ShinDengen

DF10SC9

Schottky Barrier Diodes
90V, 10A

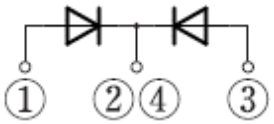
Feature

- SMD
- High Recovery Speed
- 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}		90	V
Repetitive peak surge reverse voltage	V_{RRSM}	Pulse width 0.5ms, duty=1/40	100	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, Rating for each diode IF(AV)/2, With heatsink, Tc=134°C	10	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	150	A
Repetitive peak surge reverse power	P_{RRSM}	Pulse width 10μs, Tj=25°C, per diode	330	W

※ :See the original Specifications

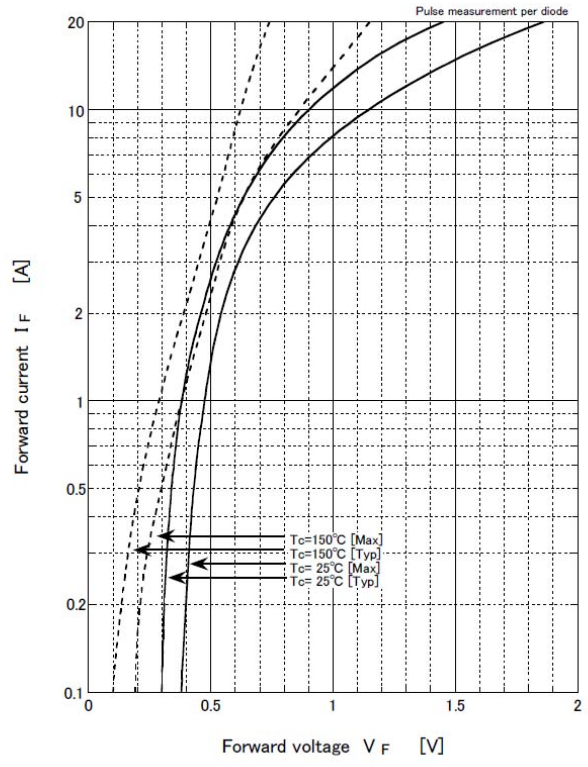
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=5A, Pulse measurement, per diode			0.75	V
Reverse current	I_R	VR=90V, Pulse measurement, per diode			3	mA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		185		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink			1.2	°C/W

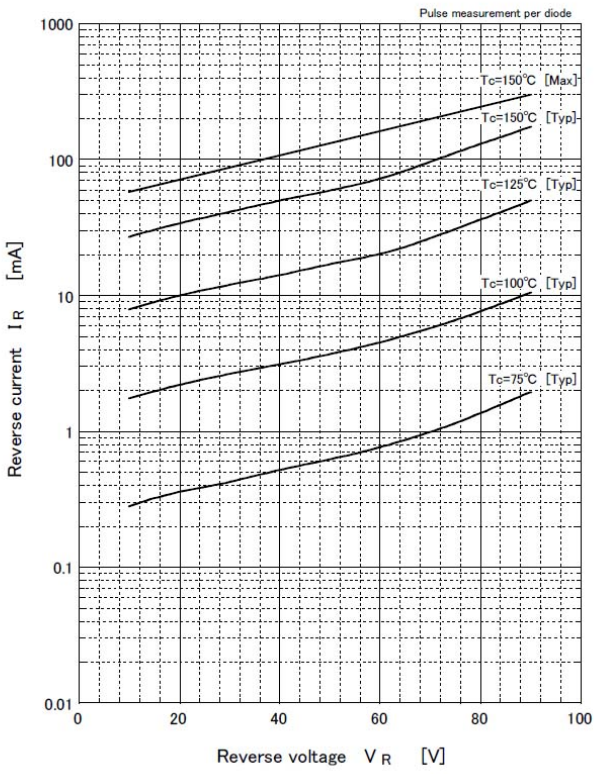
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

