D15FR4ST

Schottky Barrier Diodes
40V, 15A

Feature

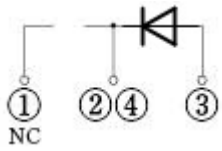
- Permit high current with a small package
- Tj=175℃
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FR
Package (JEDEC Code): TO-252AA similar



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}		40	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, With heatsink ,Tc=152℃	15	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃	250	A
Surge forward current	I_{FSM1}	tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25℃	570	A

※ ：See the original Specifications

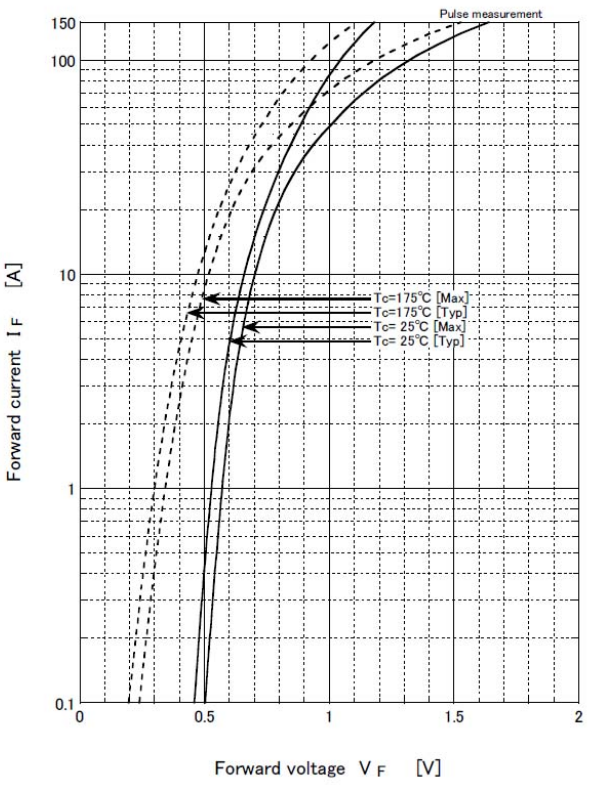
Electrical Characteristics (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement			0.74	V
Reverse current	I_R	VR=40V, Pulse measurement			0.04	mA
Total capacitance	Ct	f=1MHz, VR=10V		398		pF
Thermal resistance	Rth(j-c)	Junction to case			2.1	℃/W

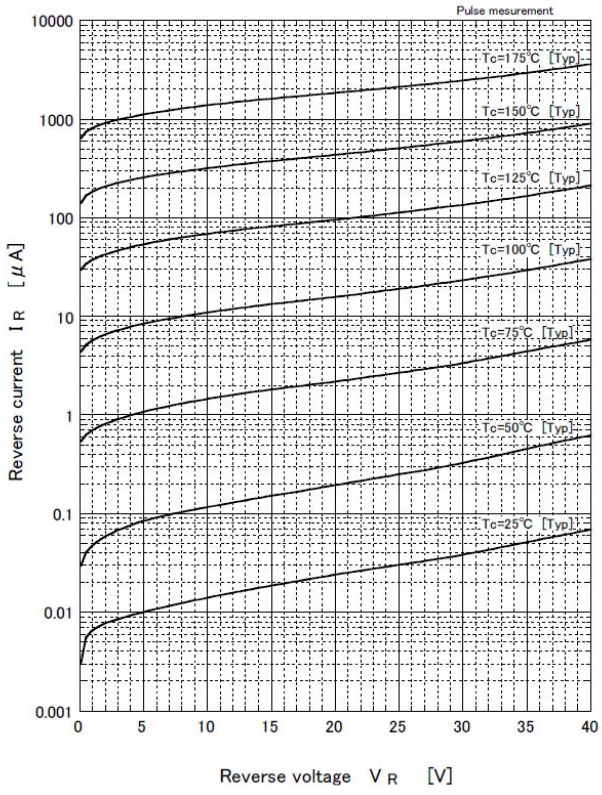
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

