ShinDengen

D3CE4S

Schottky Barrier Diodes
40V, 3A

Feature

- Ultra-small SMD
- Ultra thin PKG
- Low V_F
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): CE
Package (JEITA Code): SC-110B

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}		40	V
Repetitive peak surge reverse voltage	V_{RRSM}	Pulse width 0.5ms, duty=1/40	45	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Tl=106℃	3	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	1.7	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	1.3	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃	80	A

※ :See the original Specifications

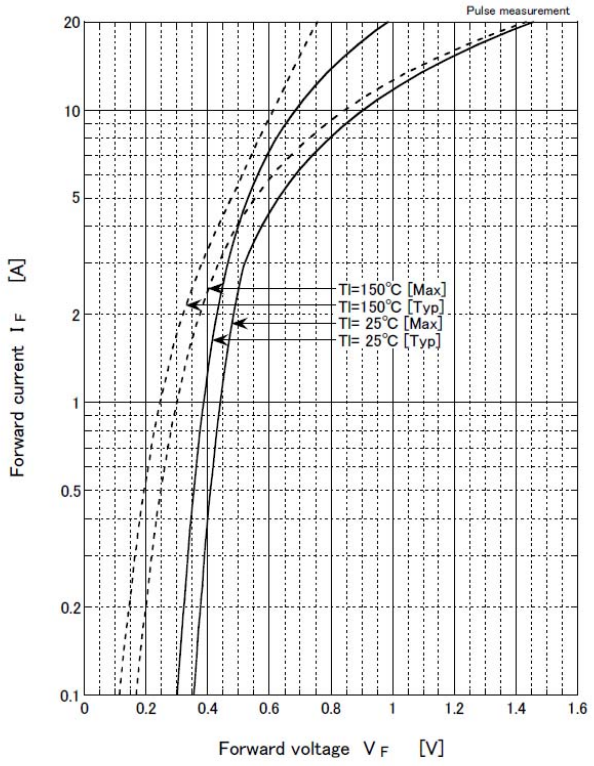
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement			0.52	V
Reverse current	I_R	VR=40V, Pulse measurement			0.3	mA
Total capacitance	Ct	f=1MHz, VR=10V		97		pF
Thermal resistance	Rth(j-l)	Junction to lead			15	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			115	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			172	℃/W

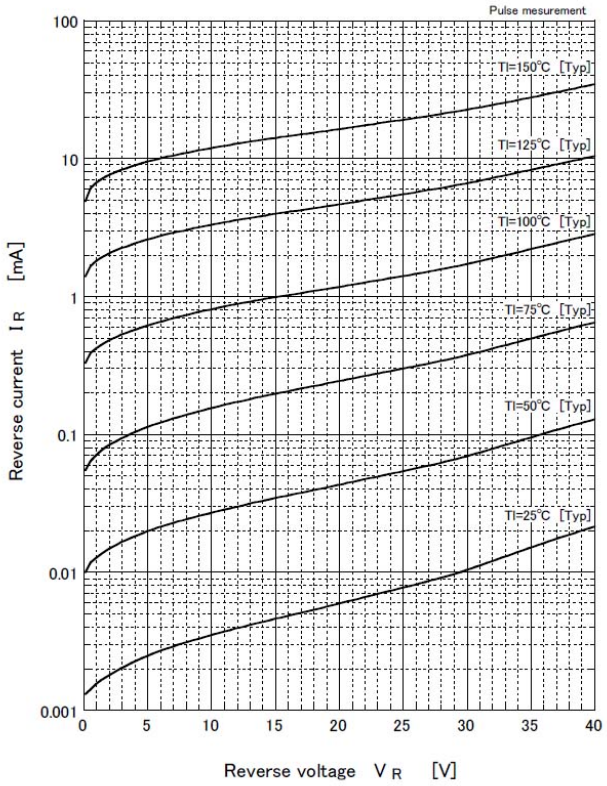
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

