ShinDengen

ST04-18F1

TVS

15A, 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	Tstg		-55 to 175	℃
Operating junction temperature	Tj		-55 to 175	℃
Maximum surge reverse current	I_{RSM}	10/1000μs, Non-repetitive ※	15	A
Maximum surge reverse power	P_{RSM}	10/1000μs, Non-repetitive ※	400	W
Continuous (direct) reverse voltage	$V_{R(DC)}$		15.3	V

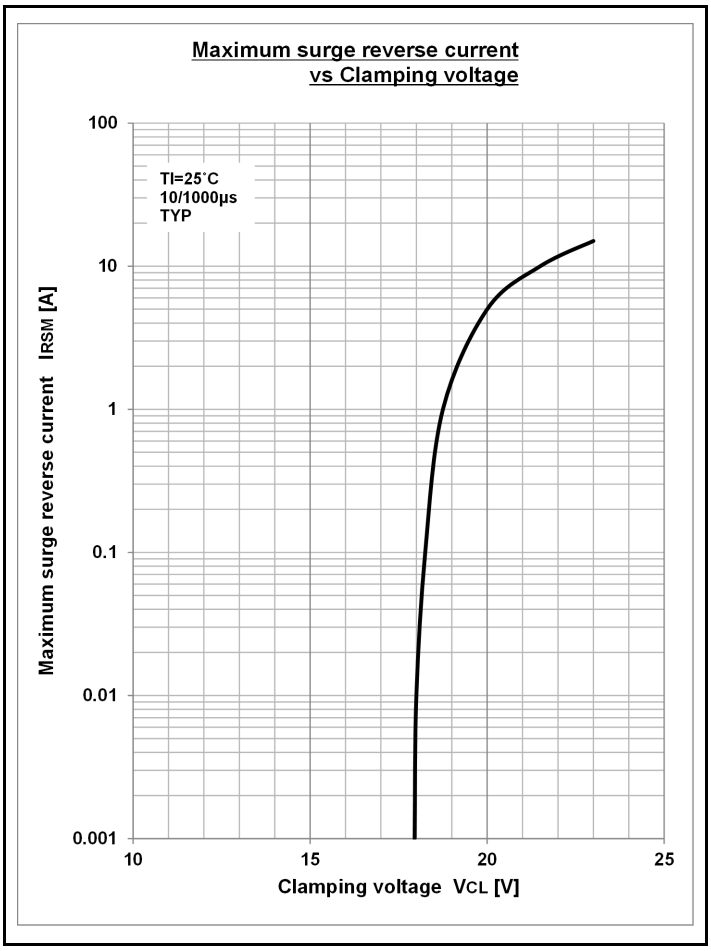
※ :See the original Specifications

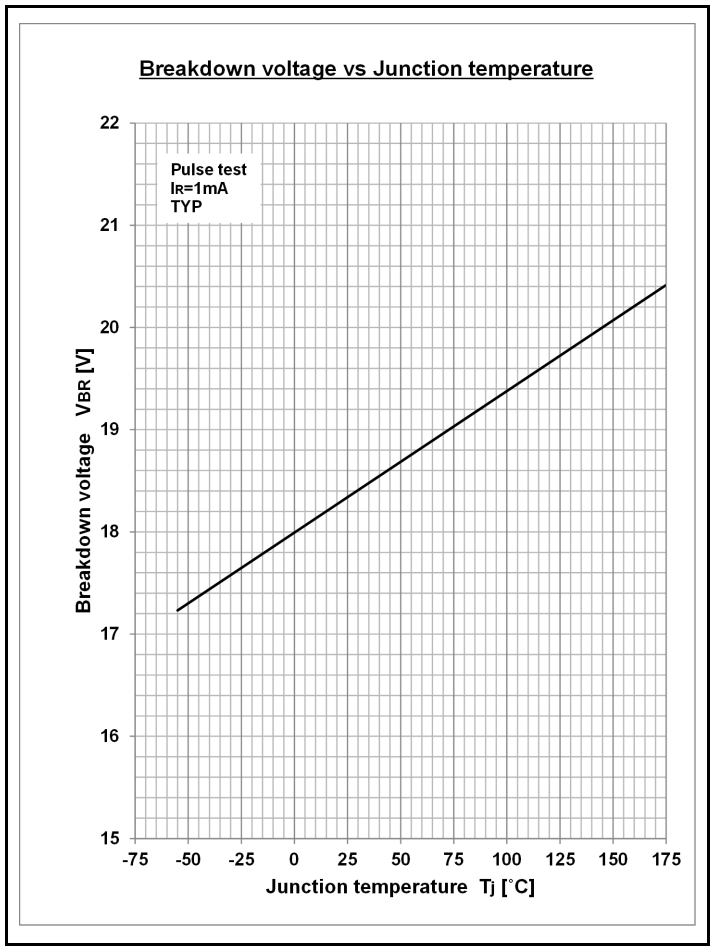
Electrical Characteristics (unless otherwise specified : Tl=25°C)

