ShinDengen

DF30SC3ML

Schottky Barrier Diodes
30V, 30A

Feature

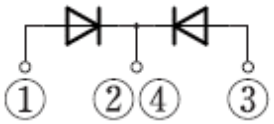
- SMD
- High Recovery Speed
- Low V_F
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): STO-220
Package (JEITA Code): SC-83 similar



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V_{RRM}		30	V
Repetitive peak surge reverse voltage	V_{RRSM}	Pulse width 0.5ms, duty=1/40	35	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, Tc=119°C	30	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	350	A
Repetitive peak surge reverse power	P_{RRSM}	Pulse width 10μs, Tj=25°C, per diode	1000	W

※ :See the original Specifications

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

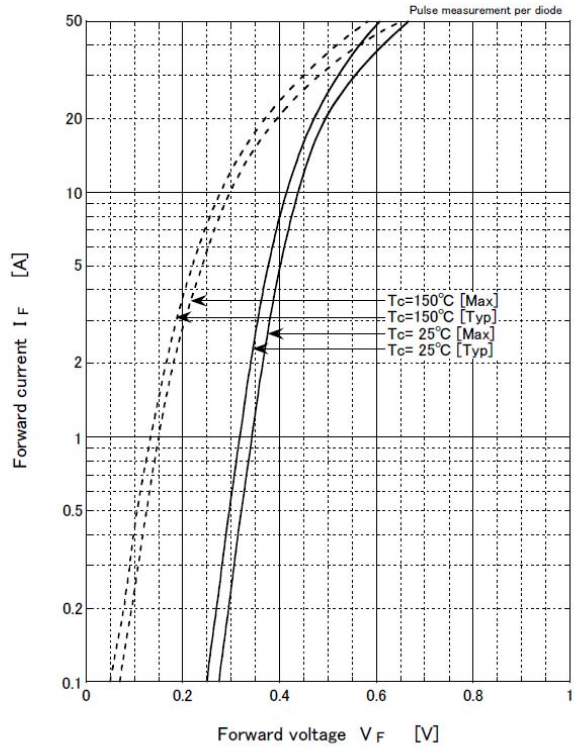
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement, per diode			0.48	V
Forward voltage	V_F	IF=12.5A, Pulse measurement, per diode			0.45	V
Reverse current	I_R	VR=30V, Pulse measurement, per diode			10	mA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		820		pF
Thermal resistance	Rth(j-c)	Junction to case			1.6	°C/W

※ :See the original Specifications

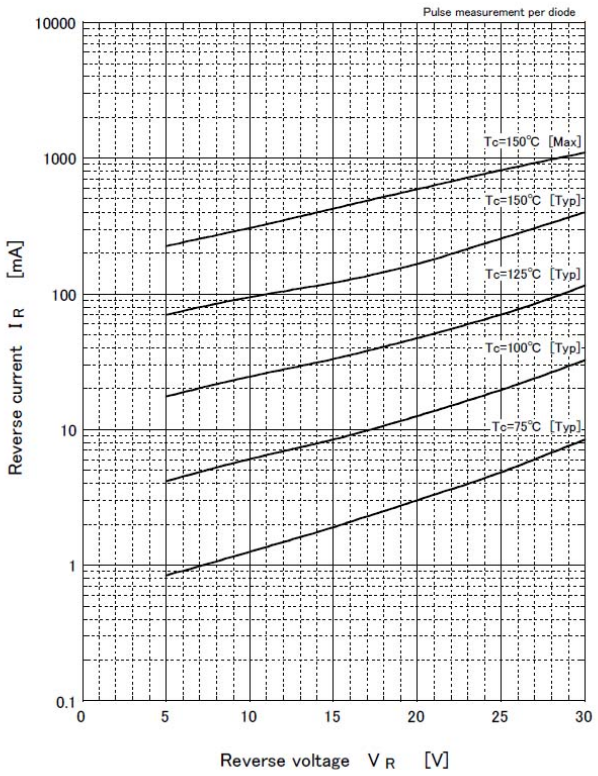
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CHARACTERISTIC DIAGRAMS

