

# D5CE4S

## Schottky Barrier Diodes

40V, 5A

### Feature

- Ultra-small SMD
- Ultra thin PKG
- Low  $V_F$
- Available for automotive use
- Pb free terminal
- RoHS:Yes

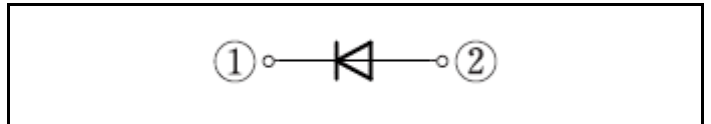
### OUTLINE

Package (House Name): CE

Package (JEITA Code): SC-110B



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : $T_I=25^{\circ}\text{C}$ )

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	$T_{stg}$		-55 to 150	$^{\circ}\text{C}$
Junction temperature	$T_j$		-55 to 150	$^{\circ}\text{C}$
Repetitive peak reverse voltage	$V_{RRM}$		40	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_I=94^{\circ}\text{C}$	5	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^{\circ}\text{C}$ ※	2	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^{\circ}\text{C}$ ※	1.3	A
Surge forward current	$I_{FSM}$	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$	120	A

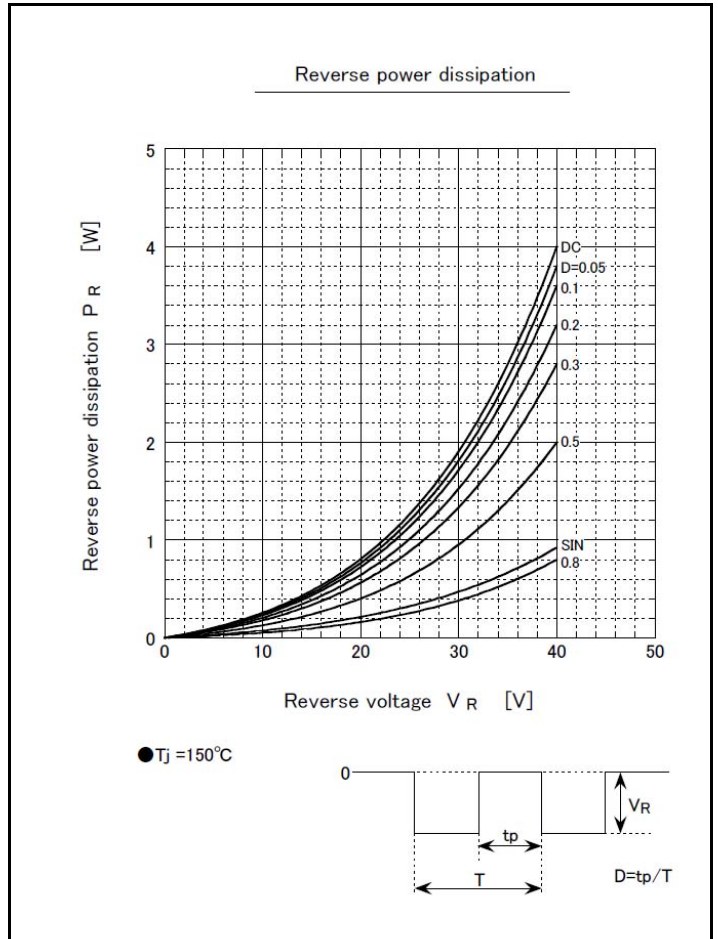
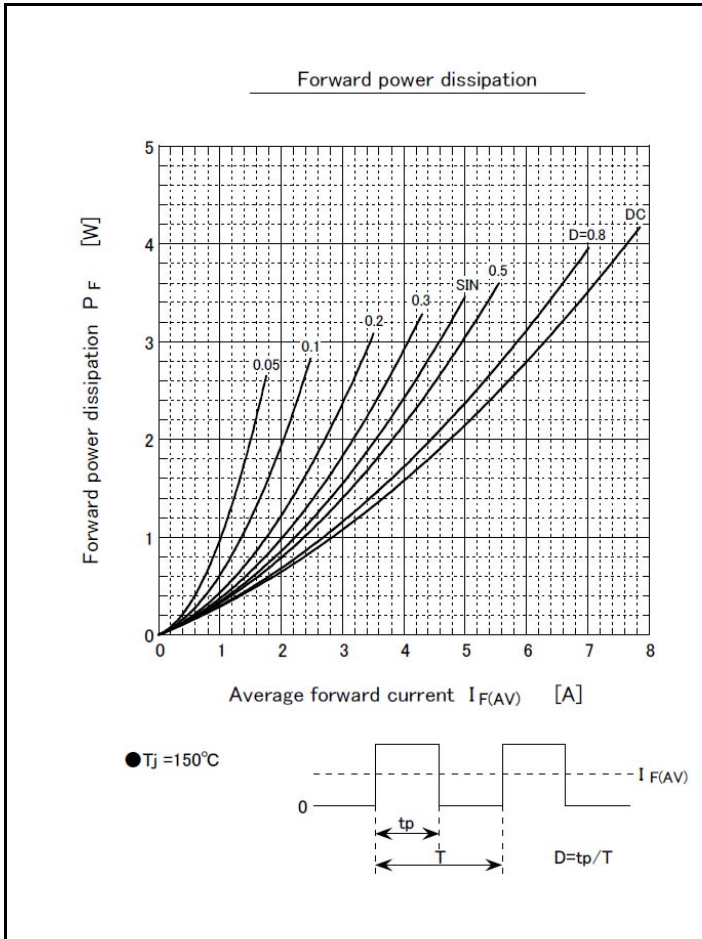
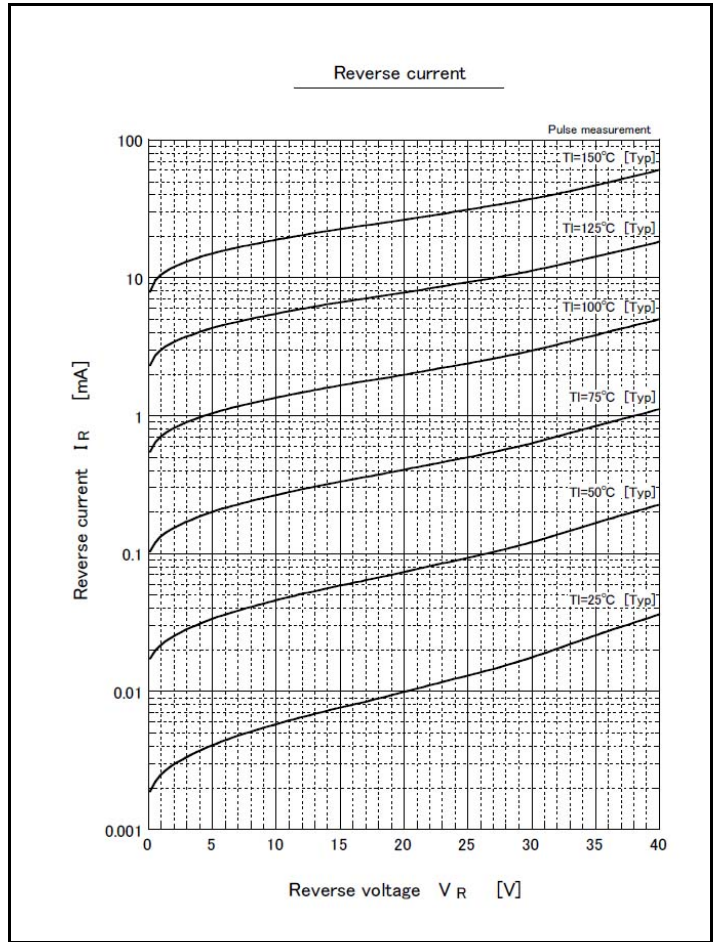
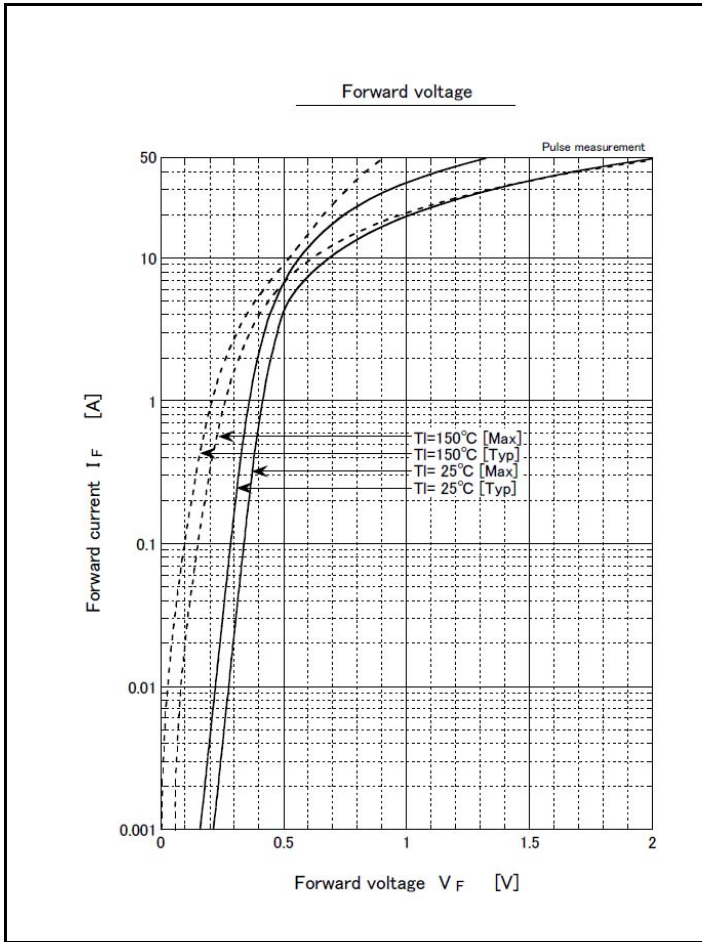
※ : See the original Specifications

