

ST02-39G1

TVS
3.8A, 200W

Feature

- Peak pulse power:200W
- 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 : TI=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 _{RSM}	10/1000μs, Non-repetitive ※	3.8	A
Maximum surge reverse power	P _{RSM}	10/1000μs, Non-repetitive ※	200	W
Continuous (direct) reverse voltage	V _{R(DC)}		30	V

※ :See the original Specifications

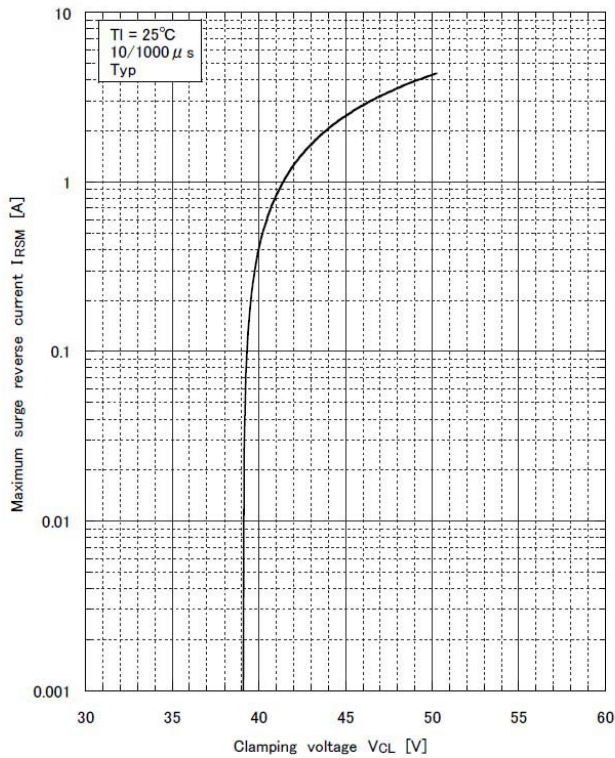
Electrical Characteristics (unless otherwise specified : TI=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V _{BR}	IR=2mA, Pulse measurement	37		41	V
Reverse current	I _R	VR=30V, 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

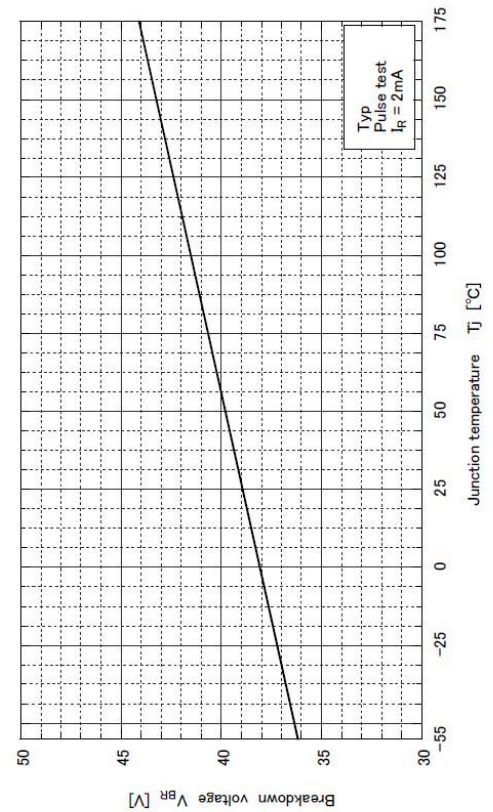
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

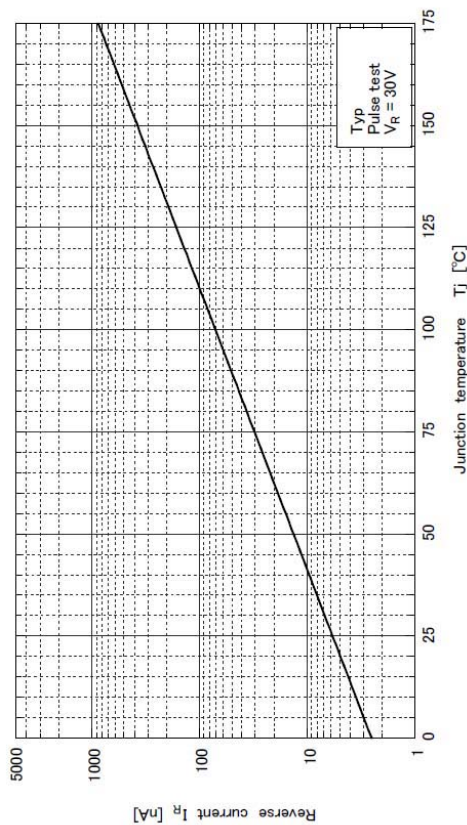
Maximum surge reverse current vs Clamping voltage



