D6FEC12ST

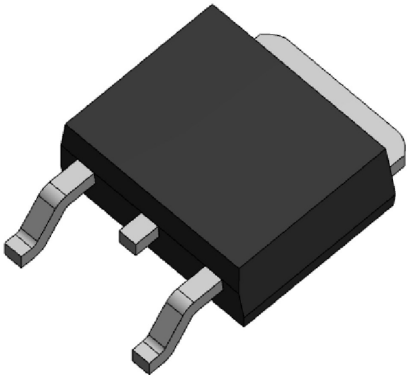
Schottky Barrier Diodes
120V, 6A

Feature

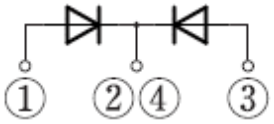
- SMD
- Tj=175°C
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

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		175	°C
Repetitive peak reverse voltage	V_{RRM}		120	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, Tc=154°C	6	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	100	A
Surge forward current	I_{FSM1}	tp=1ms, Tj=25°C, Non-repetitive	180	A

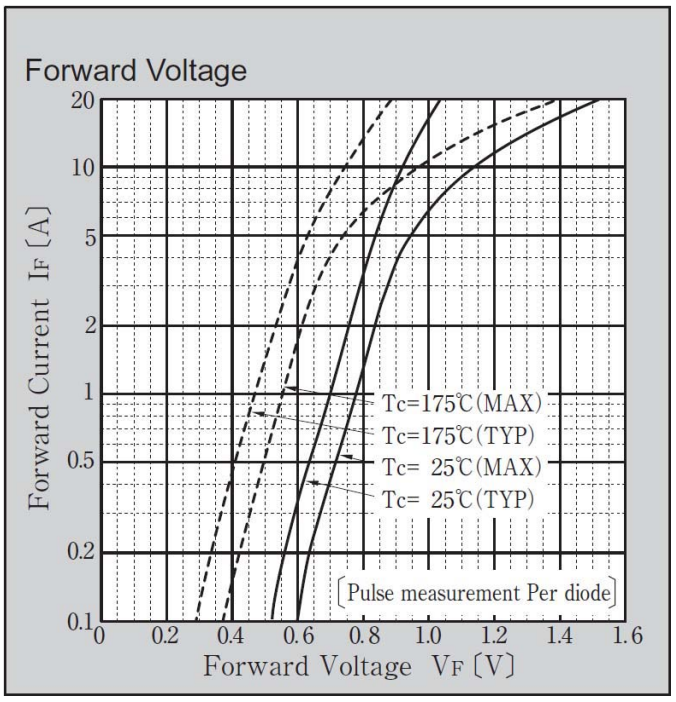
※ ：See the original Specifications

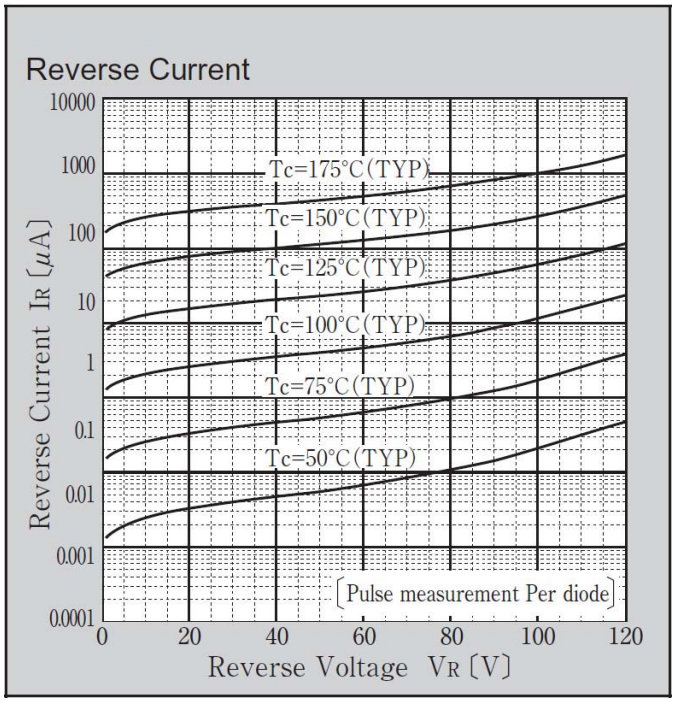
Electrical Characteristics (unless otherwise specified : Tc=25°C)

