

# DF10SC9

Schottky Barrier Diodes  
90V, 10A

**Feature**

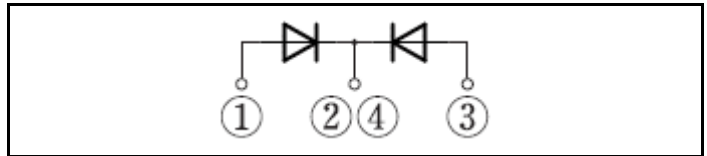
- SMD
- High Recovery Speed
- Pb free terminal
- RoHS:Yes

**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 temperature	T <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		-55 to 150	°C
Repetitive peak reverse voltage	V <sub>RRM</sub>		90	V
Repetitive peak surge reverse voltage	V <sub>RRSM</sub>	Pulse width 0.5ms, duty=1/40	100	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, Rating for each diode I <sub>F(AV)</sub> /2, With heatsink, T <sub>c</sub> =134°C	10	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive, 1cycle, Peak value, T <sub>j</sub> =25°C	150	A
Repetitive peak surge reverse power	P <sub>RRSM</sub>	Pulse width 10μs, T <sub>j</sub> =25°C, per diode	330	W

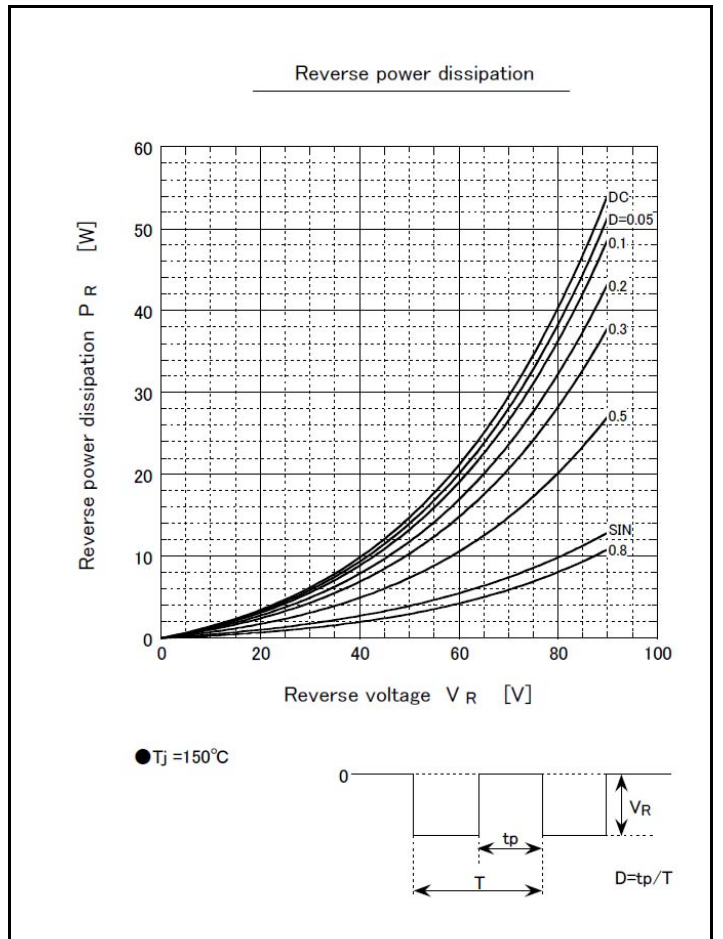
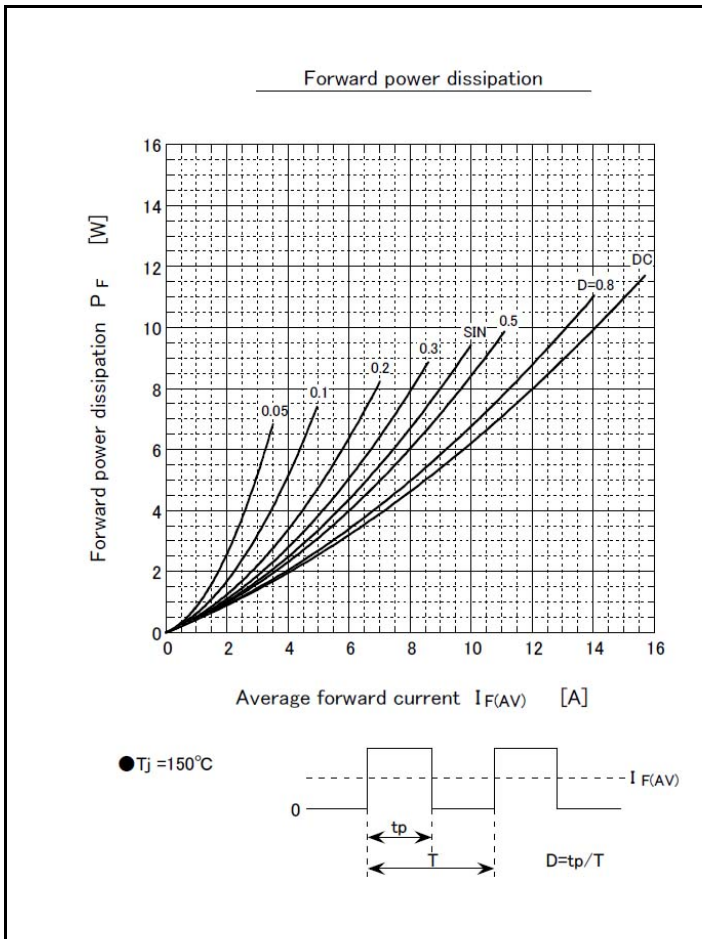
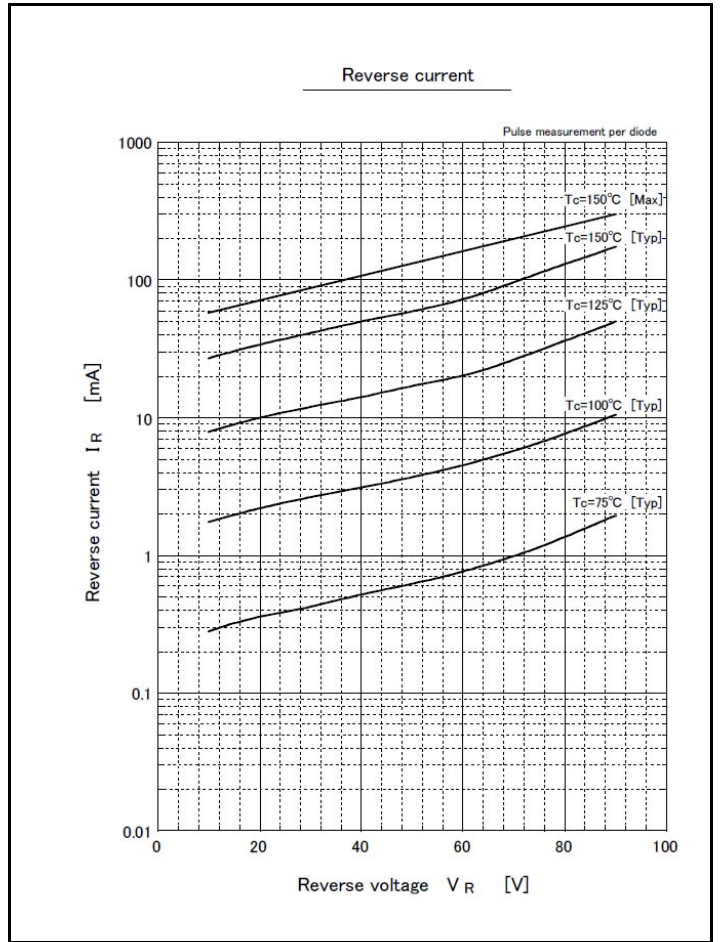
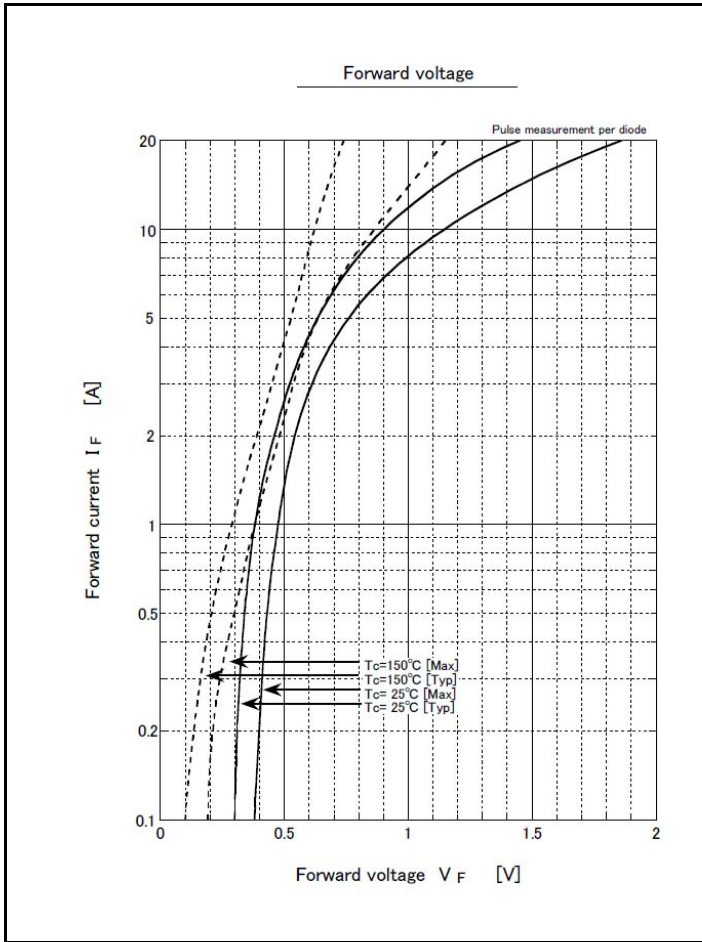
\* :See the original Specifications

