

D6FEC4ST
Schottky Barrier Diodes
40V, 6A

Feature

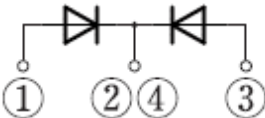
- SMD
- Tj=175°C
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FE
Package (JEDEC Code): TO-252AB similar
Package (JEITA Code): SC-63



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 175	°C
Junction temperature	Tj		-55 to 175	°C
Repetitive peak reverse voltage	V _{RRM}		40	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, Tc=158°C ※	6	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, Ta=25°C ※	4	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	90	A
Surge forward current	I _{FSM1}	tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25°C	155	A

※ : See the original Specifications

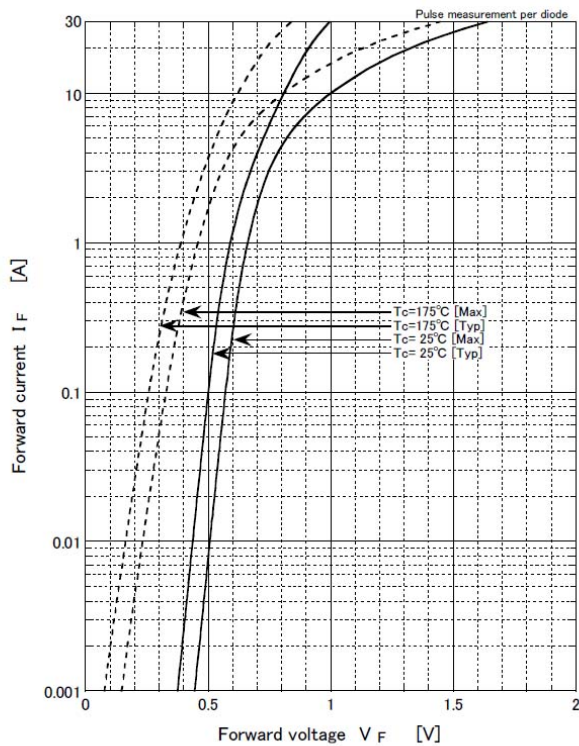
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	IF=3A, Pulse measurement, per diode			0.74	V
Reverse current	I _R	VR=40V, Pulse measurement, per diode			0.008	mA
Total capacitance	C _t	f=1MHz, VR=10V, per diode		93		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink ※			4	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient ※			60	°C/W

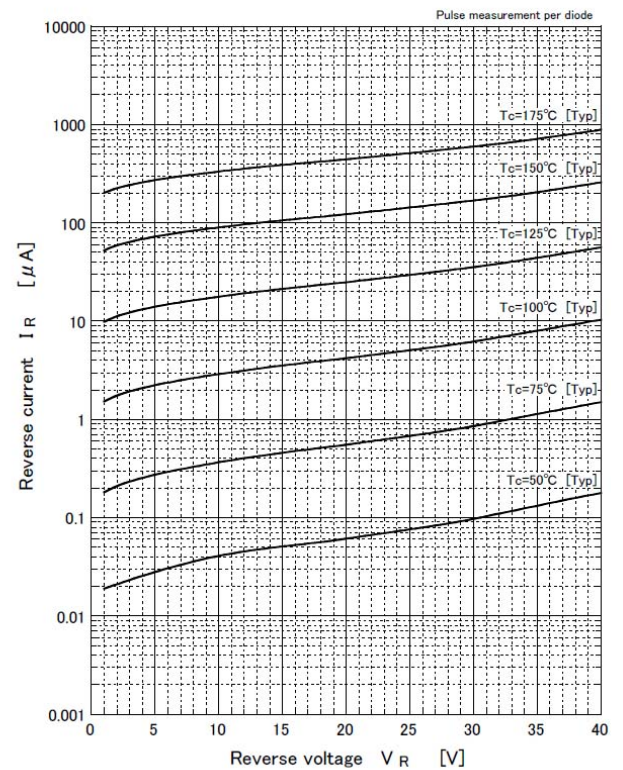
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