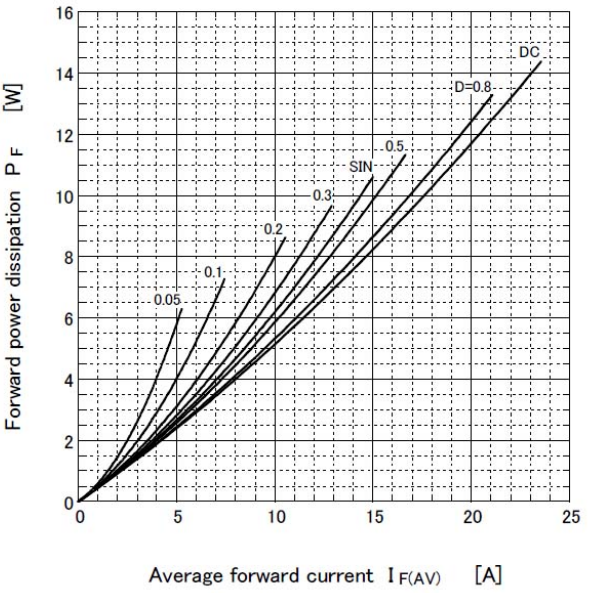
Forward voltage

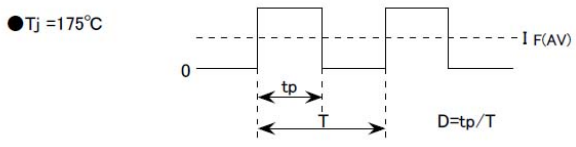


Reverse current

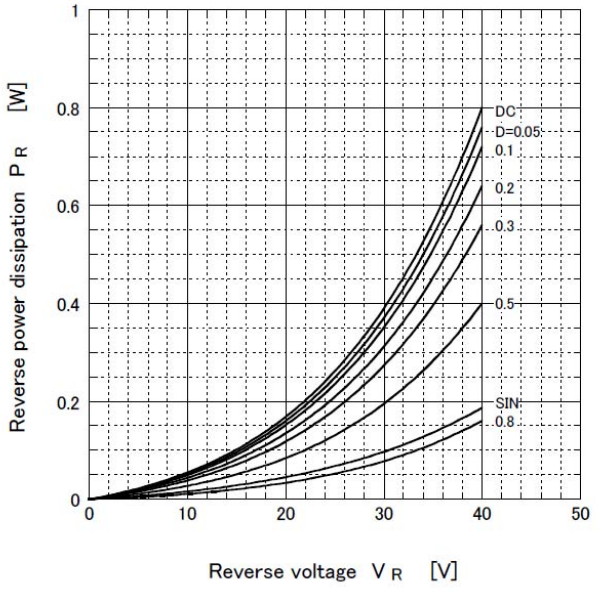


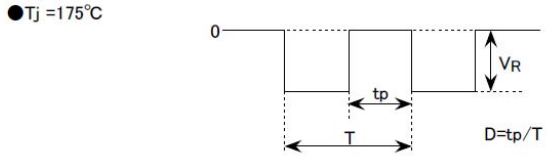
Forward power dissipation



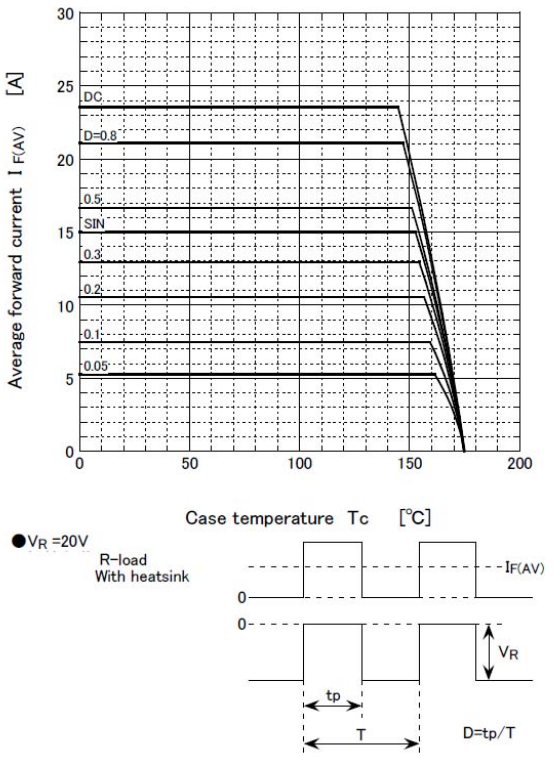


Reverse power dissipation

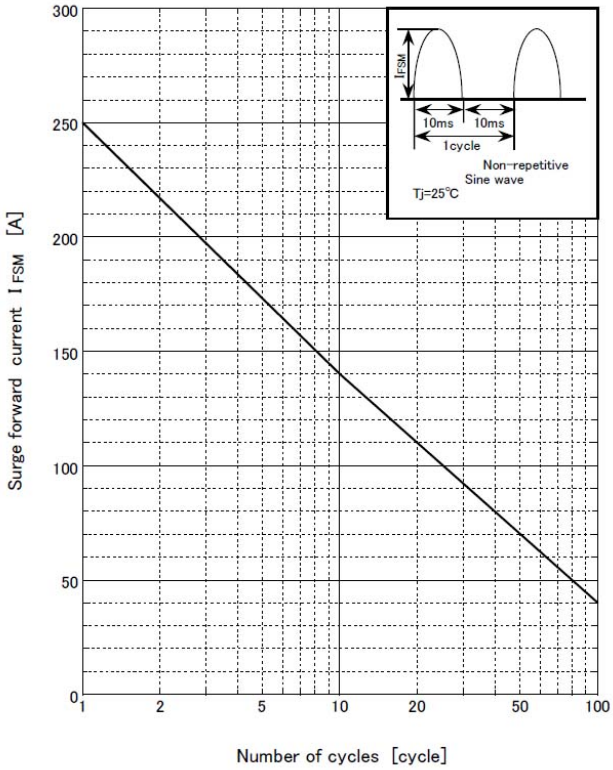