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

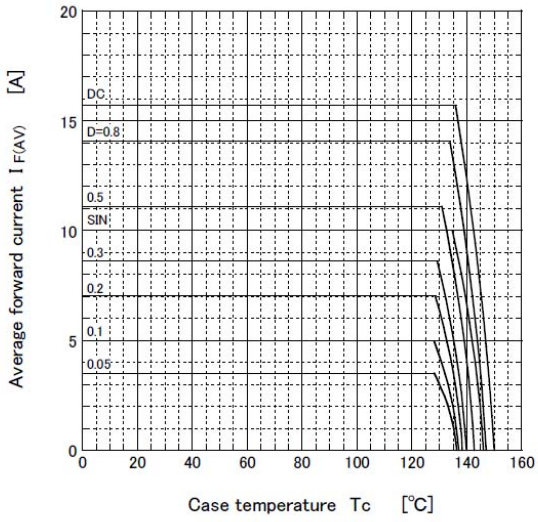
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =5A, Pulse measurement, per diode			0.75	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =90V, Pulse measurement, per diode			3	mA
Total capacitance	C <sub>t</sub>	f=1MHz, V <sub>R</sub> =10V, per diode		185		pF
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case, With heatsink			1.2	°C/W

\* : See the original Specifications

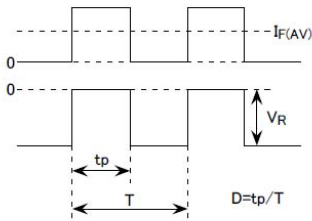