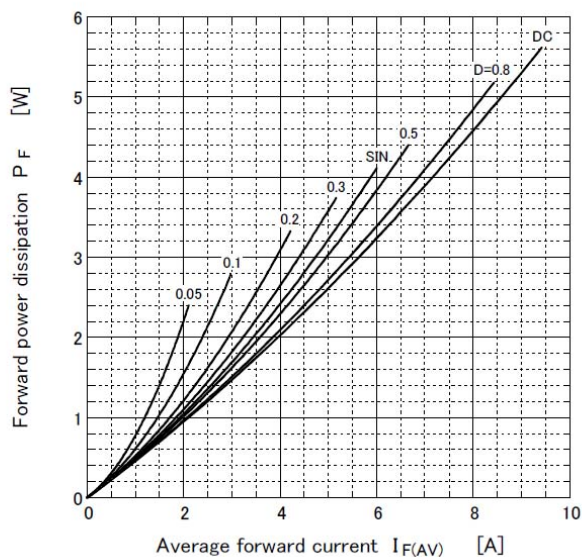
Forward voltage



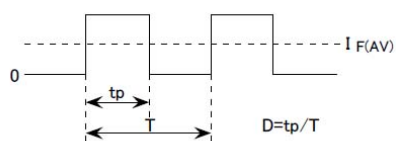
Reverse current



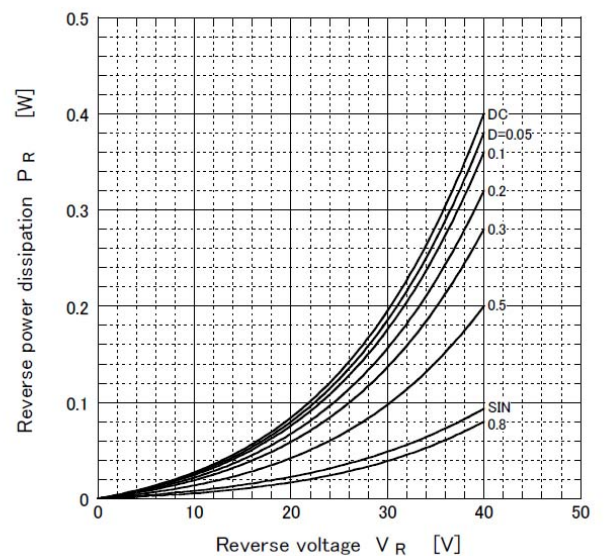
Forward power dissipation



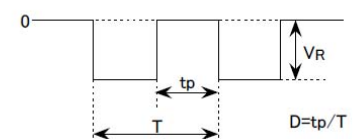
● $T_J = 175^\circ\text{C}$



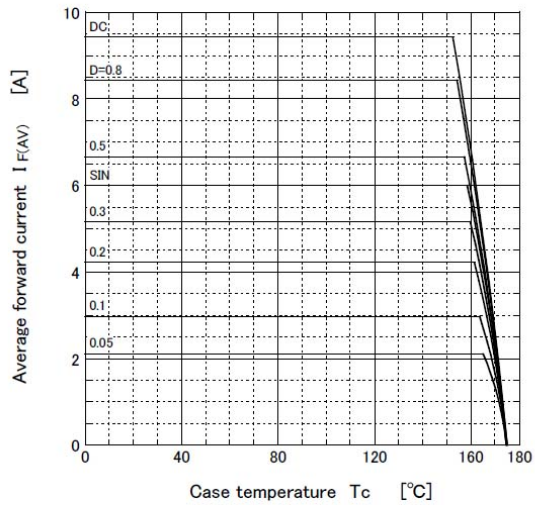
Reverse power dissipation



● $T_J = 175^\circ\text{C}$



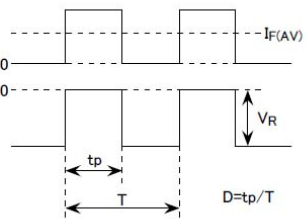
Derating curve



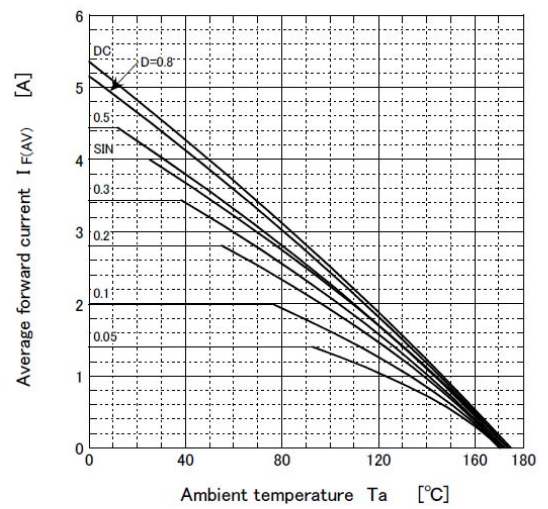
