ShinDengen

VR61F1

Varistors

0.37A, 0.28A

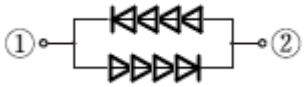
Feature

- Bi-directional surge can be absorted
- Low junction capacitance
- 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℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-55 to 150	℃
Junction temperature	Tj		-55 to 150	℃
R.M.S. forward current	$I_{F(R.M.S.)}$	50Hz, Sine wave, Resistance load, On alumina substrate, Root mean square value, Ta=25℃ ※	0.37	A
R.M.S. forward current	$I_{F(R.M.S.)}$	50Hz, Sine wave, Resistance load, On glass-epoxy substrate, Root mean square value, Ta=25℃ ※	0.28	A
Surge forward current	$I_{FSM(R.M.S.)}$	50Hz, sine wave, Non-repetitive, 1cycle, Root mean squarevalue, Tj=25℃	7.5	A
Surge forward current	I_{FSM}	10/200μs, Non-repetitive, Peak value, Application in single direction, Exponential wave ※	60	A
Surge forward current	I_{FSM}	10/1000μs, Non-repetitive, Peak value, Application in single direction, Exponential wave ※	30	A

※ :See the original Specifications

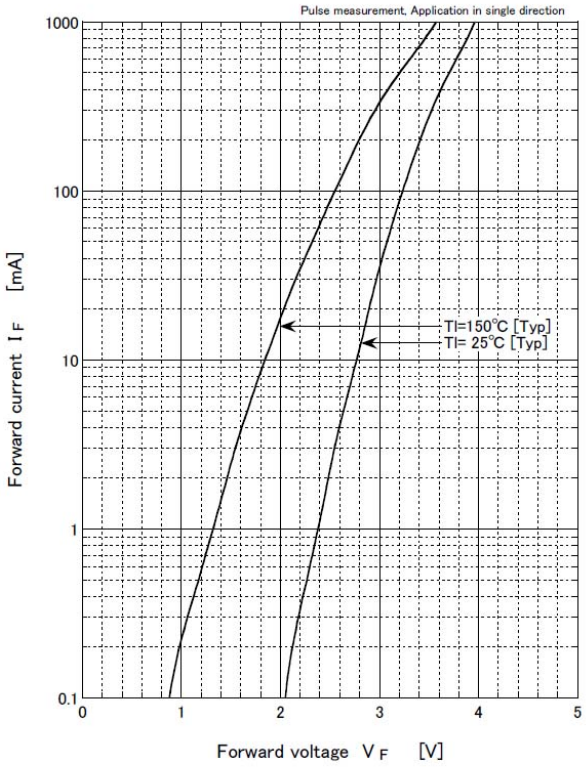
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=1mA, Pulse measurement, Application in single direction	2.05		2.55	V
Forward voltage	V_F	IF=10mA, Pulse measurement, Application in single direction	2.5		3	V
Forward voltage	V_F	IF=70mA, Pulse measurement, Application in single direction	2.85		3.35	V
Total capacitance	Ct	f=100kHz, VD=1V, OSC(R.M.S.)=50mVrms, Application in single direction		15		pF
Thermal resistance	Rth(j-a)	Junction to ambient, Application in single direction, on alumina substrate ※			108	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, Application in single direction, on glass-epoxy substrate ※			157	℃/W

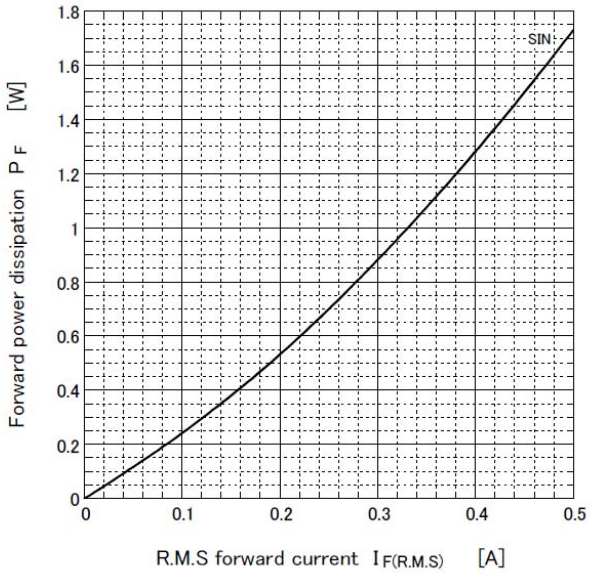
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

