

D3CE4S

Schottky Barrier Diodes

40V, 3A

Feature

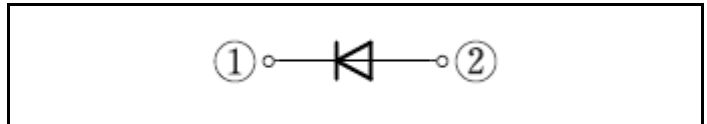
- Ultra-small SMD
- Ultra thin PKG
- Low V_F
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

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



Equivalent circuit



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

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------------|--------------------|--|------------|------|
| Storage temperature | T _{stg} | | -55 to 150 | °C |
| Junction temperature | T _j | | -55 to 150 | °C |
| 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°C | 3 | A |
| Average forward current | I _{F(AV)} | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※ | 1.7 | A |
| Average forward current | I _{F(AV)} | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※ | 1.3 | A |
| Surge forward current | I _{FSM} | 50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C | 80 | A |

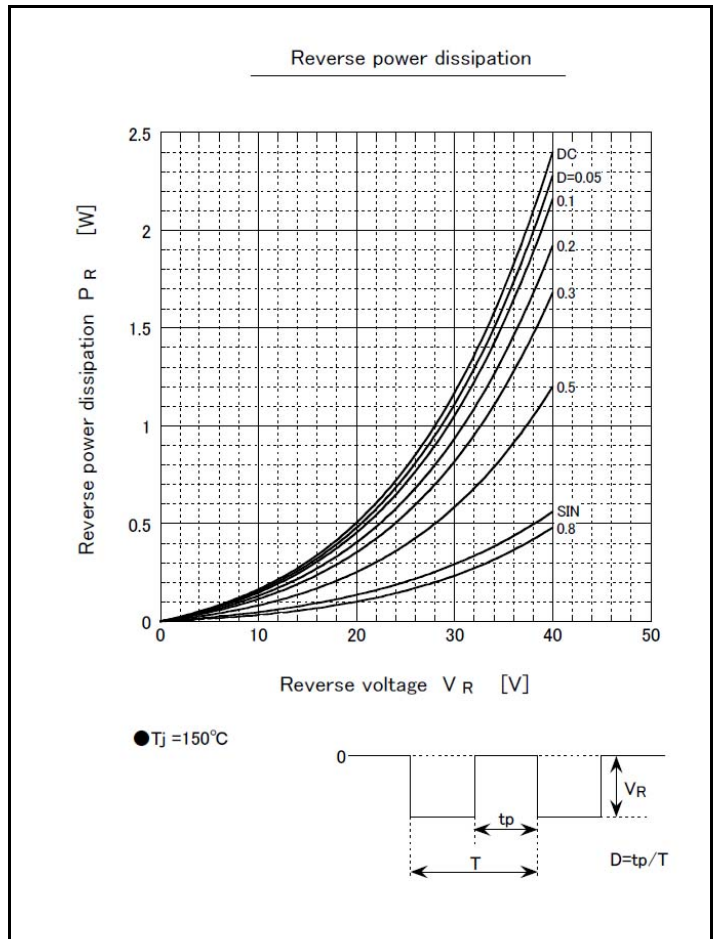
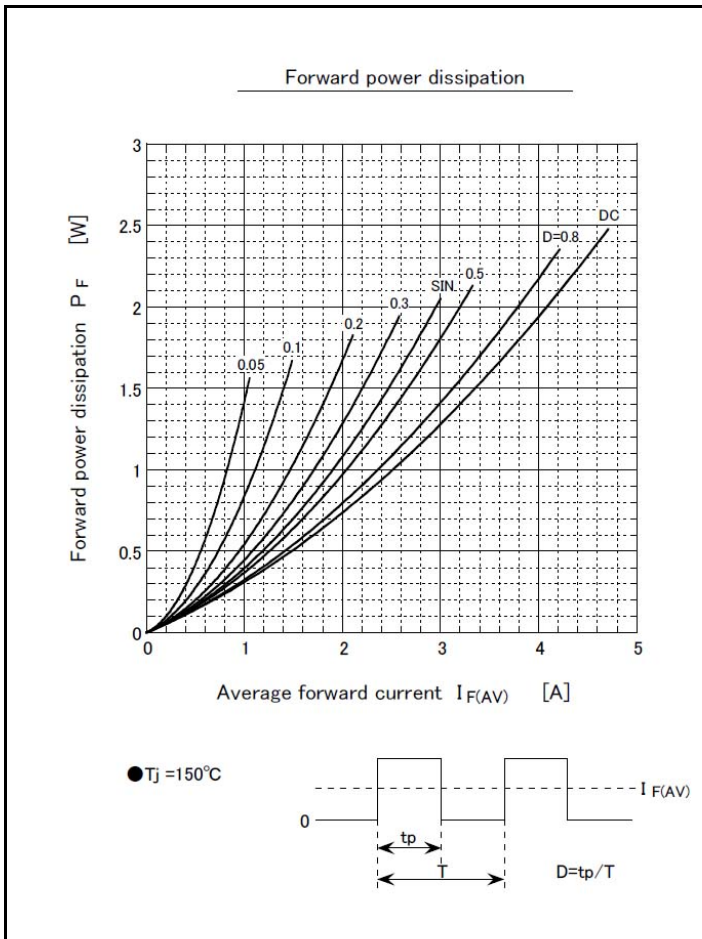
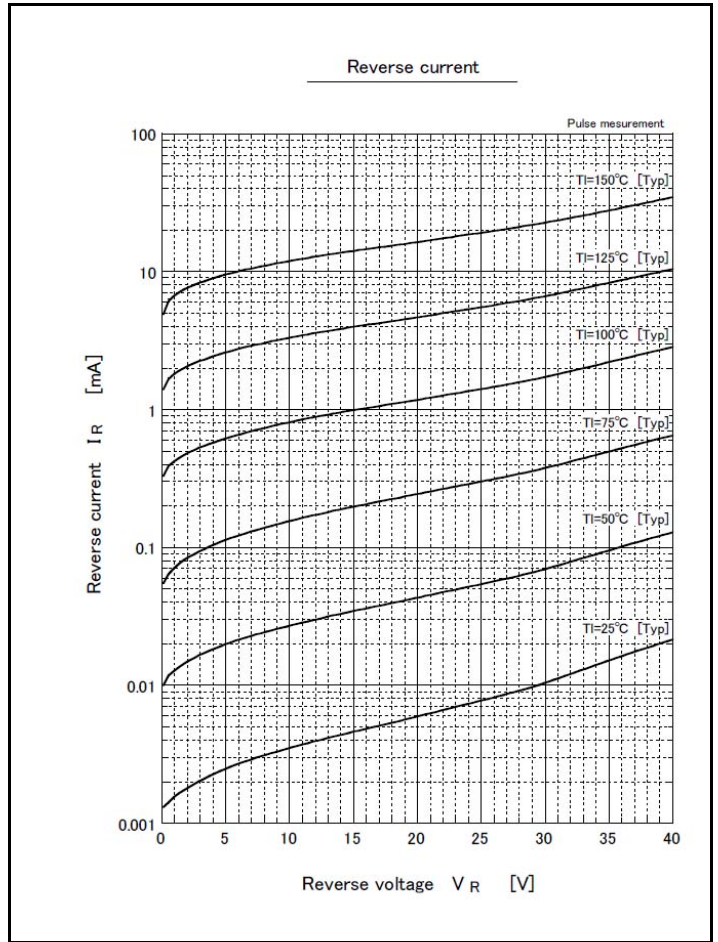
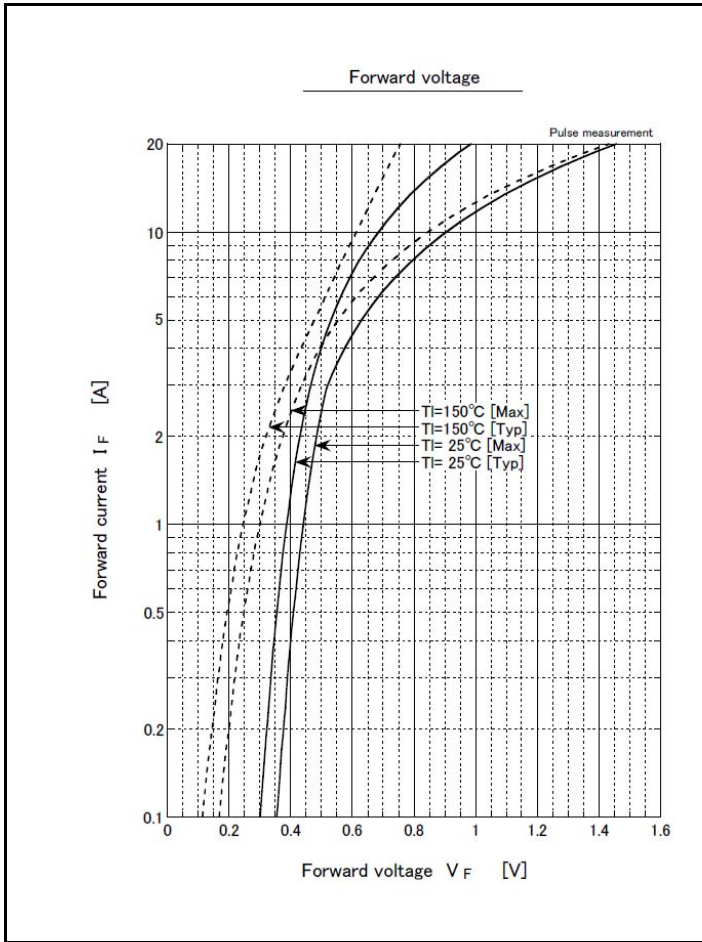
※ : See the original Specifications