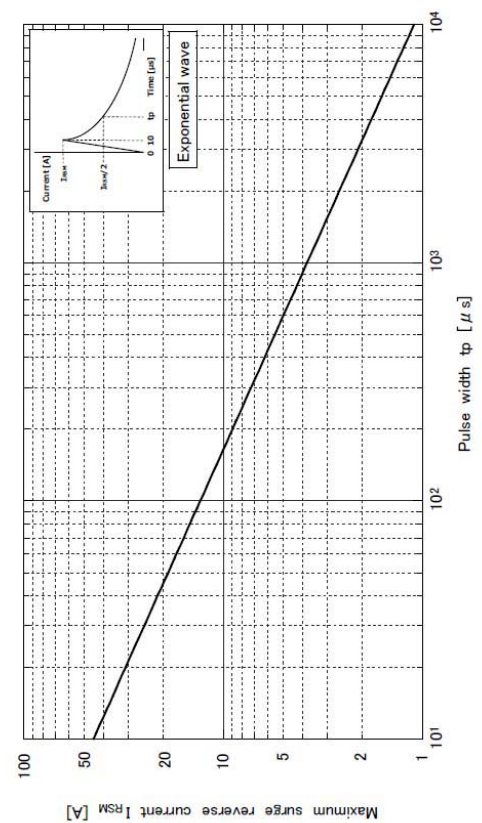
Breakdown voltage vs Junction temperature



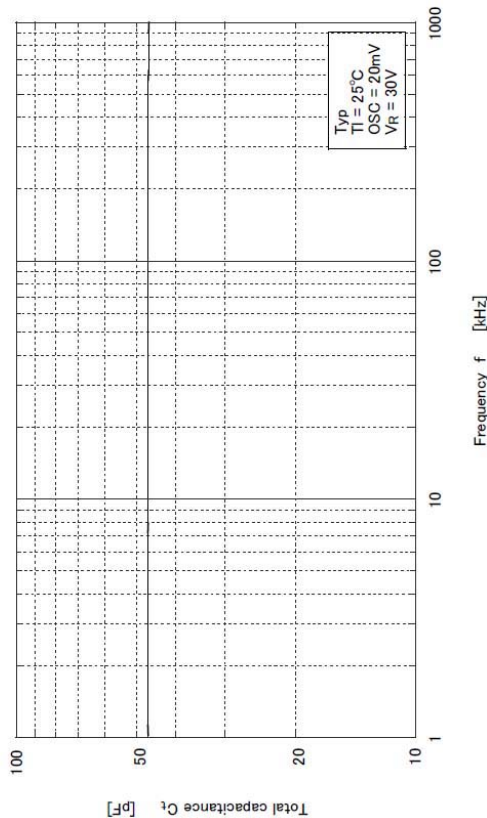
Reverse current vs Junction temperature



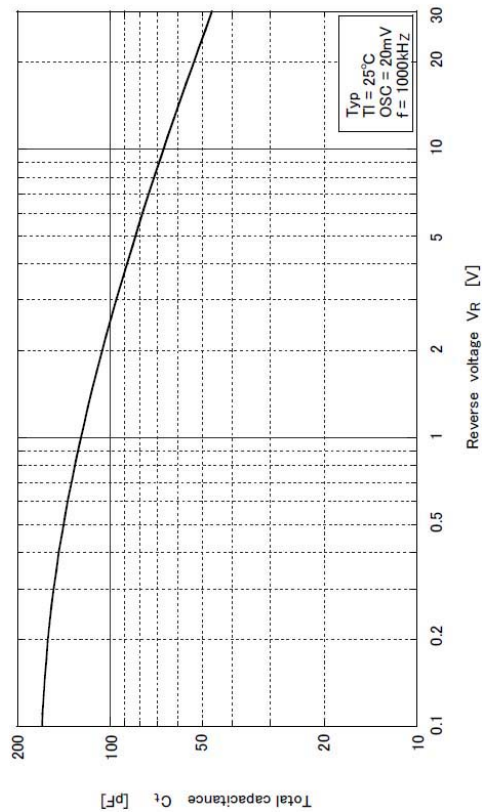
Maximum surge reverse current vs Pulse width



