

ST02-58G1

TVS

2.2A, 175W

Feature

- Optimized for Multiple Protection Purposes [ESD],[Lighting Surge],[Automotive Transient Surge]
- Peak pulse power:175W
- High Speed
- Ultra small SMD
- Based on AEC-Q101
- Tj=175°C
- Pb free terminals
- 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 _{RSM}	10/1000μs, Non-repetitive ※	2.2	A
Maximum surge reverse power	P _{RSM}	10/1000μs, Non-repetitive ※	175	W
Continuous (direct) reverse voltage	V _{R(DC)}		45	V

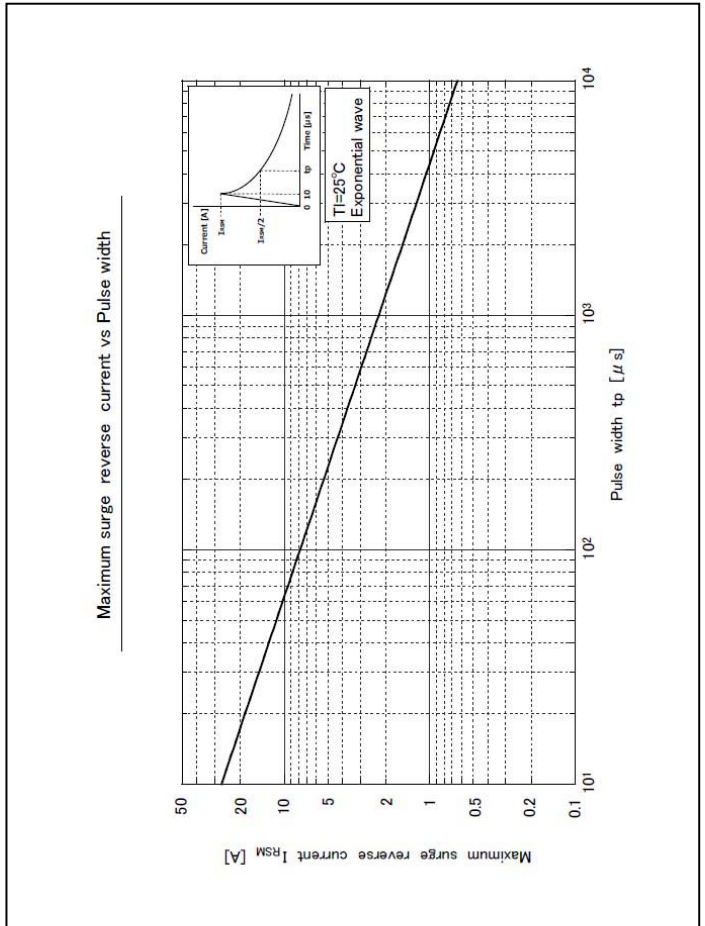
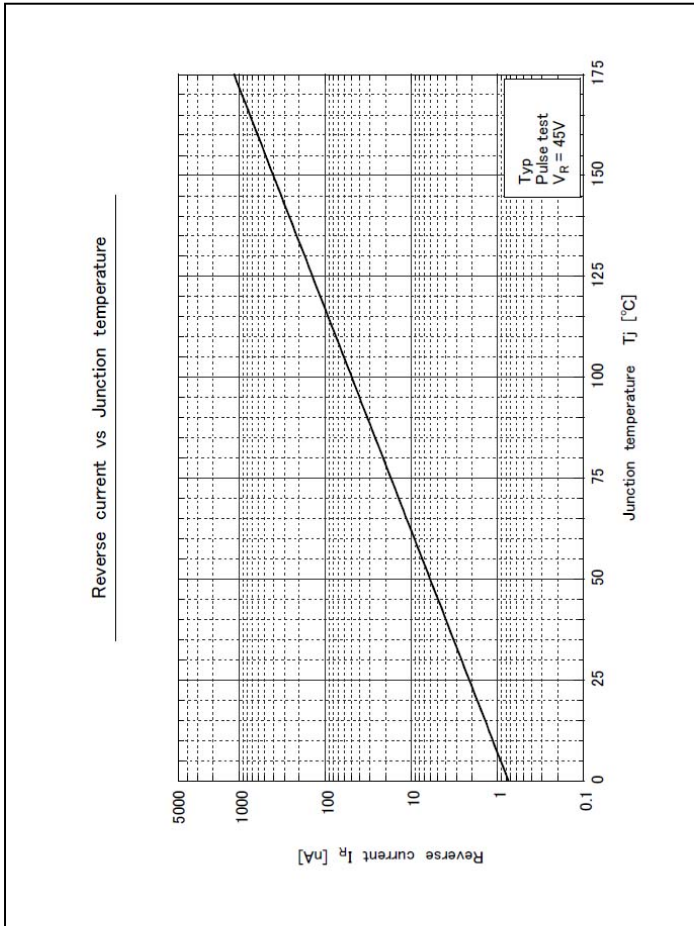
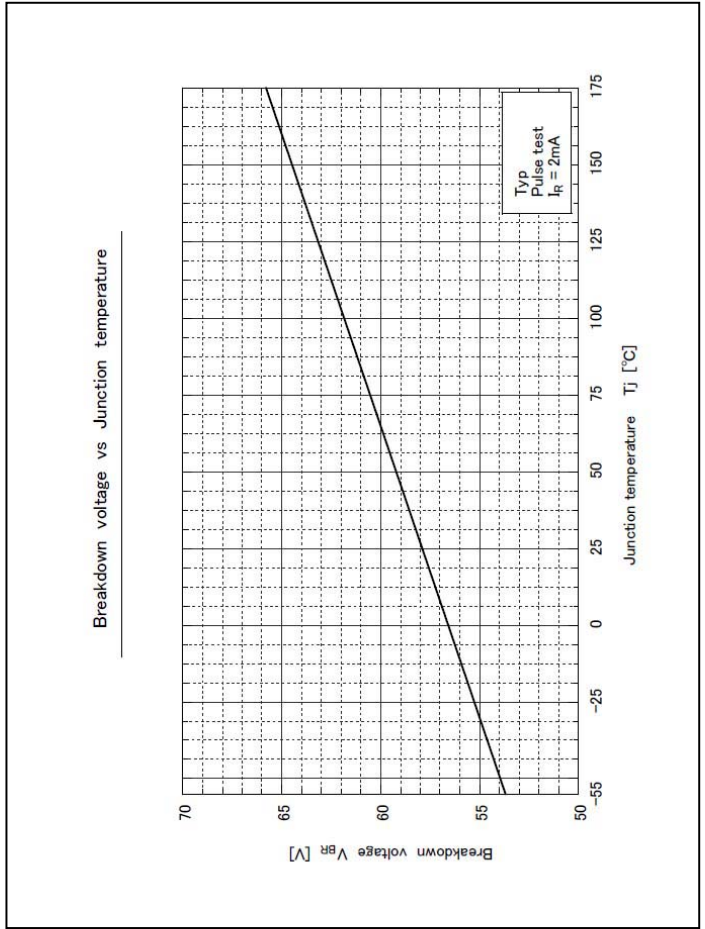
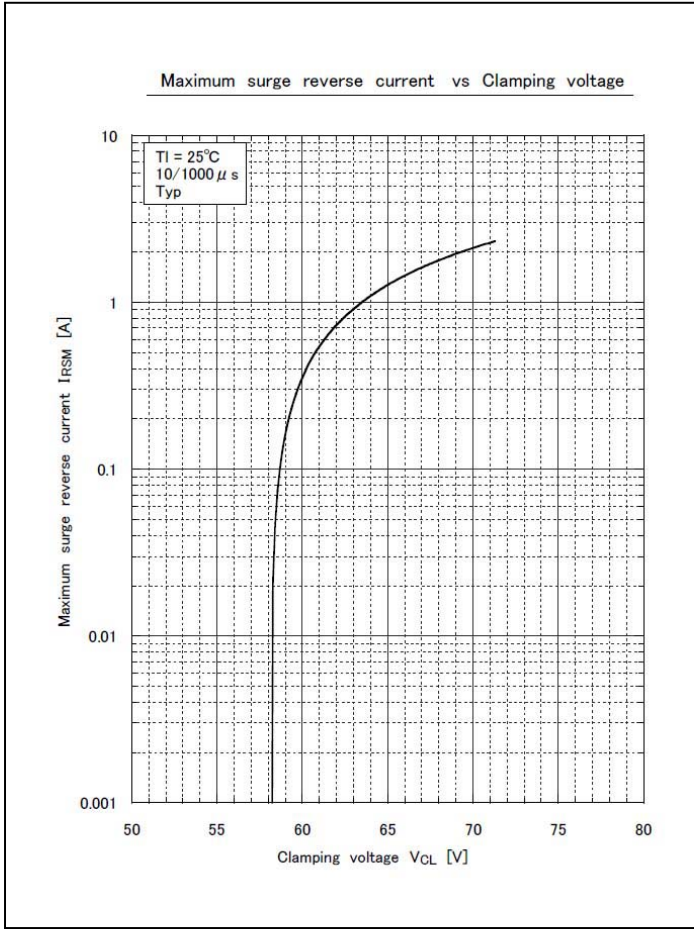
※ :See the original Specifications

