

DF10SC9
Schottky Barrier Diodes
90V, 10A

Feature

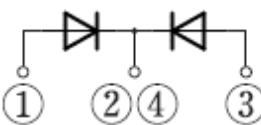
- SMD
- High Recovery Speed
- Pb free terminal
- RoHS:Yes

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

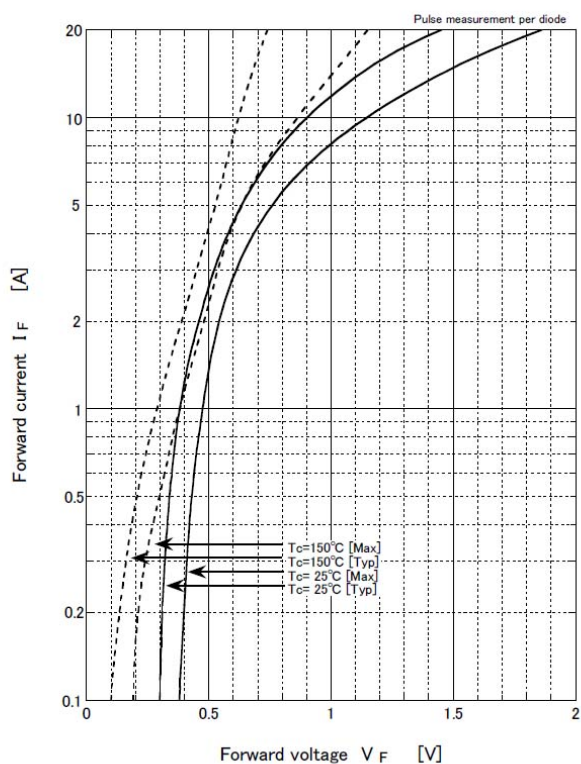
Electrical Characteristics (unless otherwise specified : Tc=25°C)

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	C _t	f=1MHz, VR=10V, per diode		185		pF
Thermal resistance	R _{th(j-c)}	Junction to case, With heatsink			1.2	°C/W

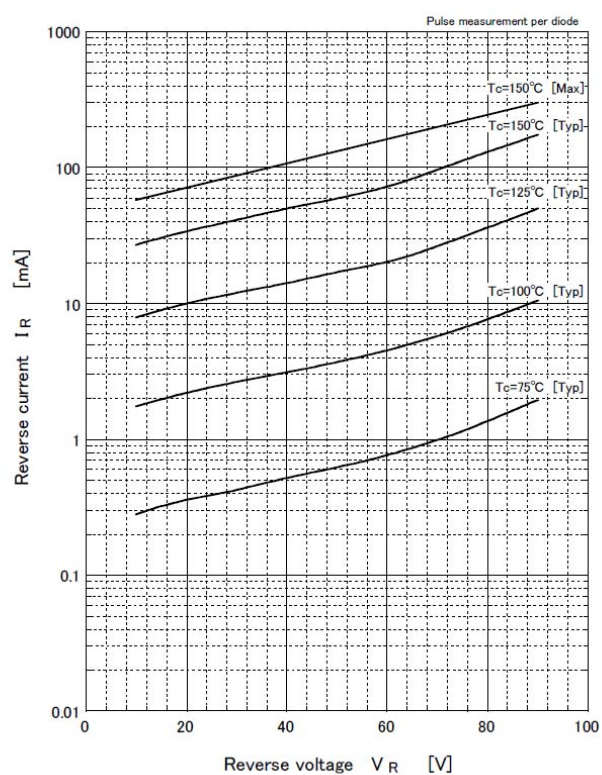
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