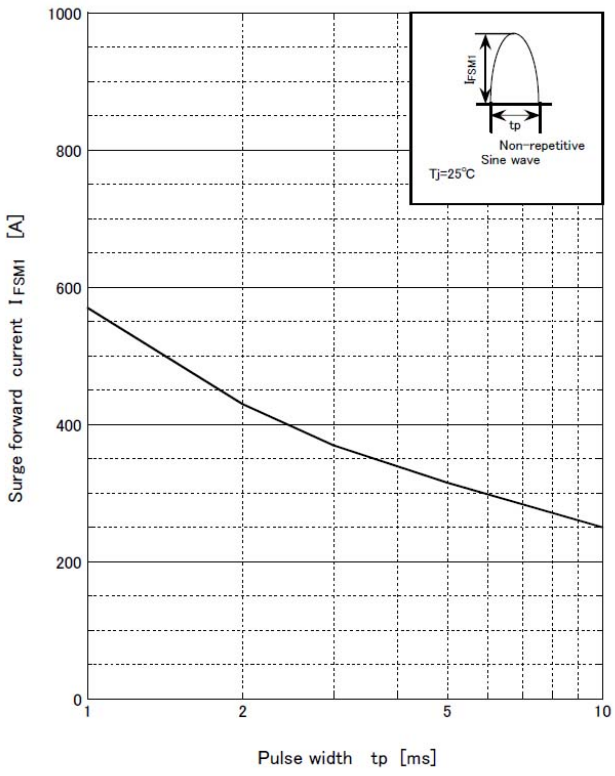
Derating curve



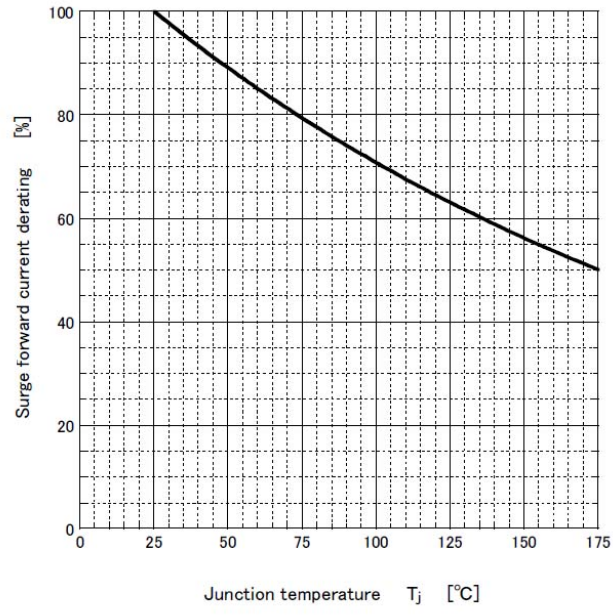
Surge forward current capability

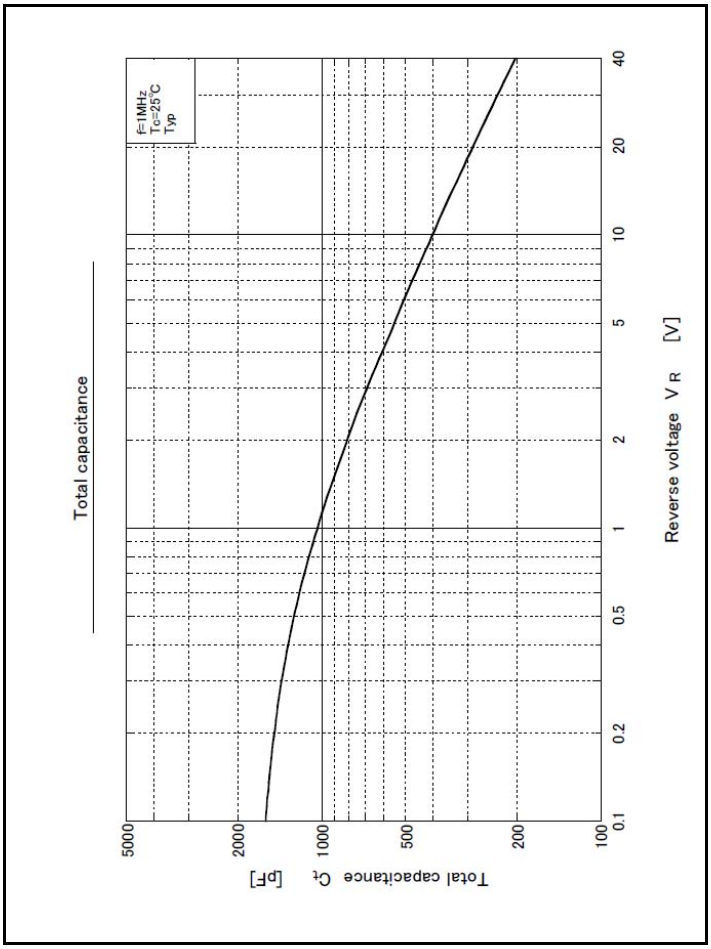


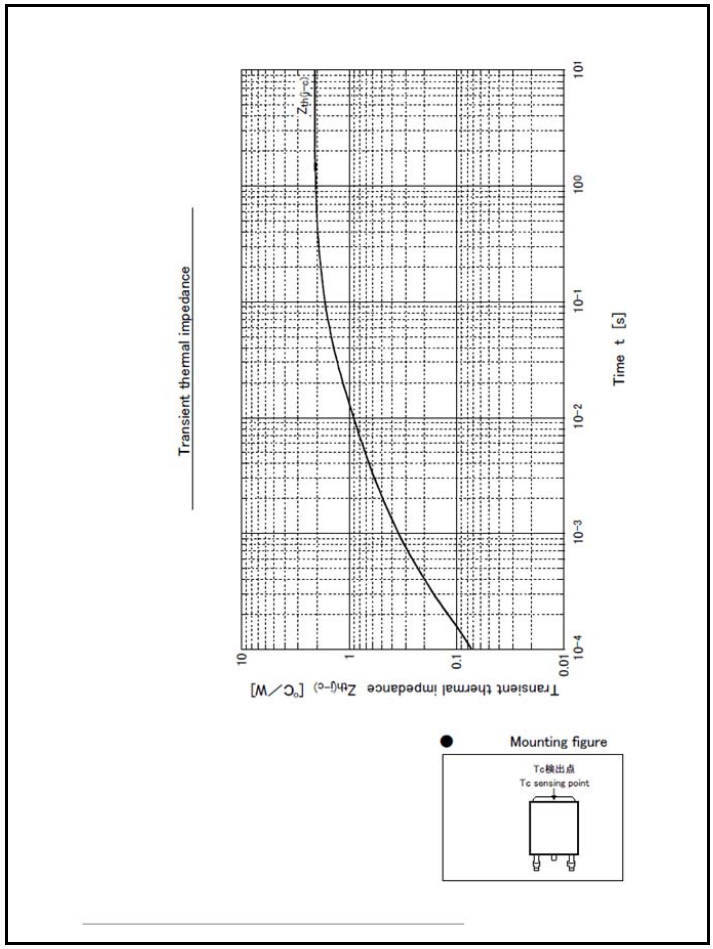
Surge forward current capability



Surge forward current derating
vs Junction temperature




Total capacitance
f=1MHz
