ShinDengen

D2CF60K

Fast Recovery Diodes
600V, 2.0A

Feature

- Small SMD
- High Voltage
- Low Noise
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): CF
Package (JEDEC Code): DO-214AC

Equivalent circuit

Absolute Maximum Ratings (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	℃
Junction temperature	Tj		-55 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, On glass-epoxy substrate, Tl=90℃ ※	2	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	0.6	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃	35	A
Surge forward current	I_{FSM1}	tp=1ms, Sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃	110	A

※ :See the original Specifications

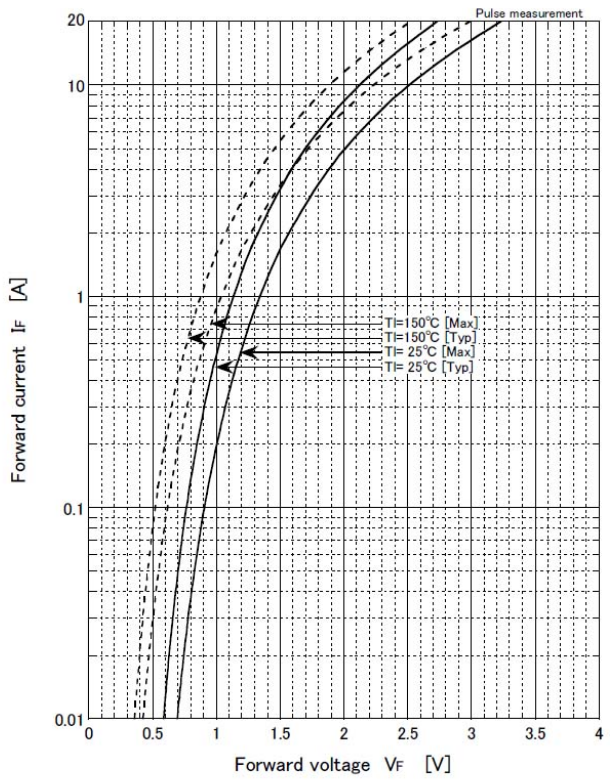
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=2.0A, Pulse measurement			1.57	V
Reverse current	I_R	VR=600V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			75	ns
Total capacitance	Ct	f=1MHz, VR=10V		14		pF
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			15	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			140	℃/W

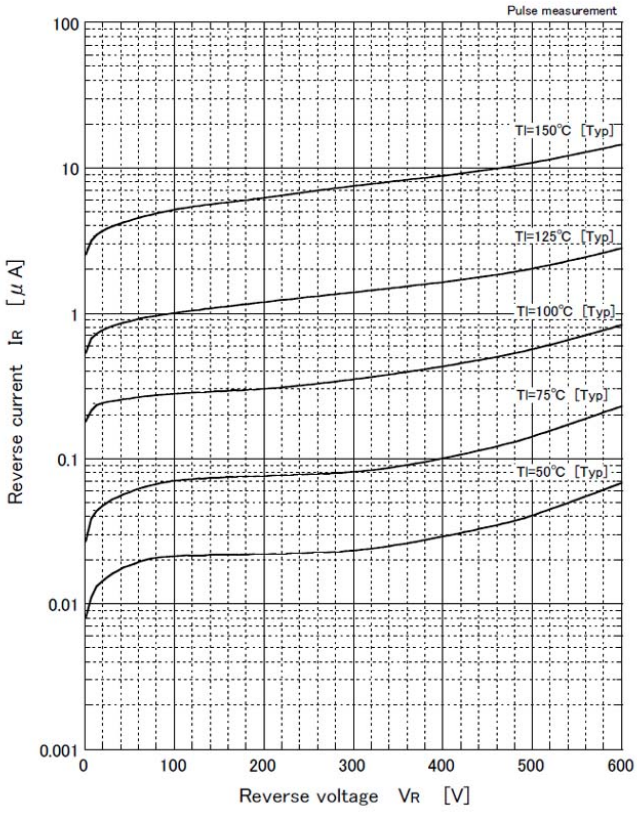
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

