ShinDengen

D6FEC15ST

Schottky Barrier Diodes
150V, 6A

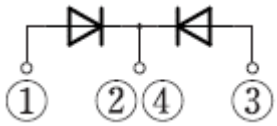
Feature

- SMD
- High Voltage
- Tj=175℃
- 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℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 175	℃
Junction temperature	Tj		-55 to 175	℃
Repetitive peak reverse voltage	V_{RRM}		150	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, Tc=154℃ ※	6	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃	100	A
Surge forward current	I_{FSM1}	tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25℃	180	A

※ :See the original Specifications

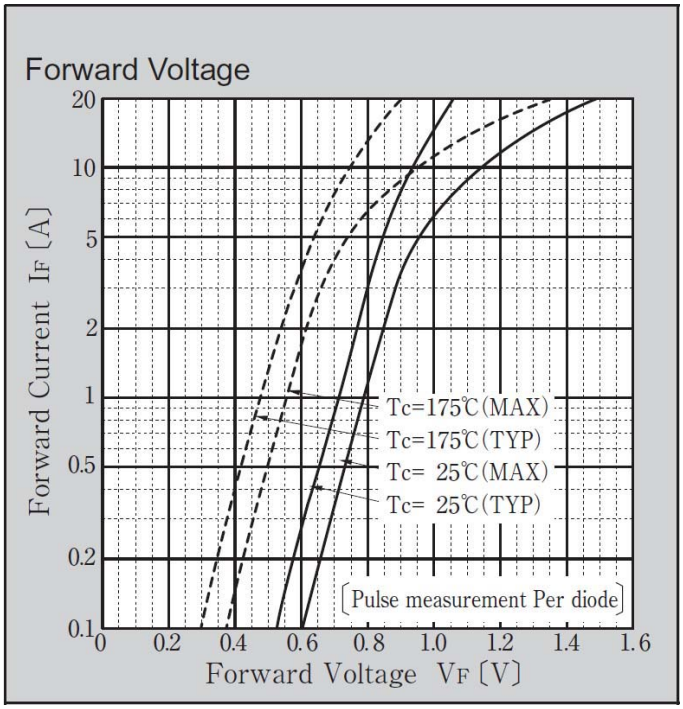
Electrical Characteristics (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement, per diode			0.88	V
Reverse current	I_R	VR=150V, Pulse measurement, per diode			0.008	mA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		52		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink ※			4	℃/W

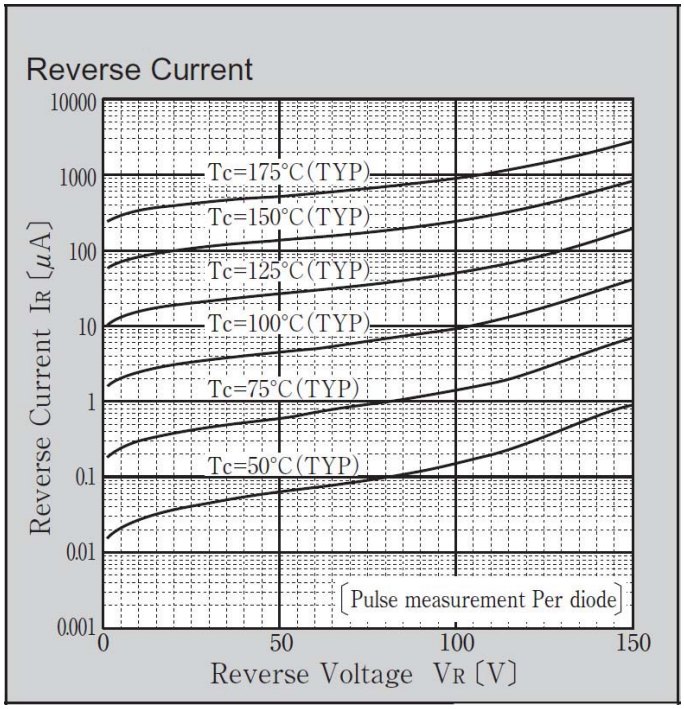
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

