

# ST20-27F2

TVS  
54A, 2000W

### Feature

- Peak pulse power:2000W
- SMD
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): 2F



### Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T <sub>stg</sub>		-55 to 175	°C
Operating junction temperature	T <sub>j</sub>		-55 to 175	°C
Maximum surge reverse current	I <sub>RSM</sub>	10/1000μs, Non-repetitive, Exponential wave ※	54	A
Maximum surge reverse power	P <sub>RSM</sub>	10/1000μs, Non-repetitive ※	2000	W
Continuous (direct) reverse voltage	V <sub>R(DC)</sub>		23	V

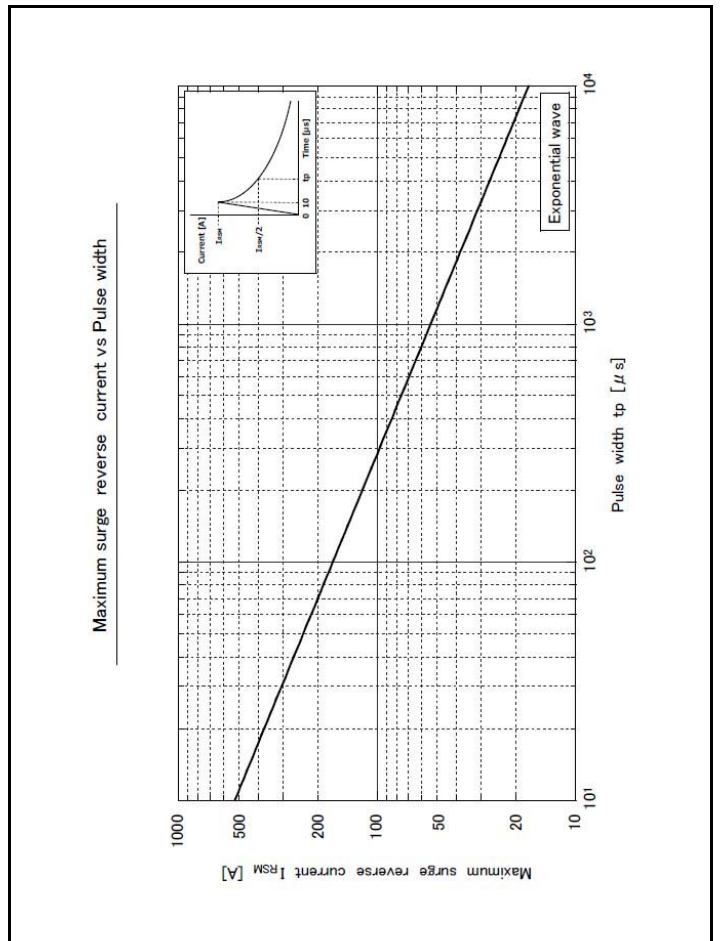
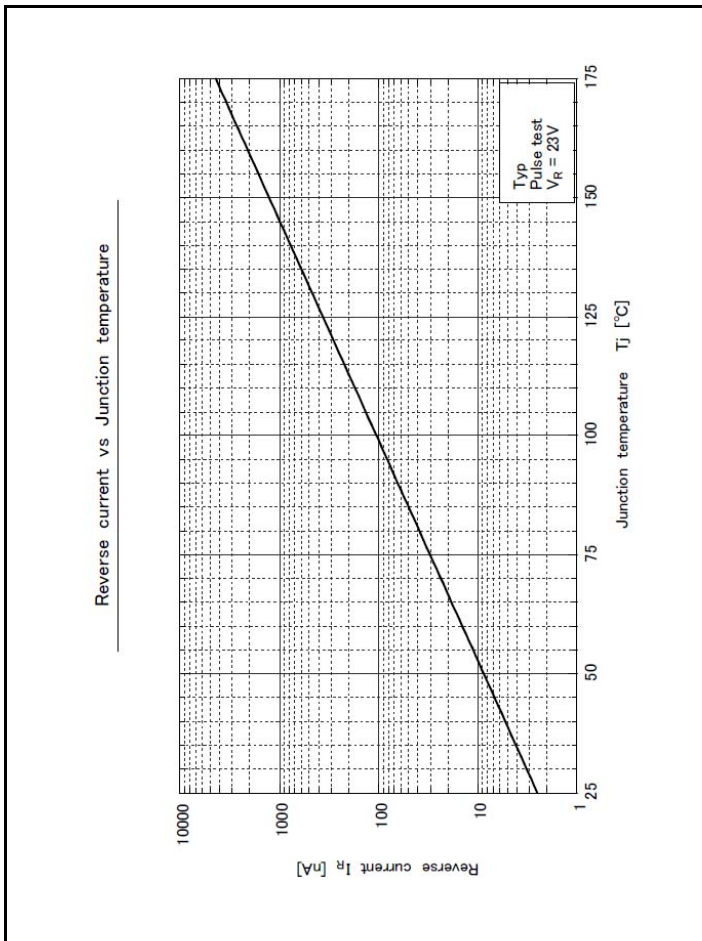
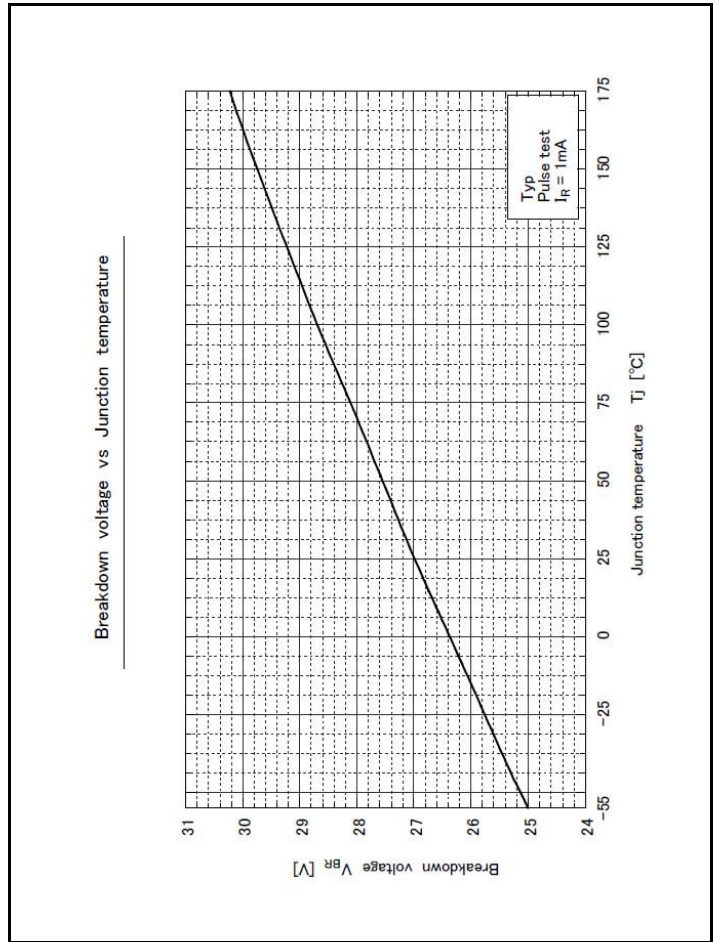
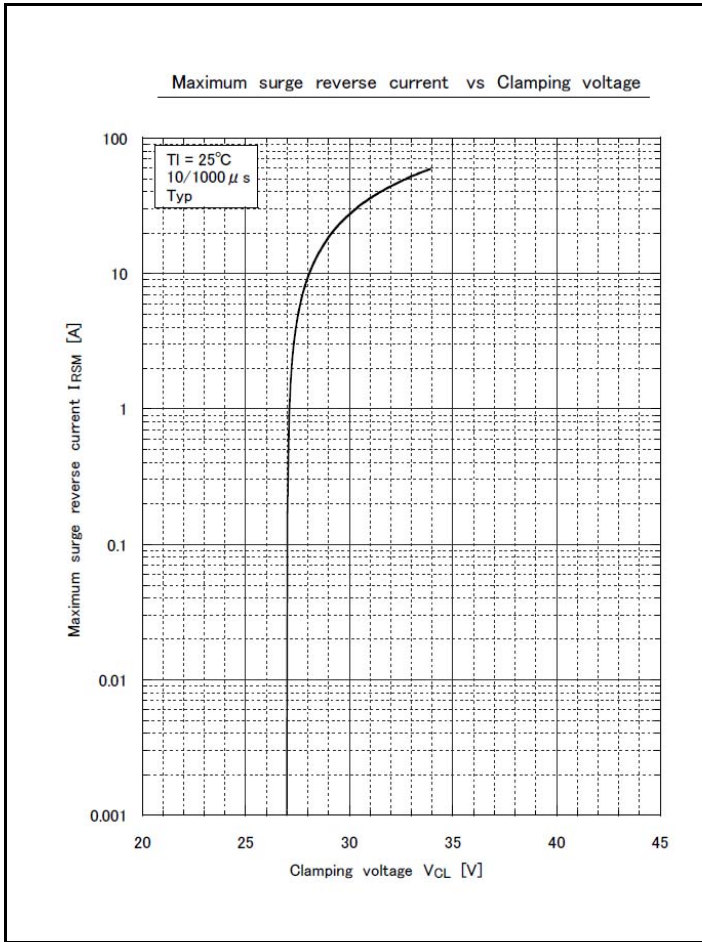
※ : See the original Specifications