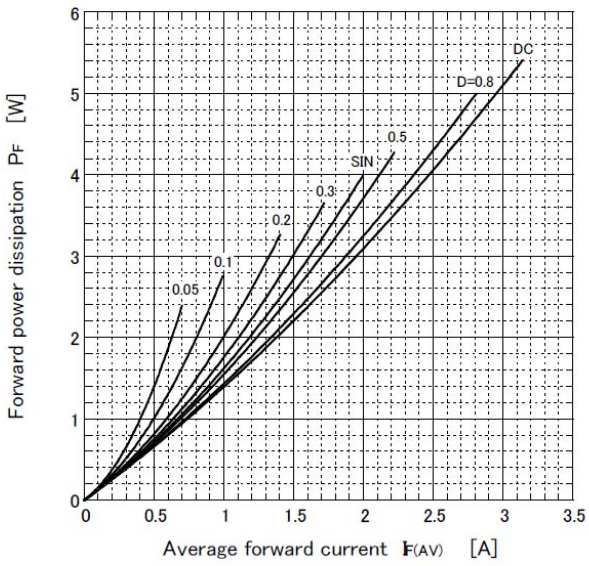
Forward voltage



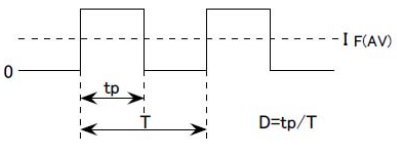
Reverse current



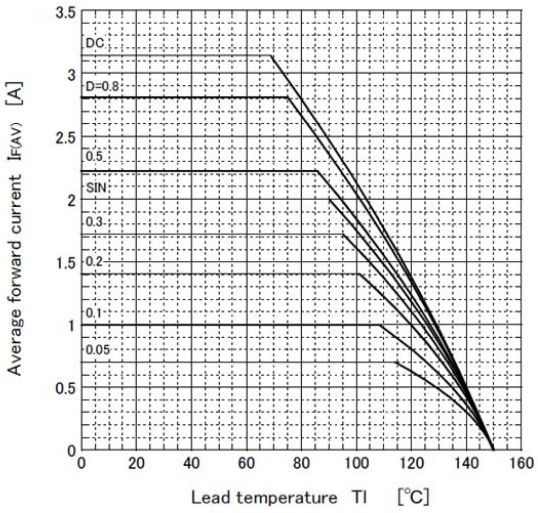
Forward power dissipation



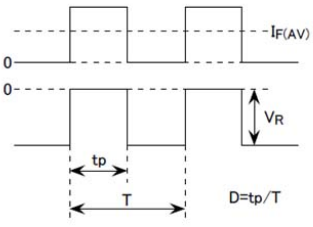
●Tj =150℃



Derating curve



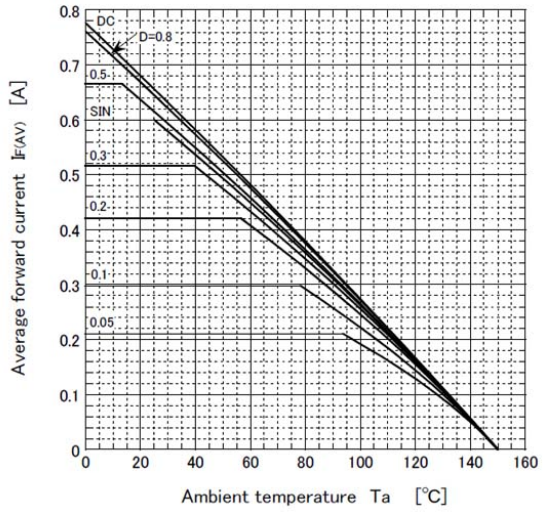
●VR = 600V
R-load
Free in air



