

# ST04-24F1

TVS  
12A, 400W

### Feature

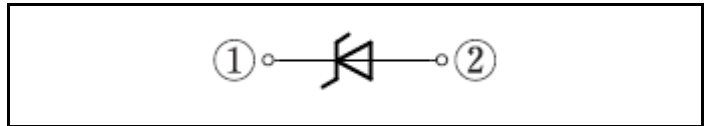
- Peak pulse power:400W
- Small SMD
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

### 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	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 *	12	A
Maximum surge reverse power	P <sub>RSM</sub>	10/1000μs, Non-repetitive *	400	W
Continuous (direct) reverse voltage	V <sub>R(DC)</sub>		20	V

\* : See the original Specifications

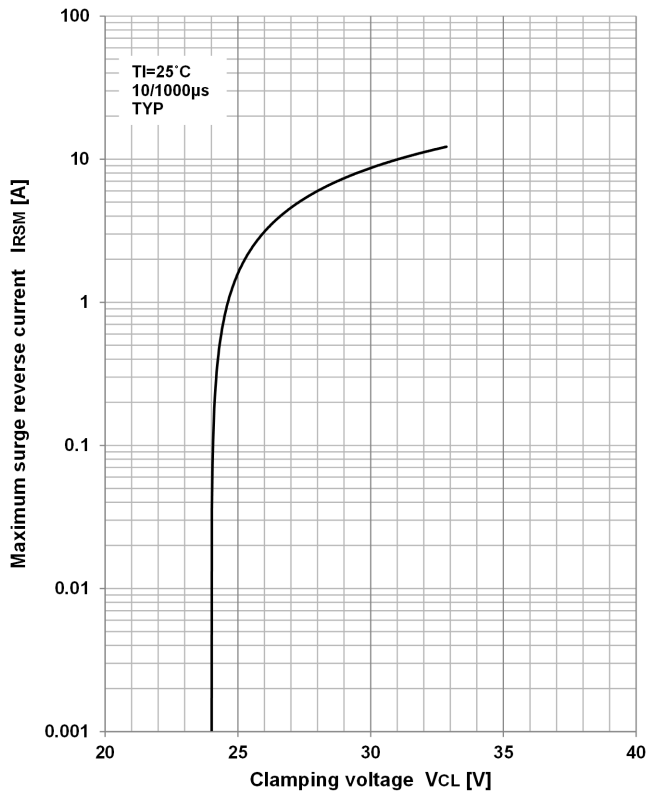
### Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA, Pulse measurement	22.8		25.6	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =20V, Pulse measurement			5	μA
Electrostatic discharge capability	V <sub>ESD</sub>	C=330pF, R=330Ω, Polarity±, Aerial discharge *		30		kV
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 *			157	°C/W