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

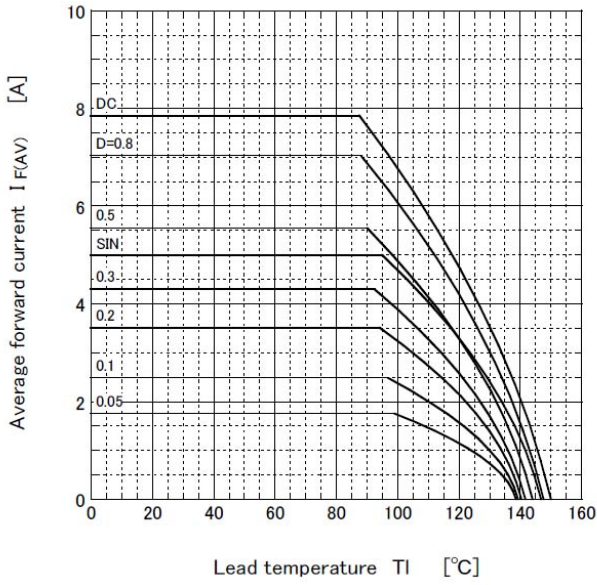
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	$V_F$	$I_F=5A$ , Pulse measurement			0.52	V
Reverse current	$I_R$	$V_R=40V$ , Pulse measurement			0.5	mA
Total capacitance	$C_t$	$f=1MHz$ , $V_R=10V$		157		pF
Thermal resistance	$R_{th(j-l)}$	Junction to lead			15	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate ※			115	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate ※			172	°C/W