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

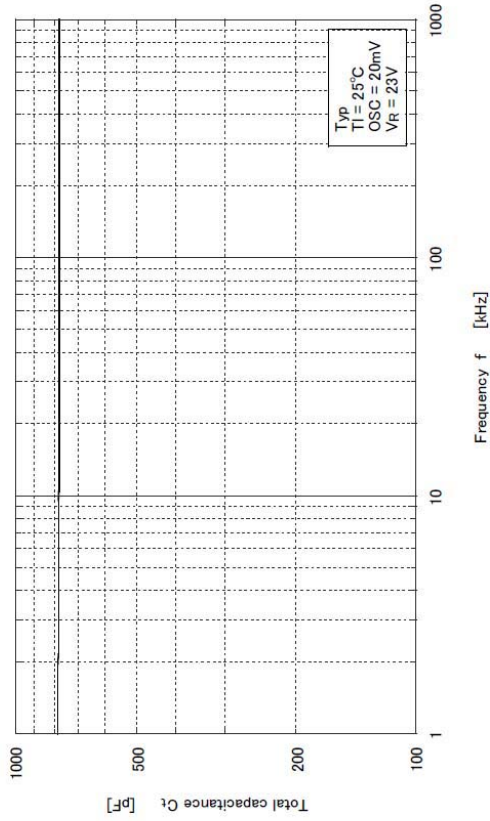
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA, Pulse measurement	24.3	27	29.7	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =23V, Pulse measurement			5	μA
Thermal resistance	R <sub>th(j-l)</sub>	Junction to lead, On glass-epoxy substrate ※			23	°C/W
Thermal resistance	R <sub>th(j-a)</sub>	Junction to ambient, On glass-epoxy substrate ※			115	°C/W
Restriction voltage	V <sub>CL</sub>	10/1000μs, I <sub>RSM</sub> =54A ※			37	V
Temperature coefficient	rz				0.12	%/°C