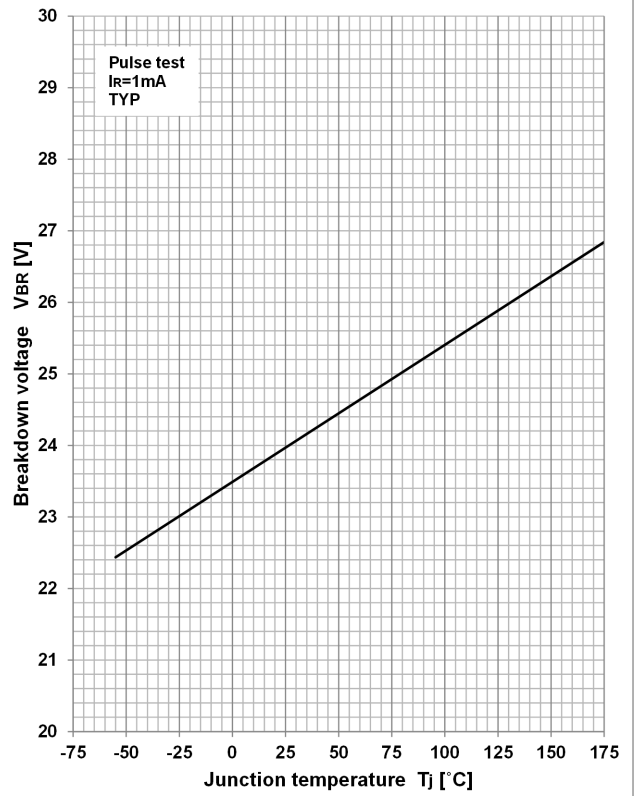
\* : See the original Specifications

# CHARACTERISTIC DIAGRAMS

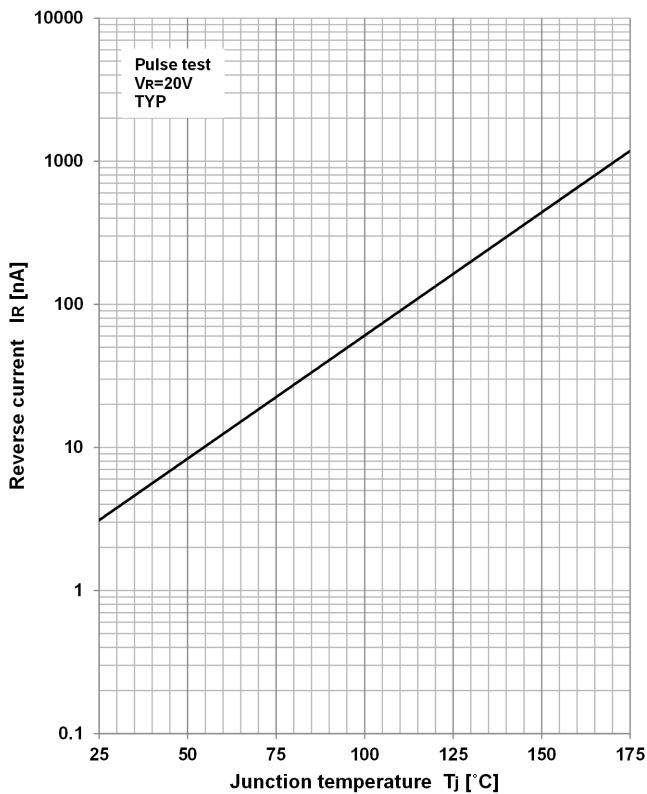
**Maximum surge reverse current vs Clamping voltage**



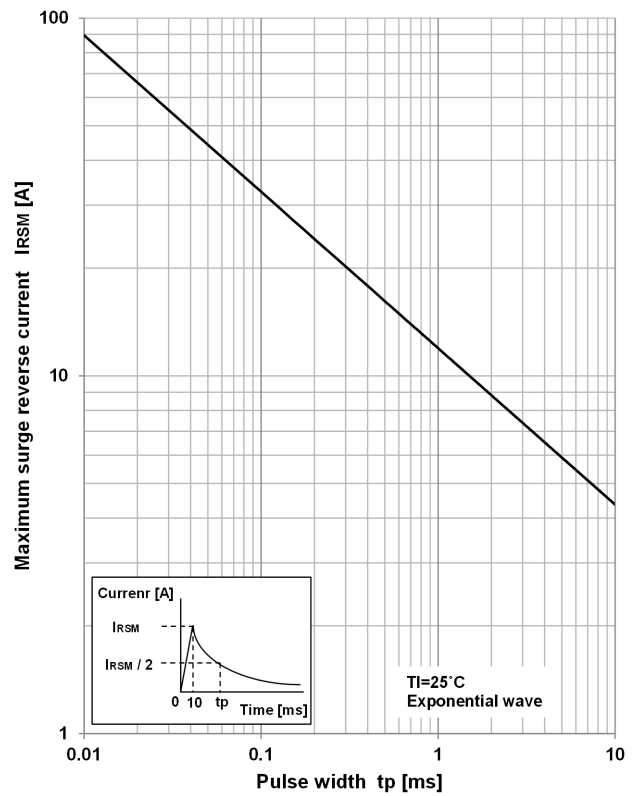
**Breakdown voltage vs Junction temperature**