# CHARACTERISTIC DIAGRAMS



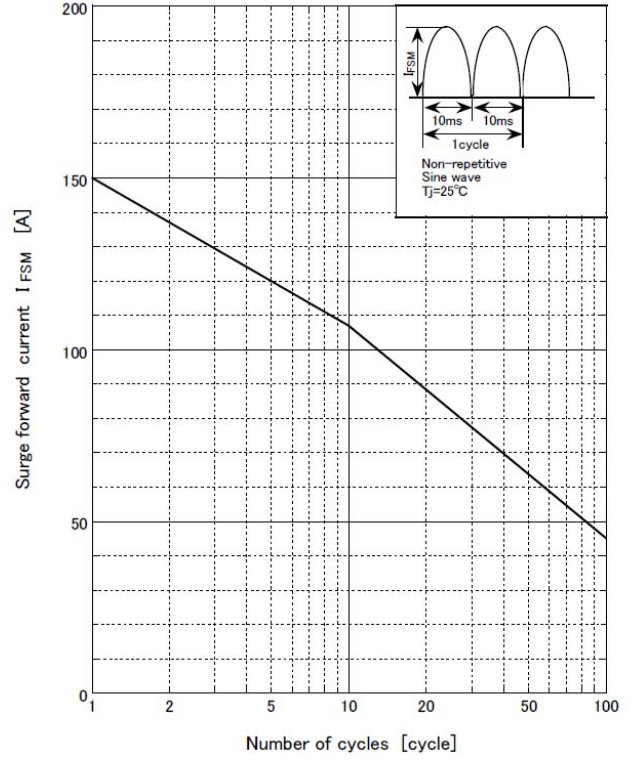
Derating curve



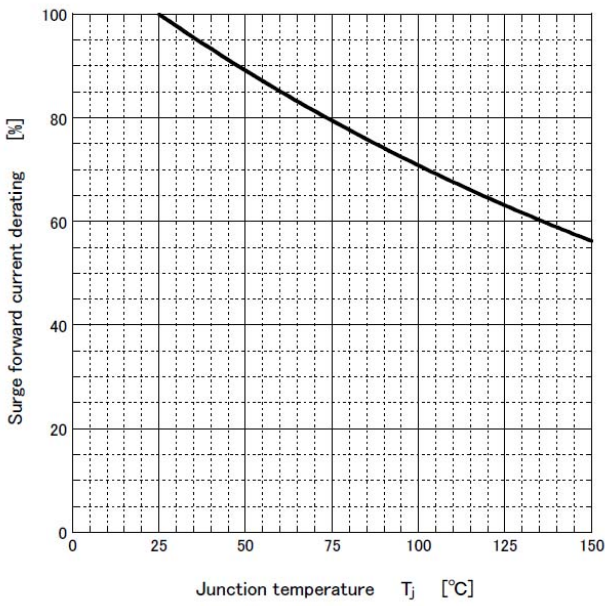
●  $V_R = 45V$   
R-load  
With heatsink



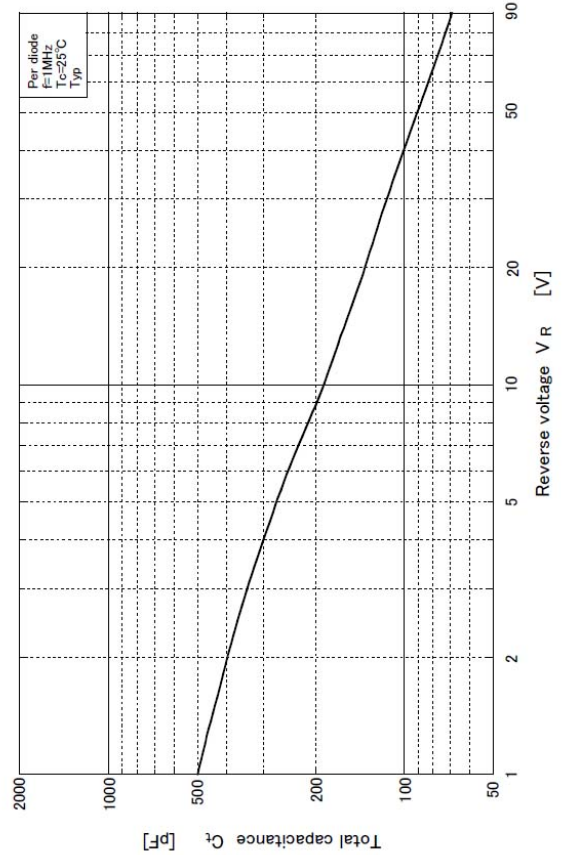
Surge forward current capability



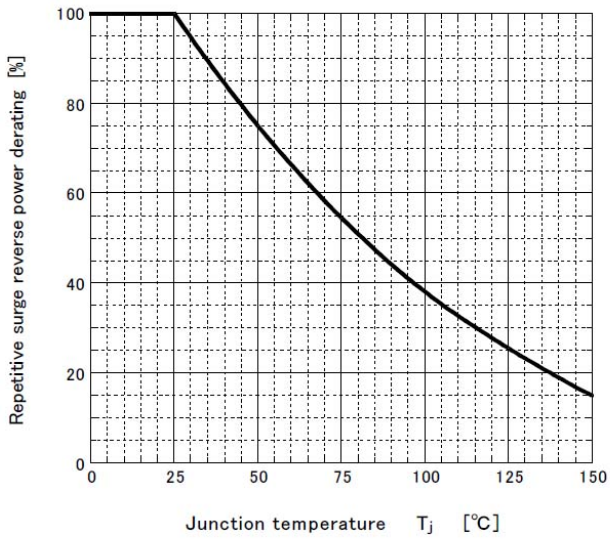
Surge forward current derating vs Junction temperature



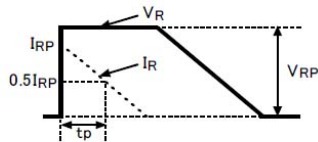
Total capacitance



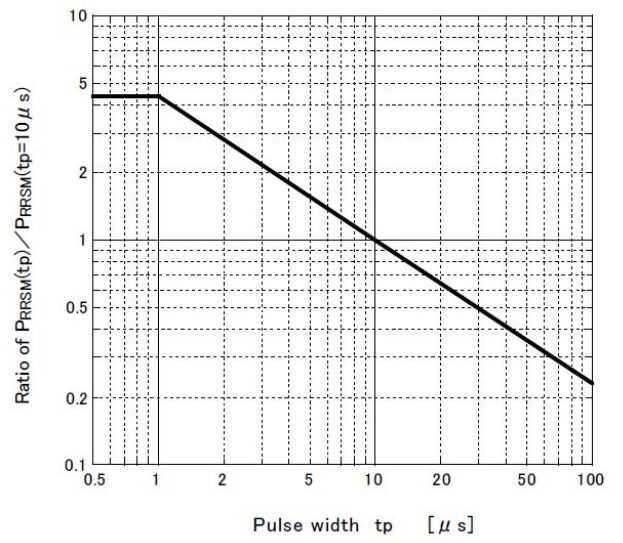
Repetitive surge reverse power derating  
vs Junction temperature



