ShinDengen

DF10SC9

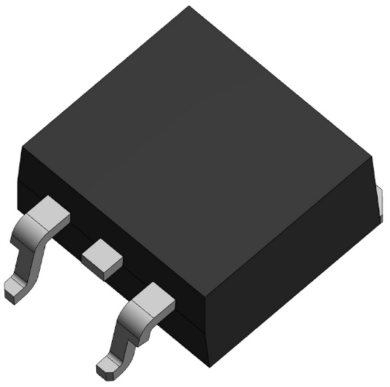
Schottky Barrier Diodes
90V, 10A

Feature

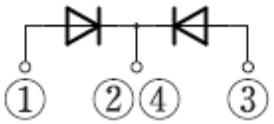
- SMD
- High Recovery Speed
- Pb free terminal
- RoHS:Yes

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

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

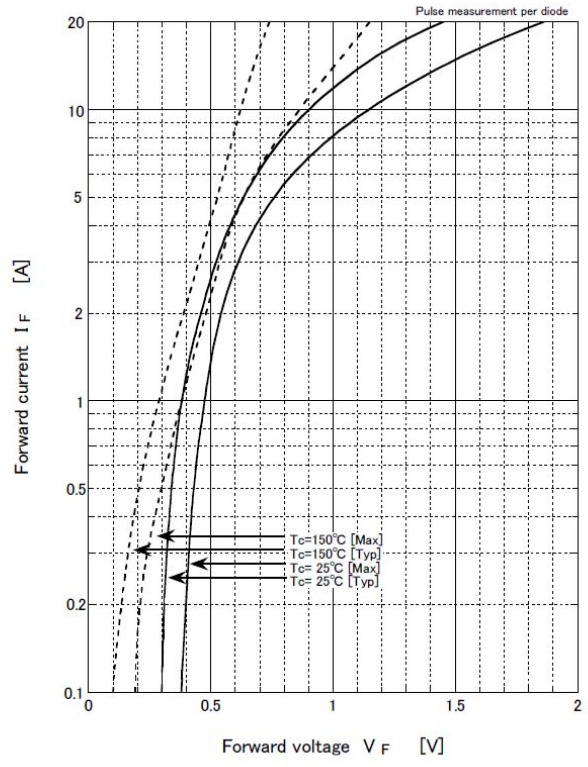
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=5A, Pulse measurement, per diode			0.75	V
Reverse current	I_R	VR=90V, Pulse measurement, per diode			3	mA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		185		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink		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

※ ：See the original Specifications

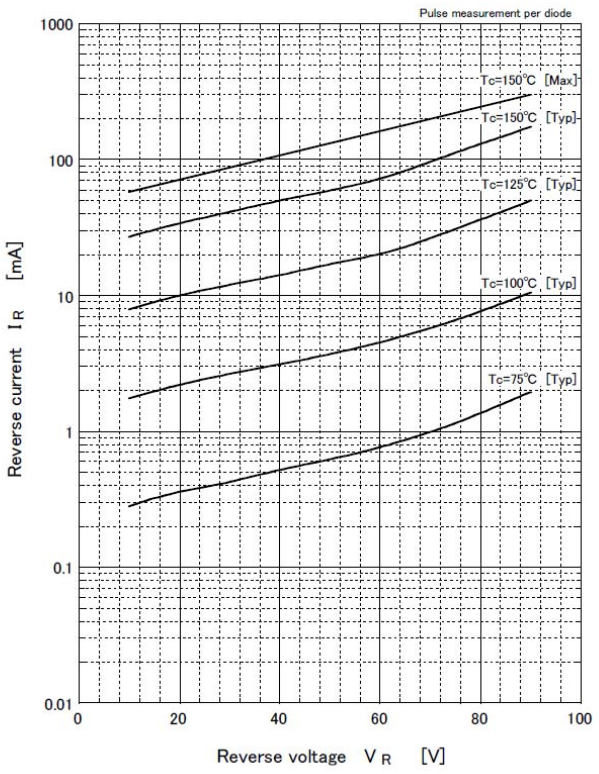
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CHARACTERISTIC DIAGRAMS

