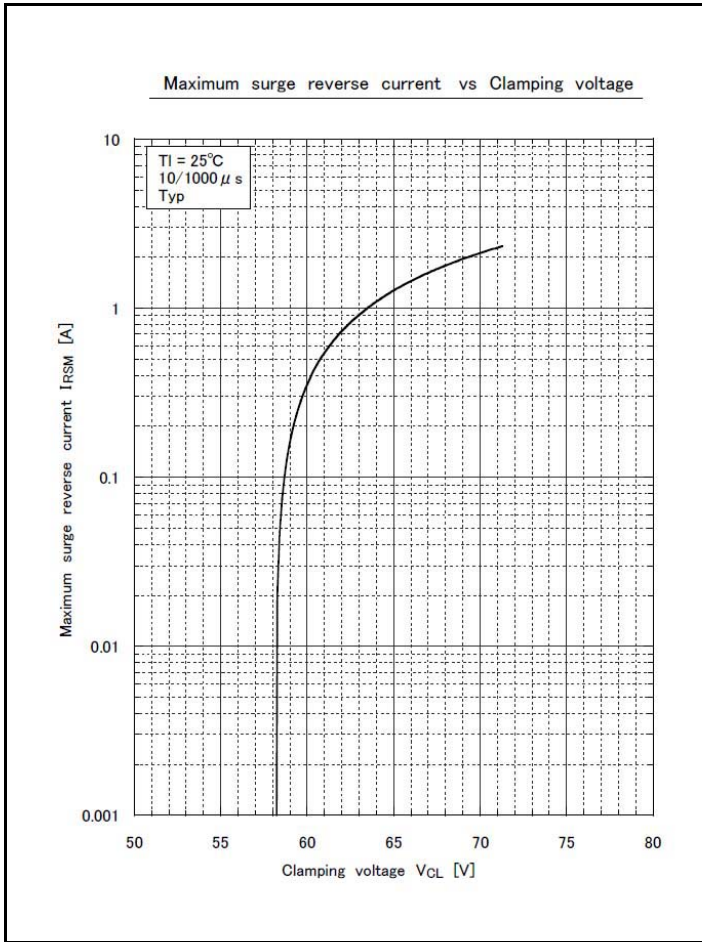
\* :See the original Specifications

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

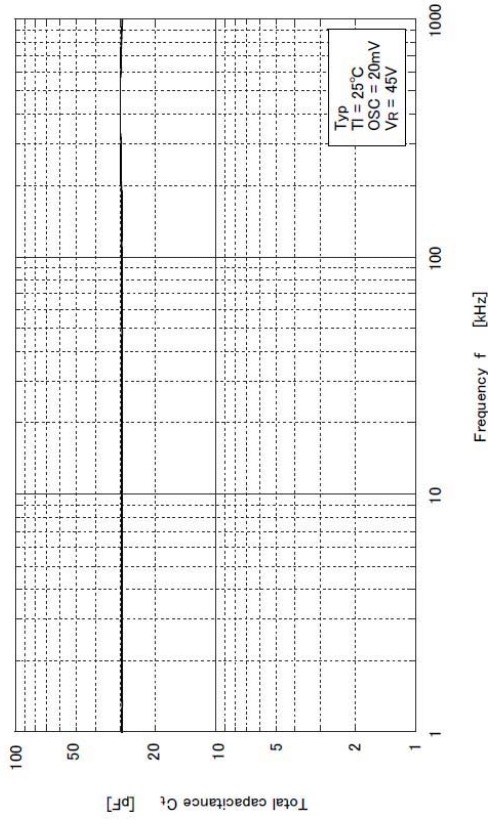
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V <sub>BR</sub>	IR=2mA, Pulse measurement	52		64	V
Reverse current	I <sub>R</sub>	VR=45V, Pulse measurement			5	µA
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate *			20	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate *			120	°C/W