Forward voltage

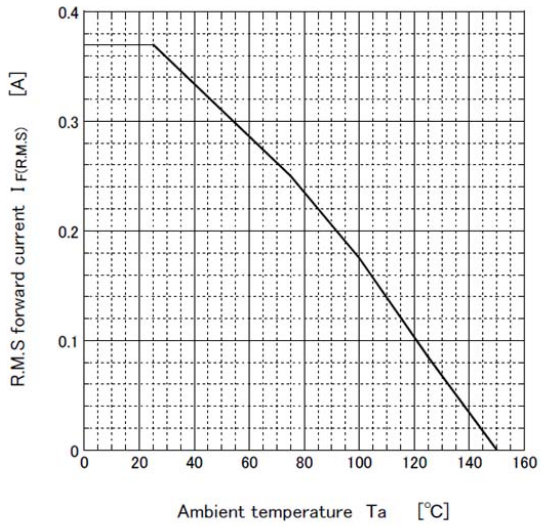


Forward power dissipation



●Tj =150℃

Derating curve

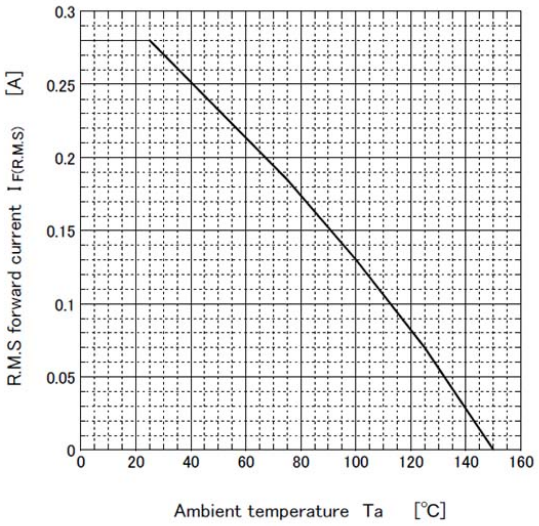


●Sine wave
R-load
Free in air

●Substrate detail

Type	Alumina
Size	1 inch²
Thickness	0.64mm
Conductor thickness	20 μm
Pattern area	47.8mm²