●Substrate detail

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

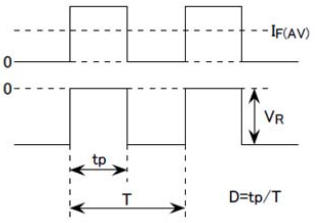
Derating curve



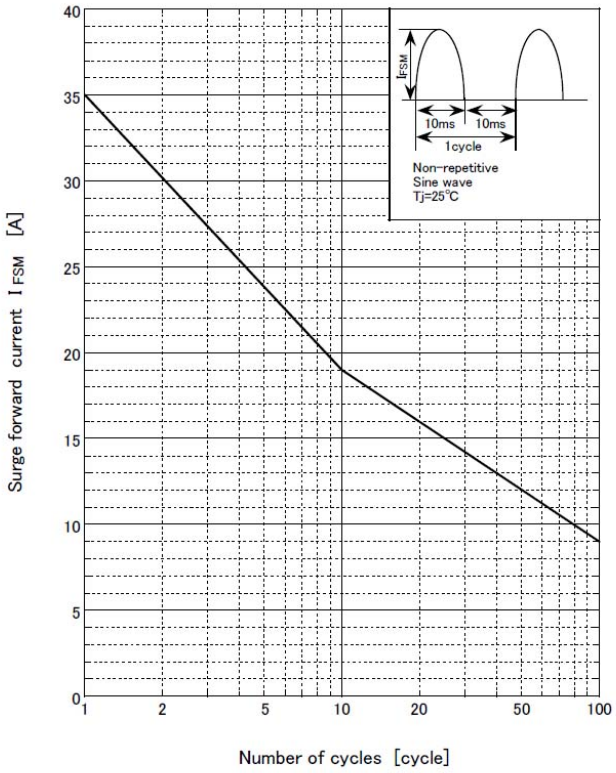
●V_R = 600V
R-load
Free in air

●Substrate detail

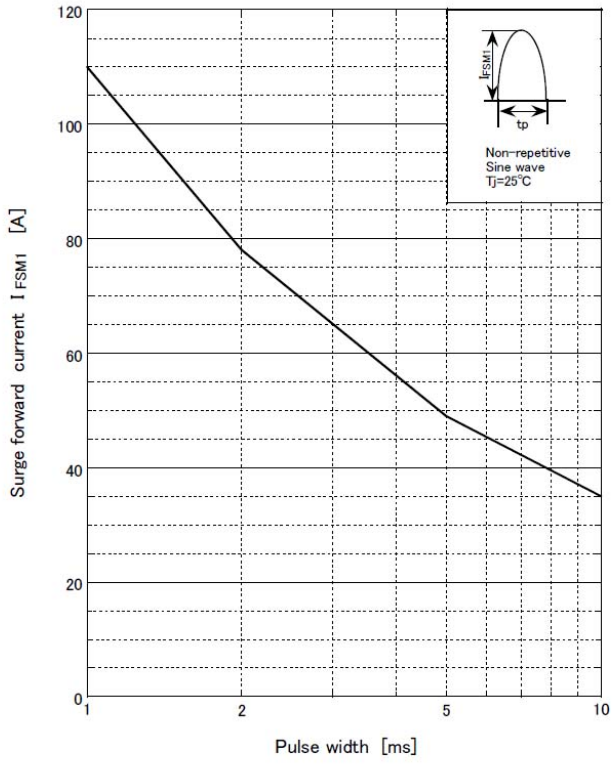
Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	47.8mm²