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

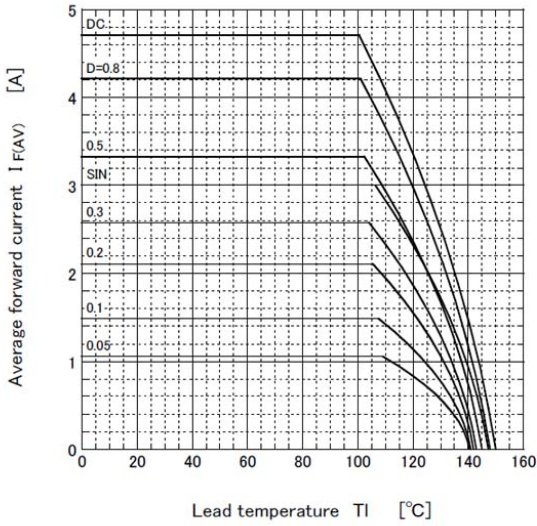
| Item | Symbol | Conditions | Ratings | | | Unit |
|--------------------|---------------|---|---------|-----|------|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V_F | $I_F=3A$, Pulse measurement | | | 0.52 | V |
| Reverse current | I_R | $V_R=40V$, Pulse measurement | | | 0.3 | mA |
| Total capacitance | C_t | $f=1MHz$, $V_R=10V$ | | 97 | | 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

