

ST03-47F1

TVS

5.0A, 300W

Feature

- Optimized for Multiple Protection Purposes
[ESD],[Lighting Surge],[Automotive Transient Surge]
- Peak pulse power:300W
- High Speed
- Small SMD
- Based on AEC-Q101
- Pb free terminals
- RoHS_Yes

OUTLINE

Package (House Name): 1F

Package (JEDEC Code): DO-214AC



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 150	°C
Maximum surge reverse current	I _{RSM}	10/1000μs, Non-repetitive, Exponential wave ※	5	A
Maximum surge reverse power	P _{RSM}	10/1000μs, Non-repetitive ※	300	W
Continuous (direct) reverse voltage	V _{R(DC)}		37	V

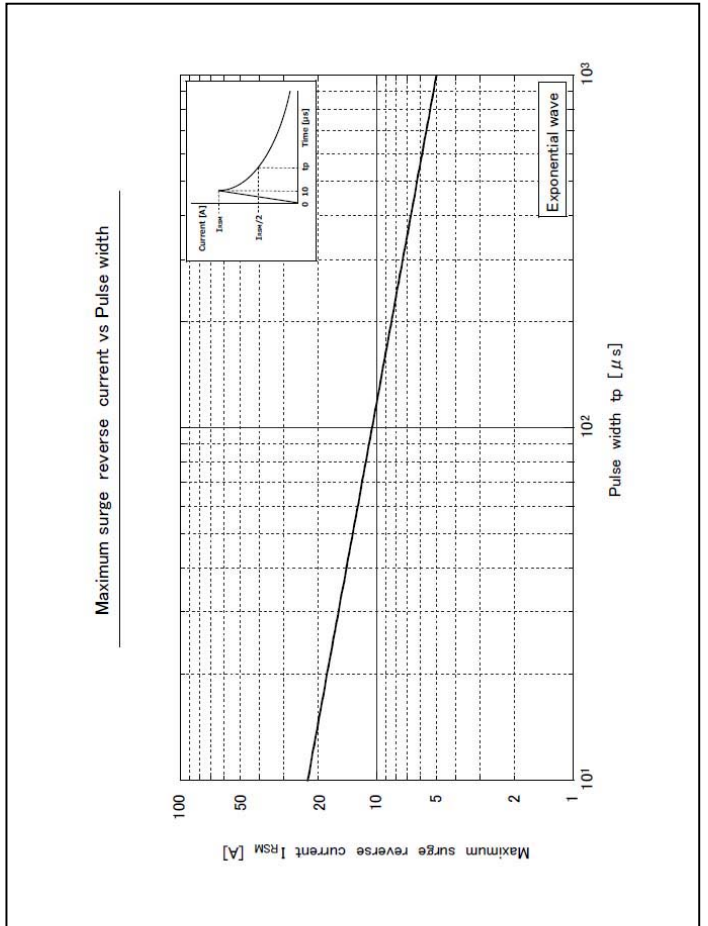
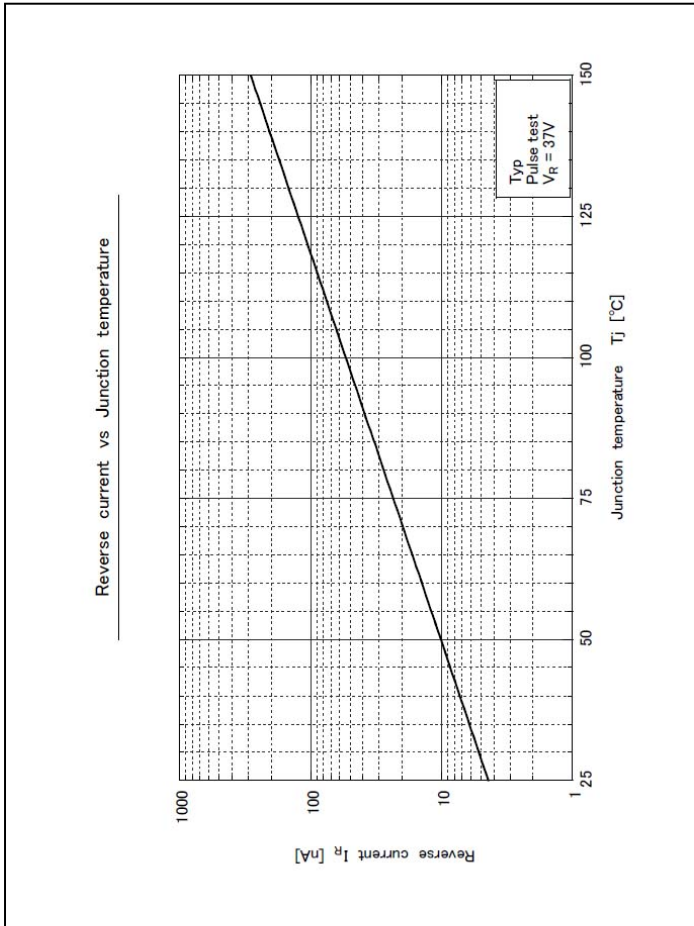
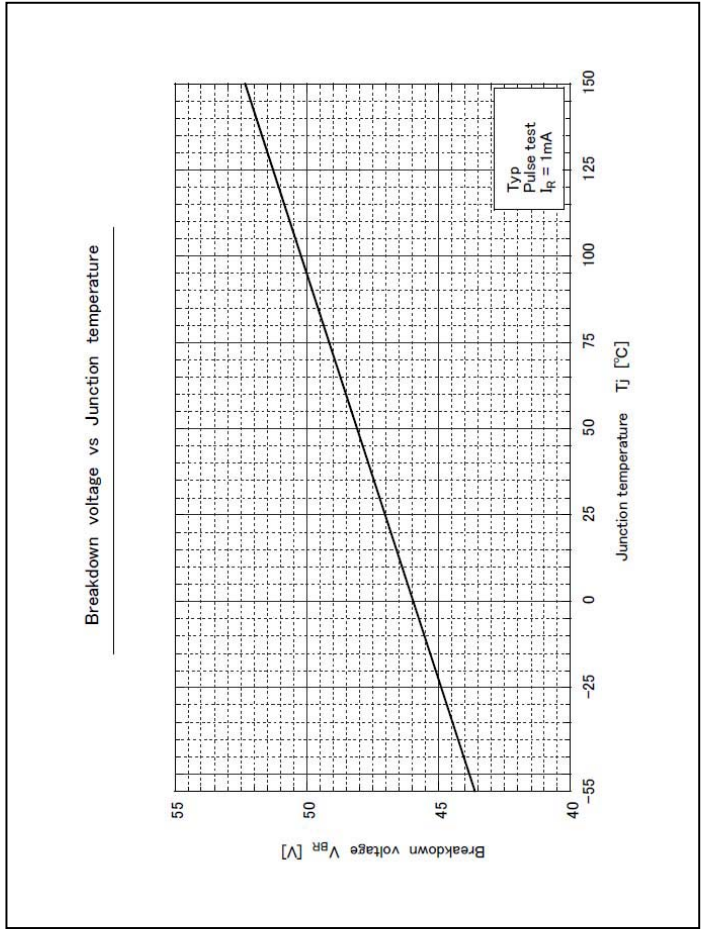
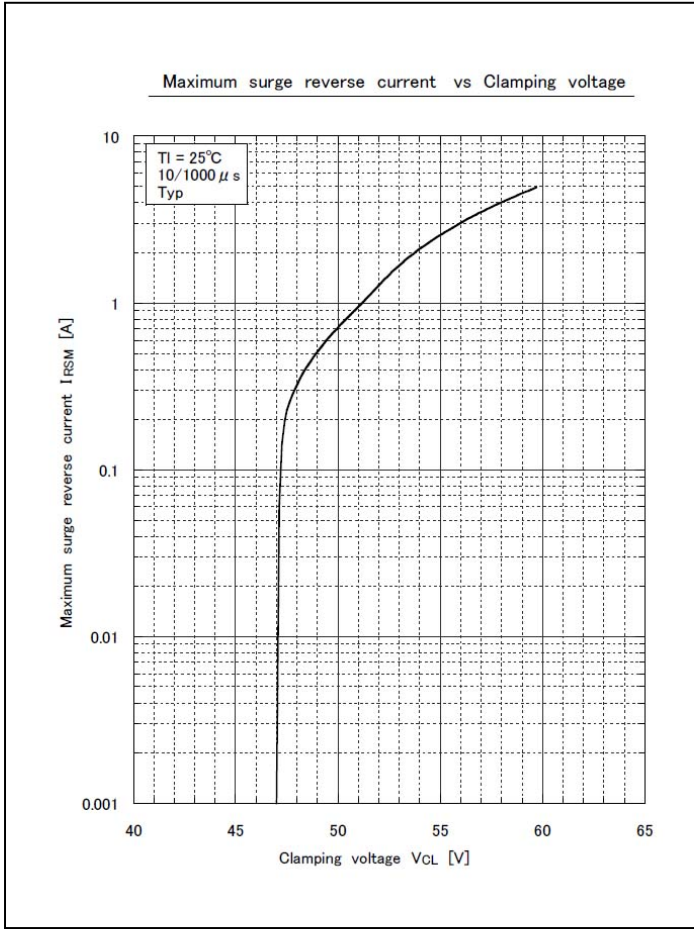
※ : See the original Specifications