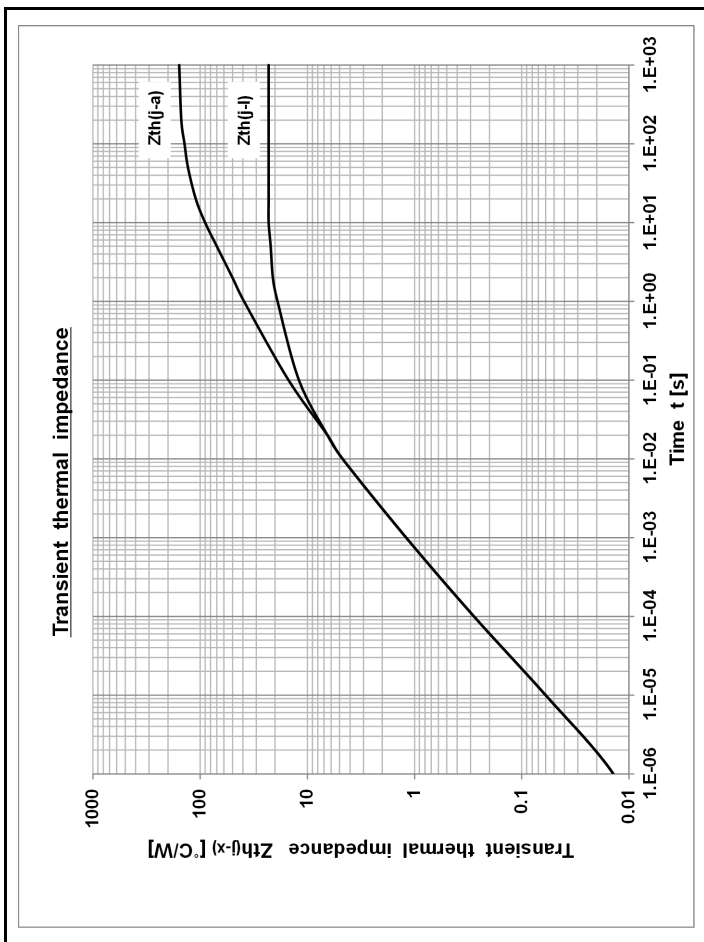
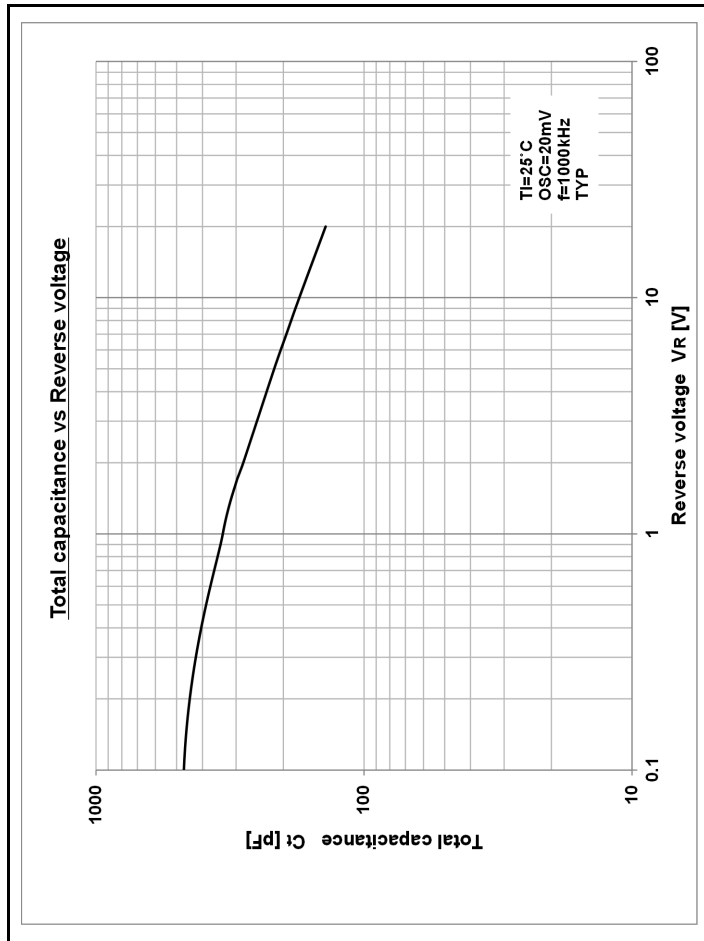
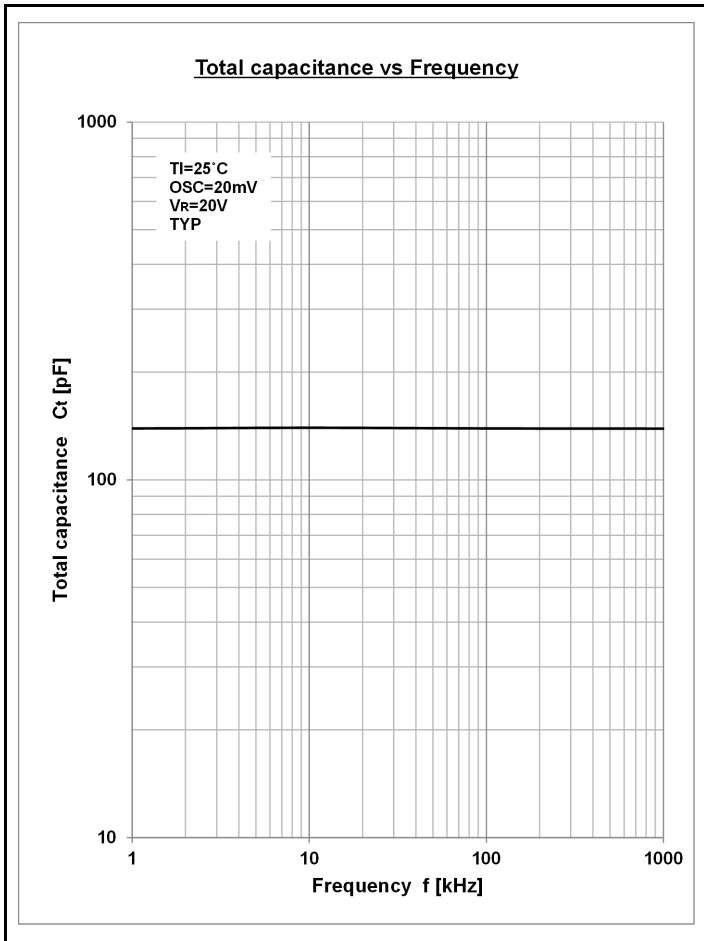