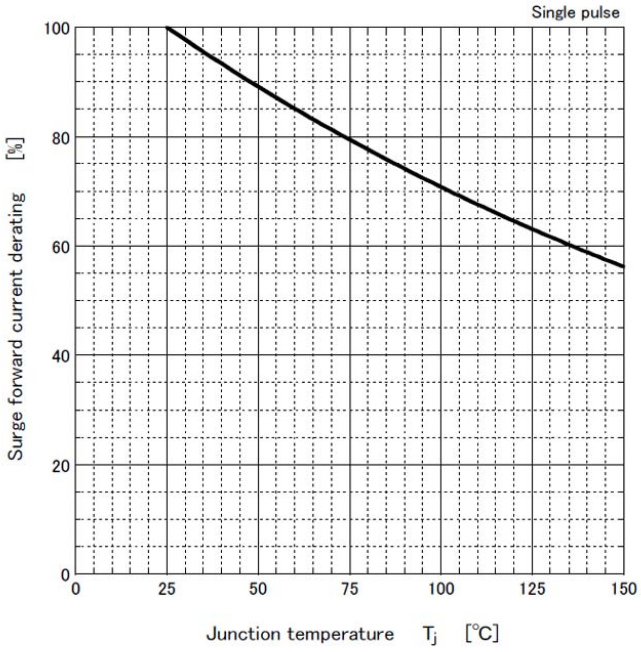
Surge forward current capability

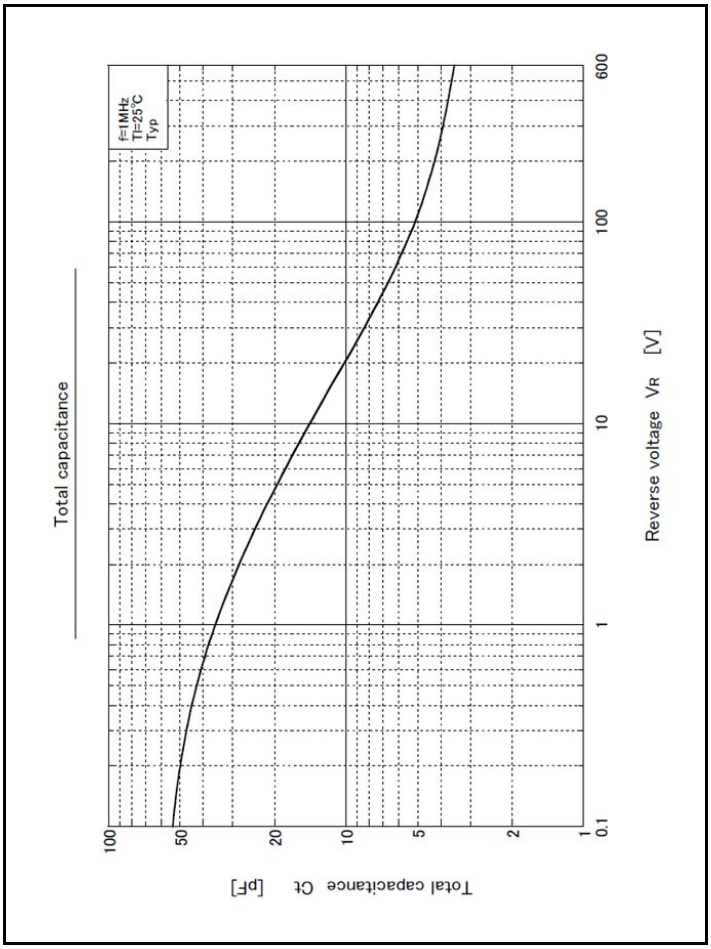


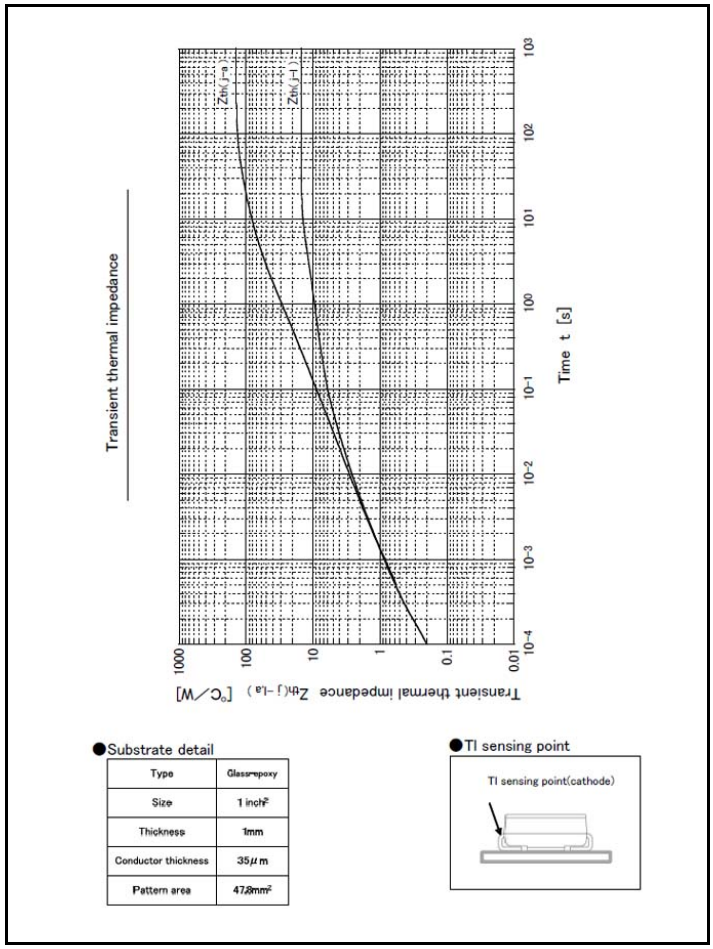
Surge forward current capability



Surge forward current derating vs Junction temperature