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

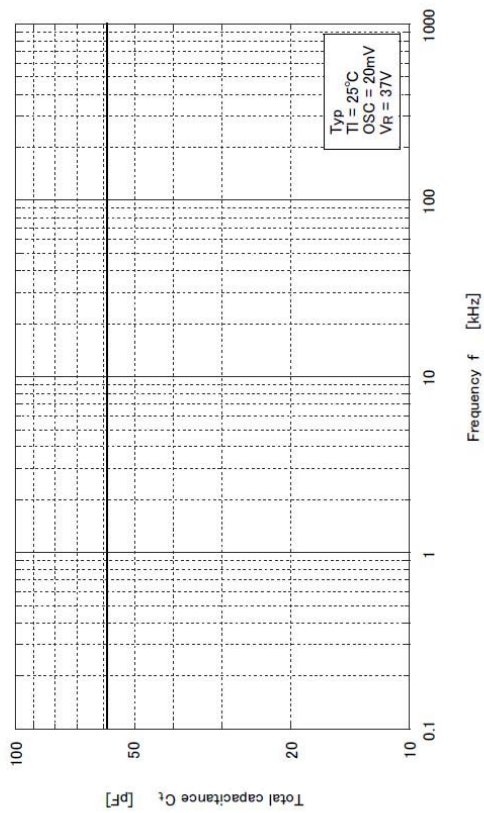
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V _{BR}	IR=1mA, Pulse measurement	42	47	52	V
Reverse current	I _R	VR=37V, Pulse measurement			5	μA
Electrostatic discharge capability	V _{ESD}	C=330pF, R=330Ω, Polarity±, Aerial discharge ※		30		kV
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			23	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			157	°C/W