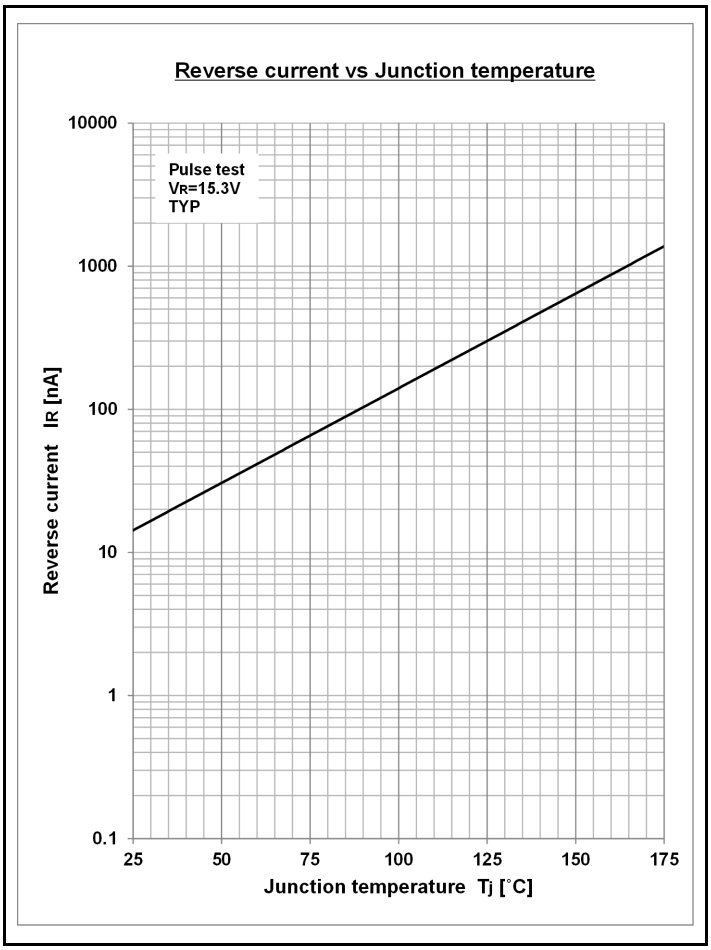
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V_{BR}	IR=1mA, Pulse measurement	16.8		19.1	V
Reverse current	I_R	VR=15.3V, Pulse measurement			5	μA
Electrostatic discharge capability	V_{ESD}	C=330pF, R=330Ω, Polarity±, Aerial discharge ※		30		kV
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			23	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			157	℃/W