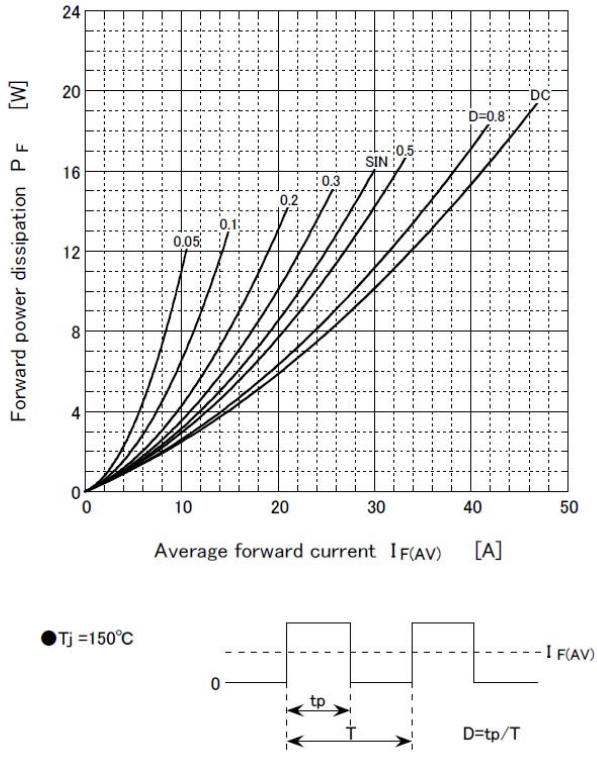
Forward voltage



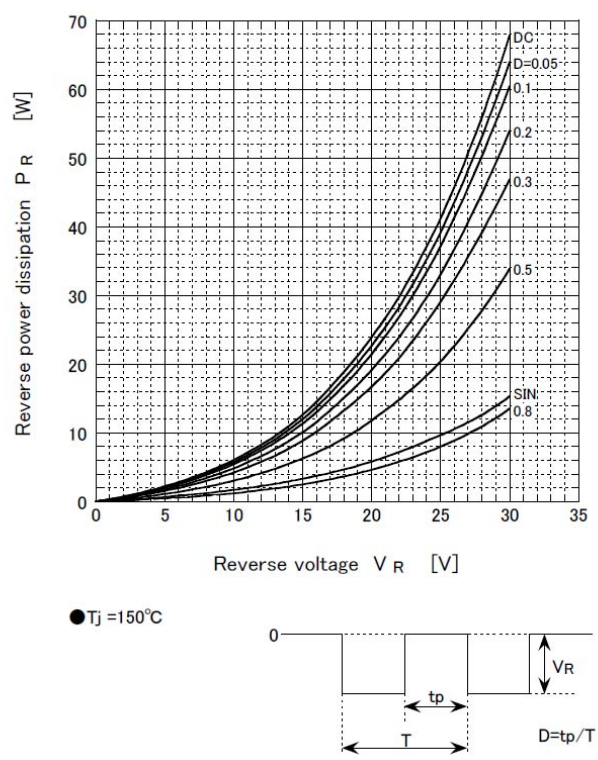
Reverse current



Forward power dissipation

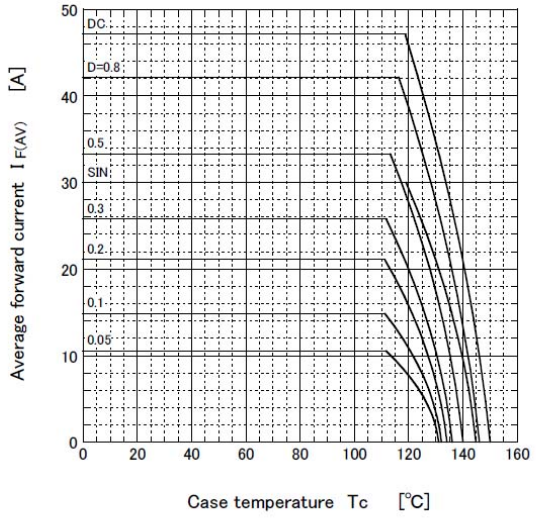


Reverse power dissipation

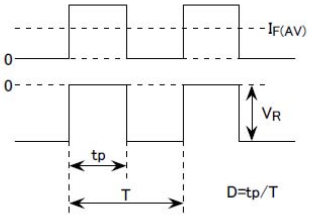


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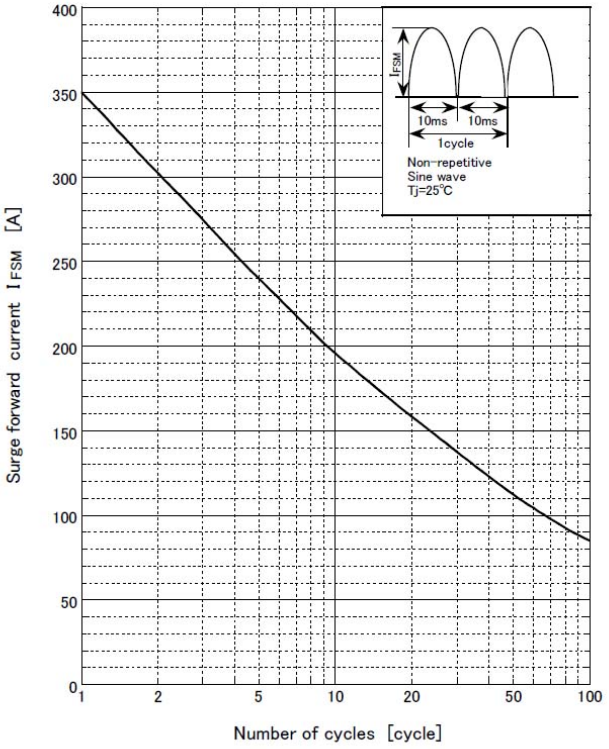
Derating curve