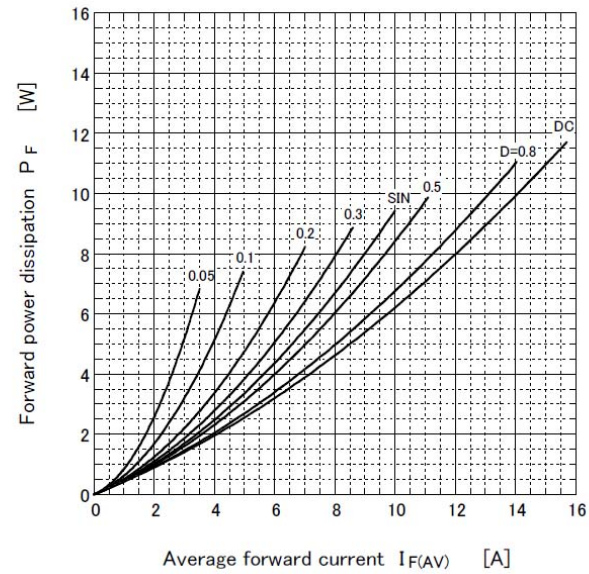
Forward voltage

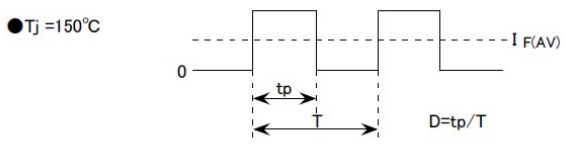


Reverse current

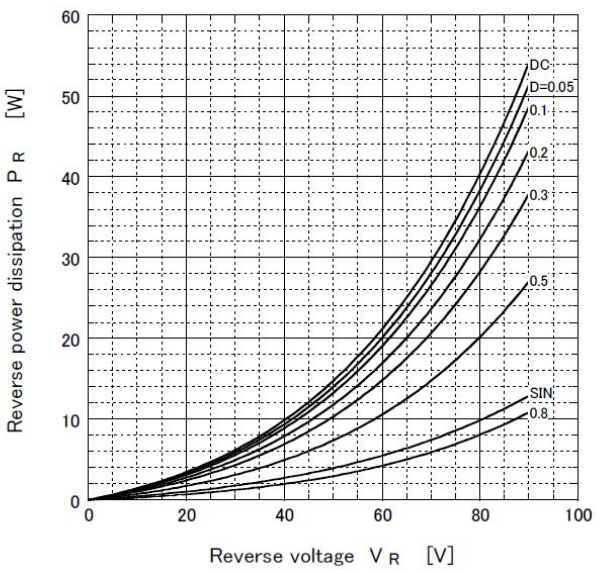


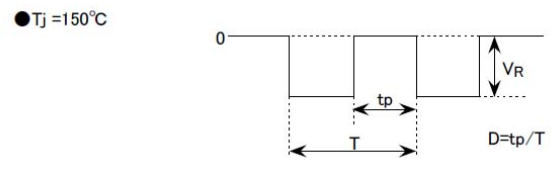
Forward power dissipation



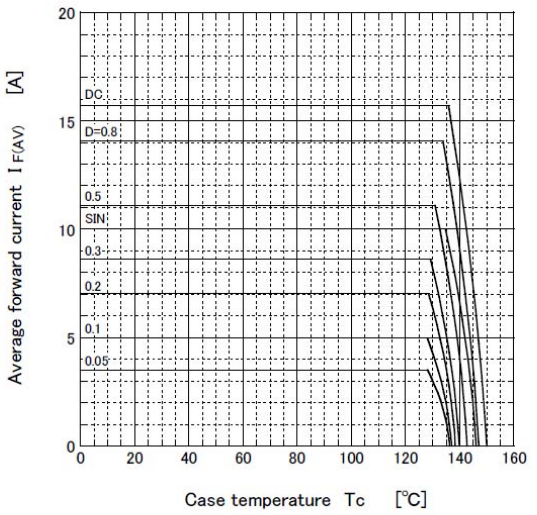


Reverse power dissipation

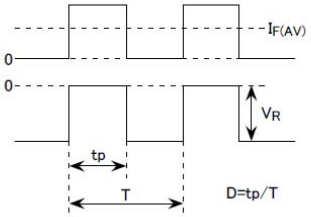