●Substrate detail

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

●Tl sensing point

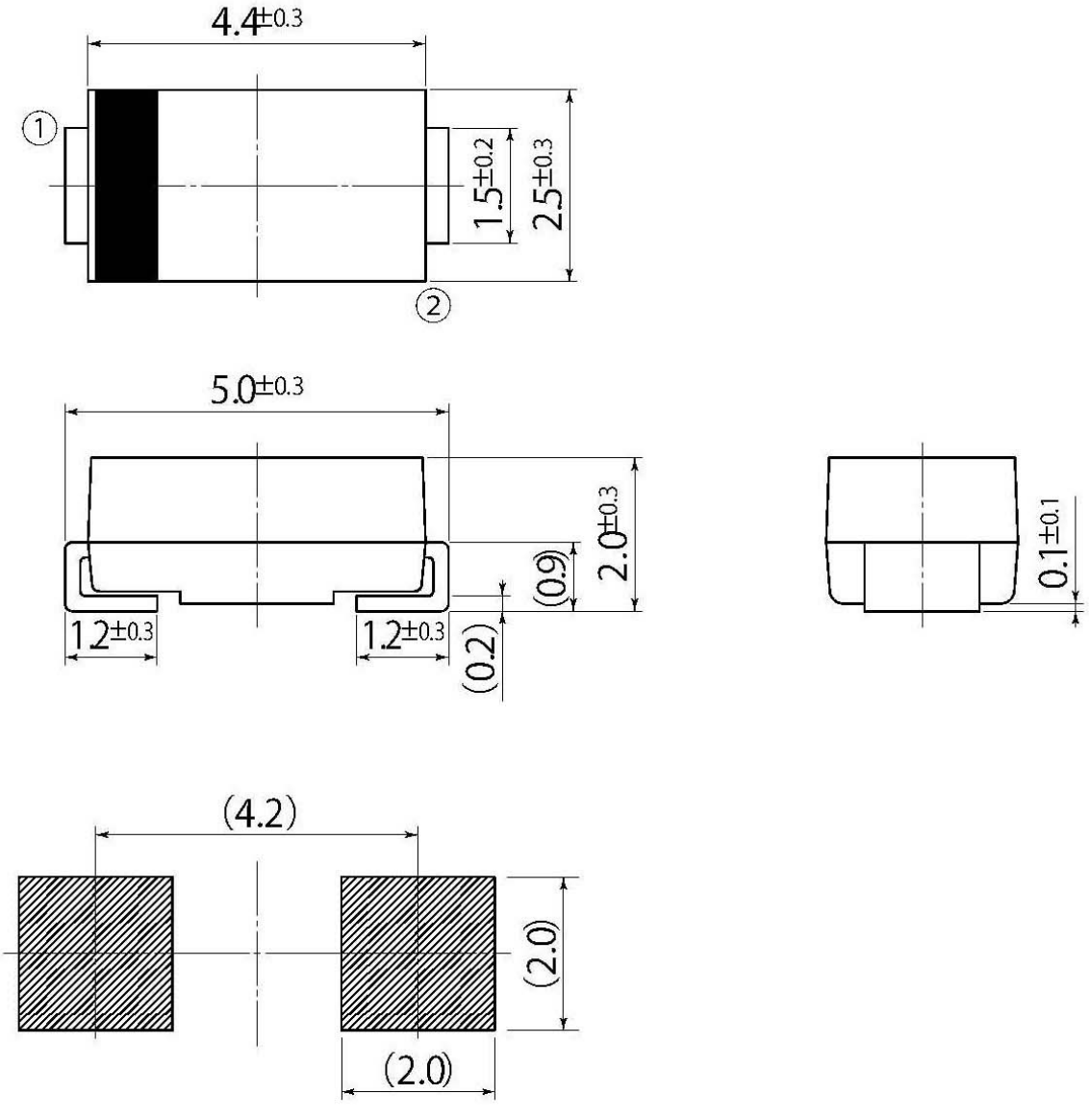
Outline Dimensions

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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