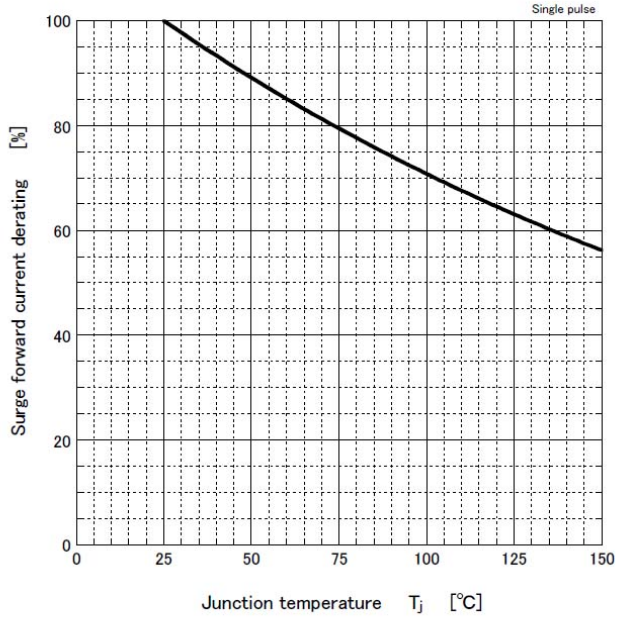
●V_R = 15V
R-load
With heatsink



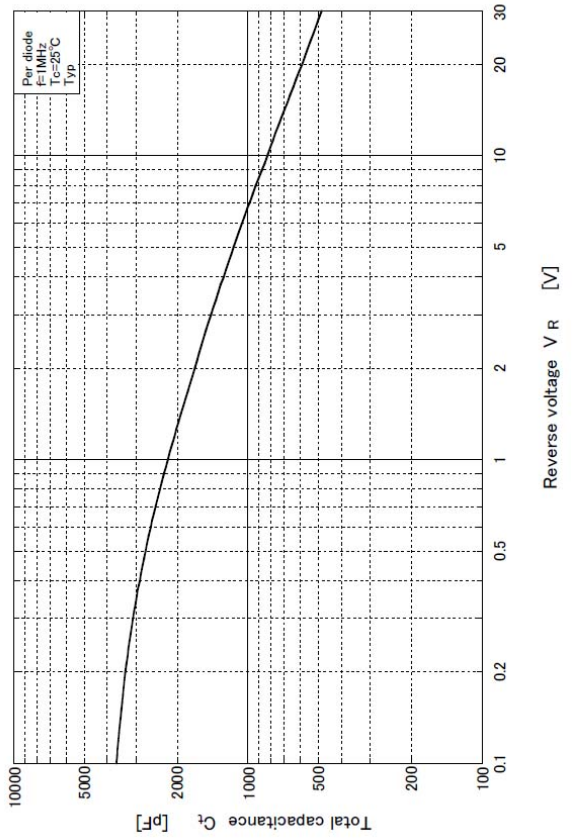
Surge forward current capability



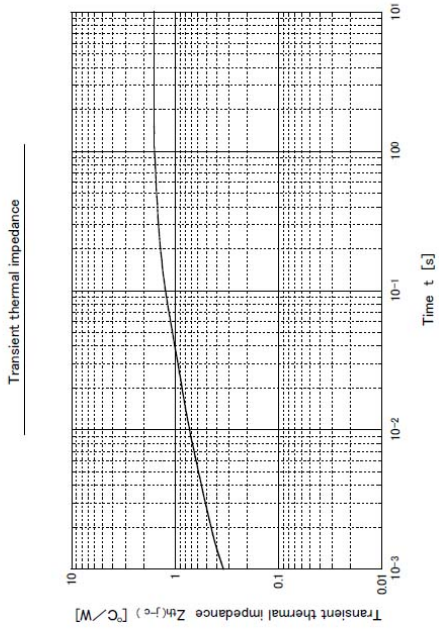
Surge forward current derating
vs Junction temperature



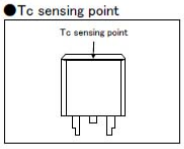