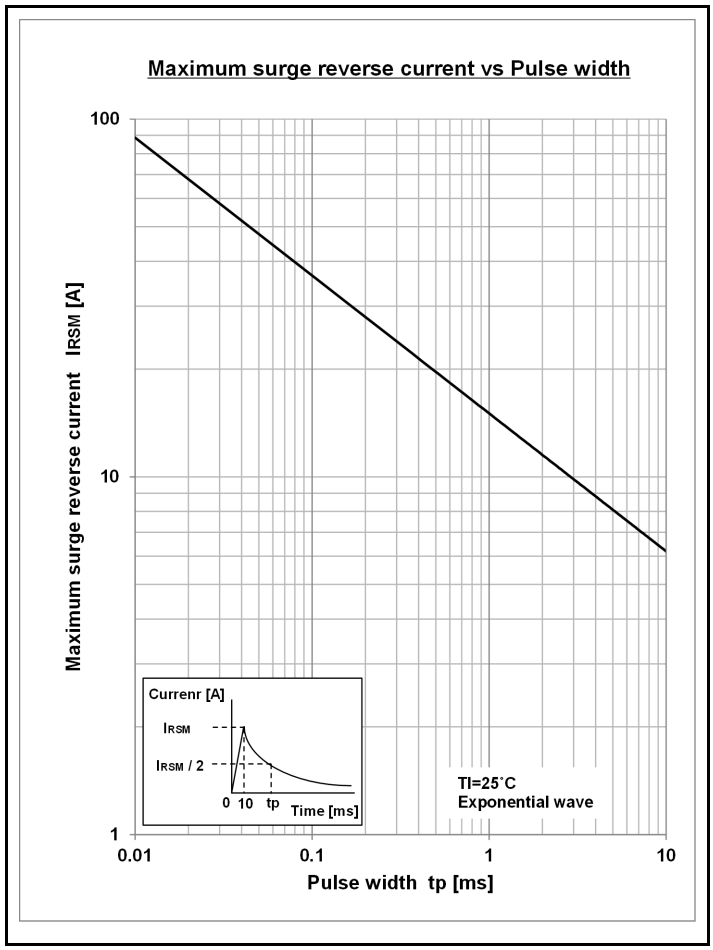
※ :See the original Specifications

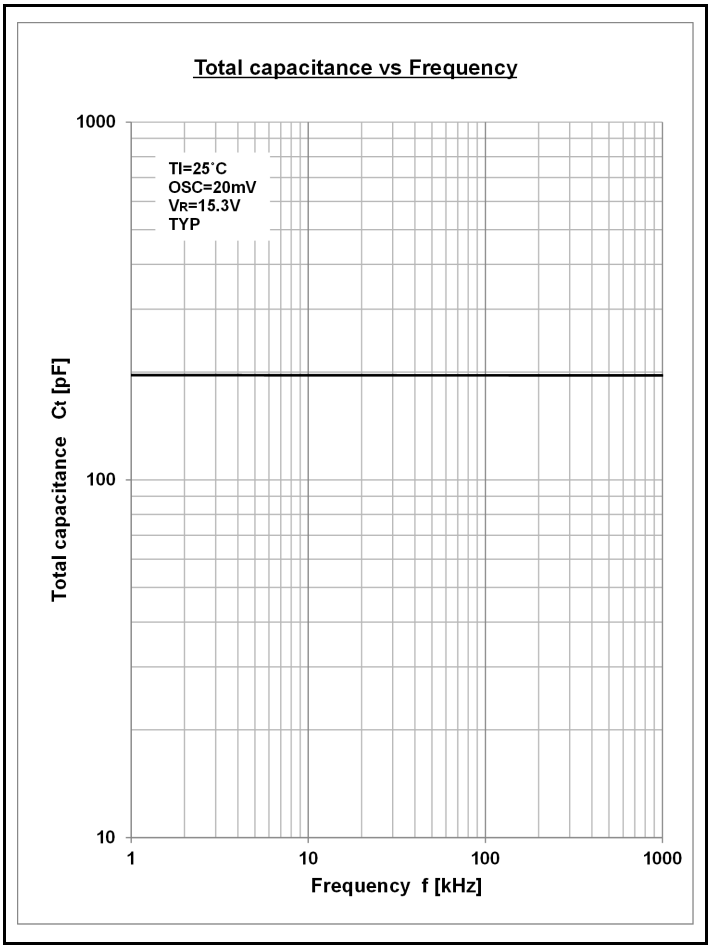
CHARACTERISTIC DIAGRAMS

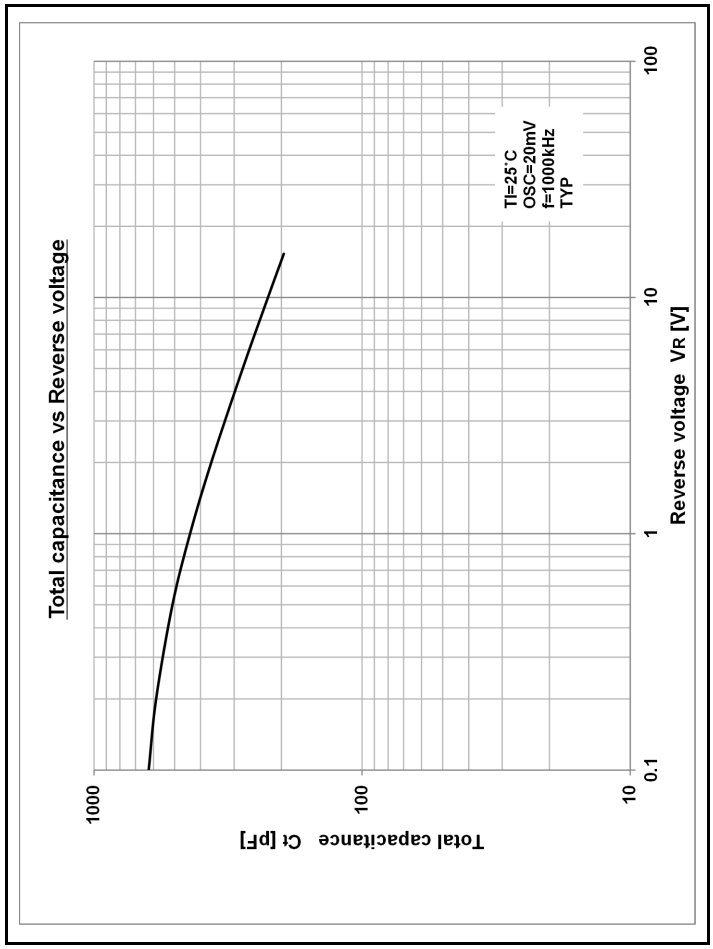


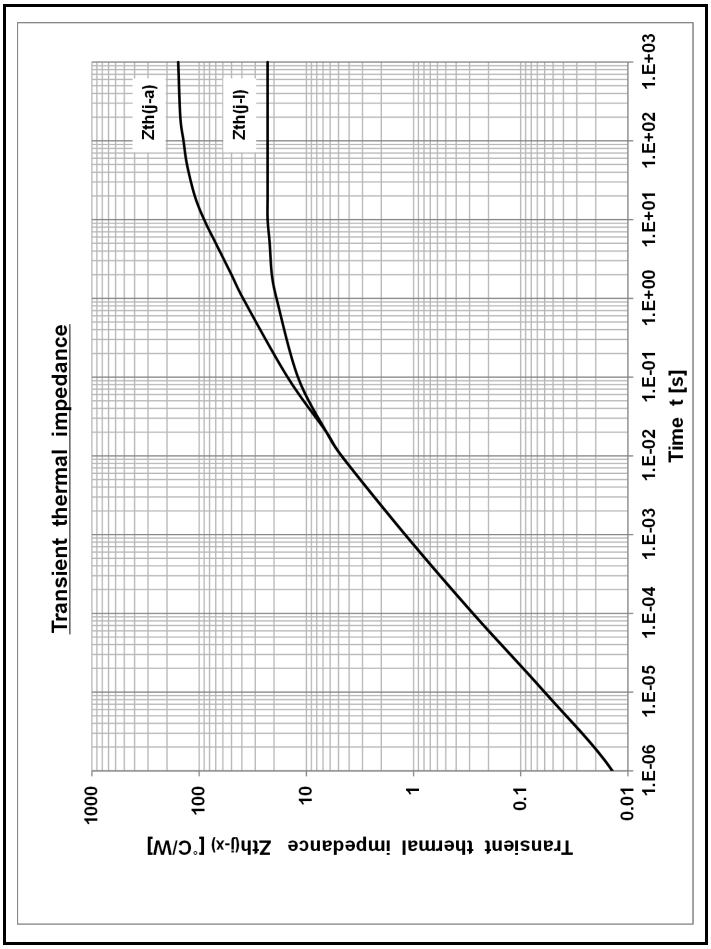







Total capacitance vs Frequency
Tl=25˚C
OSC=20mV
VR=15.3V
TYP
Total capacitance Ct [pF]
Frequency f [kHz]
1000
100
10
1
10
100
1000


Total capacitance vs Reverse voltage
Tl=25˚C
OSC=20mV
f=1000kHz
TYP
Total capacitance Ct [pF]
Reverse voltage VR [V]
1000
100
10
100
10
1
0.1