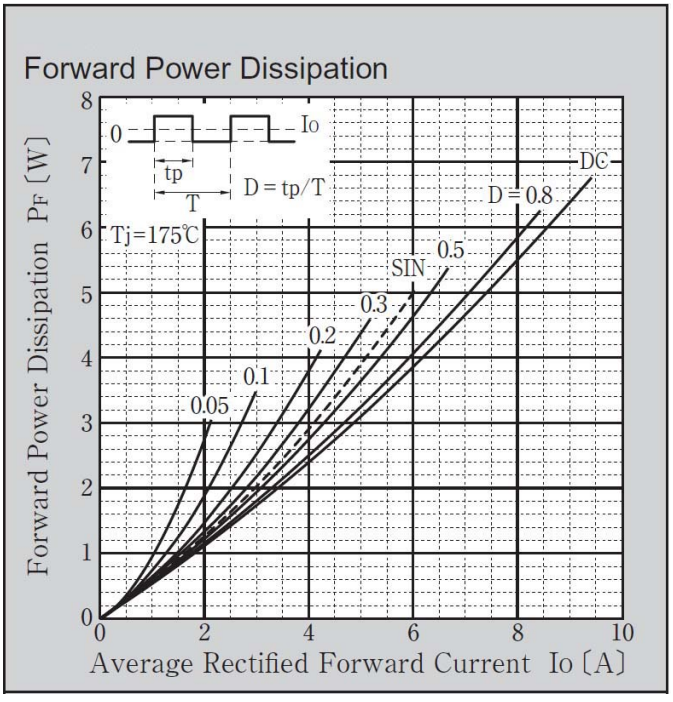
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement, per diode			0.87	V
Reverse current	I_R	VR=120V, Pulse measurement, per diode			0.008	mA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		60		pF
Thermal resistance	Rth(j-c)	Junction to case			4	°C/W

