

D3CE60K

Fast Recovery Diodes
600V, 3A

Feature

- Ultra-small SMD
- Ultra-thin PKG=1.0mm
- High Voltage
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

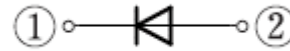
OUTLINE

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}		600	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Tl=78°C	3	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Tl=103°C	2.2	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.97	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.69	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, T _j =25°C	50	A
Surge forward current	I _{FSM1}	t _p =1ms, Sine wave, Non-repetitive, Peak value, T _j =25°C	95	A

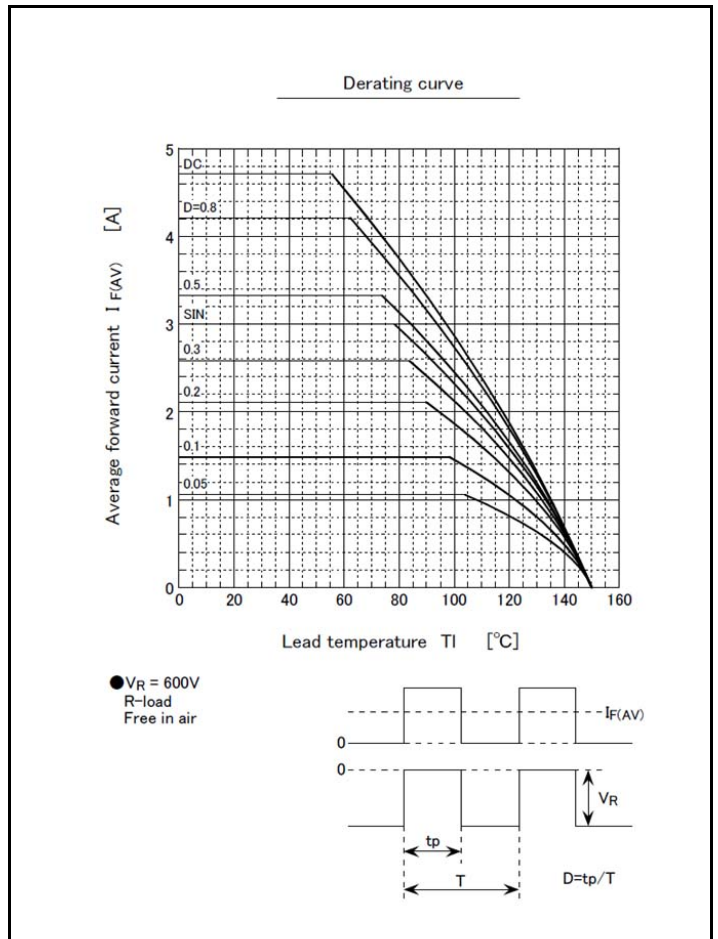
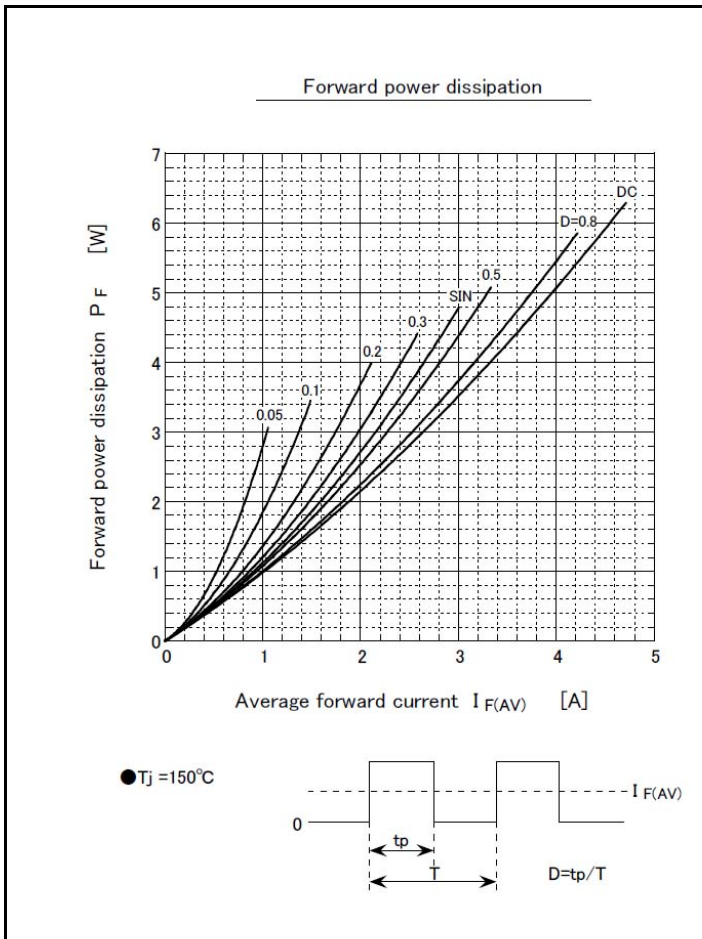
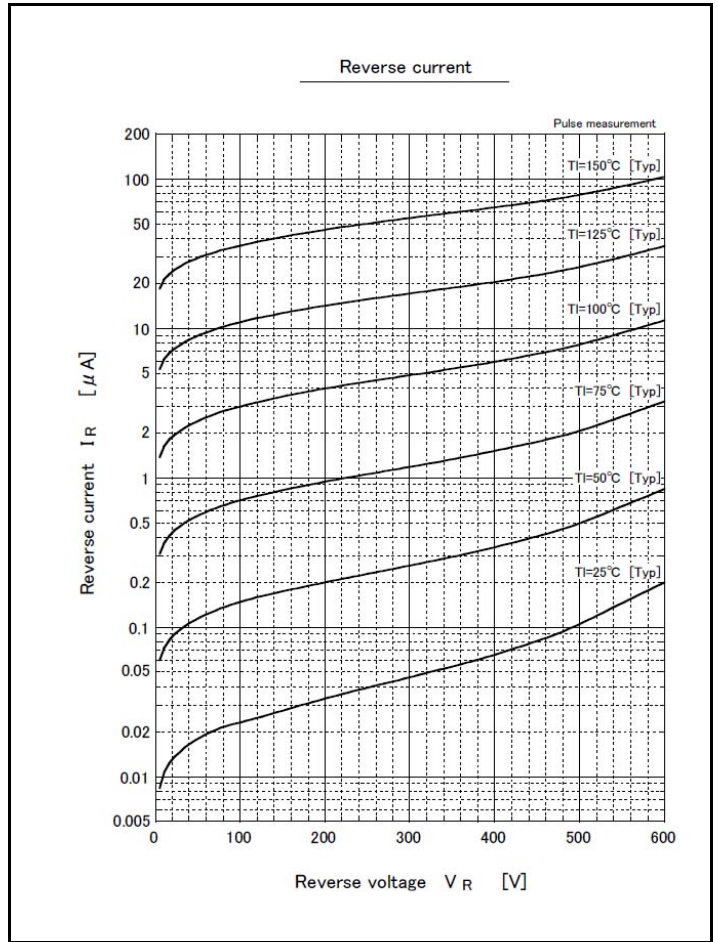
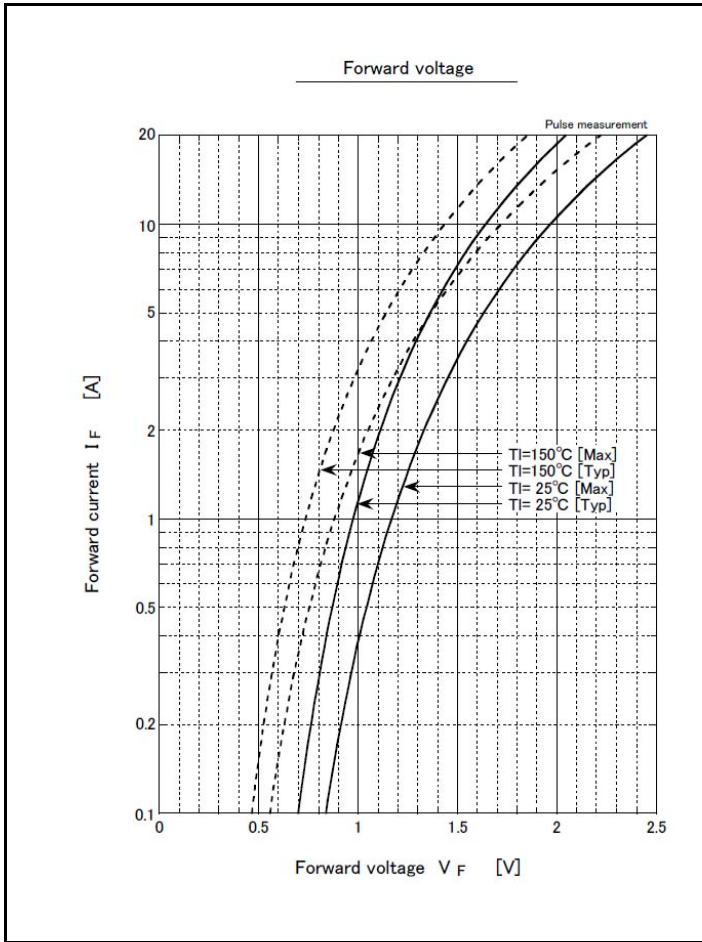
※ :See the original Specifications