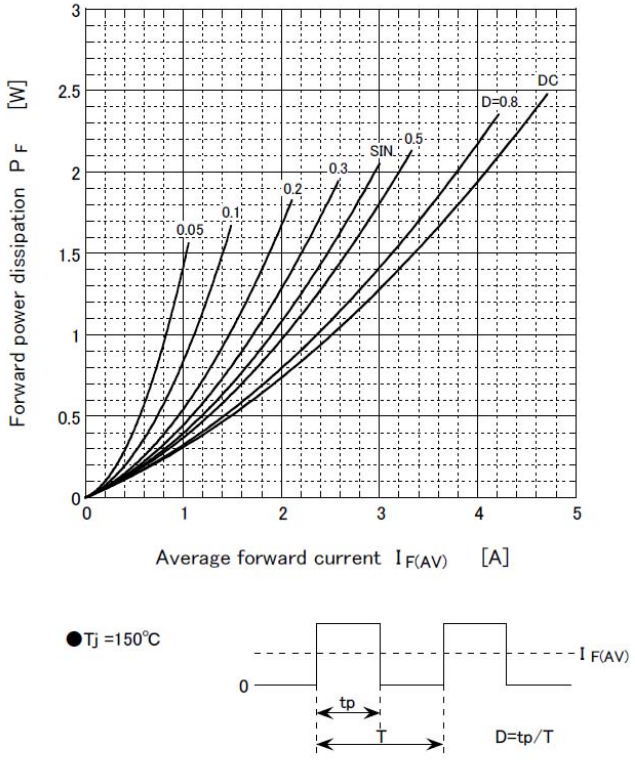
Forward voltage



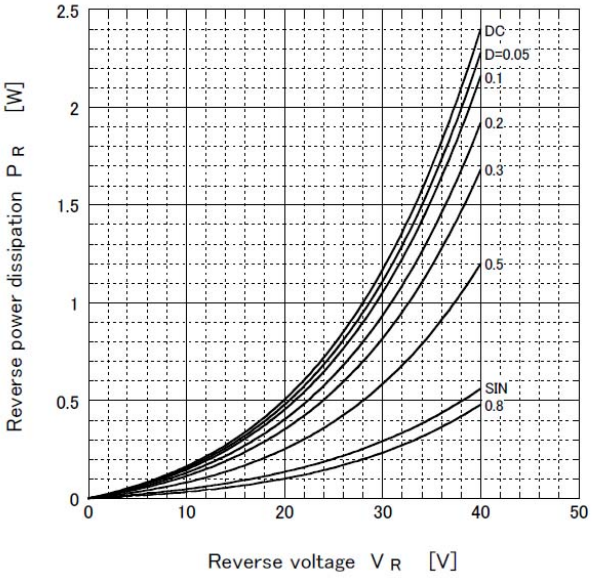
Reverse current

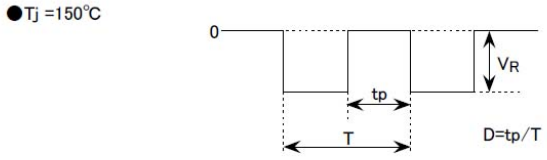


Forward power dissipation

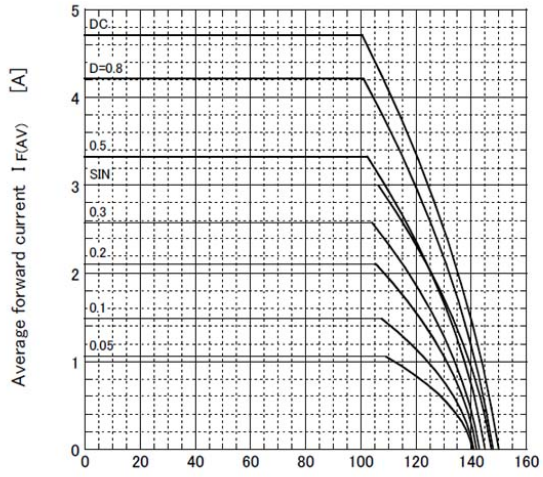


Reverse power dissipation

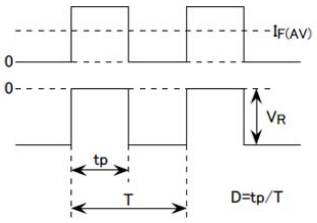




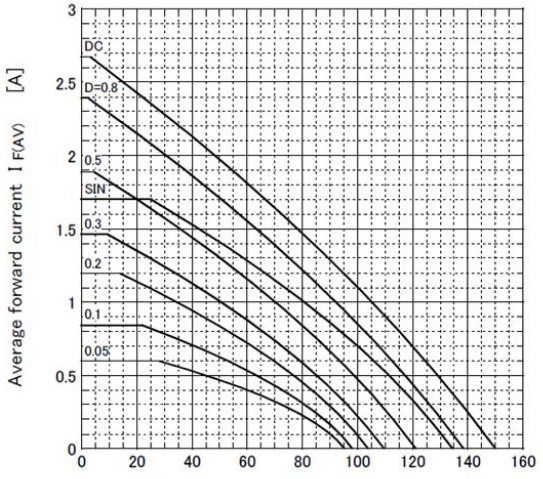
Derating curve



●V_R = 20V
R-load
Free in air



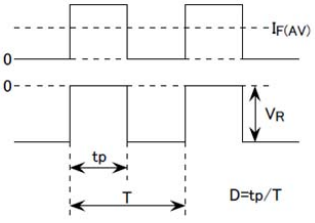
Derating curve



●V_R = 20V
R-load