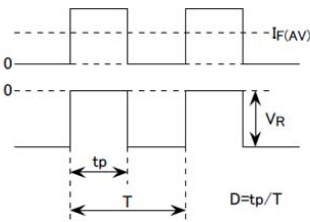
CHARACTERISTIC DIAGRAMS



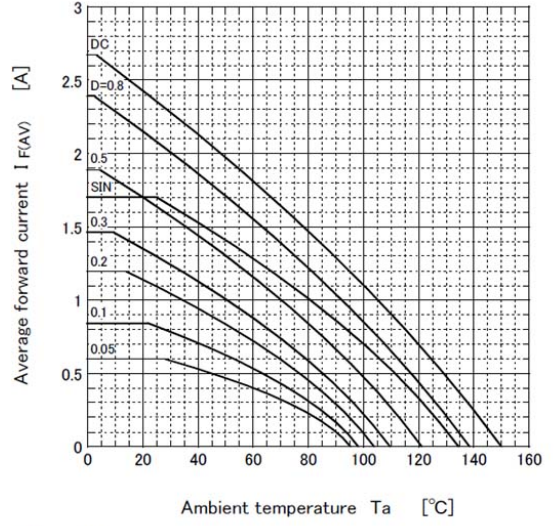
Derating curve



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



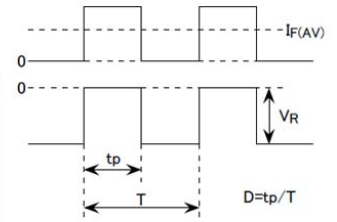
Derating curve



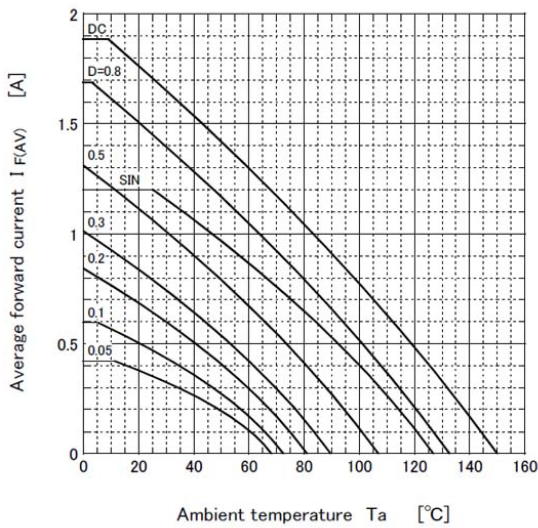
- $V_R = 20V$
- R-load
- Free in air

Substrate detail

| | |
|---------------------|---------------------|
| Type | Glass-epoxy |
| Size | 2 inch ² |
| Thickness | 1mm |
| Conductor thickness | 35 μ m |
| Pattern area | 160mm ² |