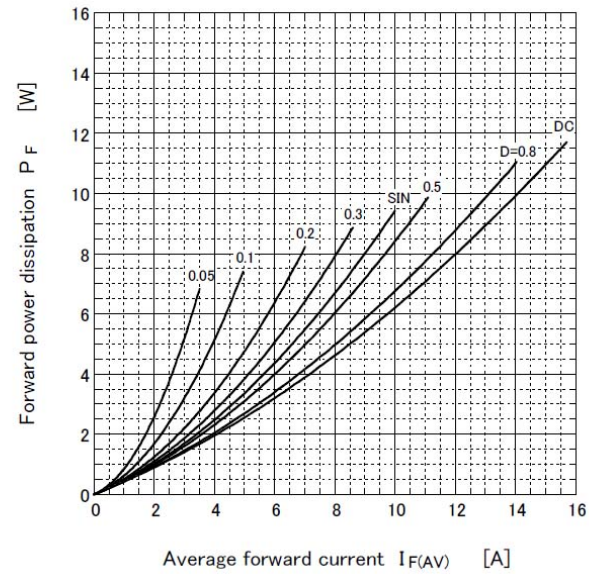
Forward voltage

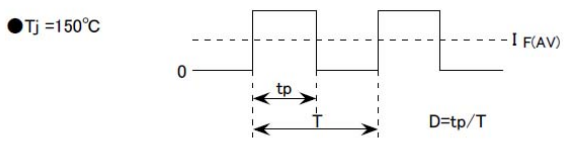


Reverse current

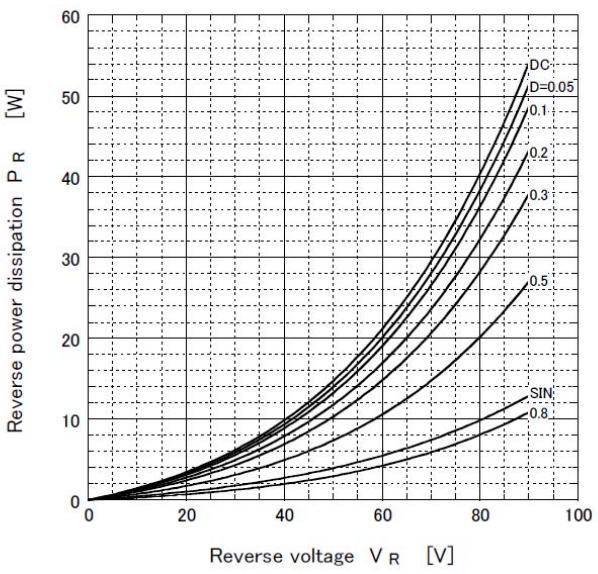


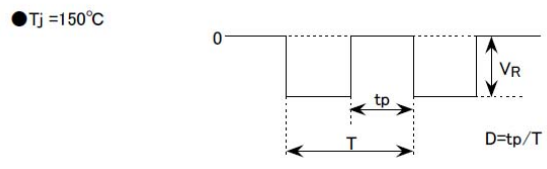
Forward power dissipation





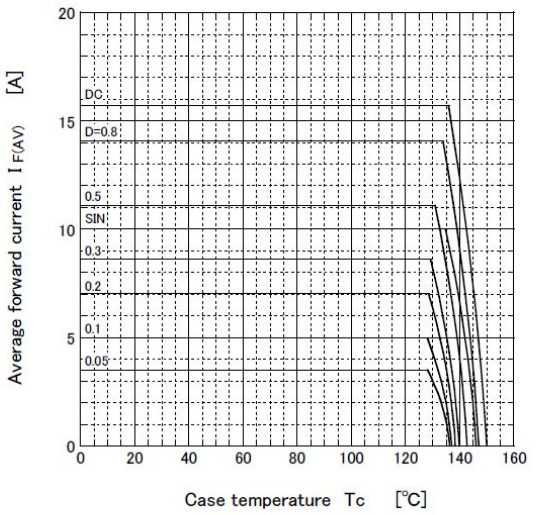
Reverse power dissipation



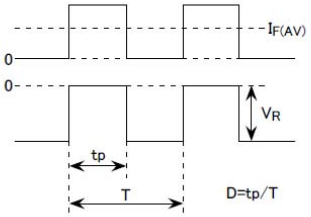


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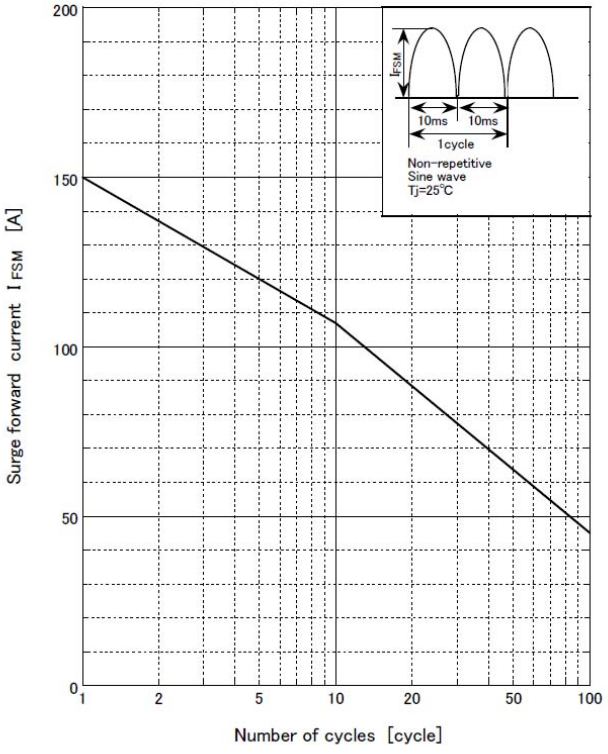
Derating curve