- $V_R = 20V$
R-load
With heatsink

- Substrate detail

Type	Alumina
Size	1inch ²
Thickness	0.64mm
Conductor thickness	20 μ m
Pattern area	65mm ²



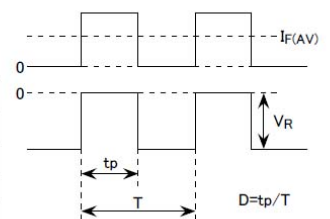
Derating curve



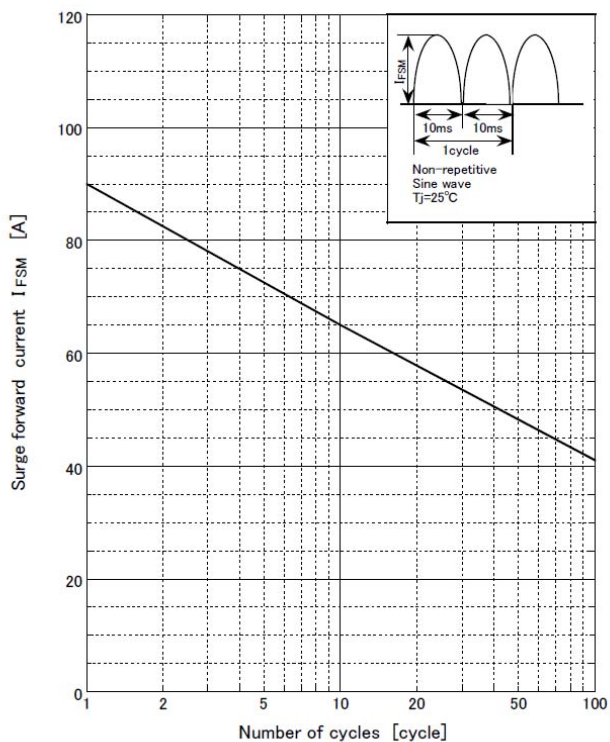
- $V_R = 20V$
R-load
Free in air

- Substrate detail

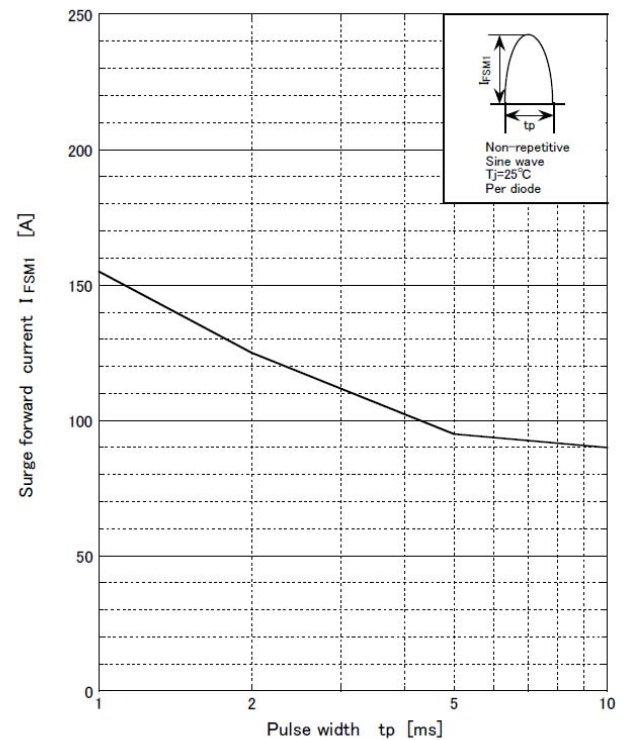
Type	Glass-epoxy
Size	24mm x 39mm
Thickness	1.6mm
Conductor thickness	35 μ m
Pattern area	56.5mm ²