Tc=25°C
Typ
Total capacitance Ct [pF]
5000
2000
1000
500
200
100
0.1
0.2
0.5
1
2
5
10
20
40
Reverse voltage VR [V]


Transient thermal impedance
Transient thermal impedance Zth(j-c) [°C/W]
10
1
0.1
0.01
10-4
10-3
10-2
10-1
100
101
Time t [s]
Mounting figure
Tc検出点
Tc sensing point

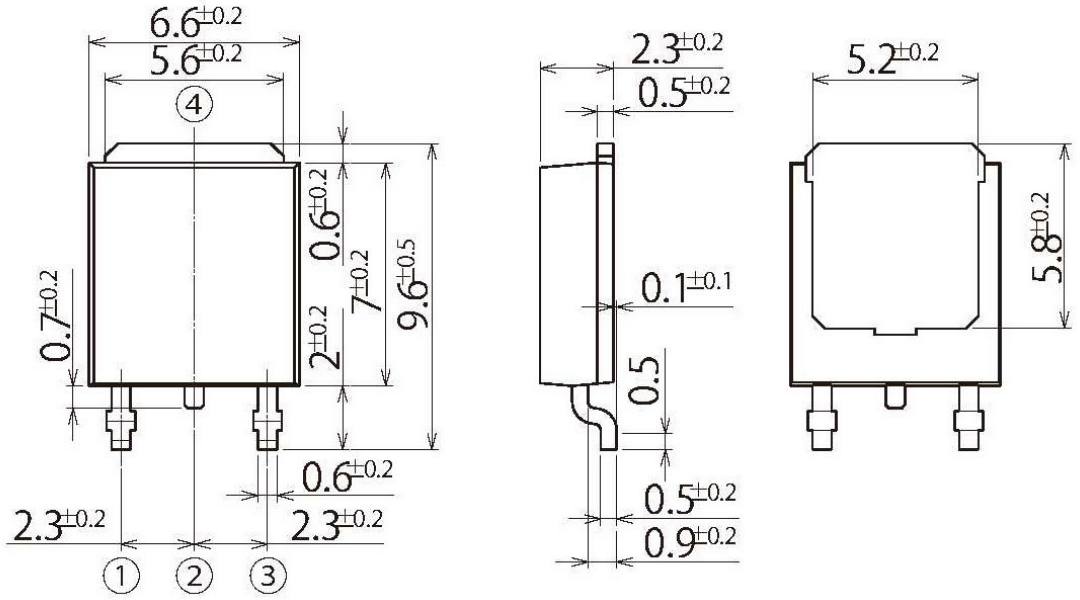
Outline Dimensions

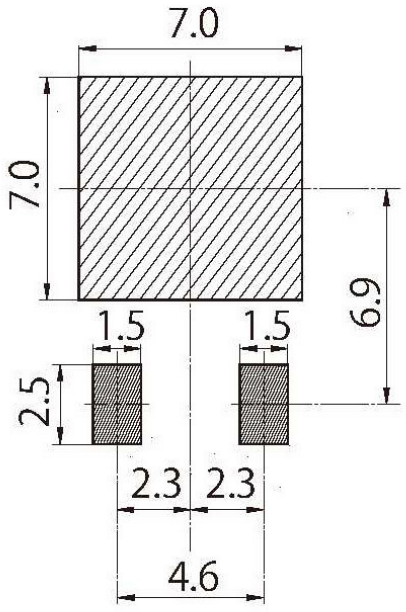
unit:mm

scale: 4/1

G5

JEDEC Code	TO-252AA similar
JEITA Code	–
House Name	FR





Referential Soldering Pad

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

Notes

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   【Specific applications】
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