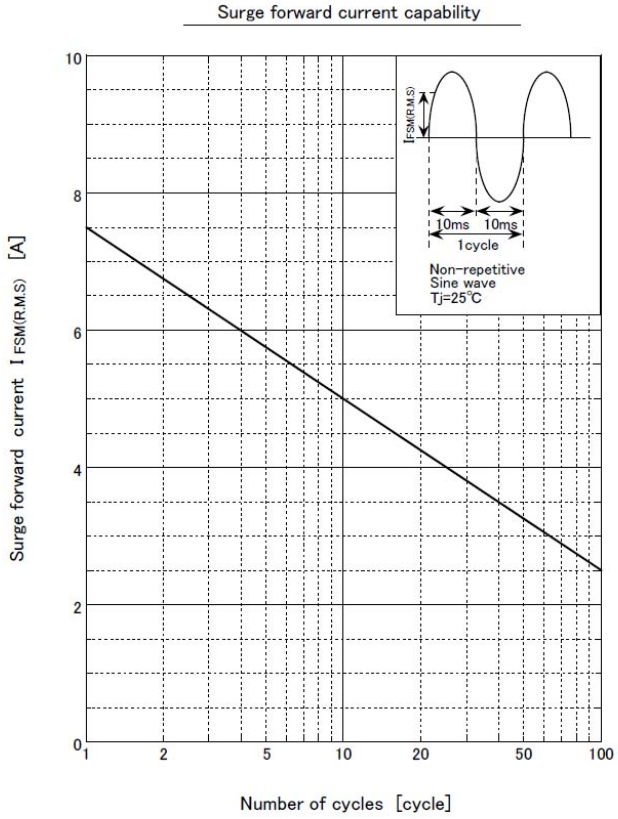
Derating curve

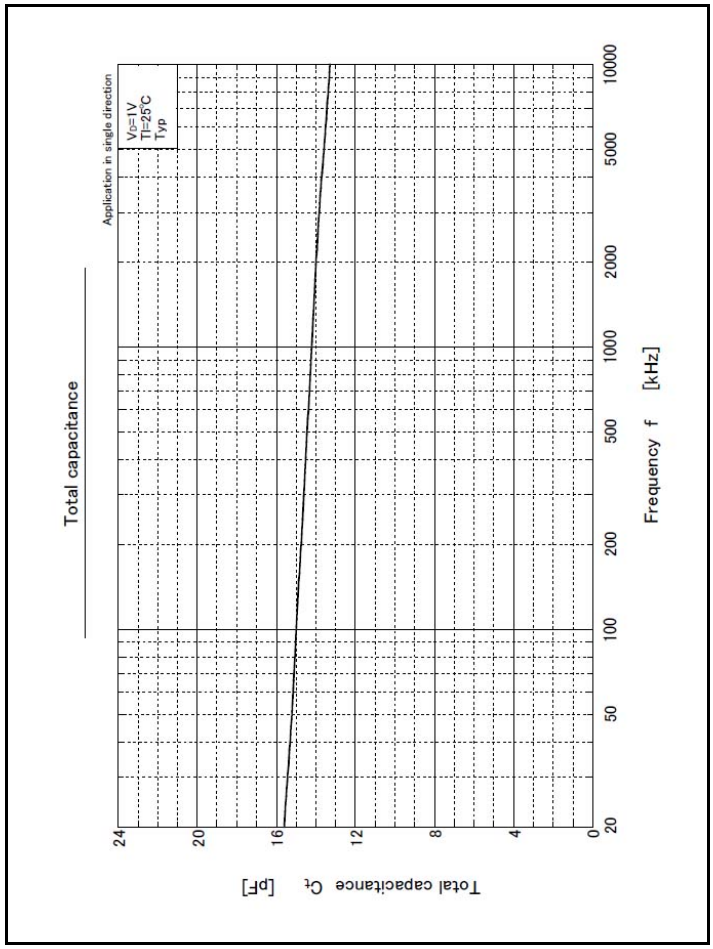


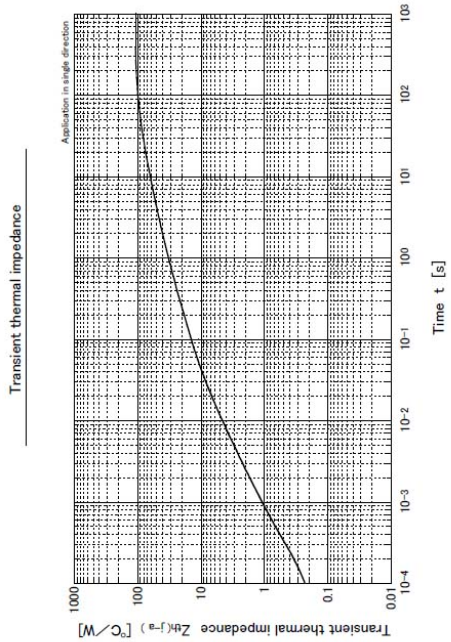
●Sine wave
R-load
Free in air

●Substrate detail

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







●Substrate detail

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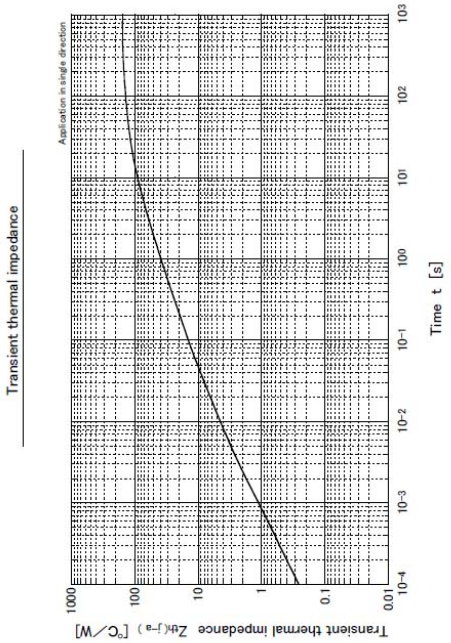