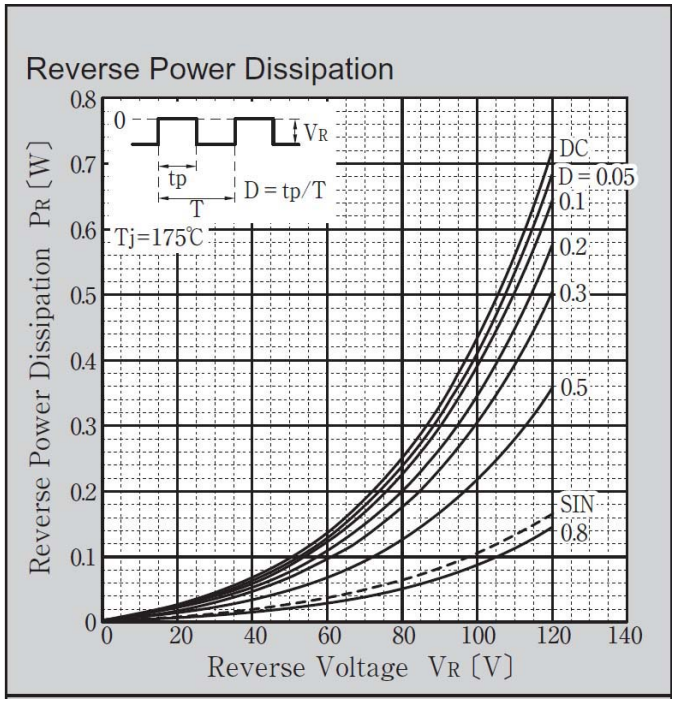
※ ：See the original Specifications

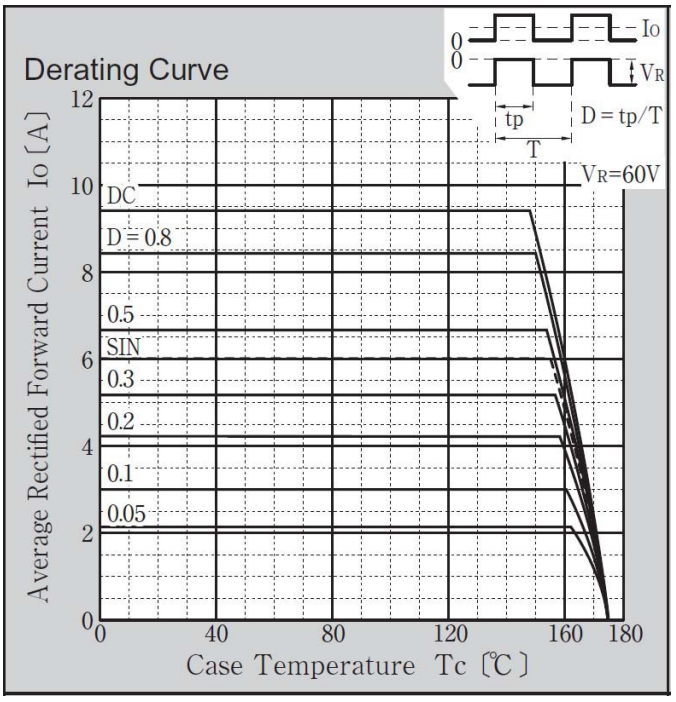
CHARACTERISTIC DIAGRAMS

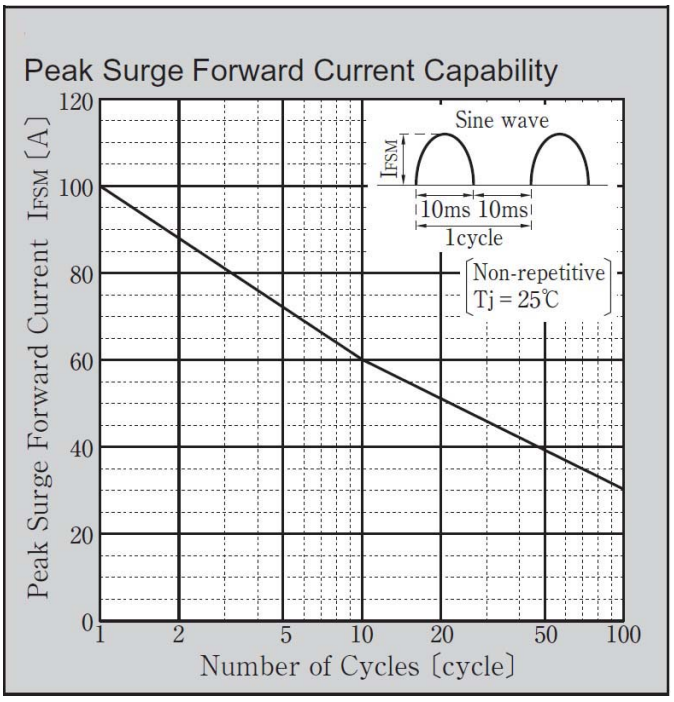


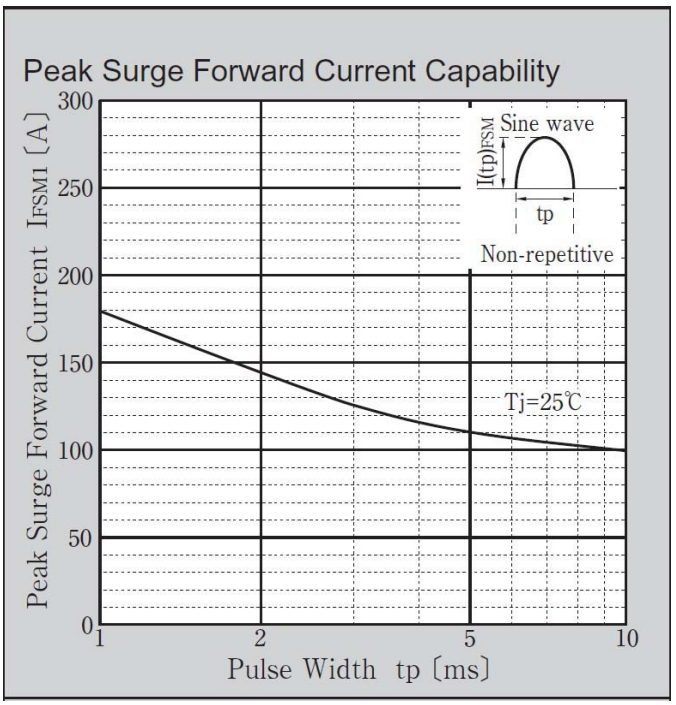


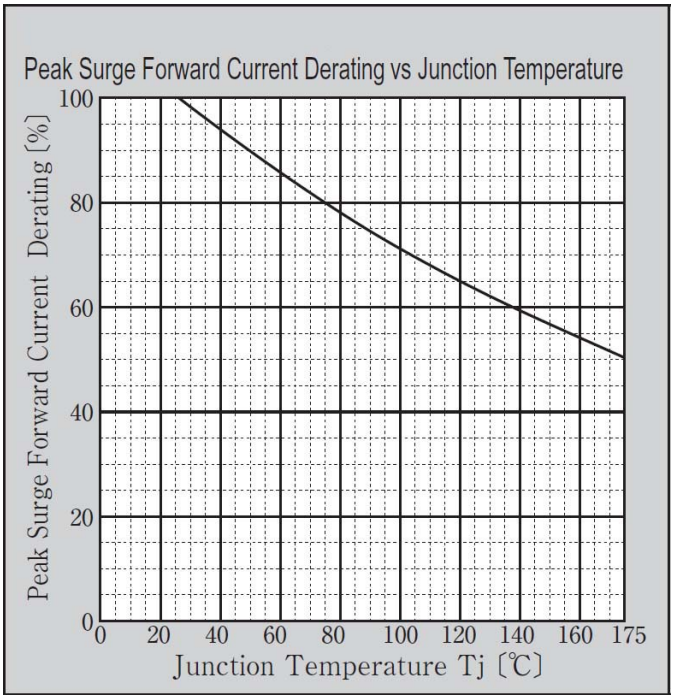