**Reverse current vs Junction temperature**



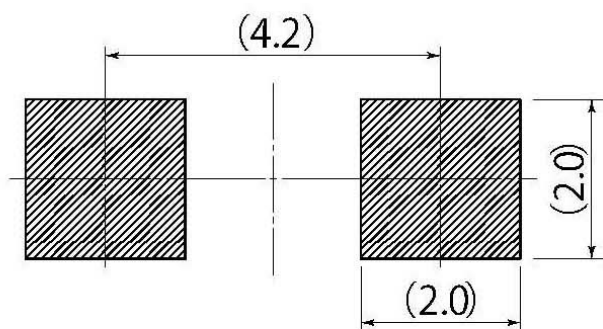
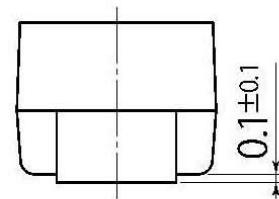
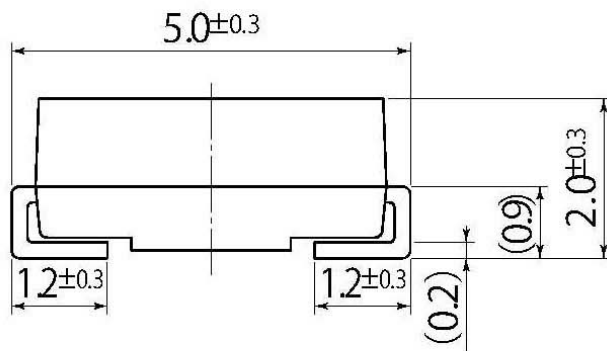
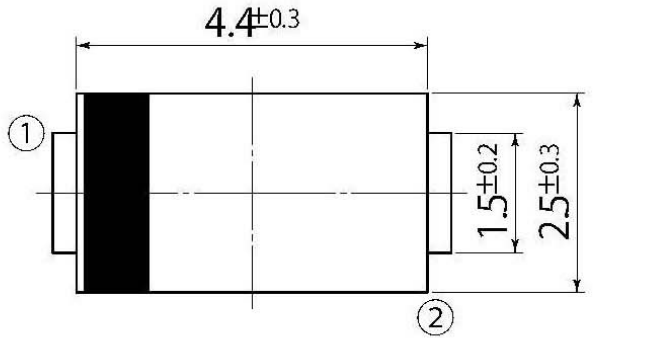
**Maximum surge reverse current vs Pulse width**





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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