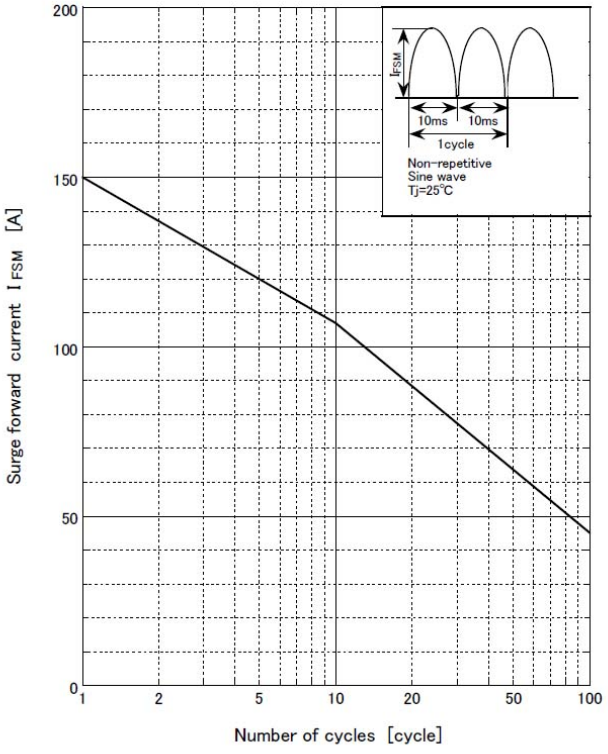
Derating curve



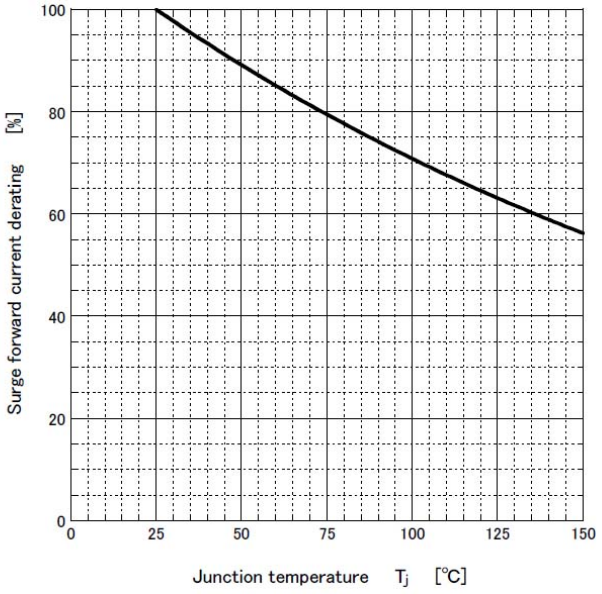
●V_R = 45V
R-load
With heatsink

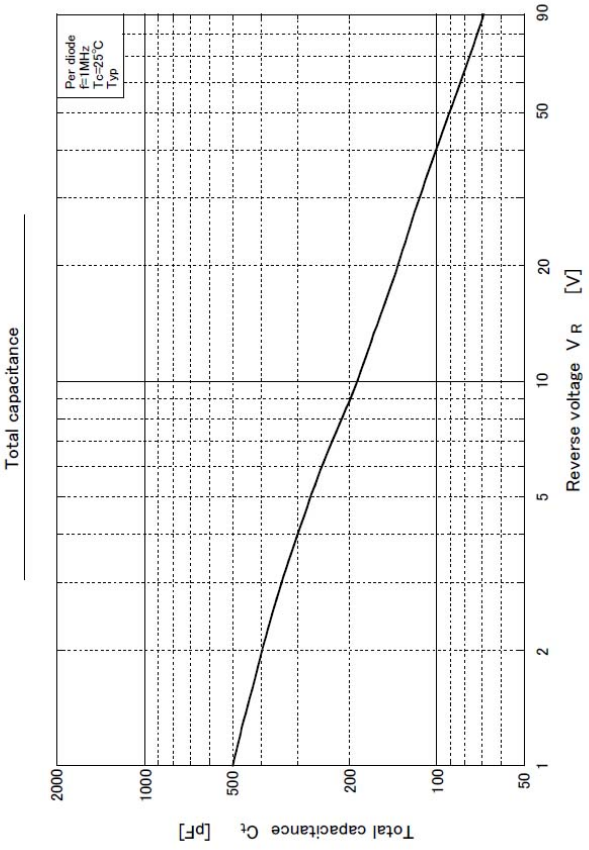


Surge forward current capability

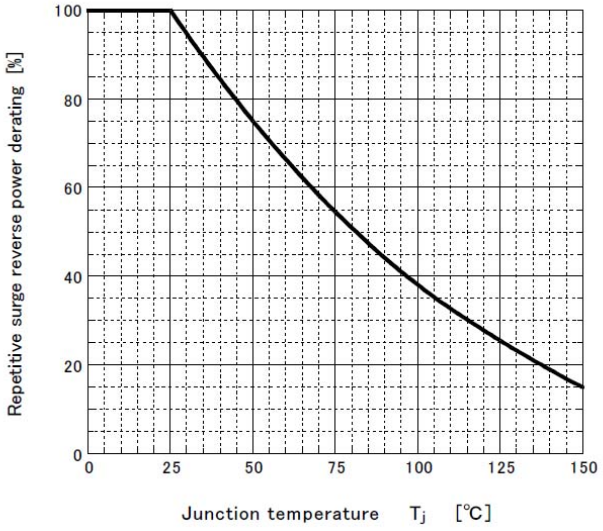


Surge forward current derating
vs Junction temperature