Total capacitance



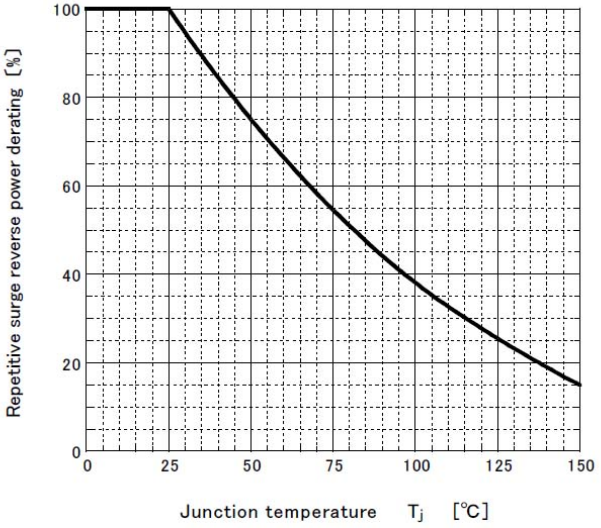
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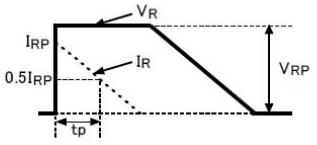
●Tc sensing point



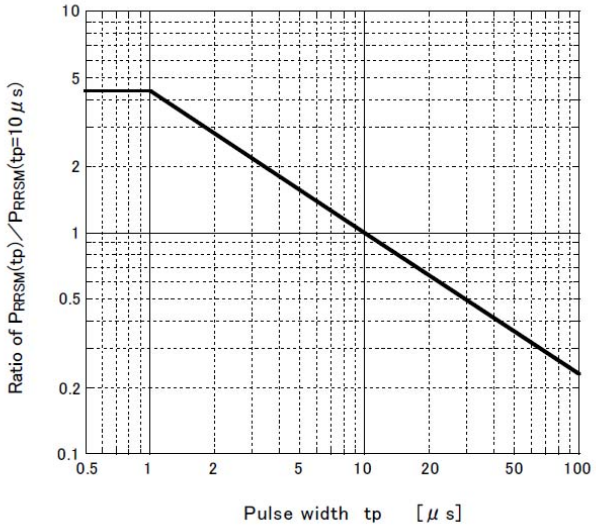
Repetitive surge reverse power derating
vs Junction temperature