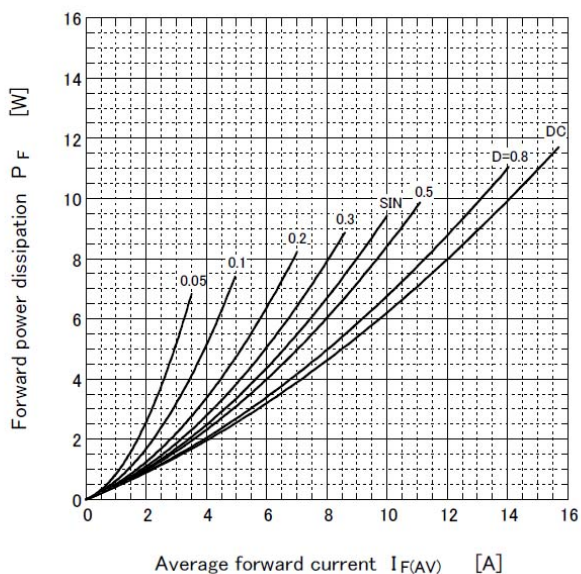
Forward voltage



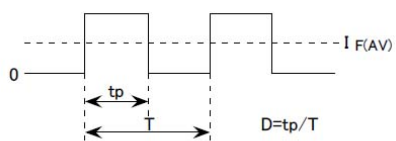
Reverse current



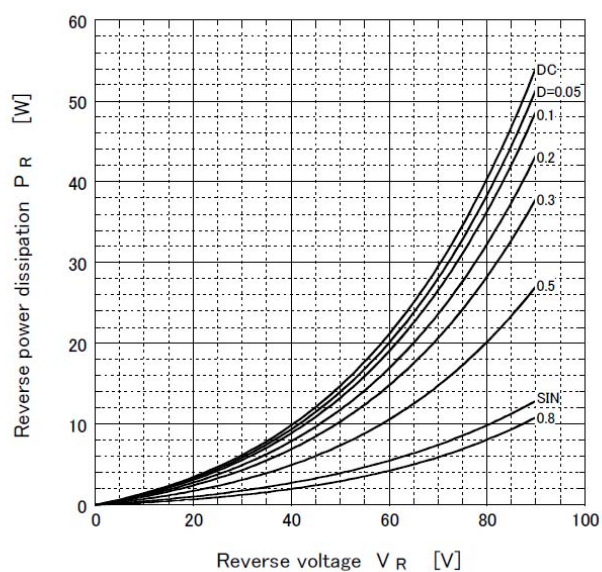
Forward power dissipation



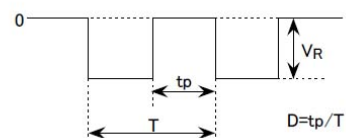
● $T_J = 150^\circ\text{C}$



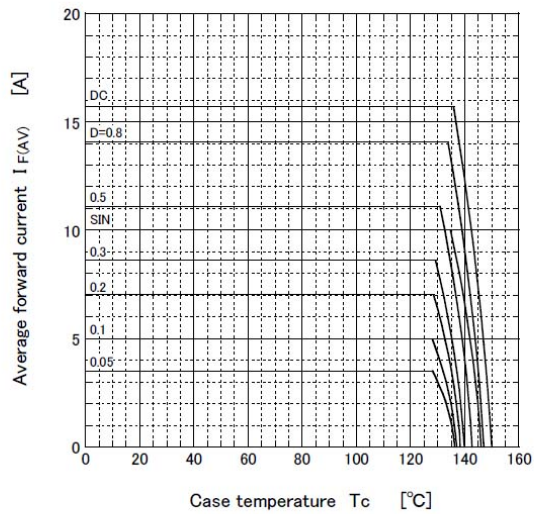
Reverse power dissipation



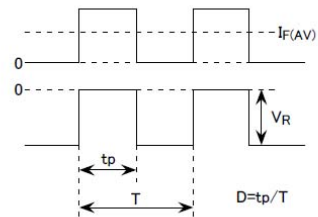
● $T_J = 150^\circ\text{C}$