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

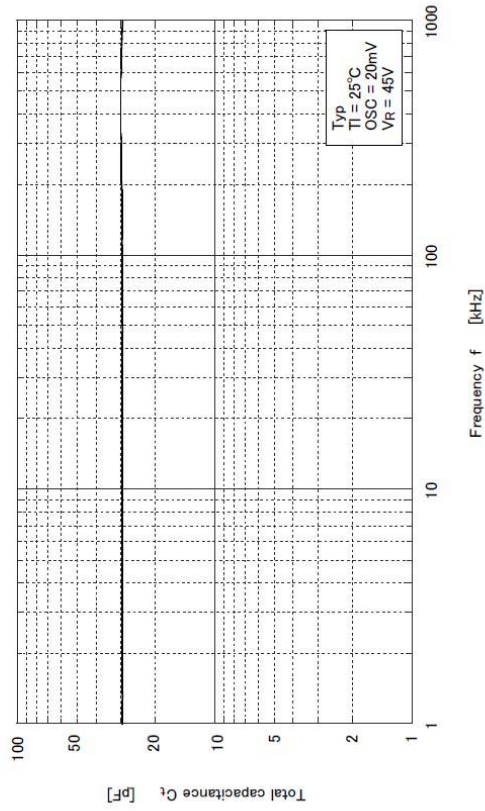
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V _{BR}	IR=2mA, Pulse measurement	52		64	V
Reverse current	I _R	VR=45V, Pulse measurement			5	μA
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			20	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient,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