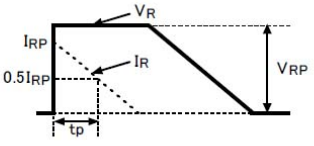
●PRRSM= IRP × VRP



Repetitive surge reverse power capability



●PRRSM= IRP × VRP



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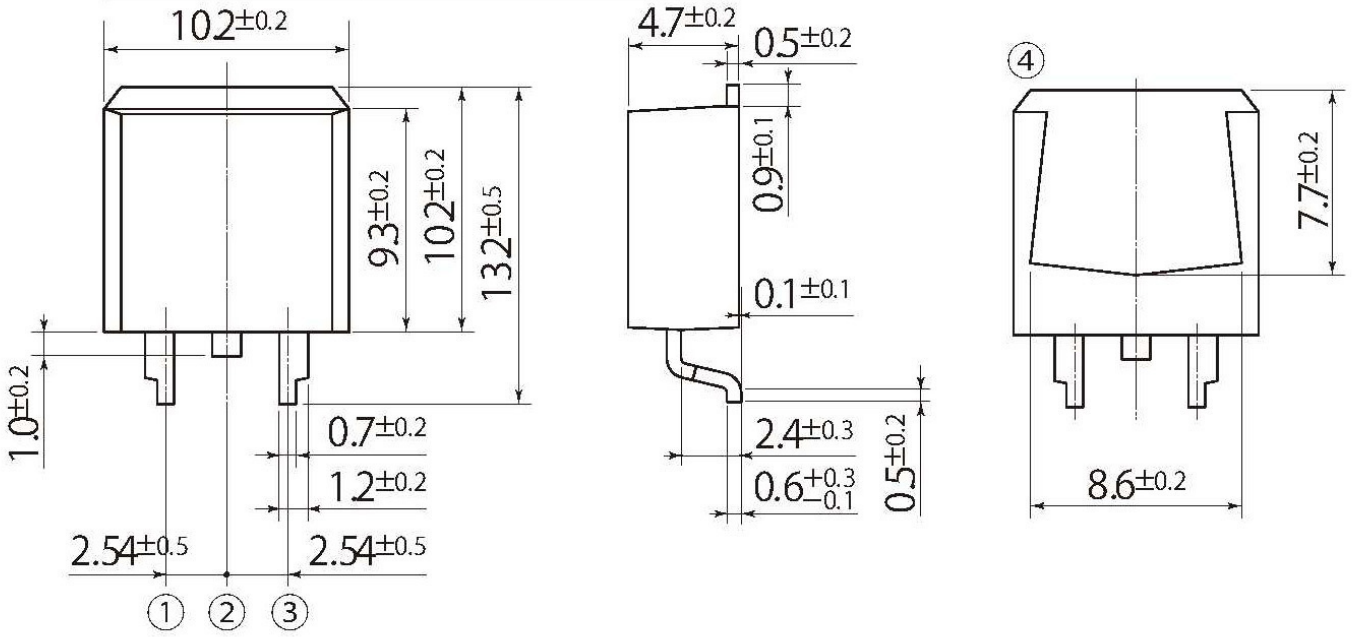
Outline Dimensions

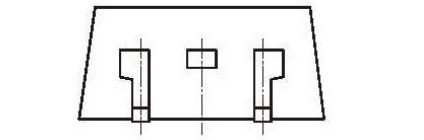
unit:mm

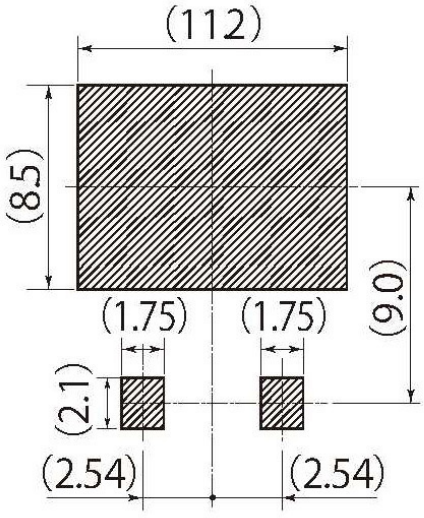
scale: 3/1

H1

JEDEC Code	–
JEITA Code	SC-83 similar
House Name	STO-220







Referential Soldering Pad

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

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Notes

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