※ :See the original Specifications

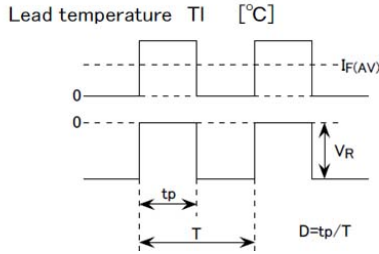
# CHARACTERISTIC DIAGRAMS



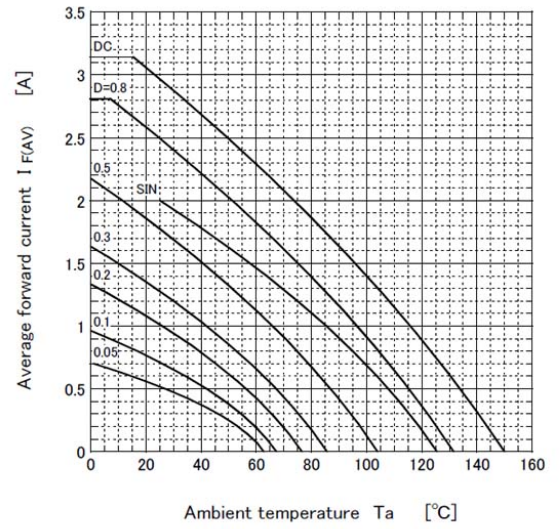
Derating curve



●  $V_R = 20V$   
R-load  
Free in air



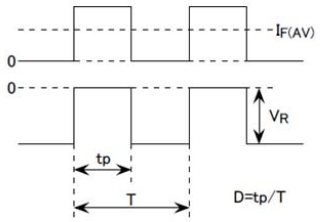
Derating curve



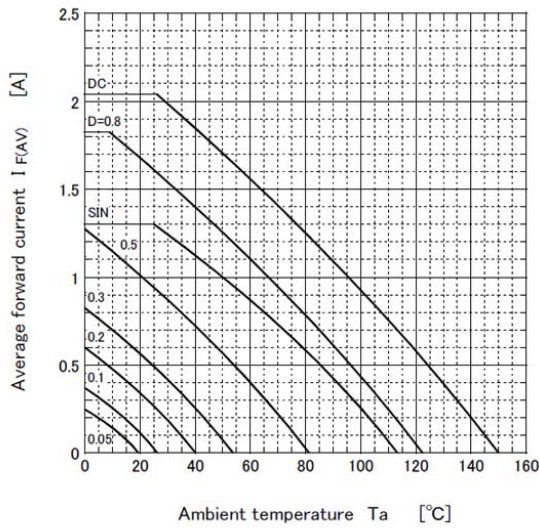
●  $V_R = 20V$   
R-load  
Free in air

● Substrate detail

Type	Glass-epoxy
Size	2 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35 $\mu$ m
Pattern area	160mm <sup>2</sup>