Transient thermal impedance
Zth(j-a)
Zth(j-l)
Transient thermal impedance Zth(j-x) [°C/W]
Time t [s]
1000
100
10
1
0.1
0.01
1.E-06
1.E-05
1.E-04
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03

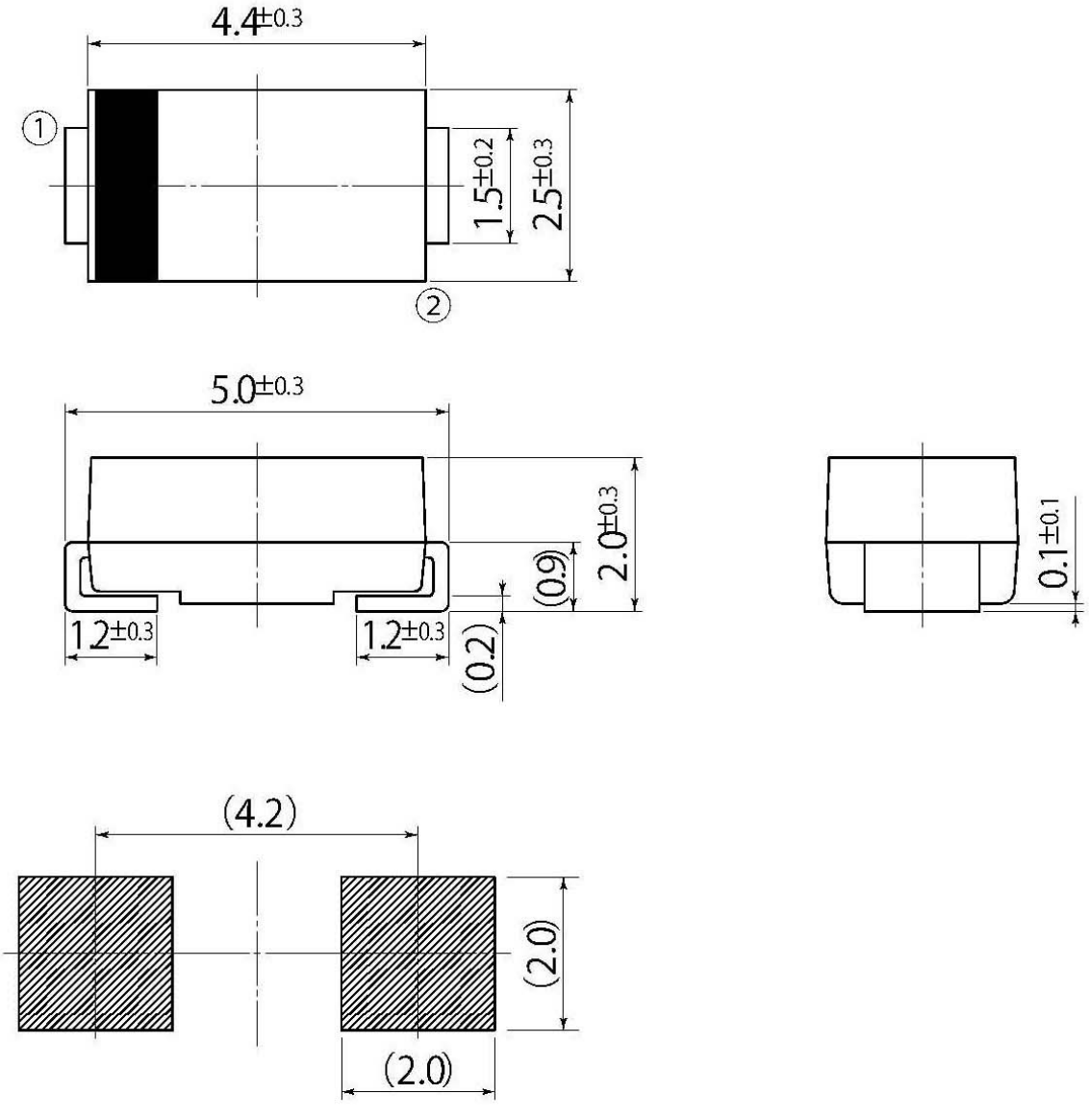
Outline Dimensions

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

1. If you wish to use any such product, please be sure to refer to the specifications issued by Shindengen.
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