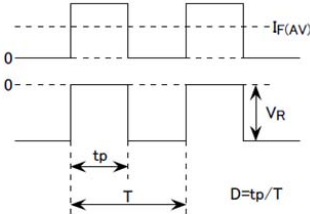
Derating curve



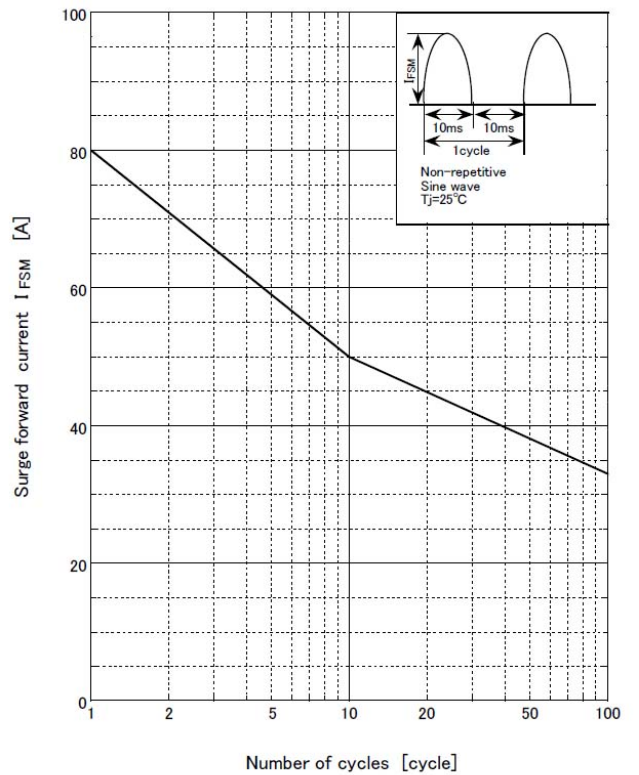
- $V_R = 20V$
- R-load
- Free in air

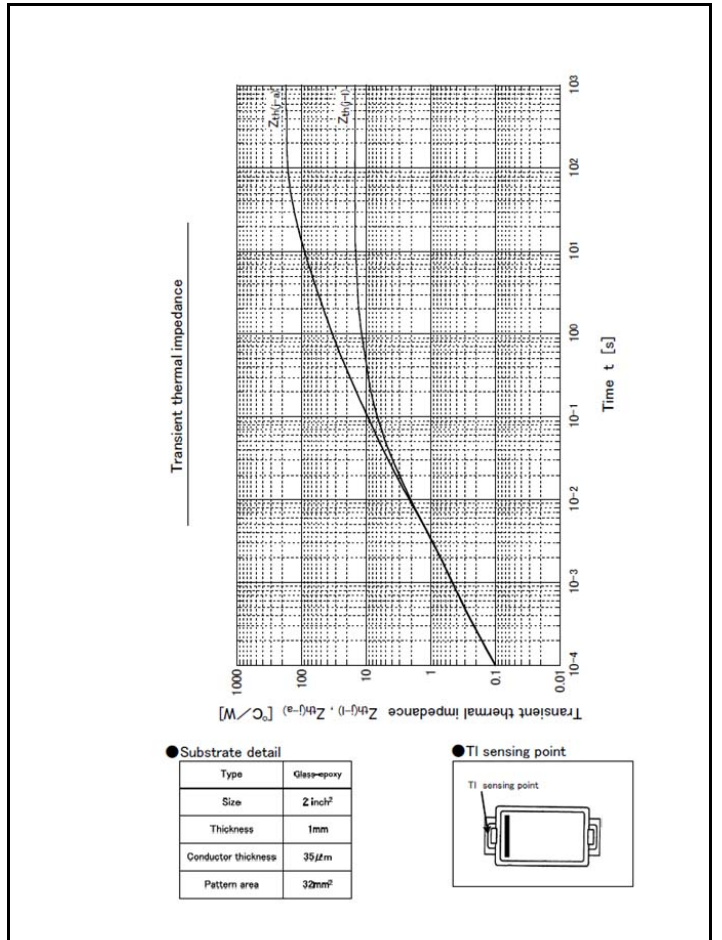