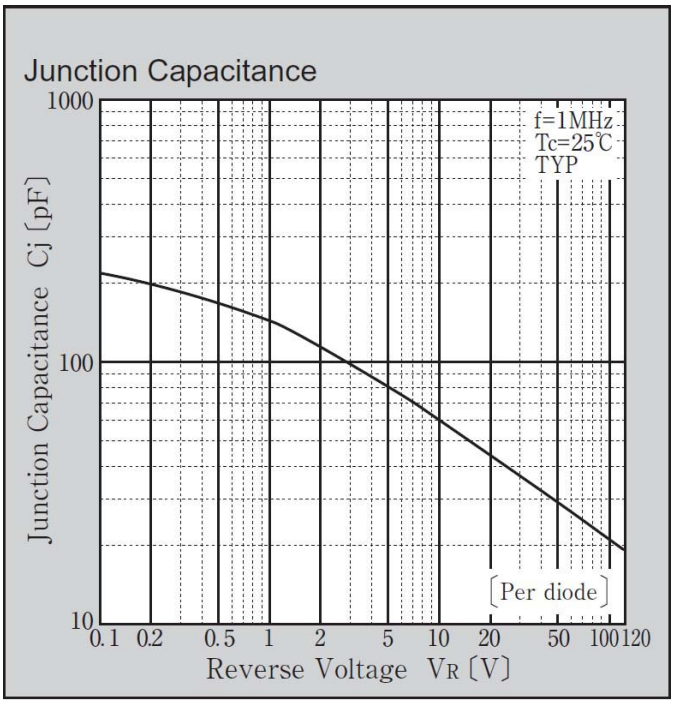


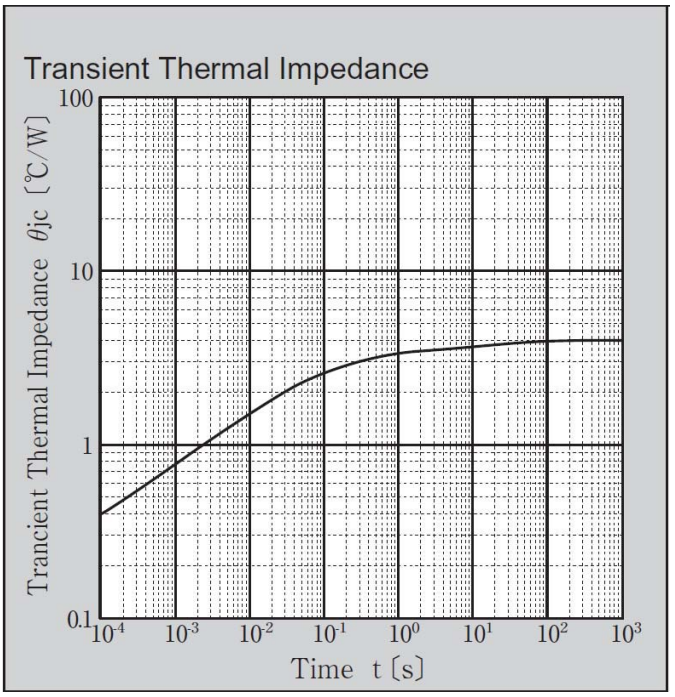

Derating Curve
Io
0
0
VR
tp
T
D = tp/T
VR=60V
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Case Temperature Tc〔℃〕
0
2
4
6
8
10
12
0
40
80
120
160
180


