ShinDengen

ST03-58F1

TVS

4.0A, 300W

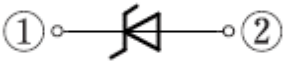
Feature

- Optimized for Multiple Protection Purposes
  [ESD],[Lighting Surge],[Automotove 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 ※	4	A
Maximum surge reverse power	P_{RSM}	10/1000µs, Non-repetitive ※	300	W
Continuous (direct) reverse voltage	$V_{R(DC)}$		45	V

※ ：See the original Specifications

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

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V_{BR}	IR=1mA, Pulse measurement	52		64	V
Reverse current	I_R	VR=45V, 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

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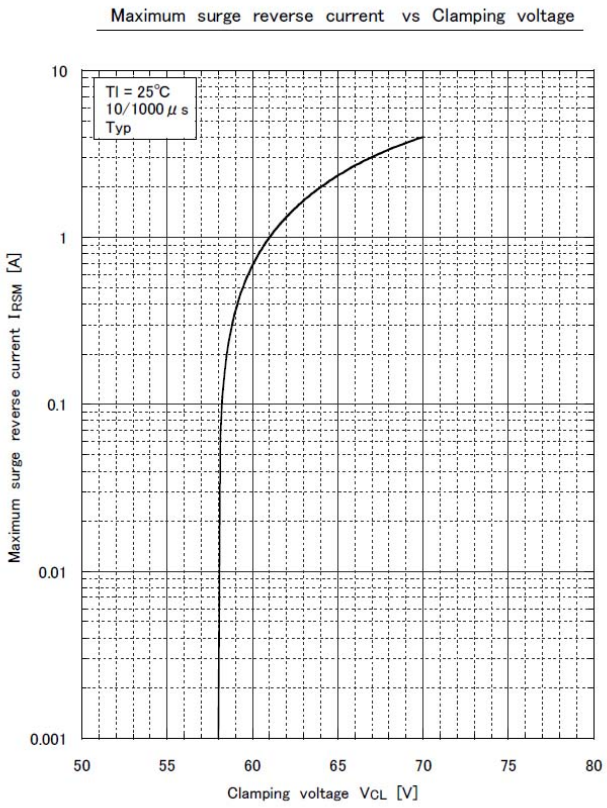
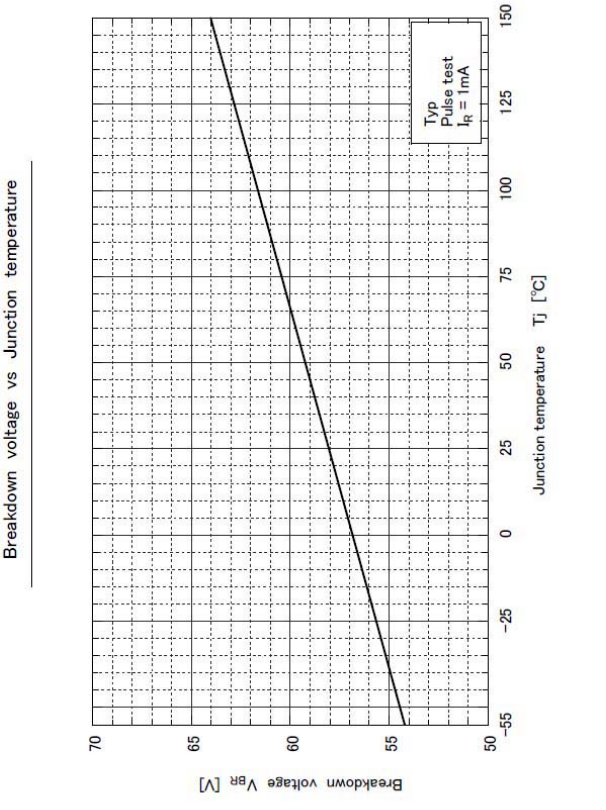
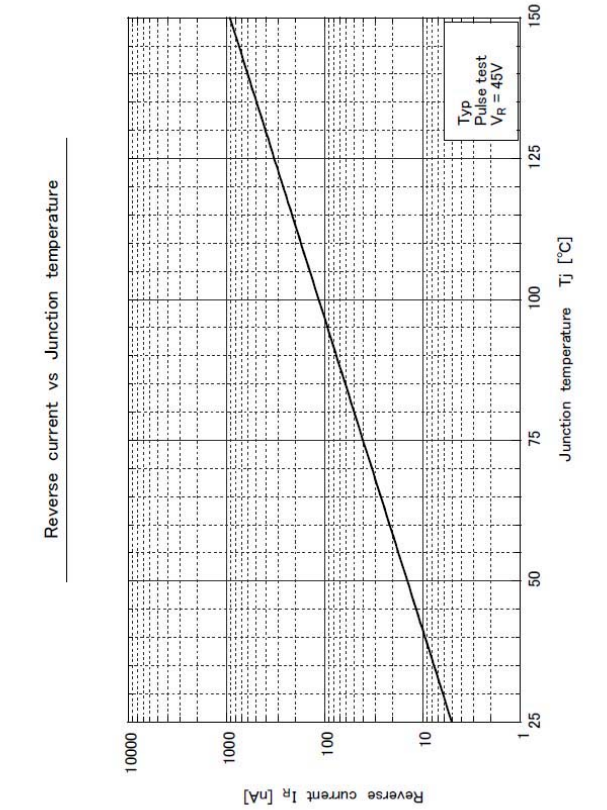
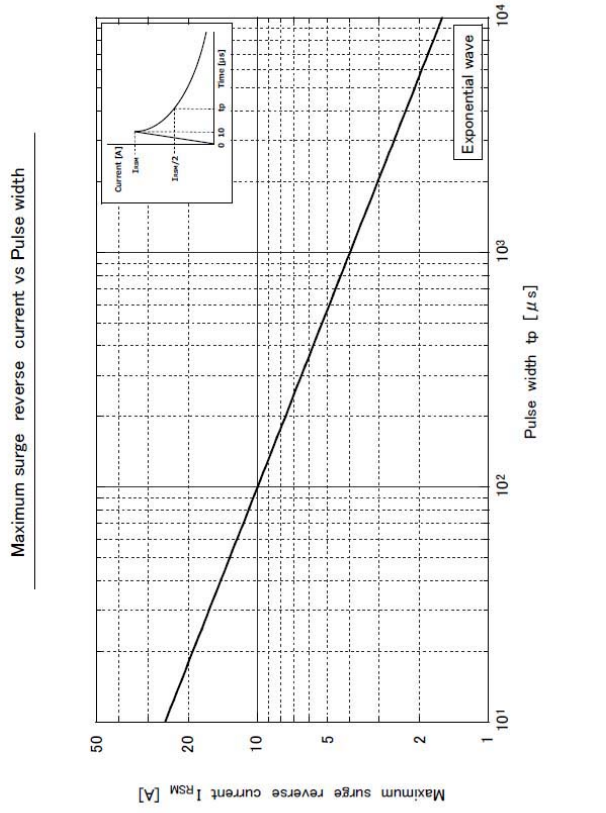
CHARACTERISTIC DIAGRAMS