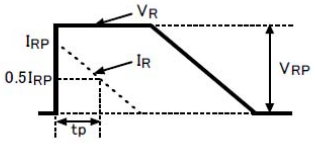




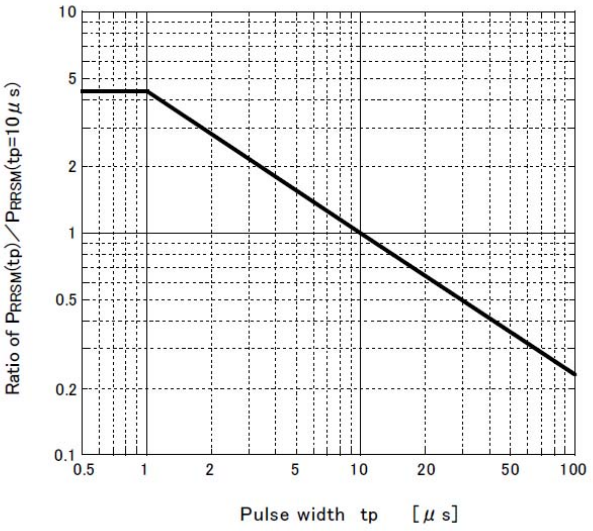
Repetitive surge reverse power derating
vs Junction temperature



● P_{RRSM}= I_{RP} × V_{RP}



Repetitive surge reverse power capability



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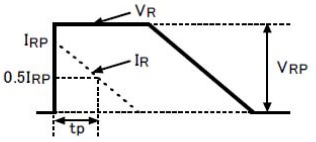