Free in air

●Substrate detail

Type	Glass-epoxy
Size	2 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	160mm²



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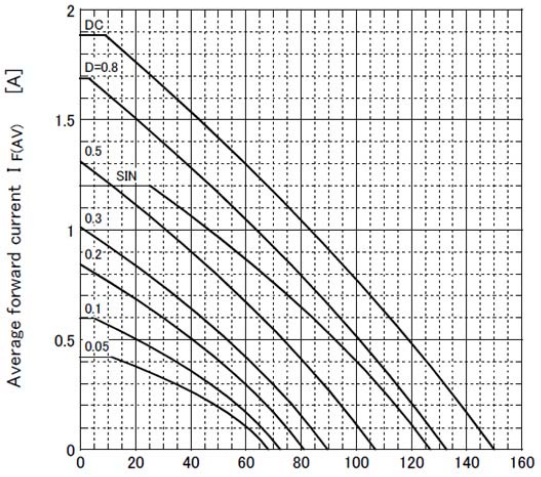
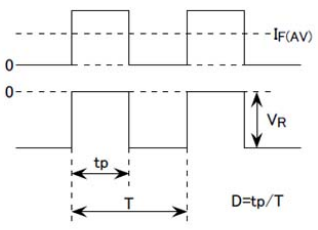


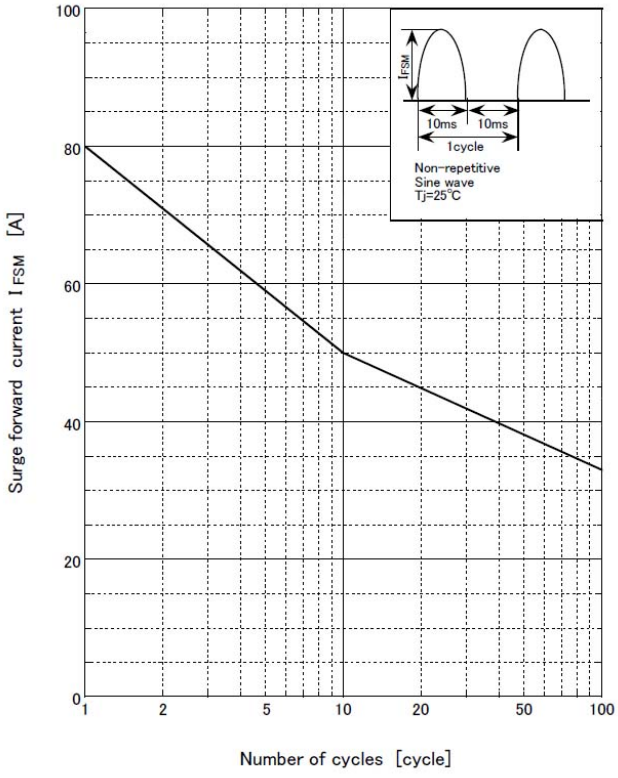
●V_R = 20V
R-load
Free in air

●Substrate detail

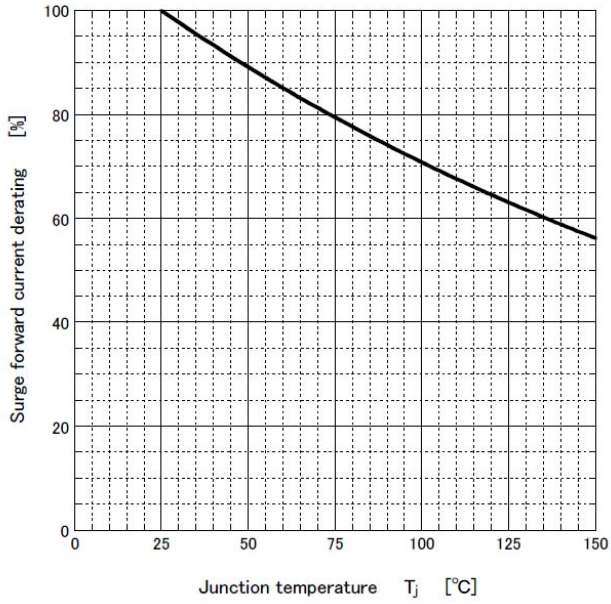
Type	Glass-epoxy
Size	2 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	32mm²