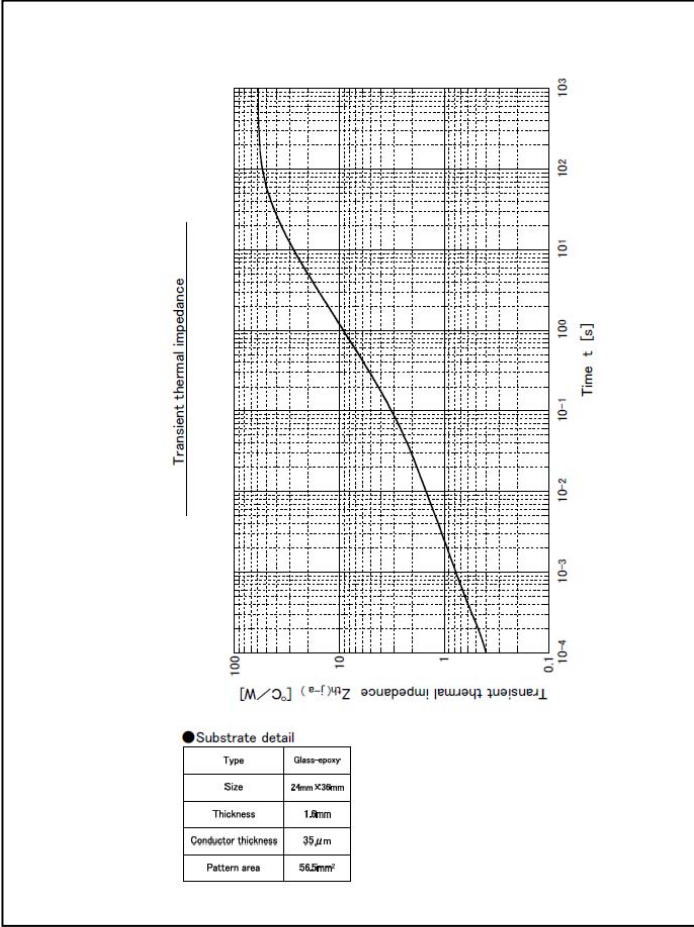
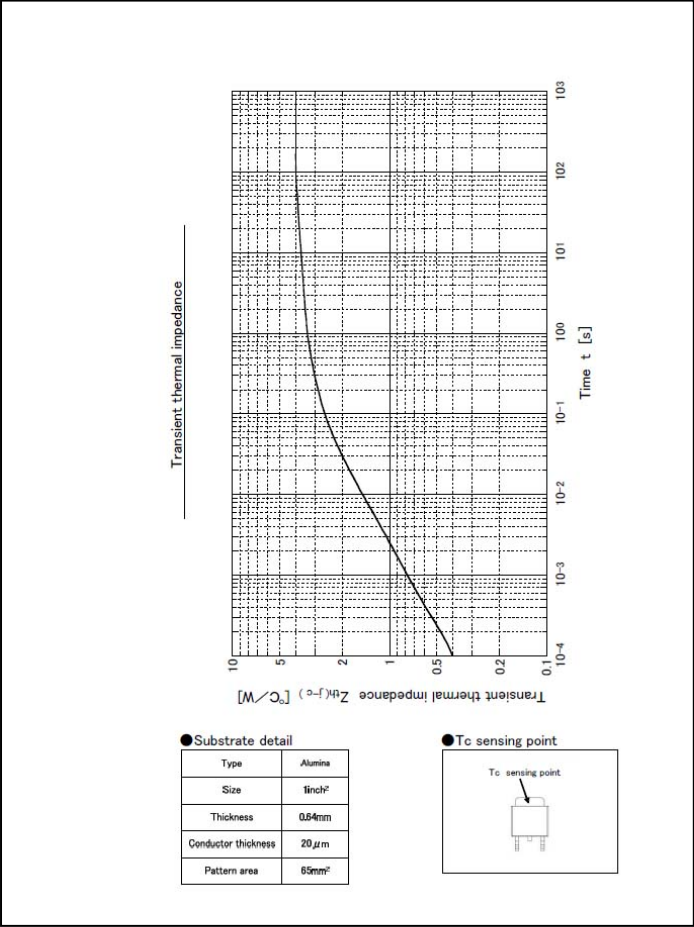