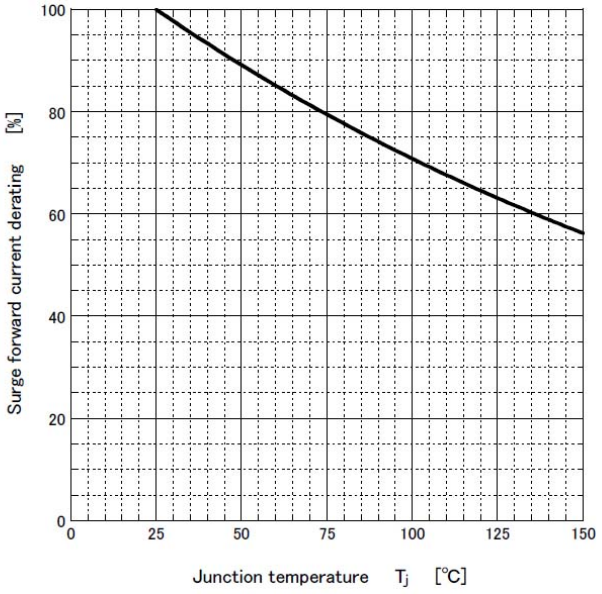
●V_R = 45V
R-load
With heatsink

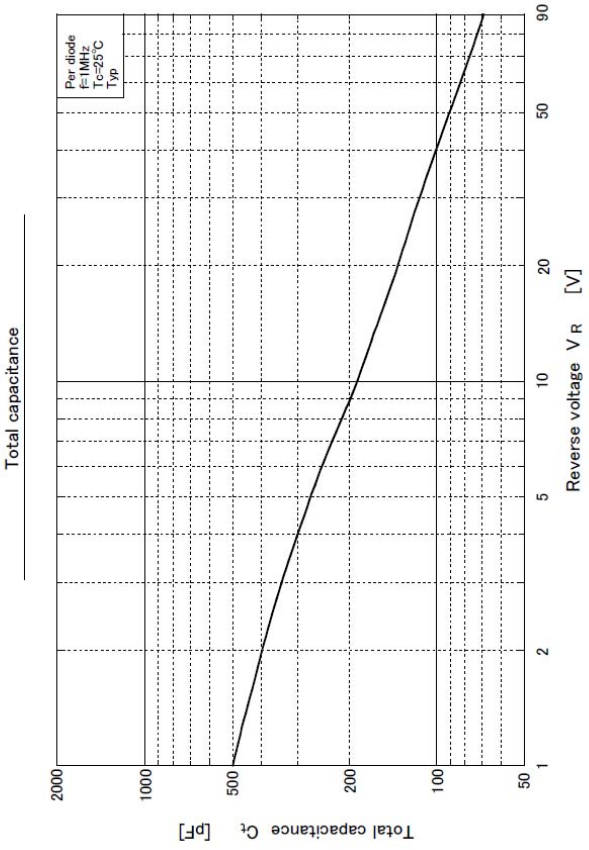


Surge forward current capability



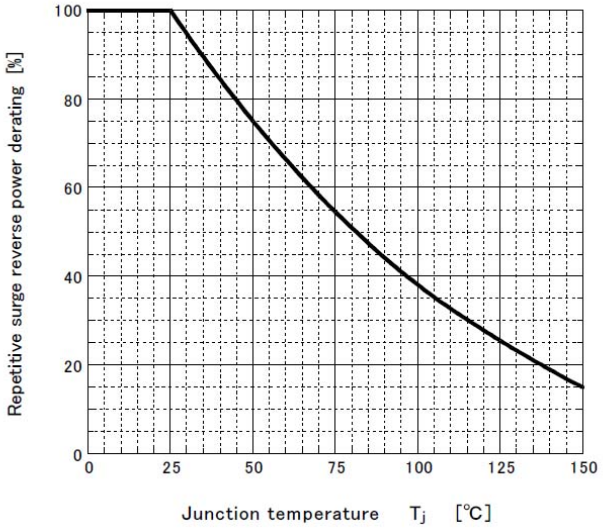
Surge forward current derating
vs Junction temperature