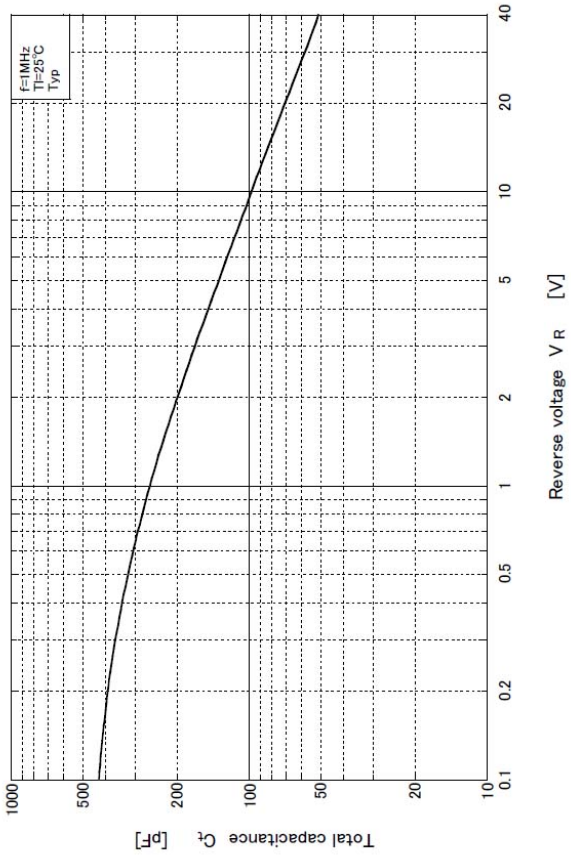
Surge forward current capability



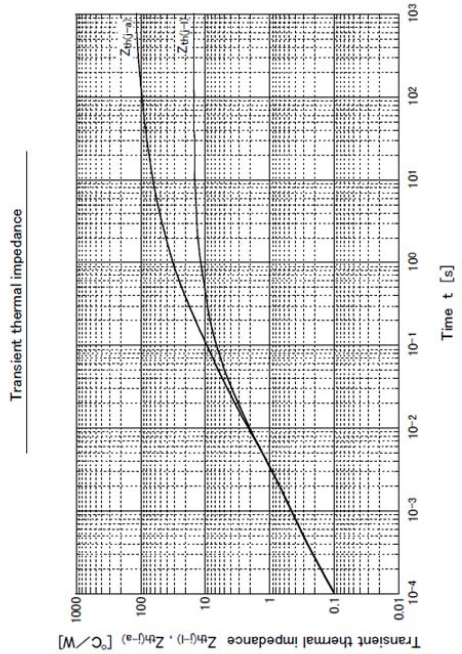
Surge forward current derating
vs Junction temperature



Total capacitance



Transient thermal impedance



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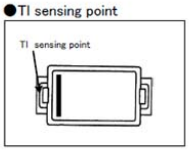
●TI sensing point



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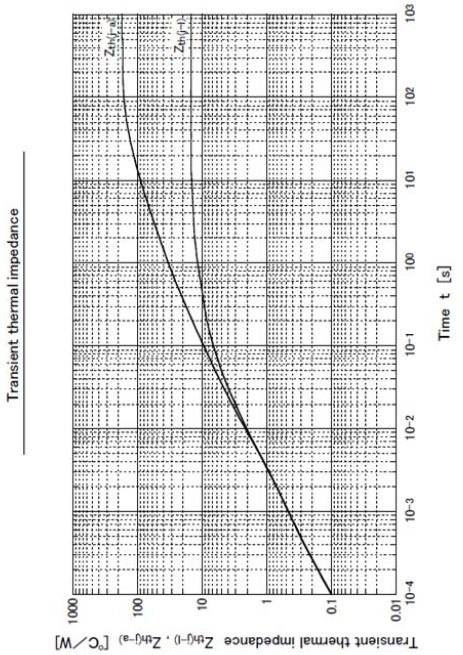