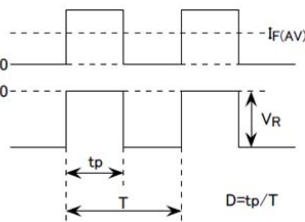
Derating curve



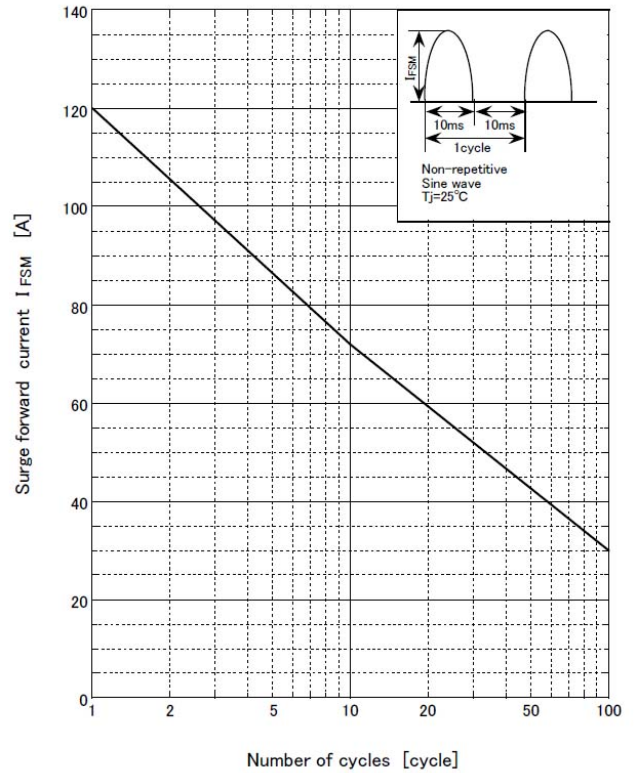
●  $V_R = 20V$   
R-load  
Free in air

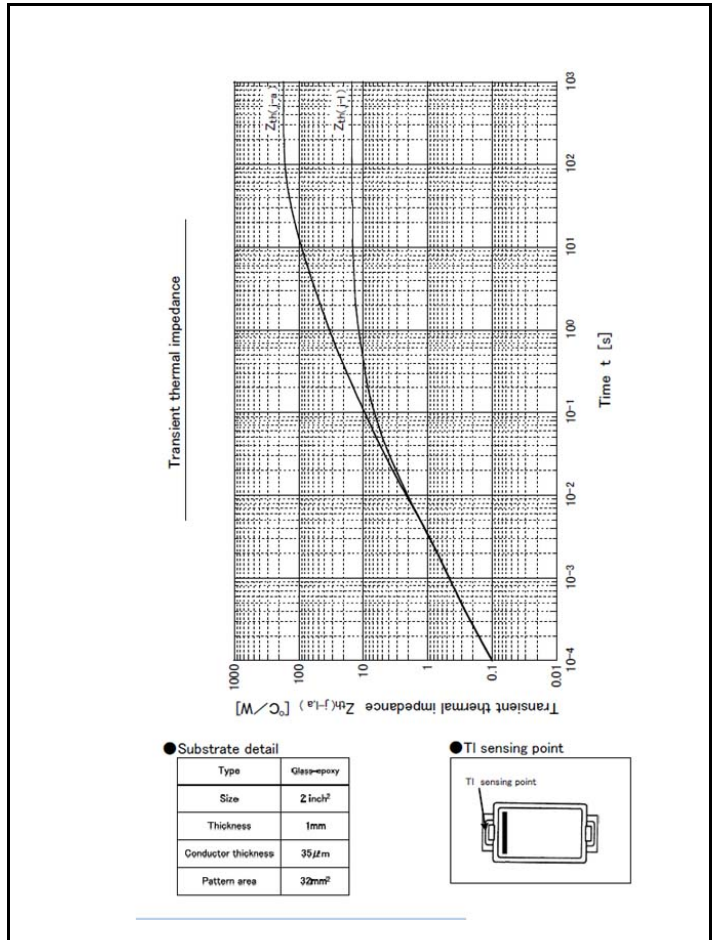