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

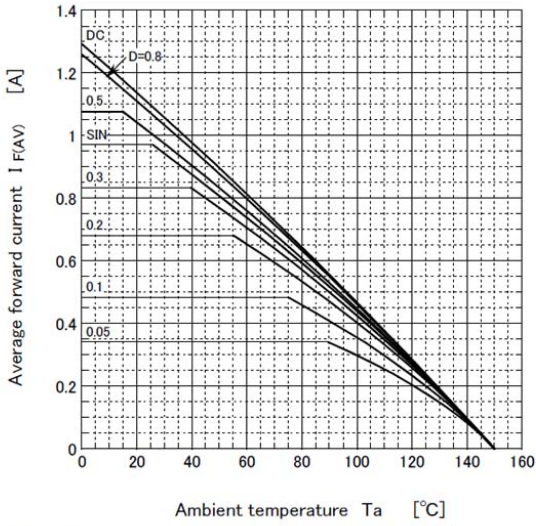
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement			1.45	V
Reverse current	I_R	VR=600V, Pulse measurement			10	μ A
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			80	ns
Reverse recovery time	trr	IF=1.0A, VR=30V, di/dt=-50A/ μ s, 0.25IR			64	ns
Reverse recovery time	trr	IF=1.0A, VR=420V, di/dt=-50A/ μ s, 0.25IR			76	ns
Total capacitance	Ct	f=1MHz, VR=10V		18		pF
Thermal resistance	Rth(j-l)	Junction to lead			15	$^{\circ}$ C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			115	$^{\circ}$ C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			172	$^{\circ}$ C/W