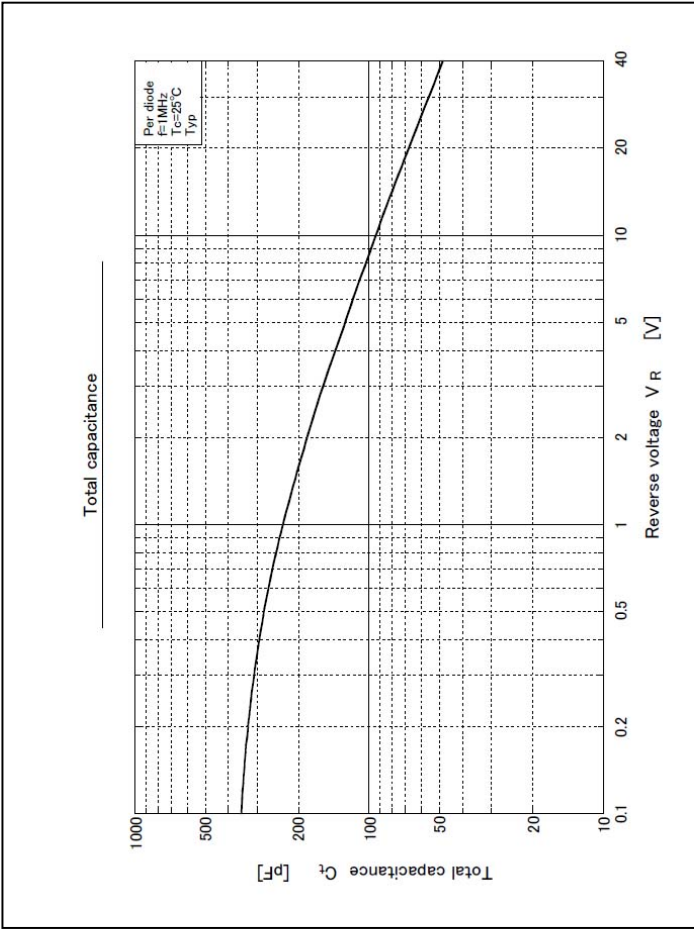
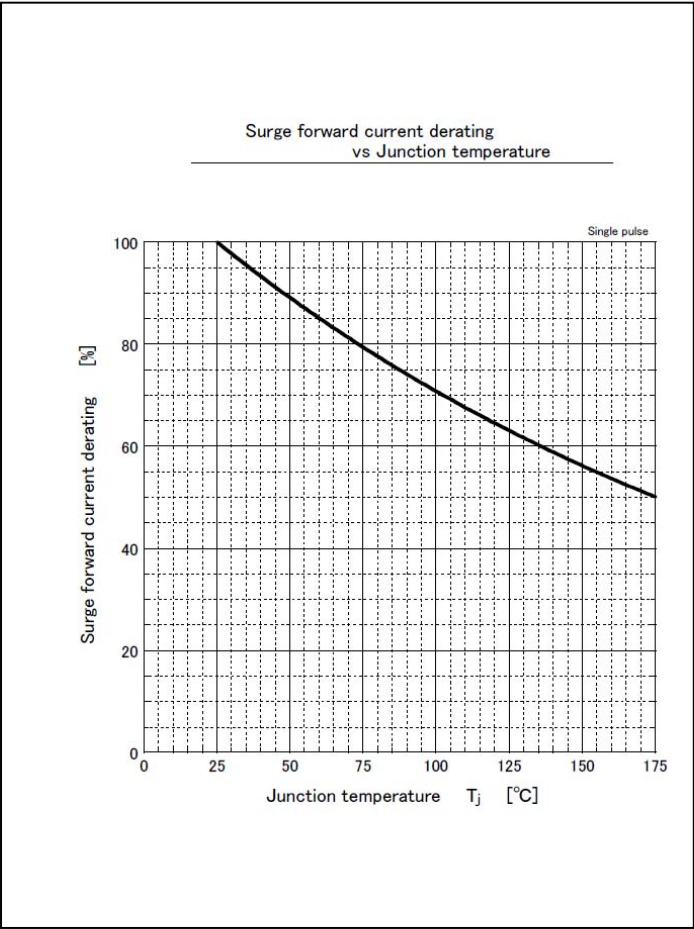