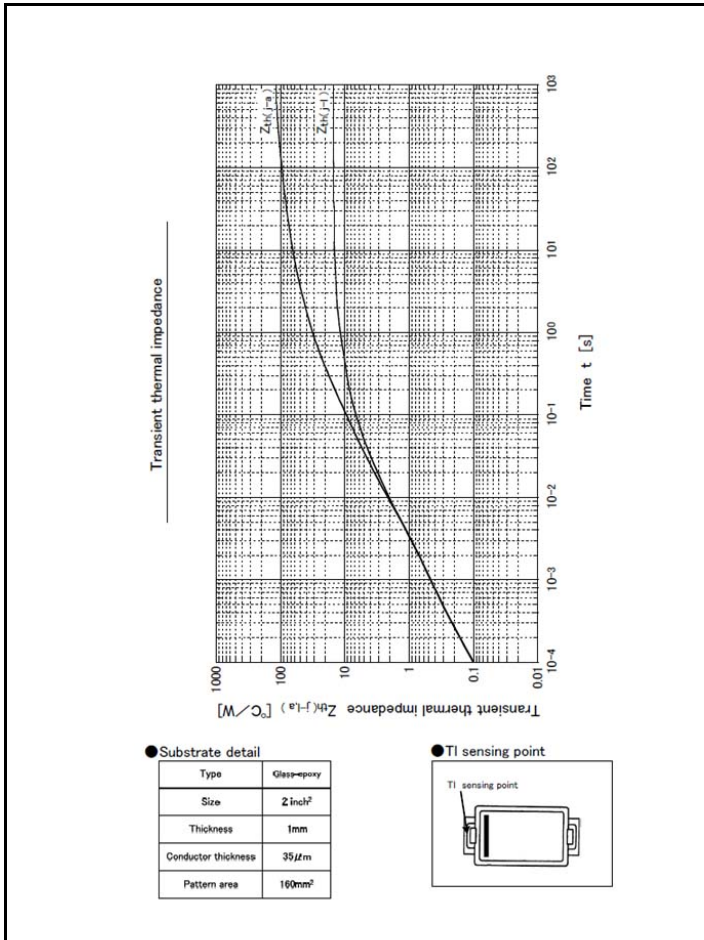
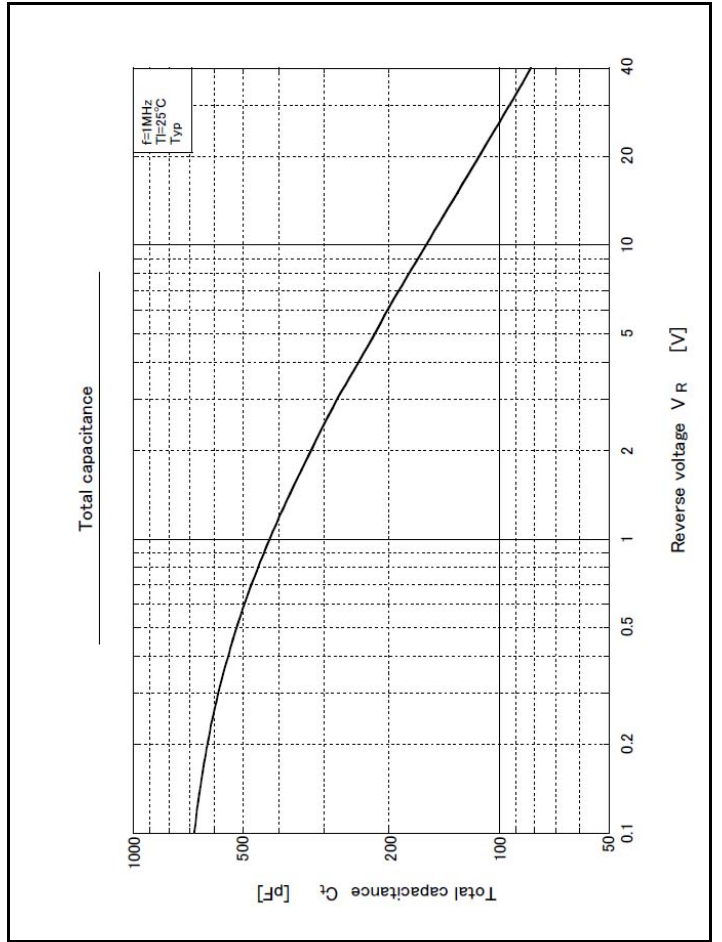
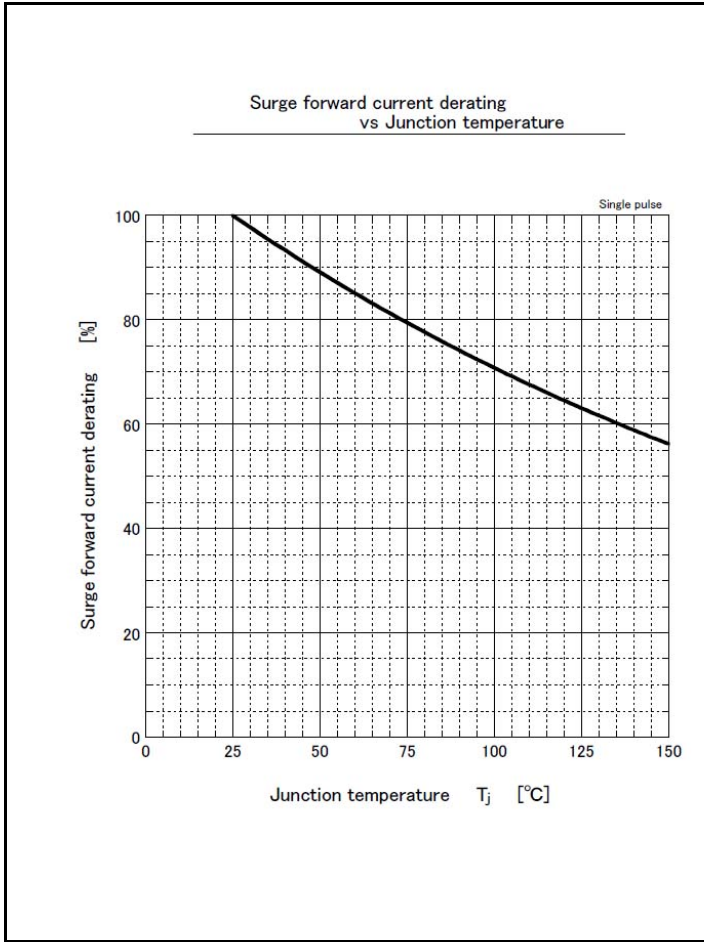
● Substrate detail