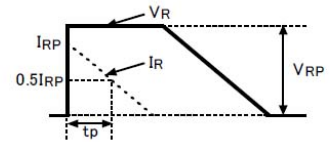
●  $P_{RRSM} = I_{RP} \times V_{RP}$



Repetitive surge reverse power capability

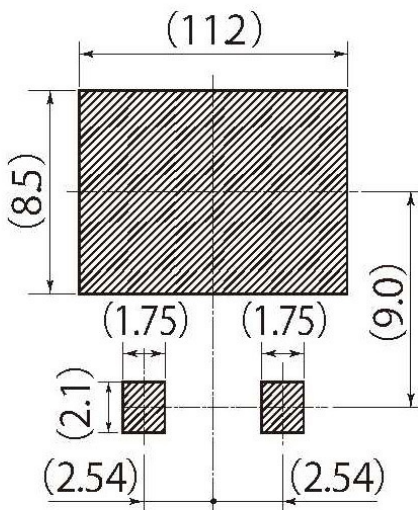
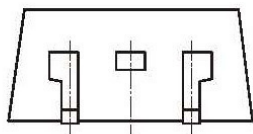
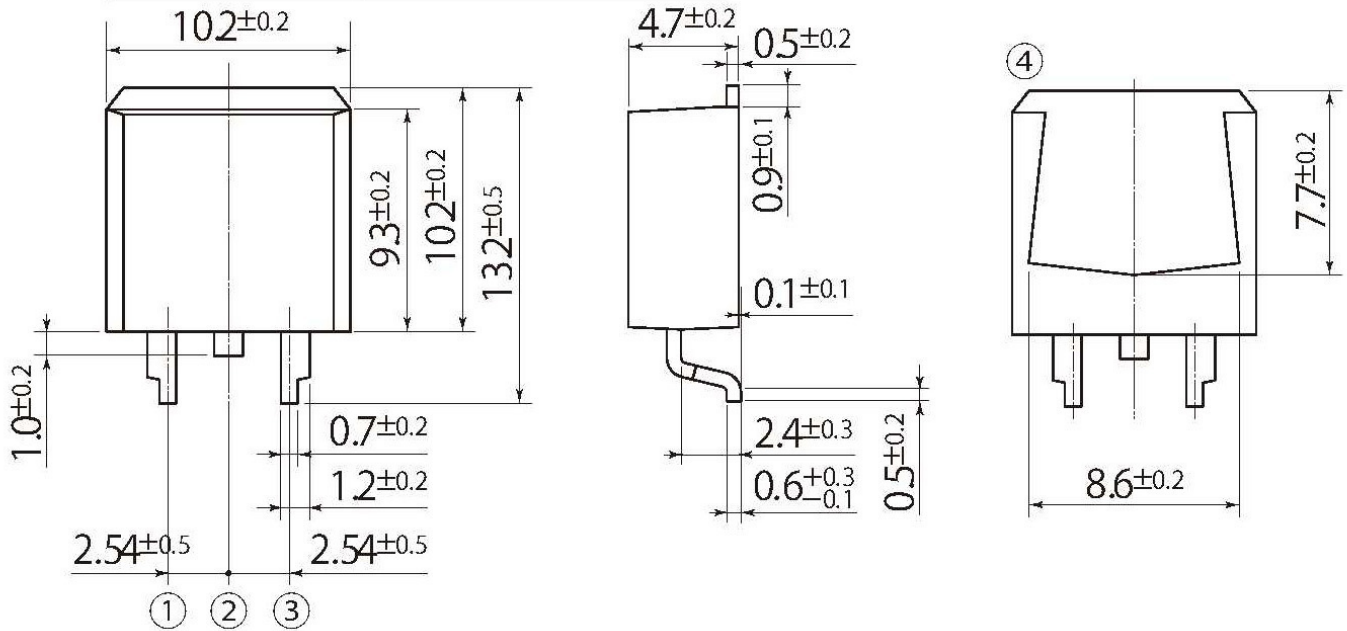


●  $P_{RRSM} = I_{RP} \times V_{RP}$



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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