●Substrate detail

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

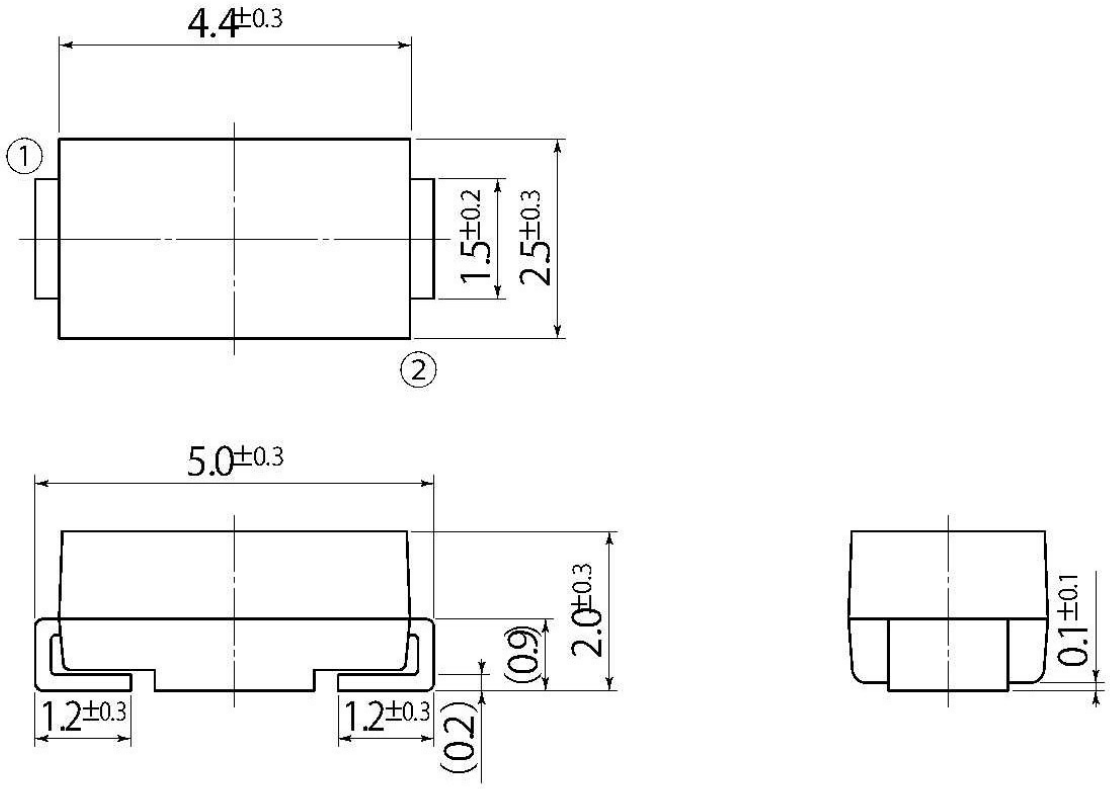
Outline Dimensions

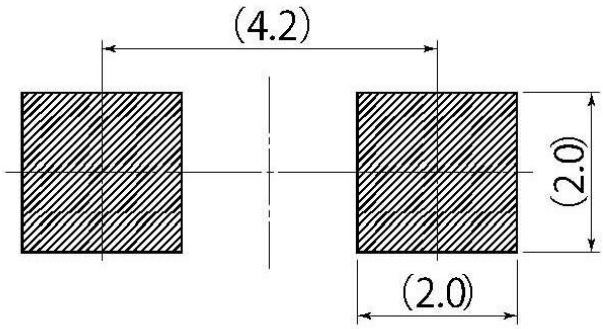
unit:mm

scale: 10/1

B4

JEDEC Code	DO-214AC
JEITA Code	–
House Name	1F





Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condi tion.

Notes

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