Type	Glass-epoxy
Size	2 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35 $\mu$ m
Pattern area	32mm <sup>2</sup>



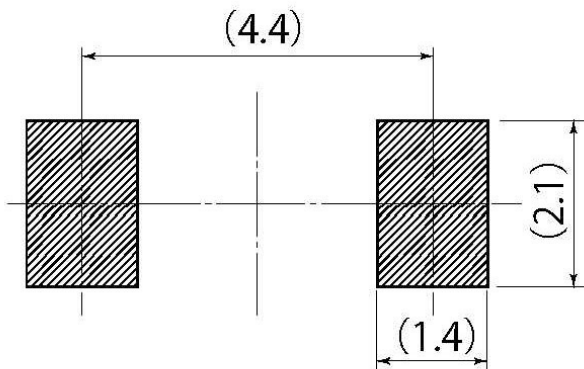
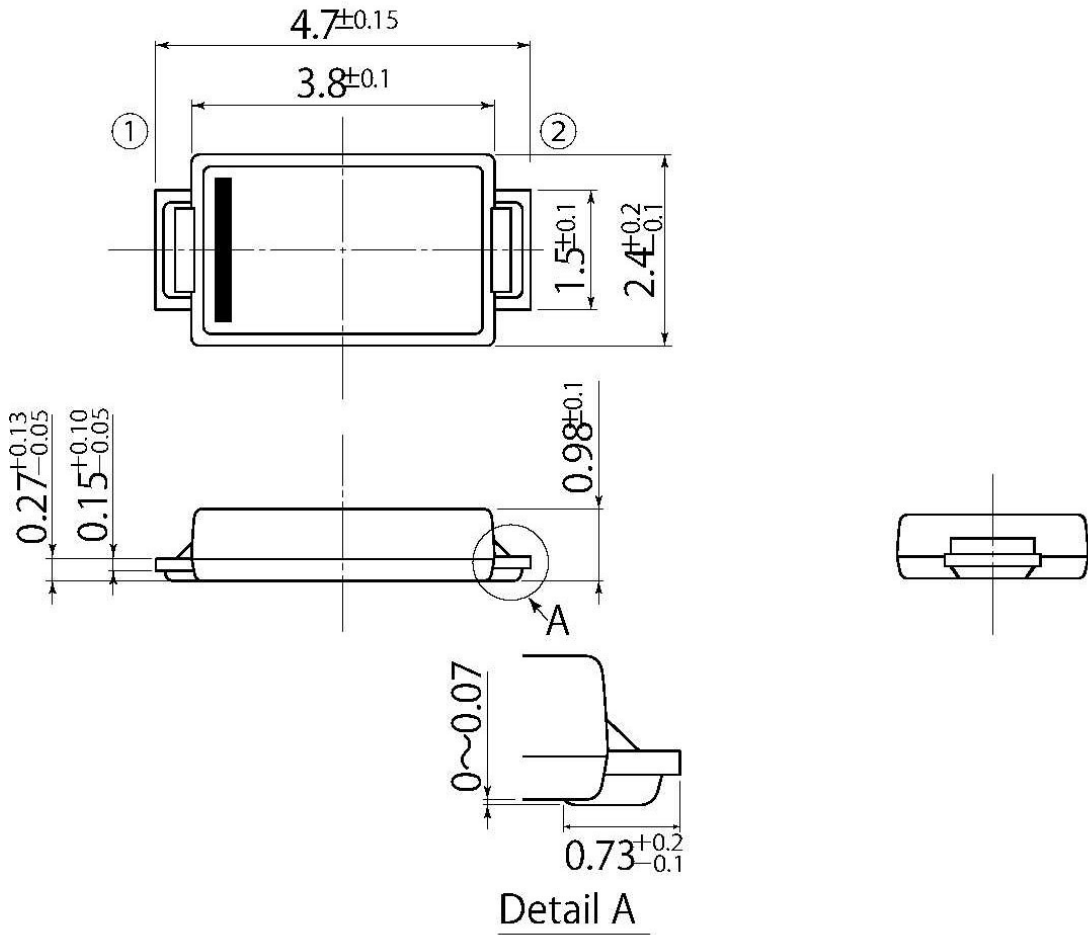
Surge forward current capability





B5

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



Referential Soldering Pad

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

## Notes

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