※ :See the original Specifications

CHARACTERISTIC DIAGRAMS



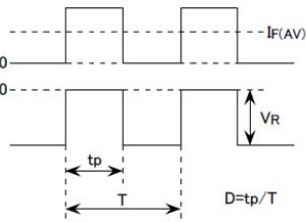
Derating curve



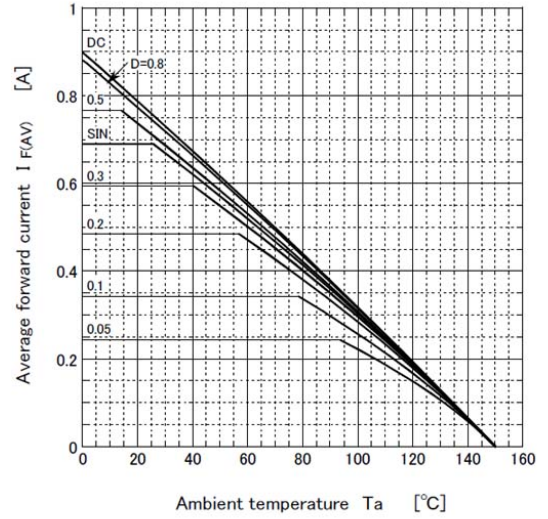
● $V_R = 600V$
R-load
Free in air

● Substrate detail

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



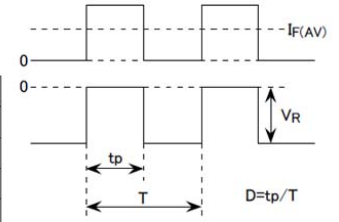
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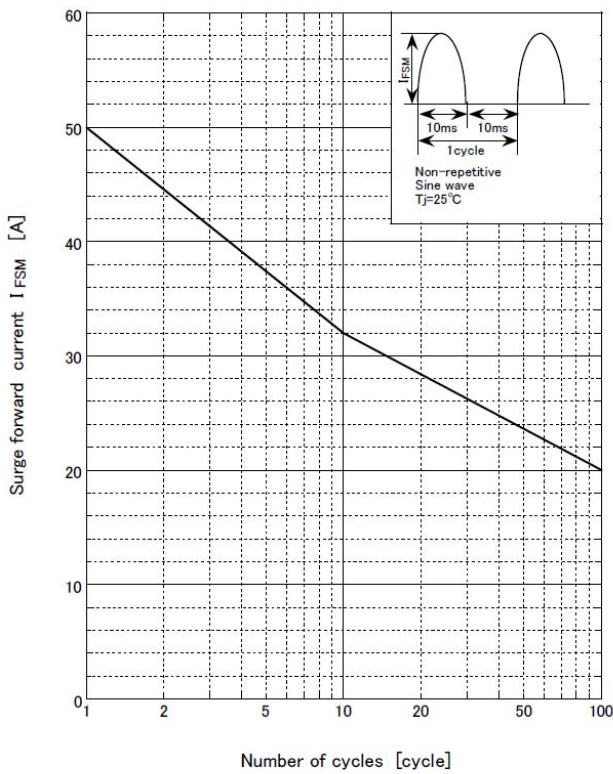
● $V_R = 600V$
R-load
Free in air

● Substrate detail

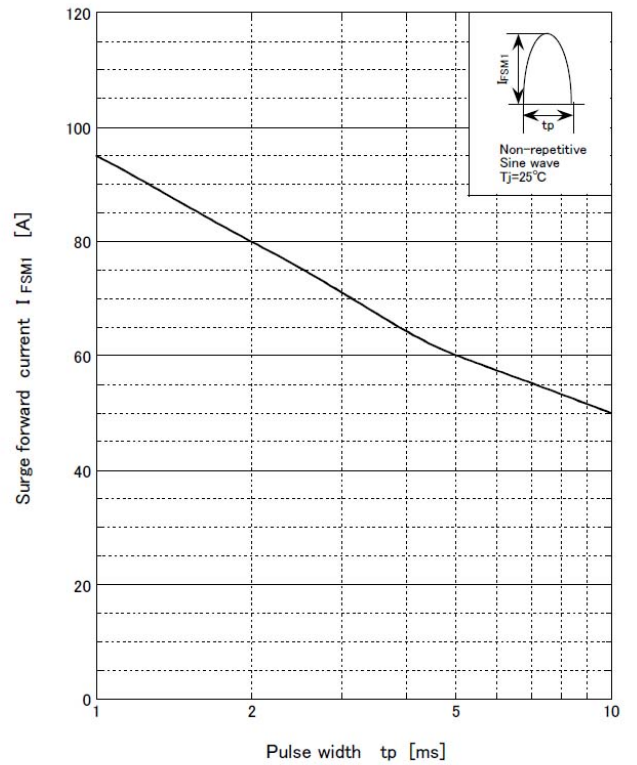
Type	Glass-epoxy
Size	2 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	32mm ²