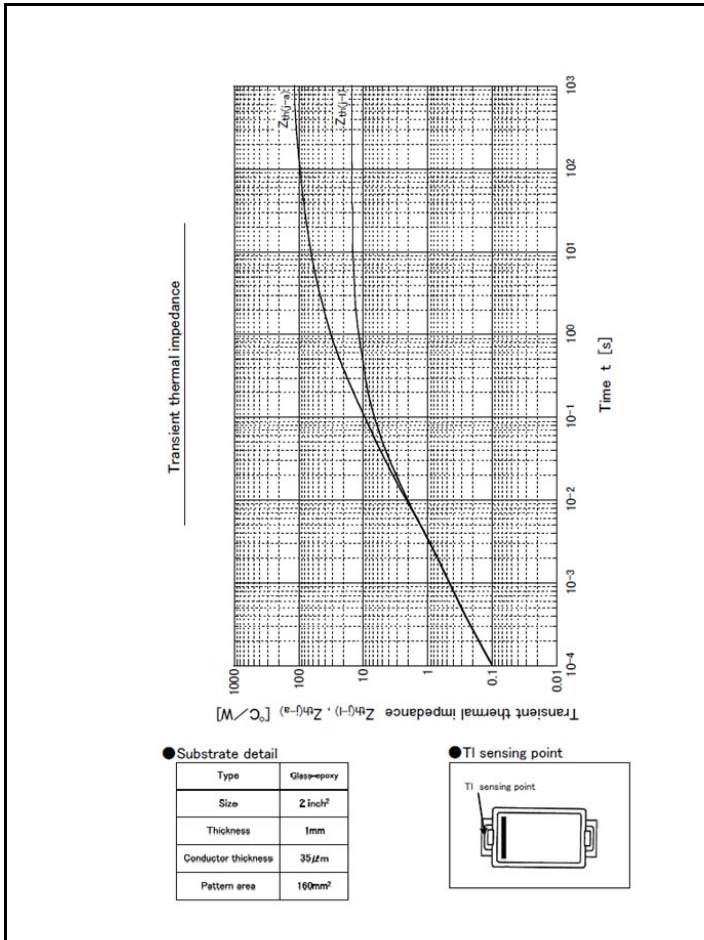
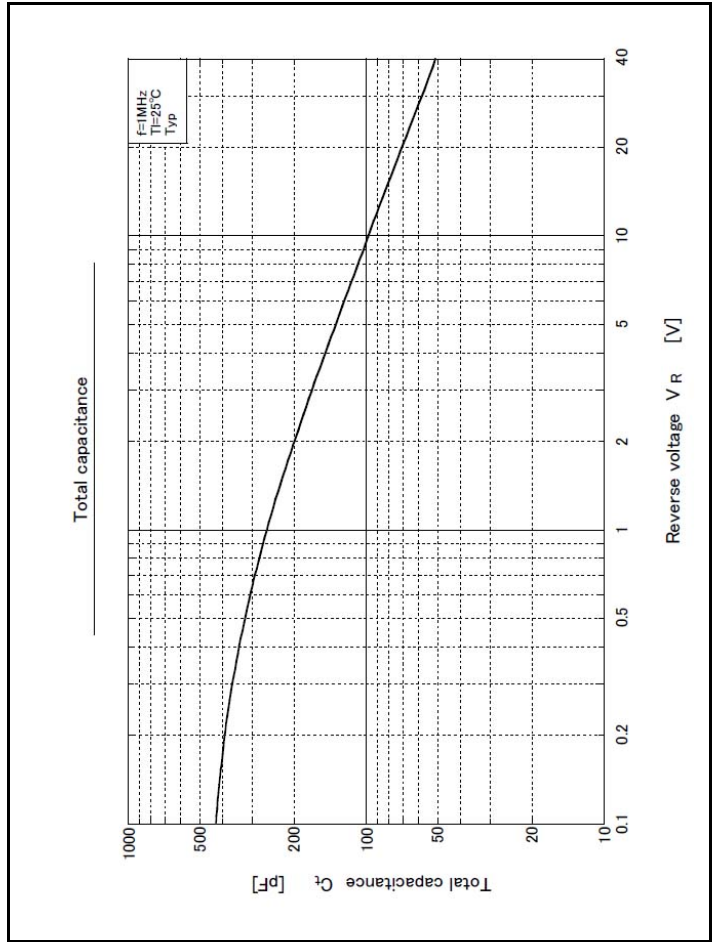
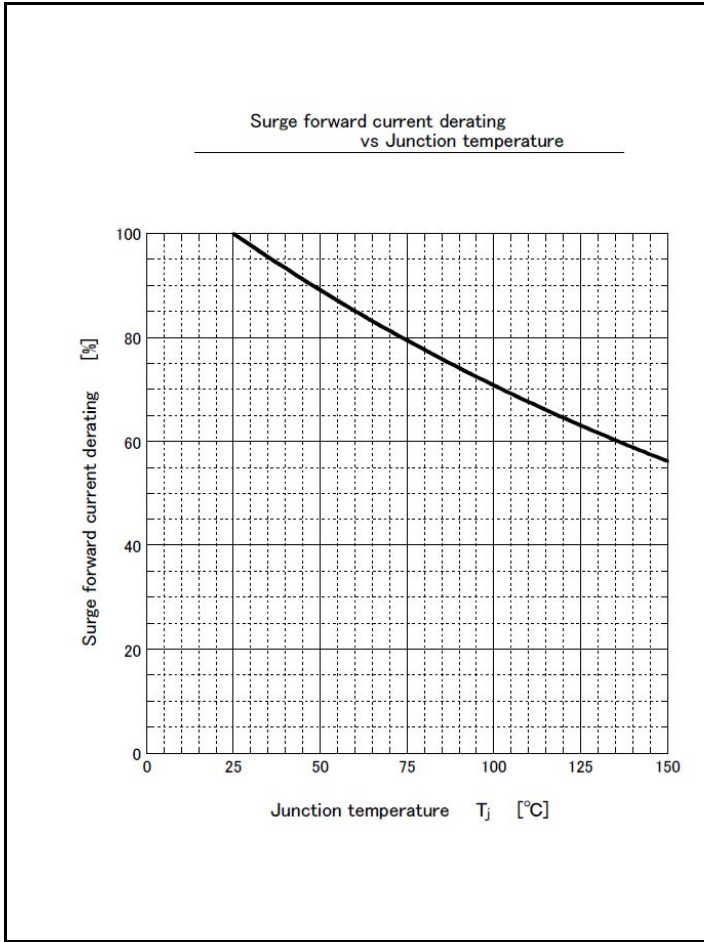
Substrate detail