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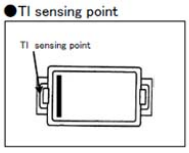


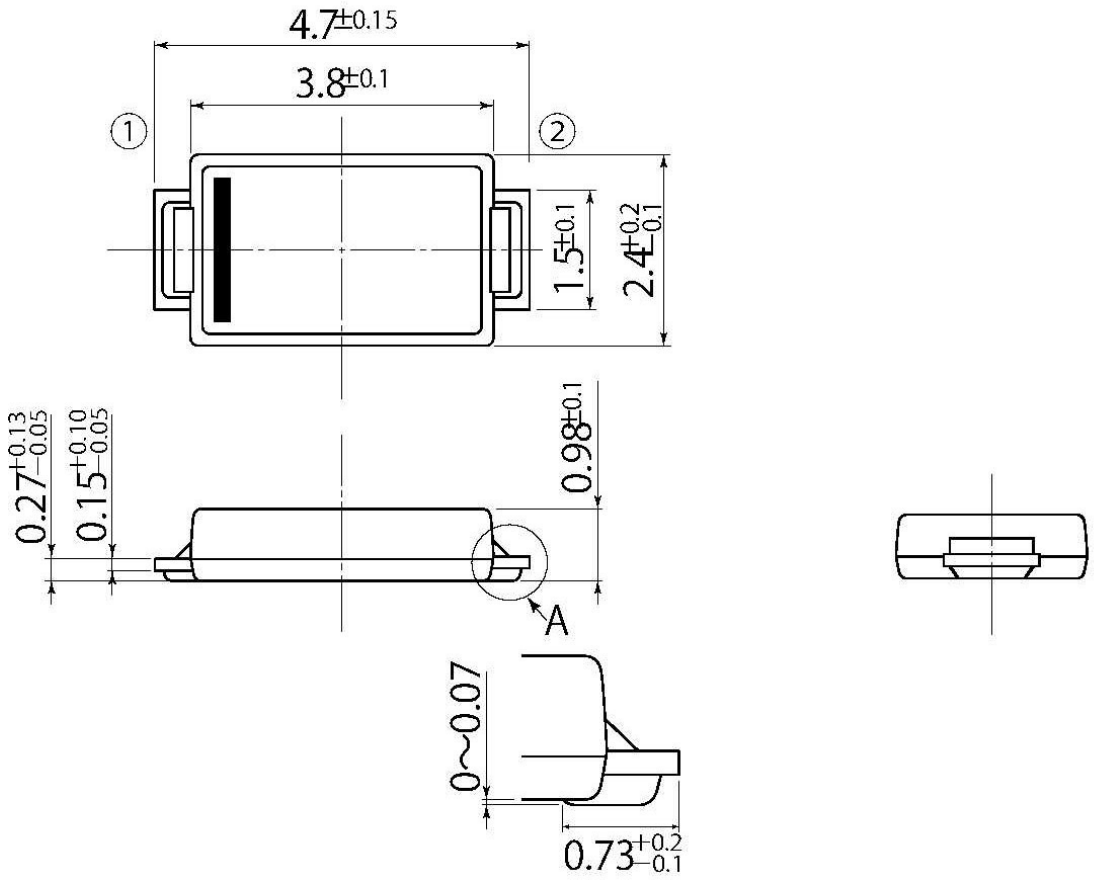
Outline Dimensions

unit:mm

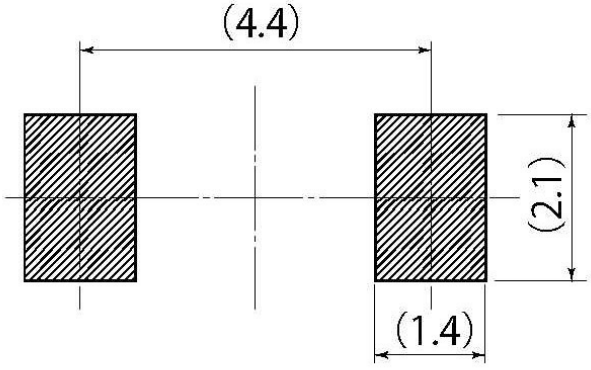
scale: 10/1

B5

JEDEC Code	–
JEITA Code	SC-110B
House Name	CE



Detail A



Referential Soldering Pad

・Optimize soldering pad to the board design and soldering condition.

Notes

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