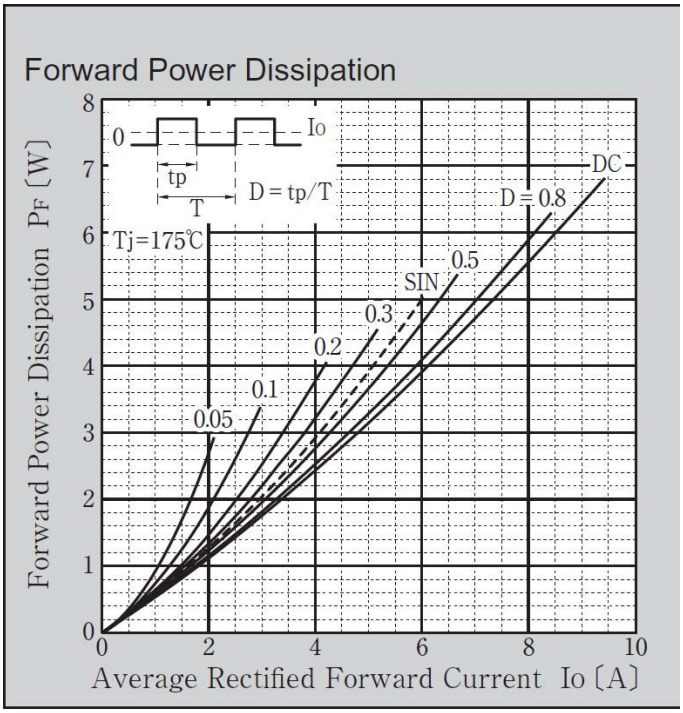
Forward Voltage



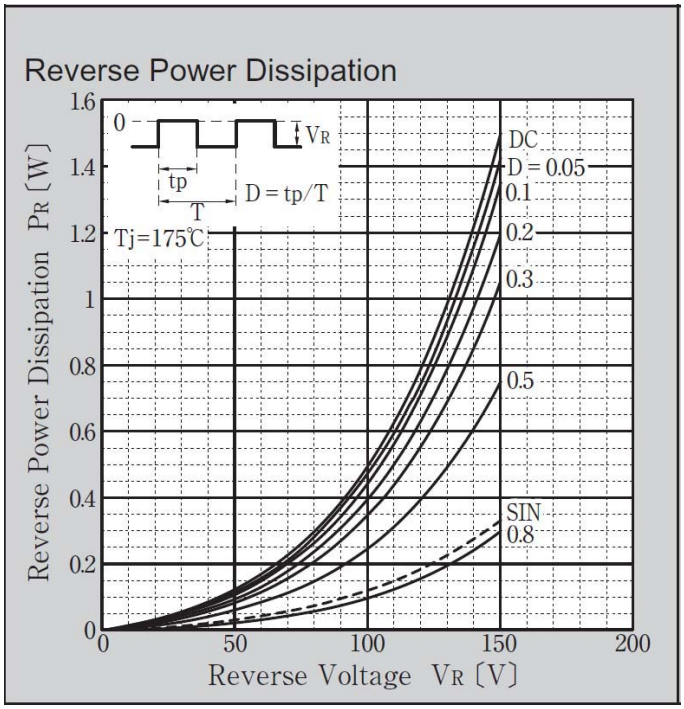
Reverse Current



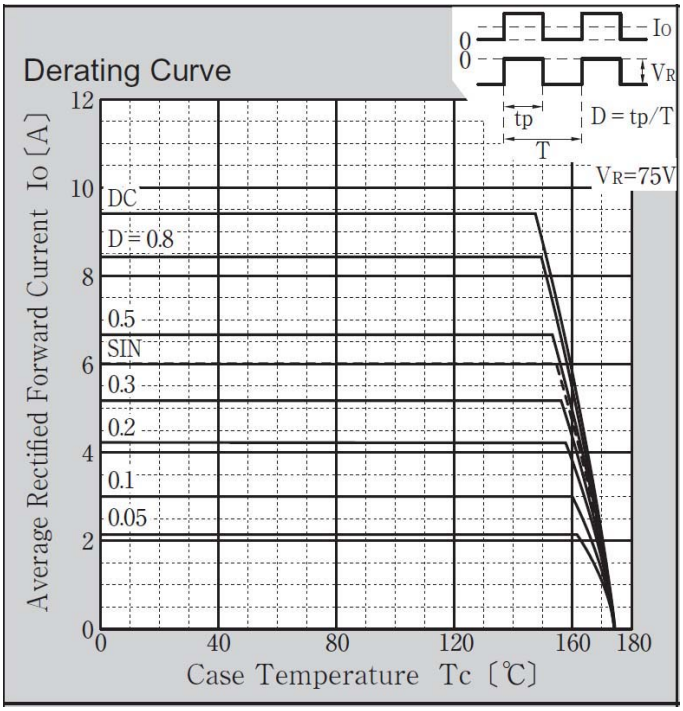
Forward Power Dissipation



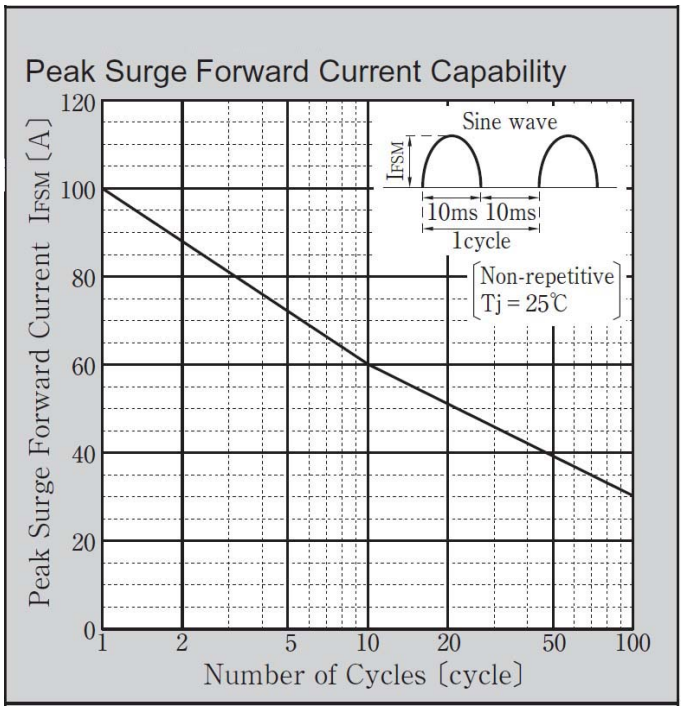
Reverse Power Dissipation