※ : See the original Specifications

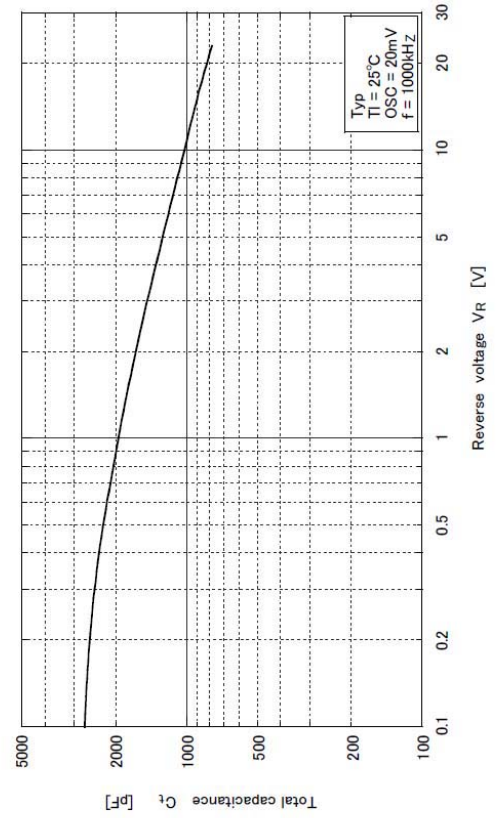
# CHARACTERISTIC DIAGRAMS



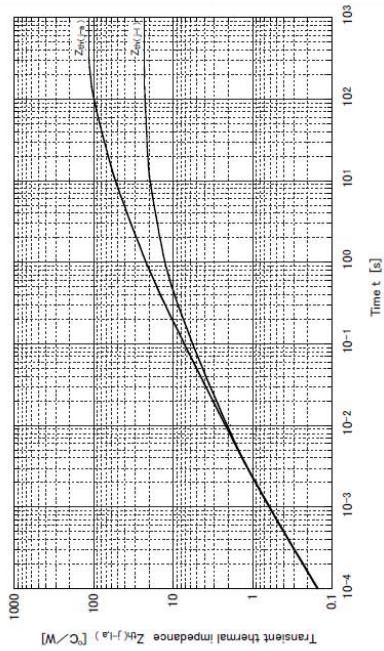
Total capacitance vs Frequency



Total capacitance vs Reverse voltage



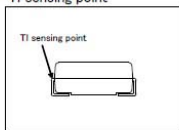
Transient thermal impedance vs Time



Substrate detail

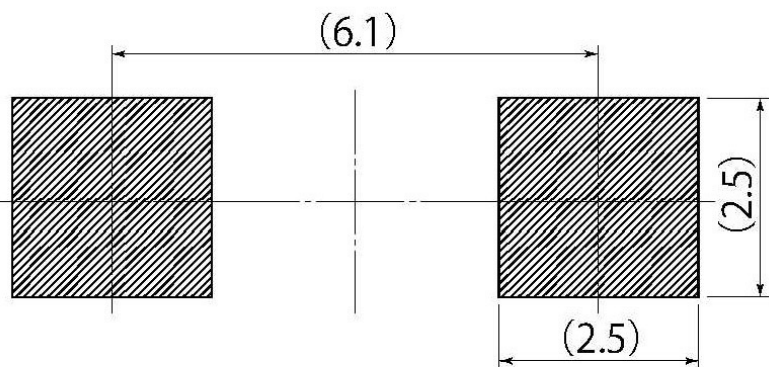
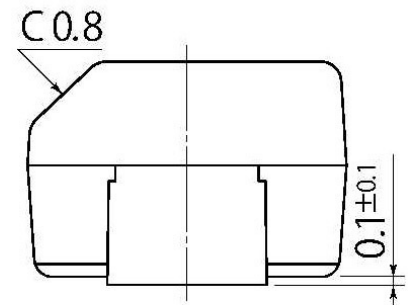
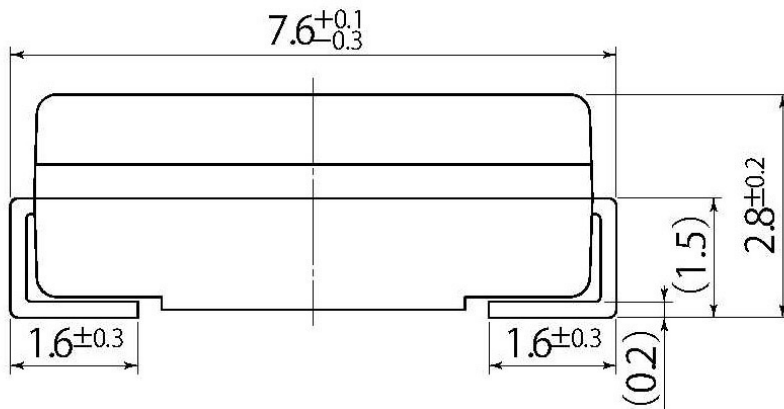
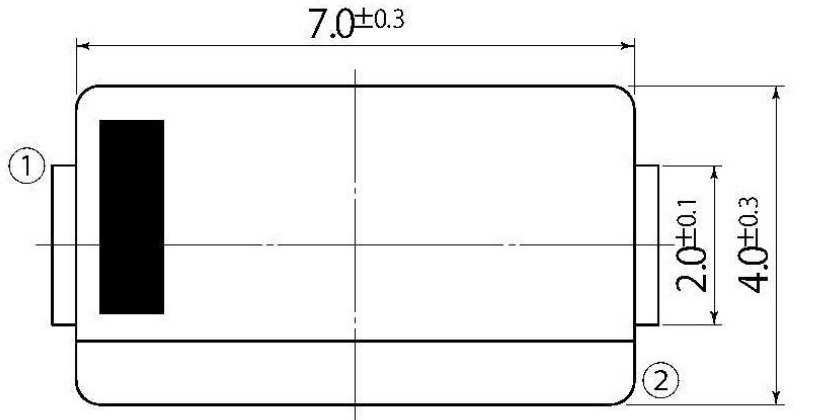
Type	Glass-epoxy
Size	1 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35μm
Pattern area	44.5mm <sup>2</sup>

TI sensing point



B10

JEDEC Code	—
JEITA Code	—
House Name	2F



Referential Soldering Pad

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

## Notes

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