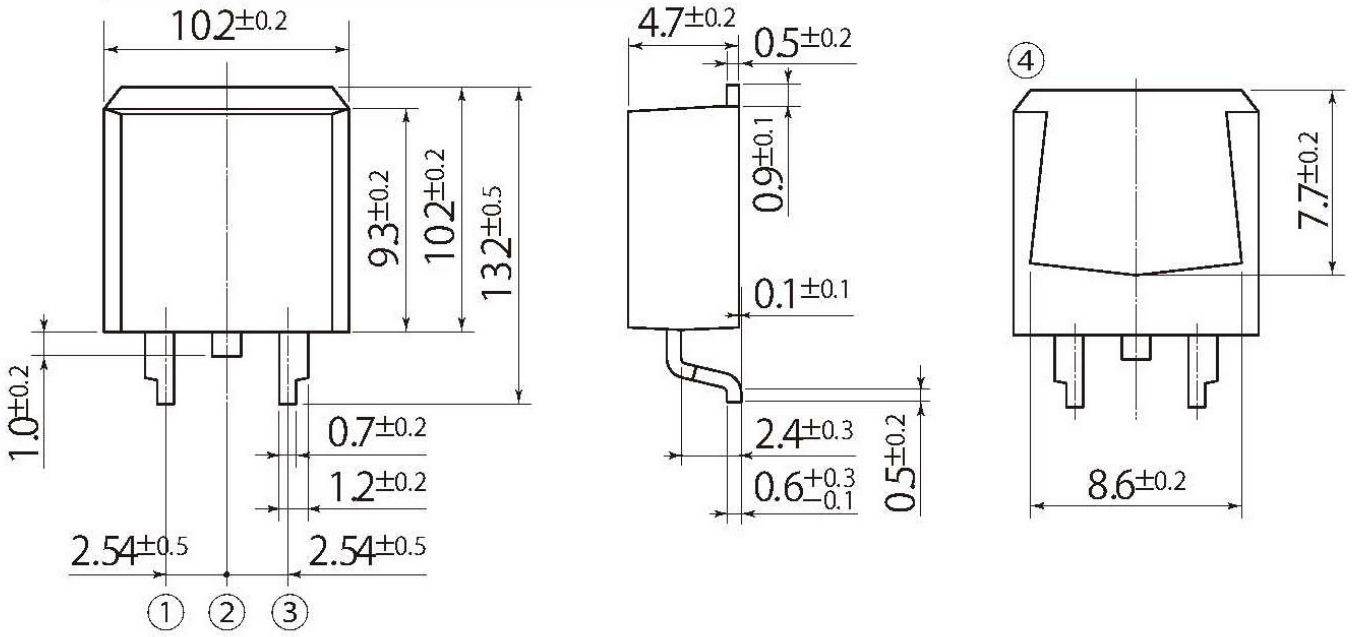
Outline Dimensions

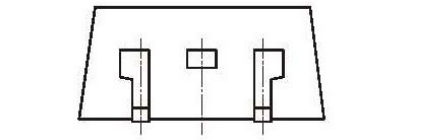
unit:mm

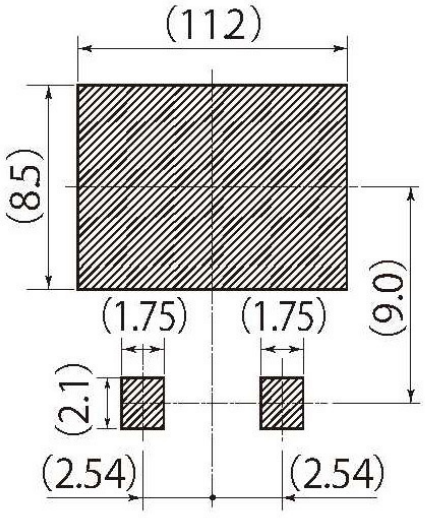
scale: 3/1

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.

Notes

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