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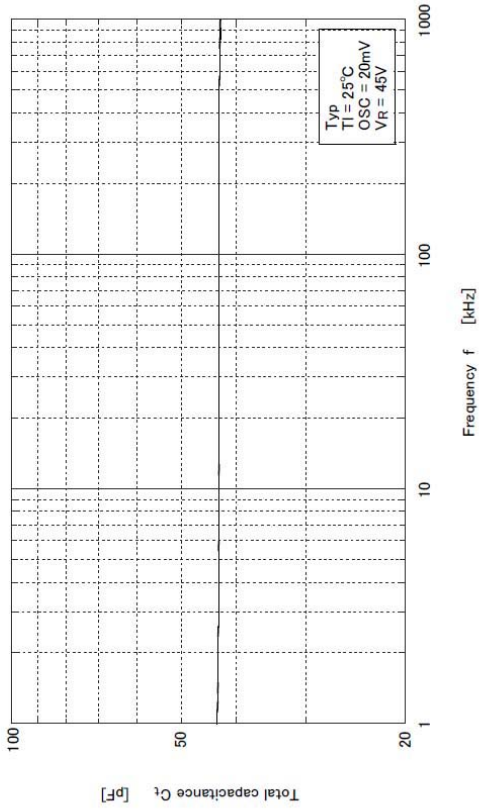
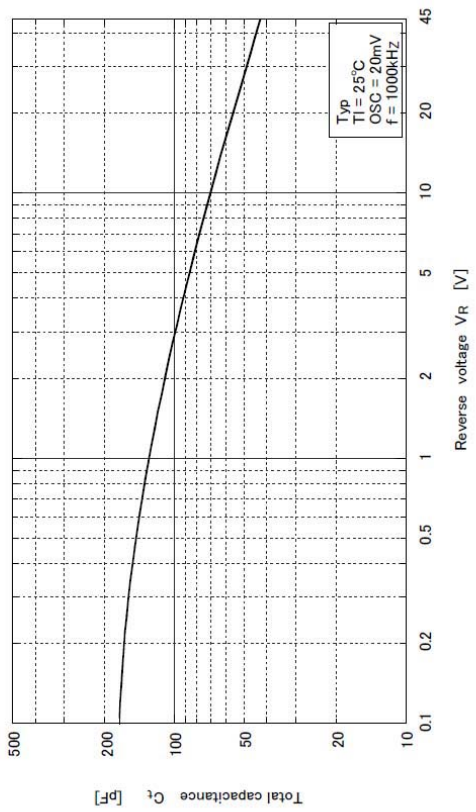
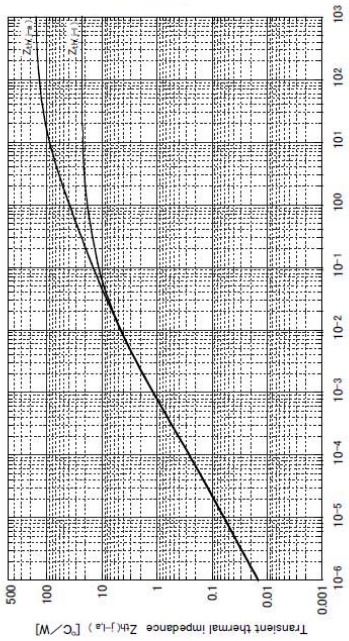
Total capacitance vs Frequency