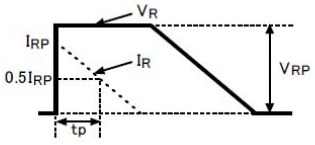


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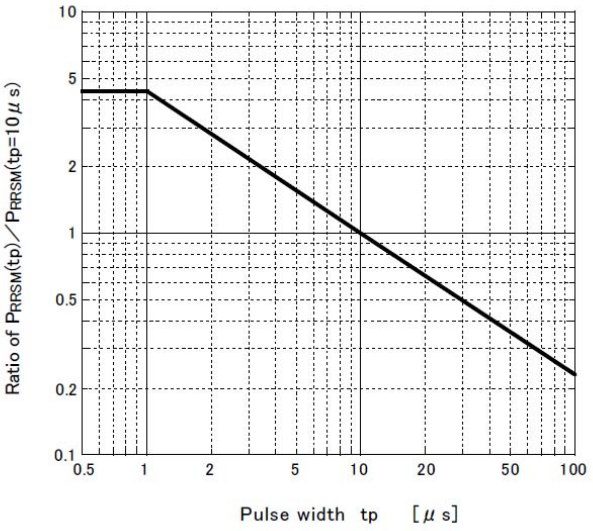
Repetitive surge reverse power derating
vs Junction temperature



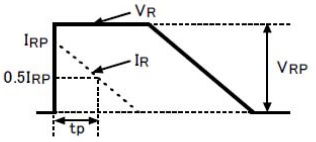
● P_{RRSM}= I_{RP} × V_{RP}



Repetitive surge reverse power capability



● P_{RRSM}= I_{RP} × V_{RP}



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Outline Dimensions

unit:mm

H1

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

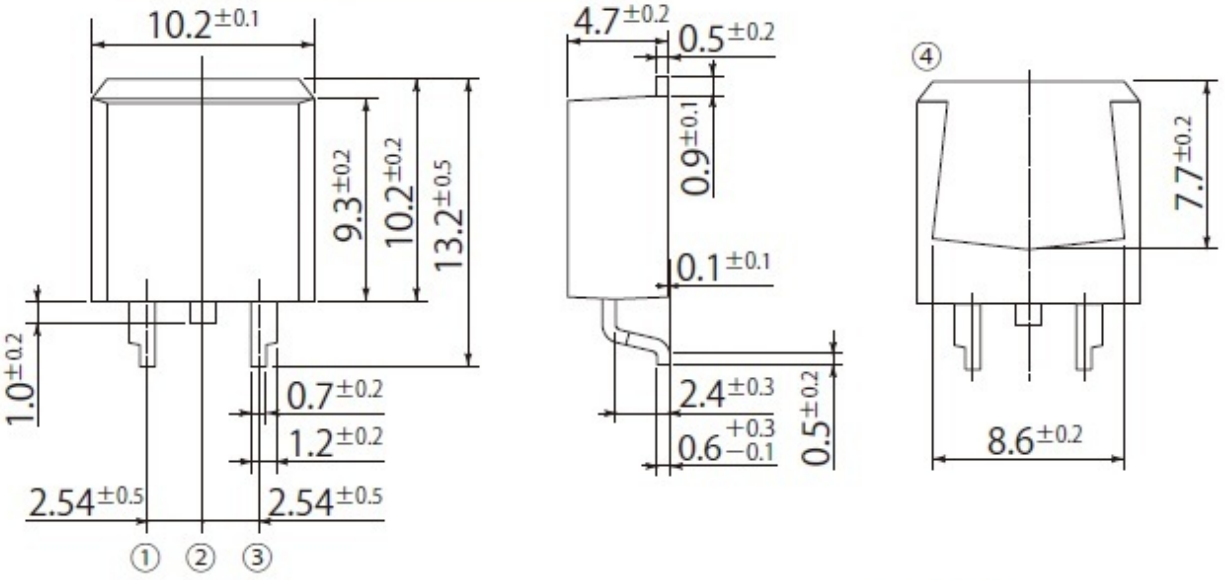
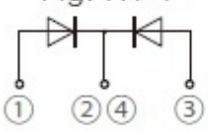
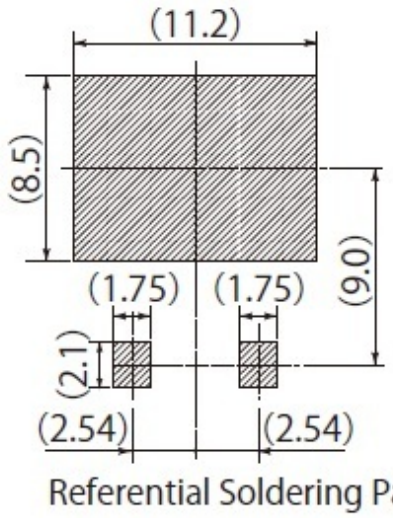


Fig. H1-1





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.

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   【Special applications】
   Transportation equipment (vehicles, ships, etc.), trunk-line communication equipment, traffic signal control systems, anti-disaster/crime systems, safety equipment, medical equipment, etc.
   【Specific applications】
   Nuclear reactor control systems, aircraft, aerospace equipment, submarine repeaters, life support equipment and systems, etc.
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