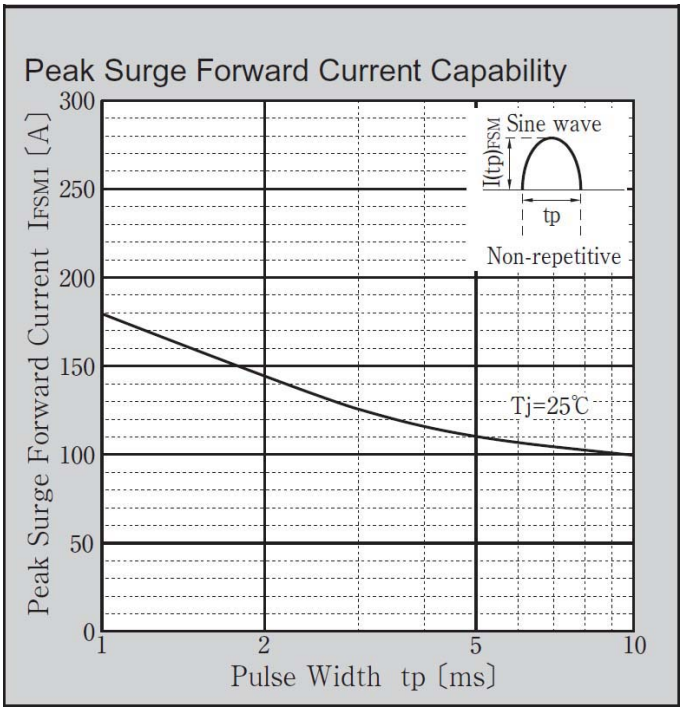
Derating Curve



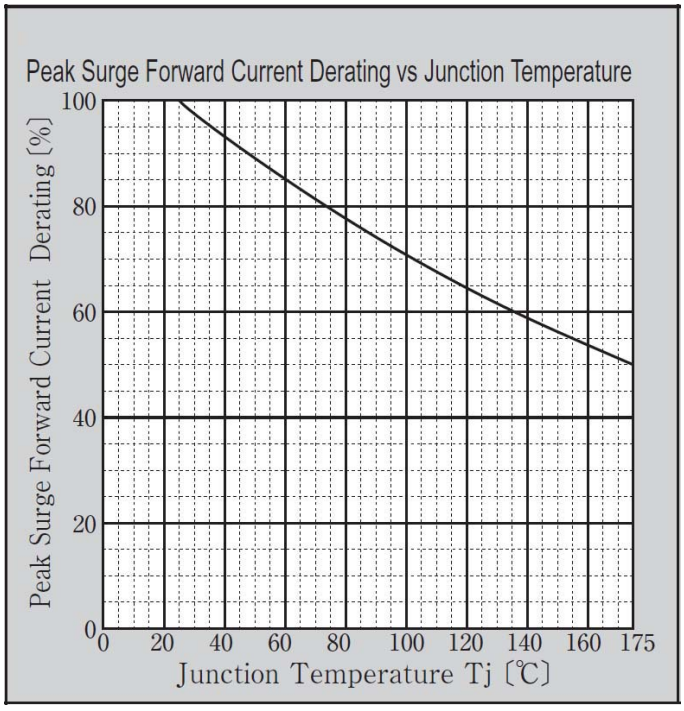
Peak Surge Forward Current Capability

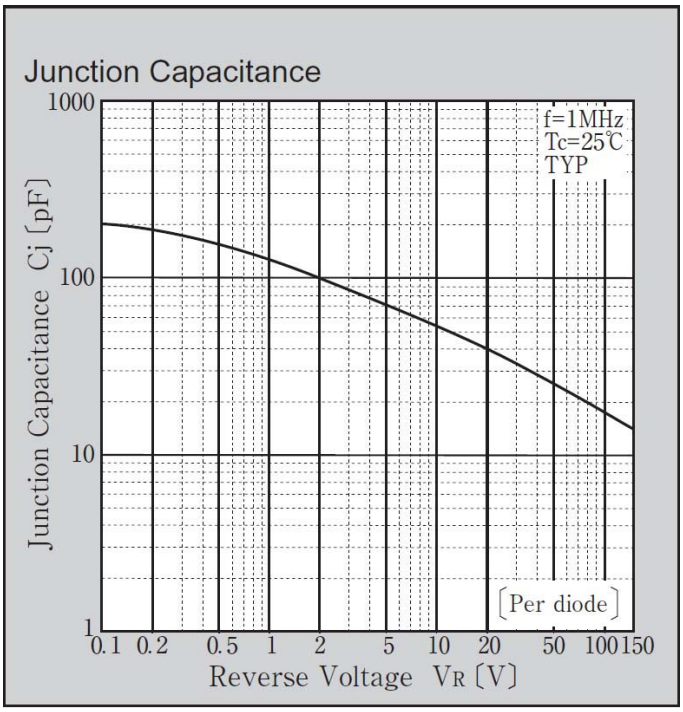


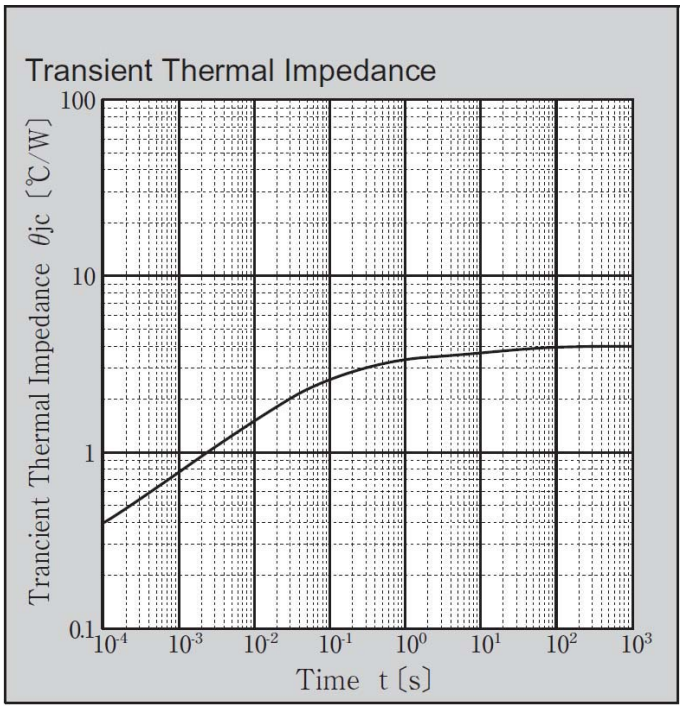
Peak Surge Forward Current Capability



Peak Surge Forward Current Derating vs Junction Temperature




Junction Capacitance
1000
100
10
1
Junction Capacitance Cj〔pF〕
f=1MHz
Tc=25℃
TYP
〔Per diode〕
0.1 0.2 0.5 1 2 5 10 20 50 100 150
Reverse Voltage VR〔V〕