Total capacitance vs Reverse voltage



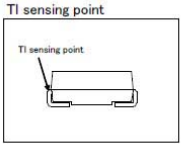
Transient thermal impedance vs Time



Substrate detail

Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	47.8mm²

Tl sensing point



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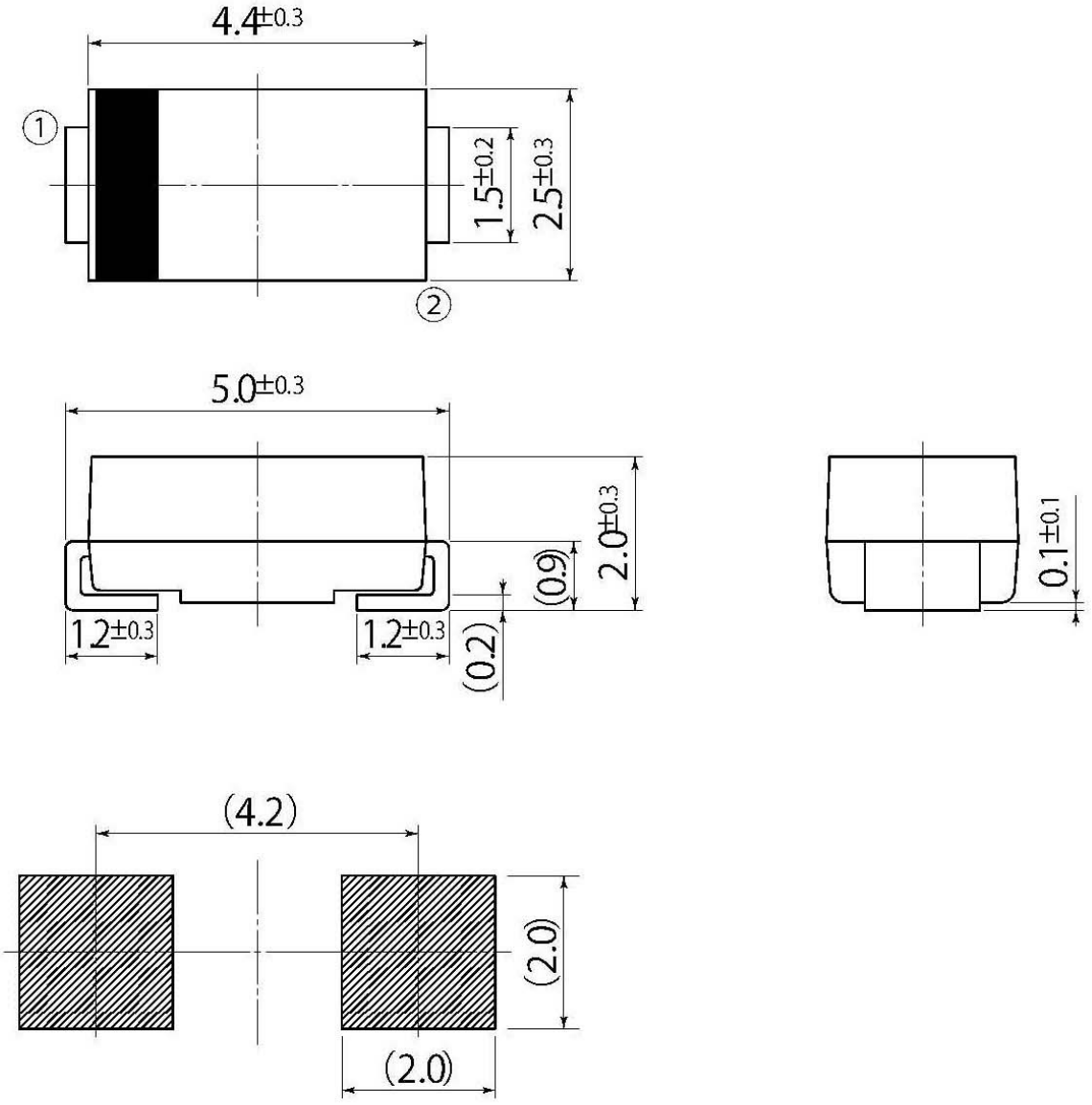
Outline Dimensions

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.

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Notes

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