Peak Surge Forward Current Capability
Sine wave
IFSM
10ms 10ms
1cycle
Non-repetitive
Tj = 25℃
Peak Surge Forward Current IFSM〔A〕
Number of Cycles〔cycle〕
0
20
40
60
80
100
120
1
2
5
10
20
50
100


Peak Surge Forward Current Capability
Sine wave
I(tp)FSM
tp
Non-repetitive
Tj=25℃
Peak Surge Forward Current IFSM1〔A〕
Pulse Width tp〔ms〕
0
50
100
150
200
250
300
1
2
5
10


Peak Surge Forward Current Derating vs Junction Temperature
Peak Surge Forward Current Derating〔%〕
Junction Temperature Tj〔℃〕
0
20
40
60
80
100
0
20
40
60
80
100
120
140
160
175


Junction Capacitance
1000
100
10
Junction Capacitance Cj〔pF〕
f=1MHz
Tc=25℃
TYP
〔Per diode〕
0.1 0.2 0.5 1 2 5 10 20 50 100 120
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

G3

JEDEC Code	TO-277AB similar
JEITA Code	SC-63
House Name	FE

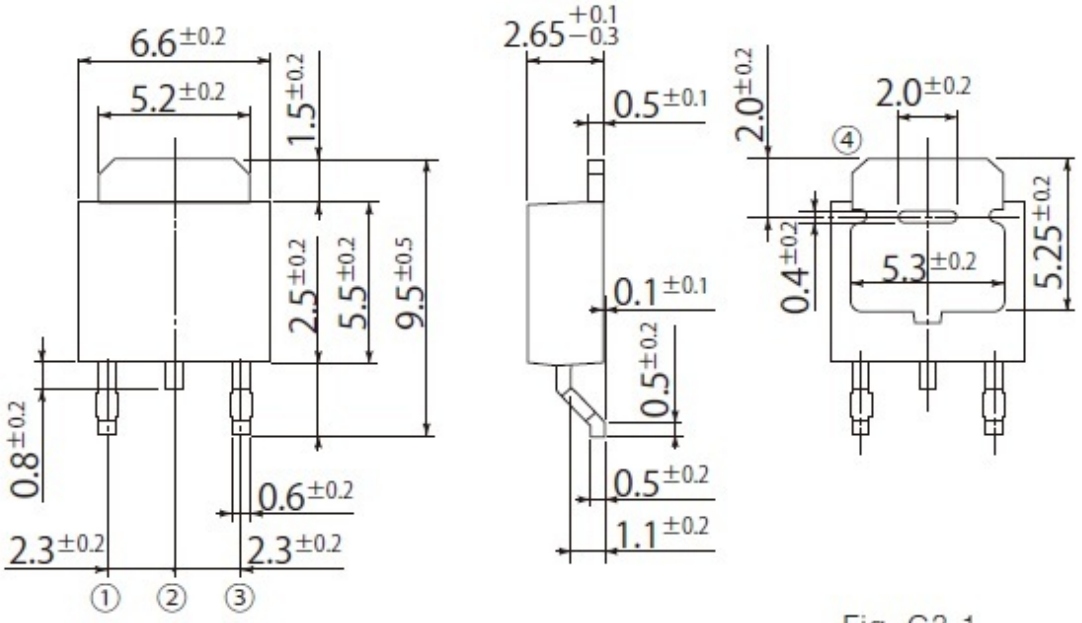
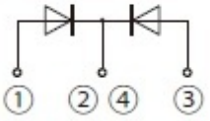
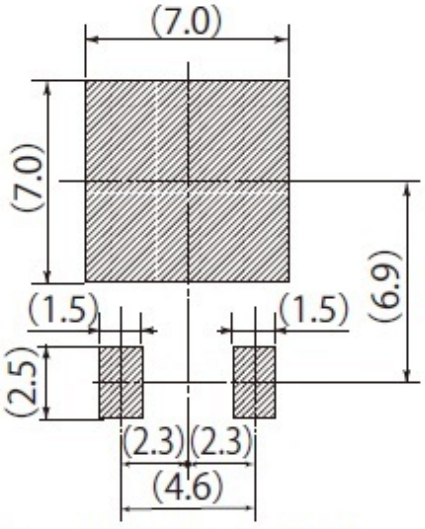


Fig. G3-1





Referential Soldering Pad

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

・The content specified herein is subject to change for improvement without notice.
・If you wish to use any such products, please be sure to refer to the specifications.

U182-1(2026.09)

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