※ :See the original Specifications

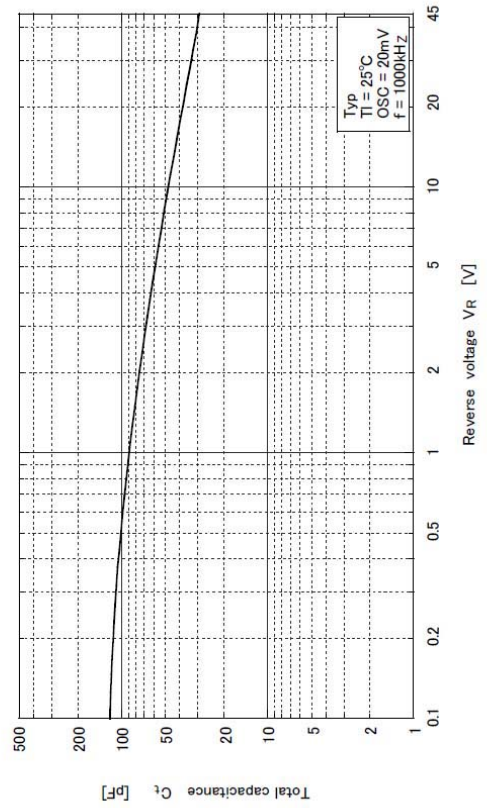
CHARACTERISTIC DIAGRAMS



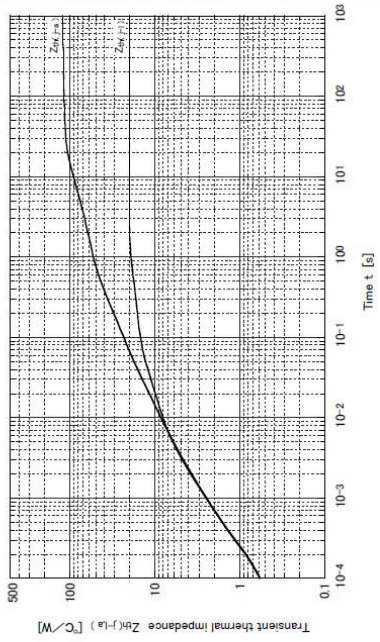
Total capacitance vs Frequency



Total capacitance vs Reverse voltage

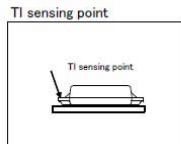


Transient thermal impedance vs Time



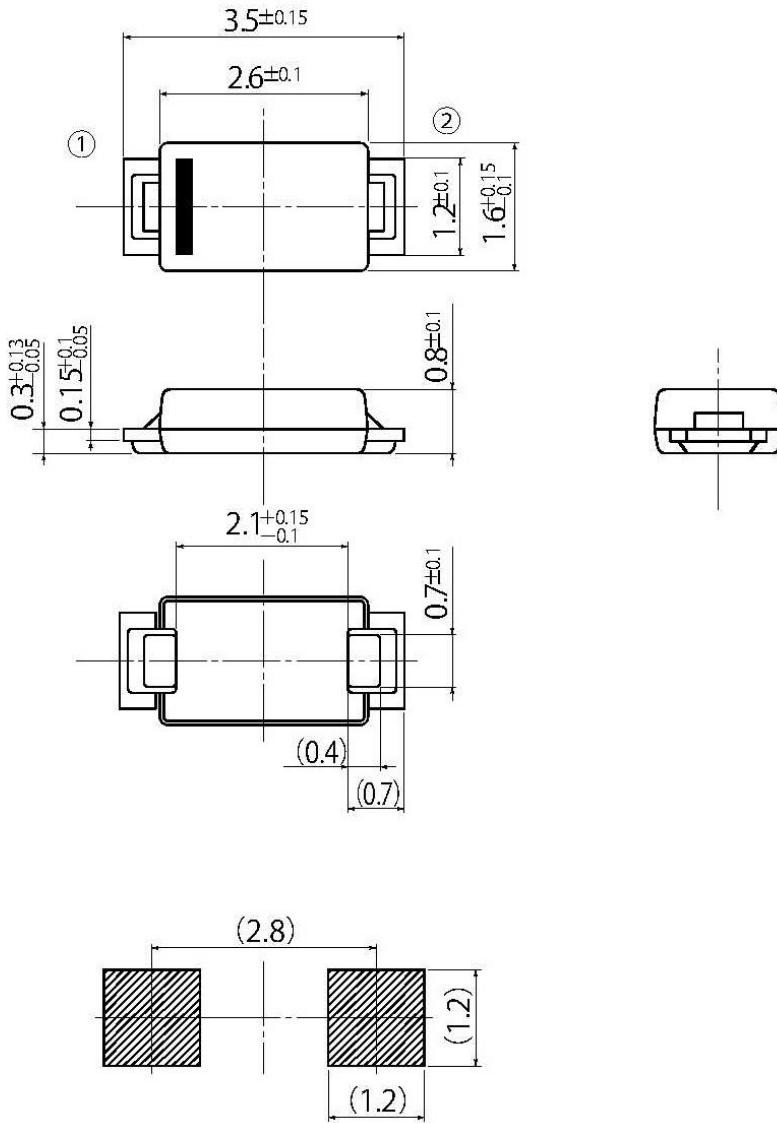
Substrate detail

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



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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