\* :See the original Specifications

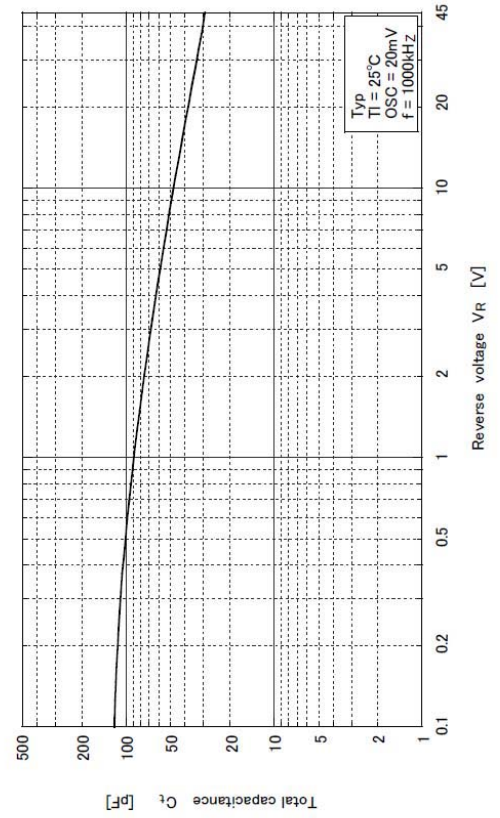
# CHARACTERISTIC DIAGRAMS



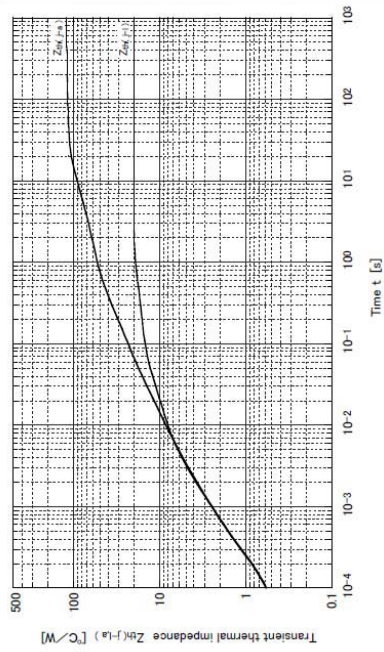
Total capacitance vs Frequency



Total capacitance vs Reverse voltage



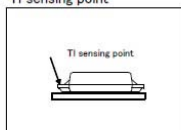
Transient thermal impedance vs Time



Substrate detail

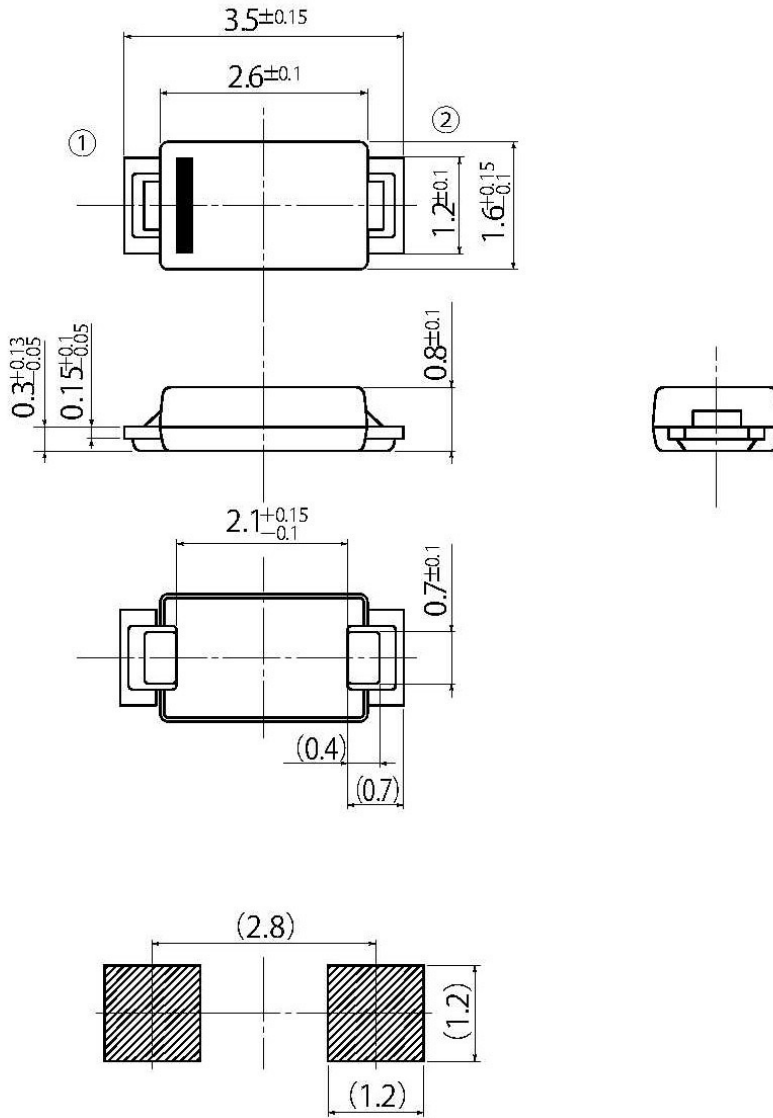
Type	Glass-epoxy
Size	1 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35μm
Pattern area	160mm <sup>2</sup>

Tl sensing point



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.

## Notes

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