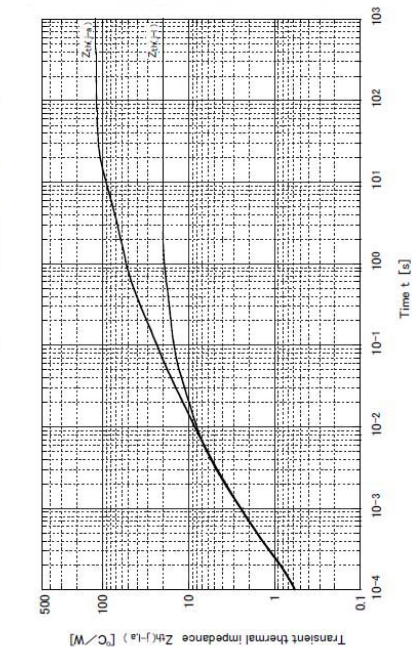
Total capacitance vs Frequency



Total capacitance vs Reverse voltage

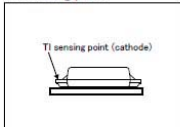


Transient thermal impedance vs Time



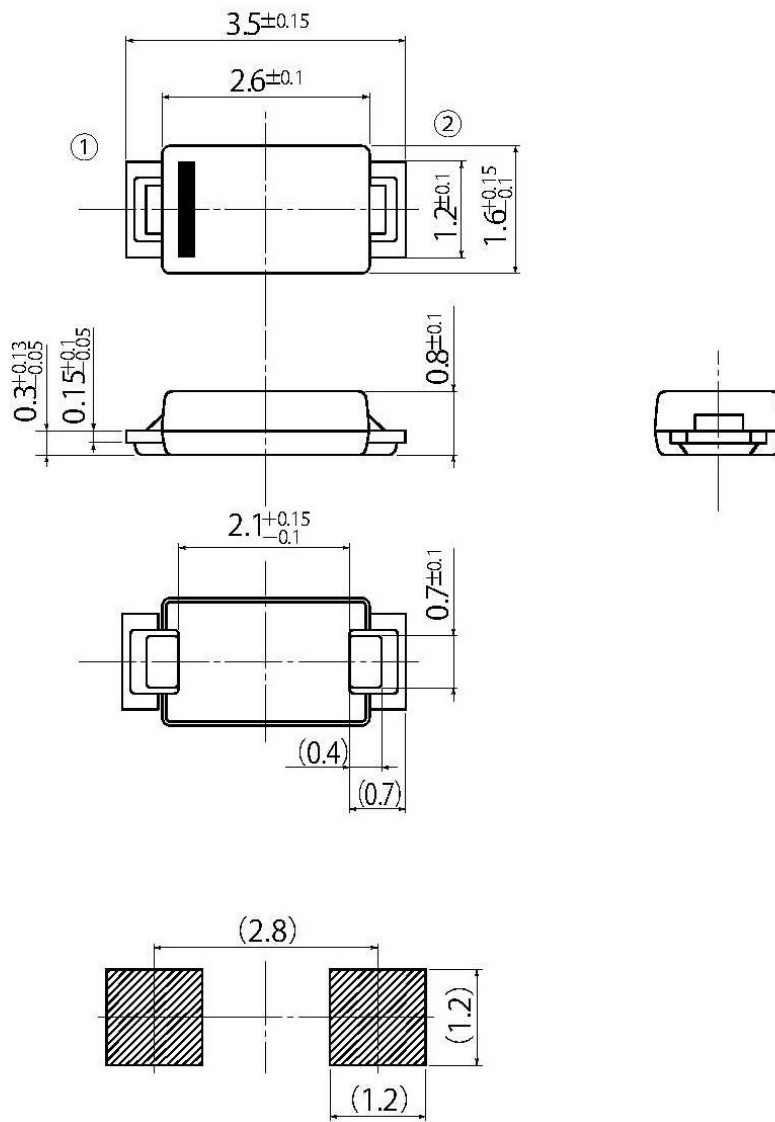
Substrate detail	
Type	Glass epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	100mm ²

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.

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