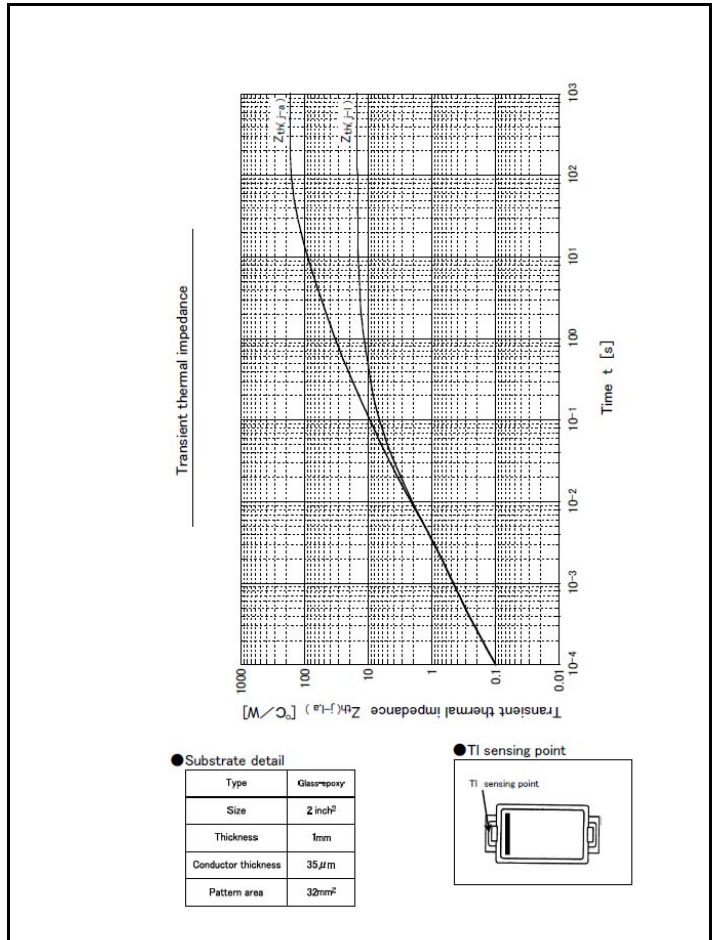
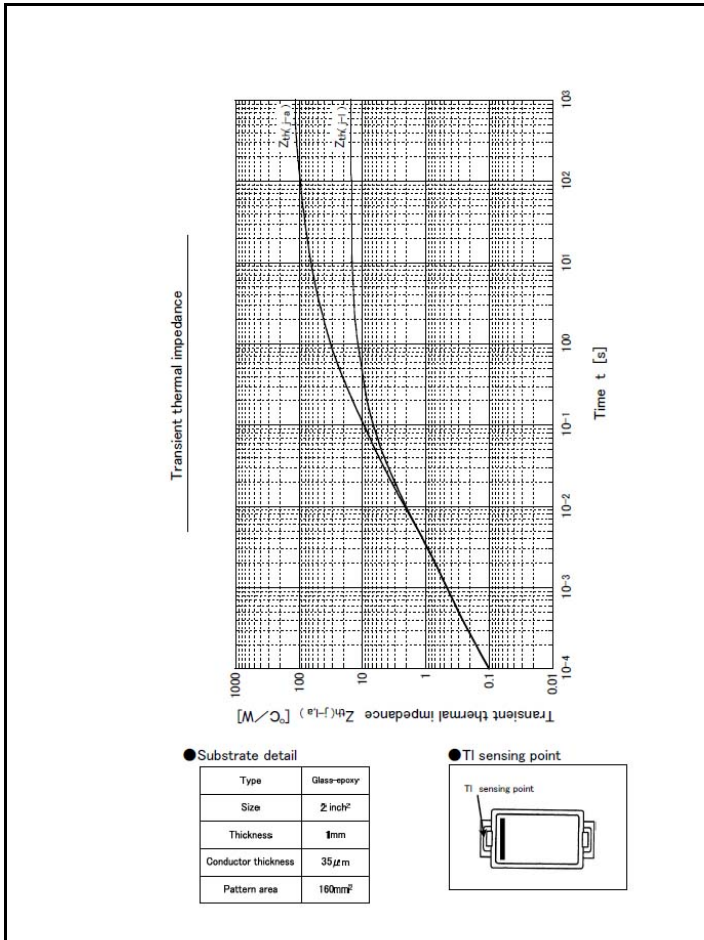