Transient Thermal Impedance
100
10
1
0.1
Trancient Thermal Impedance θjc〔℃/W〕
10-4 10-3 10-2 10-1 100 101 102 103
Time t〔s〕

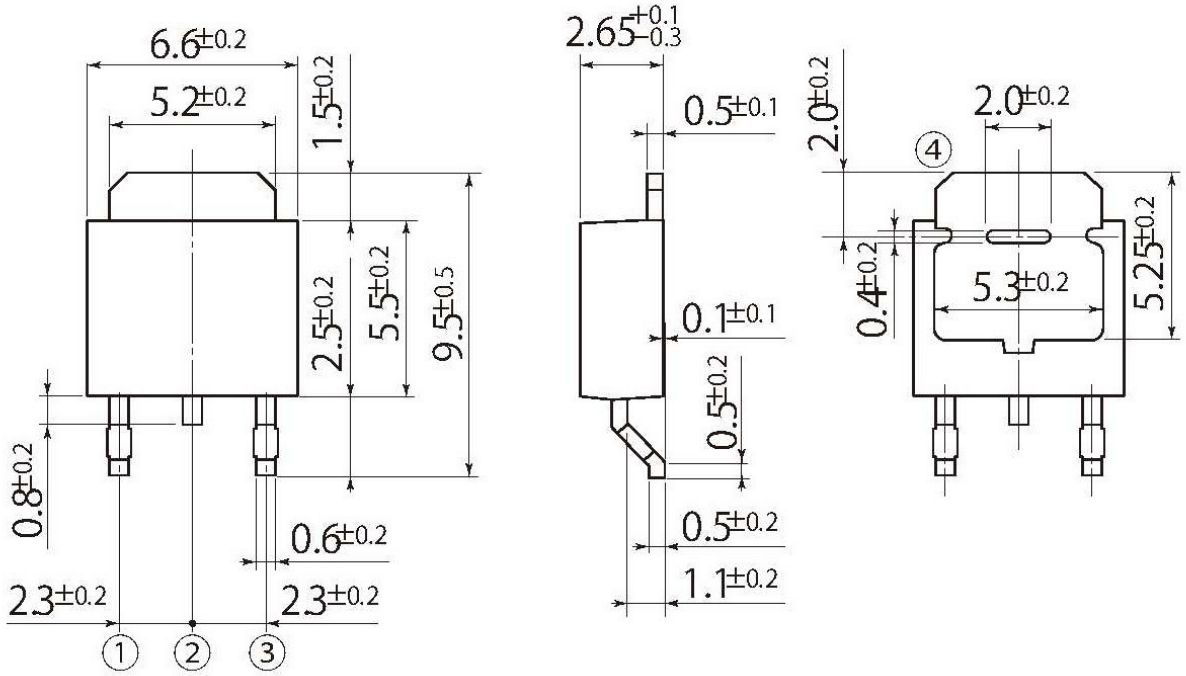
Outline Dimensions

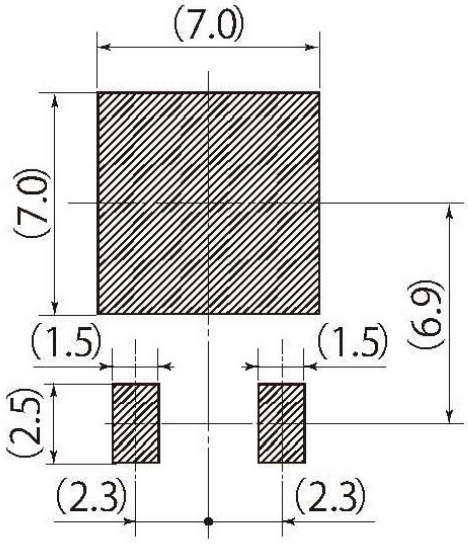
unit:mm

scale: 4/1

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.