| | |
|---------------------|---------------------|
| Type | Glass-epoxy |
| Size | 2 inch ² |
| Thickness | 1mm |
| Conductor thickness | 35 μ m |
| Pattern area | 32mm ² |



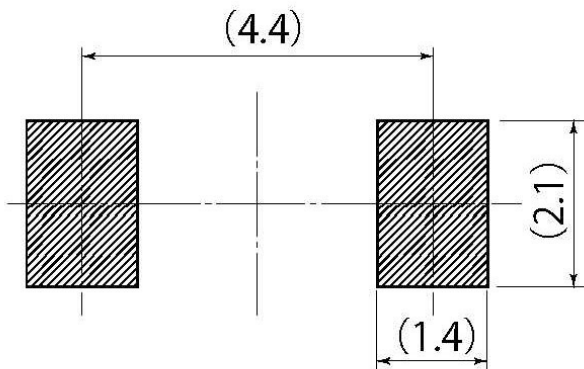
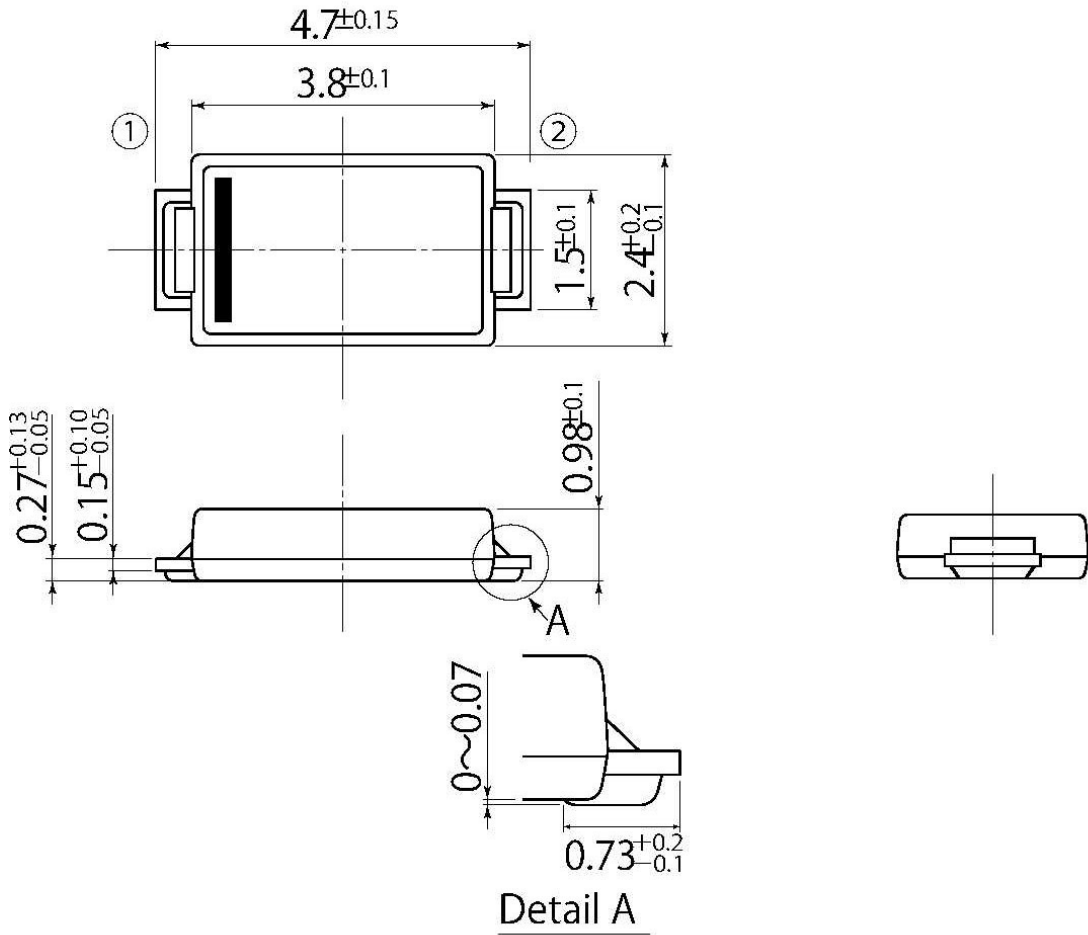
Surge forward current capability





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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