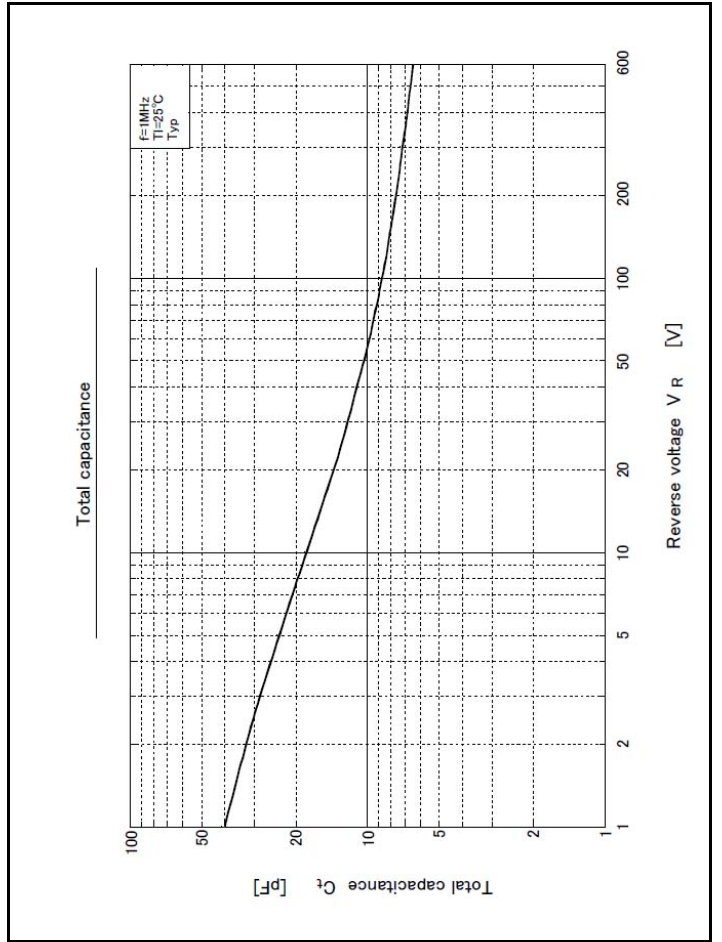
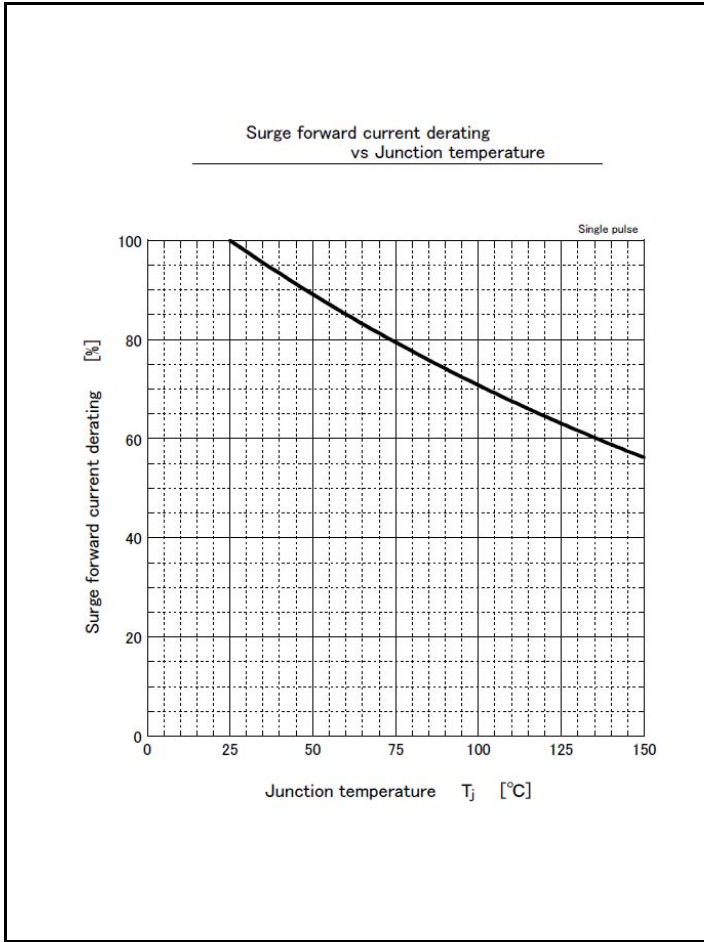