※ : See the original Specifications

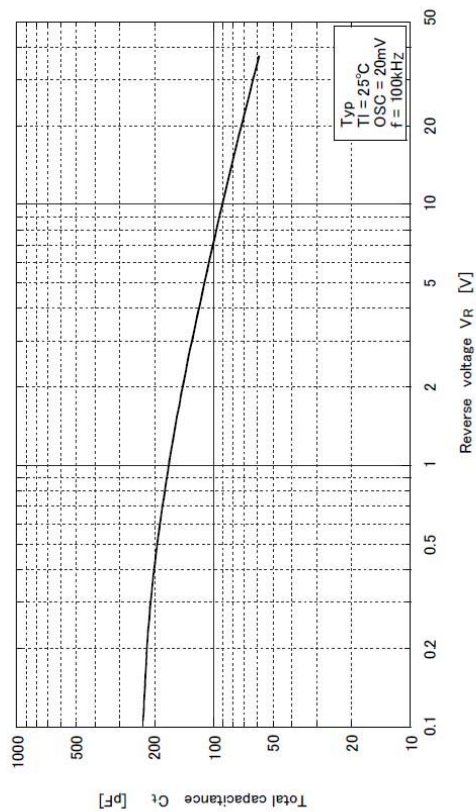
CHARACTERISTIC DIAGRAMS



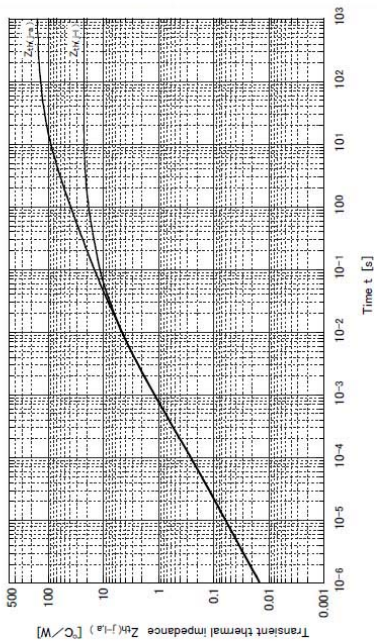
Total capacitance vs Frequency



Total capacitance vs Reverse voltage



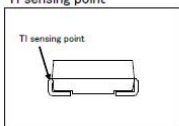
Transient thermal impedance vs Time



Substrate detail

Type	Glass-epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	47.8mm ²

TI sensing point



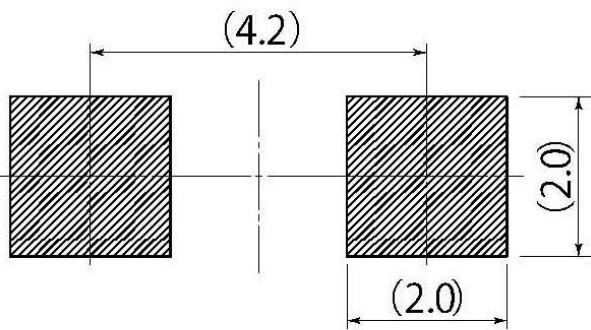
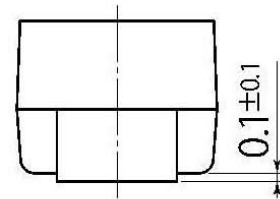
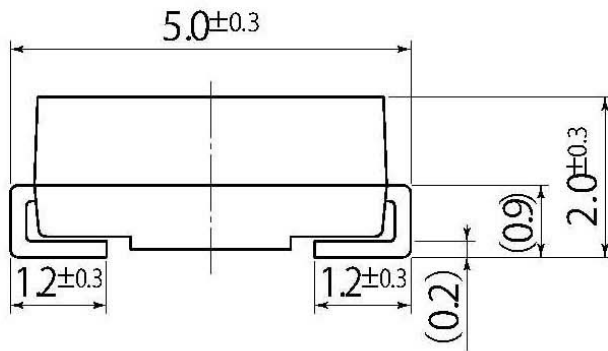
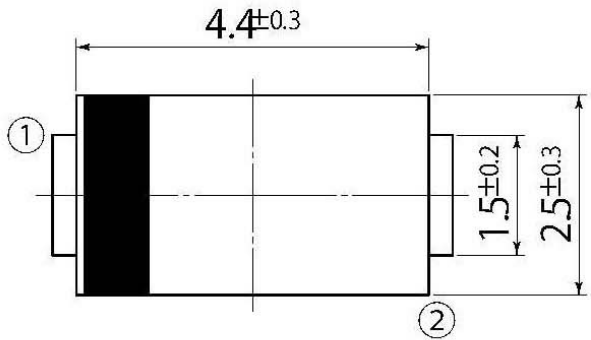
Outline Dimensions

unit:mm

scale: 10/1

B3

JEDEC Code	DO-214AC
JEITA Code	—
House Name	1F, CF



Referential Soldering Pad

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

Notes

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