Surge forward current capability



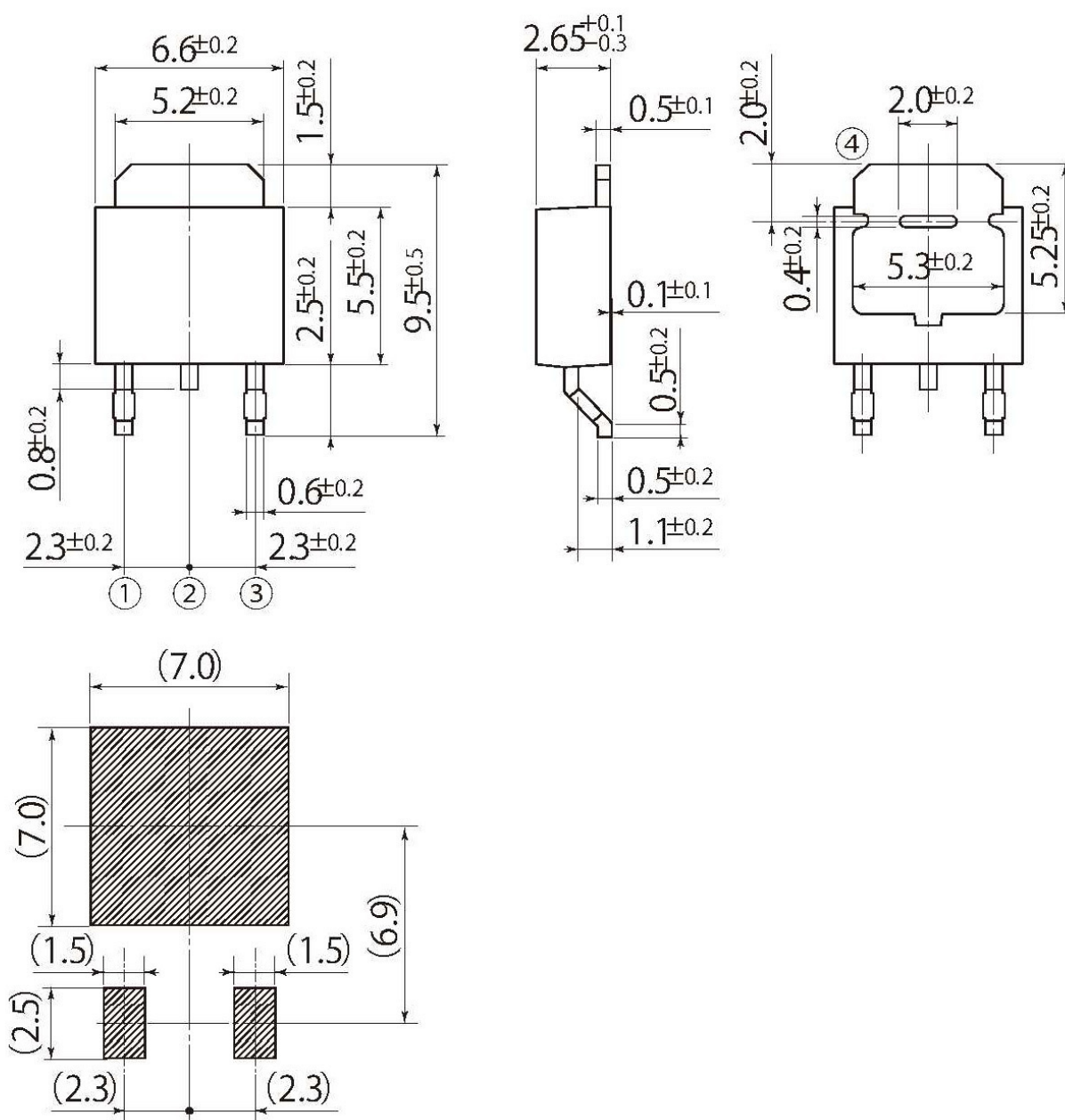
Surge forward current capability





G3

JEDEC Code	TO-252AB similar
JEITA Code	SC-63
House Name	FE



Referential Soldering Pad

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

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