Surge forward current capability



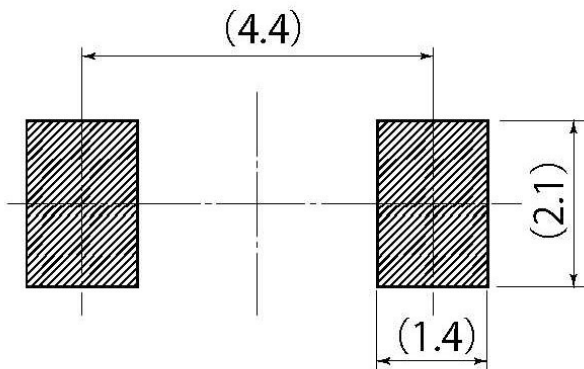
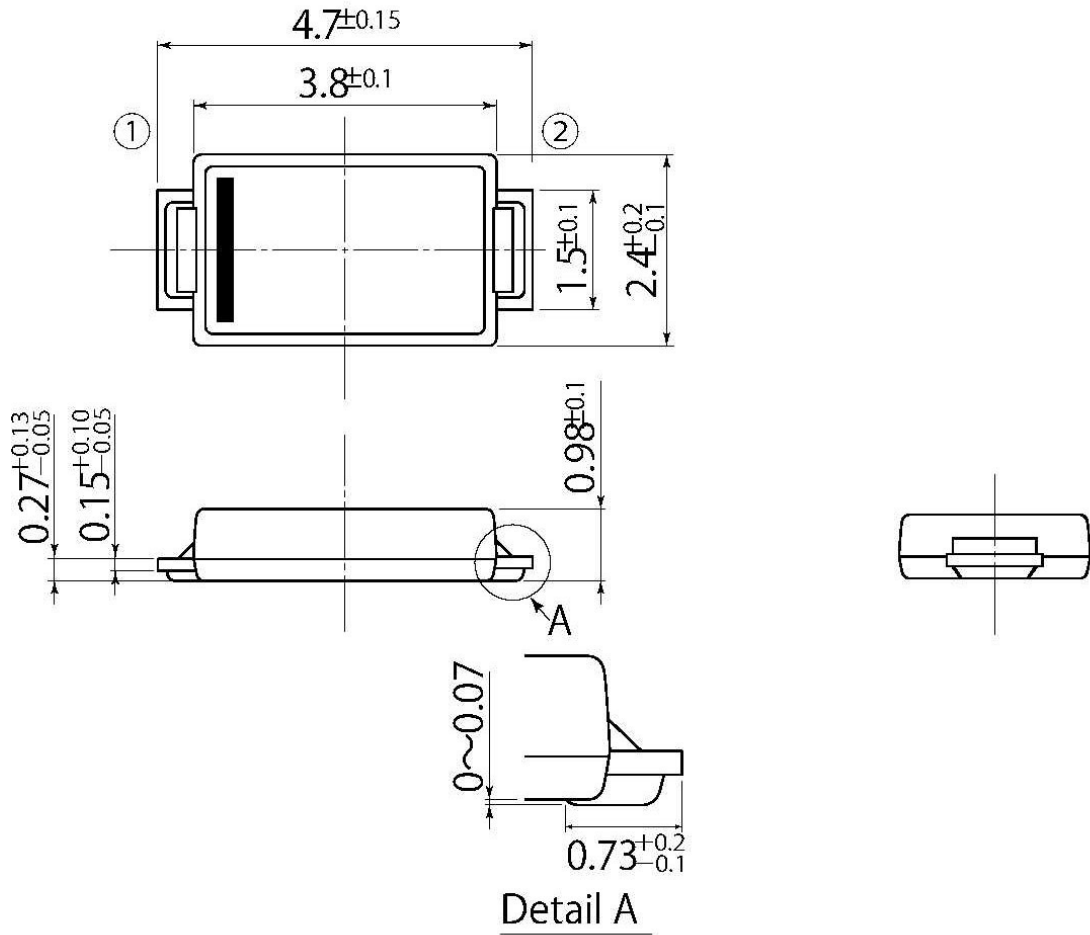
Surge forward current capability





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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