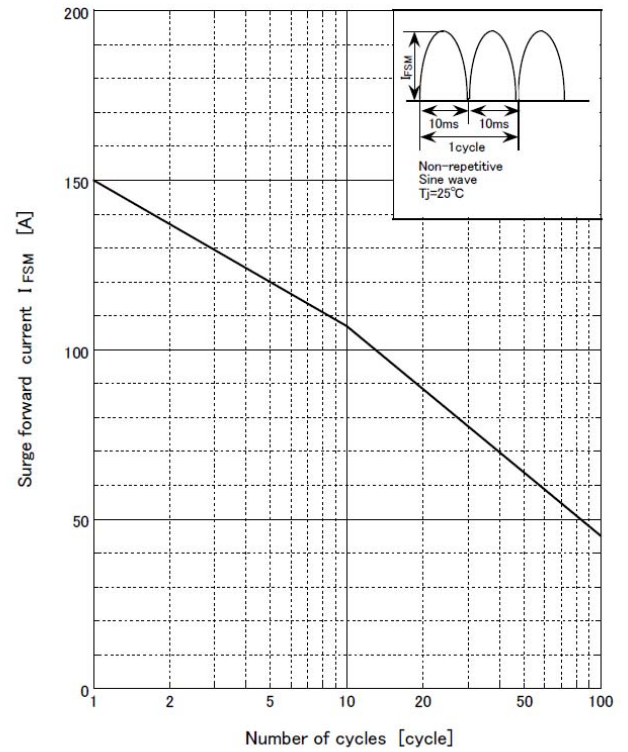
Derating curve



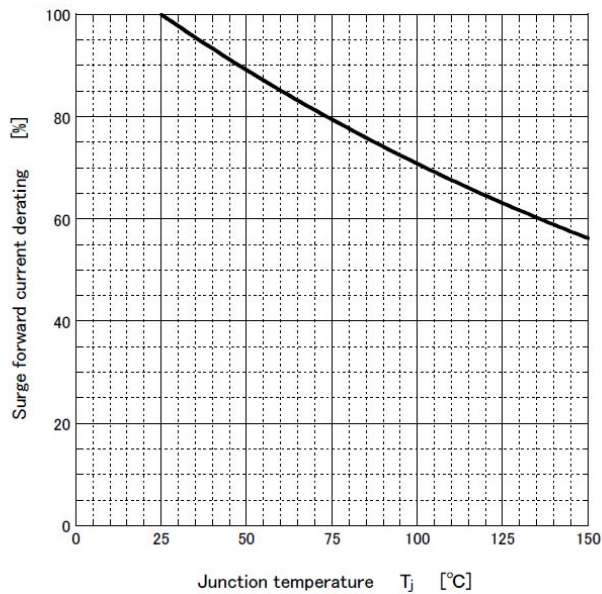
● $V_R = 45V$
R-load
With heatsink



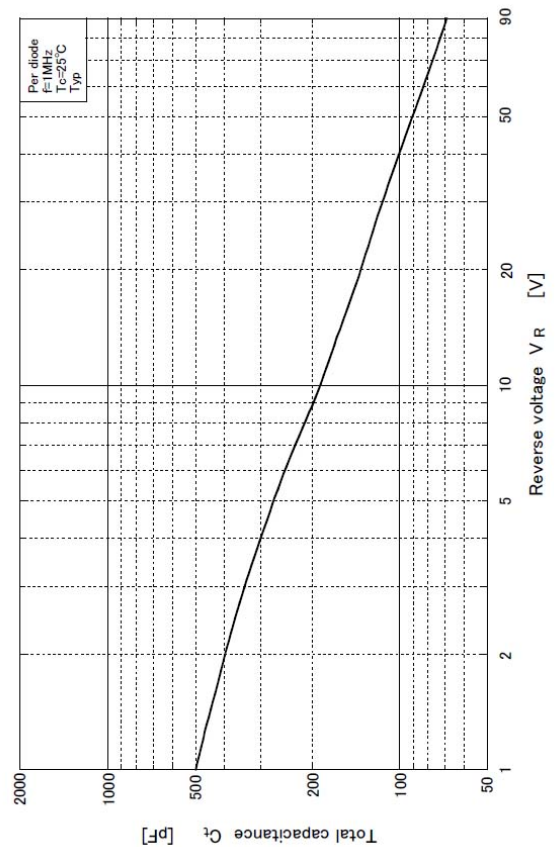
Surge forward current capability



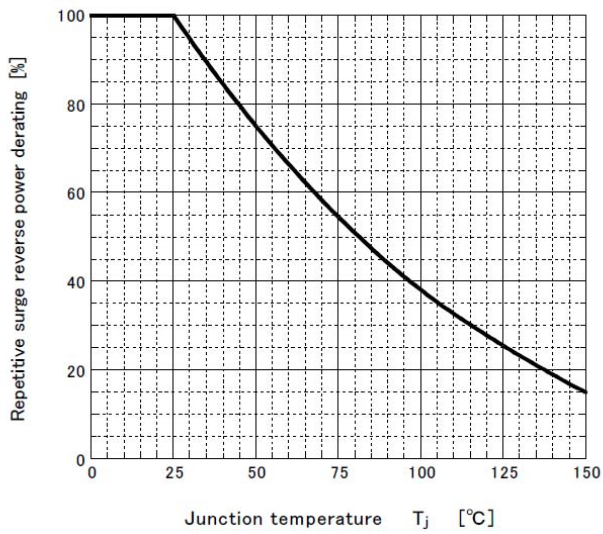
Surge forward current derating vs Junction temperature



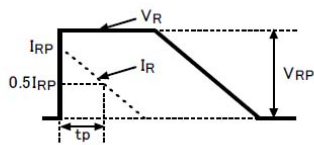
Total capacitance



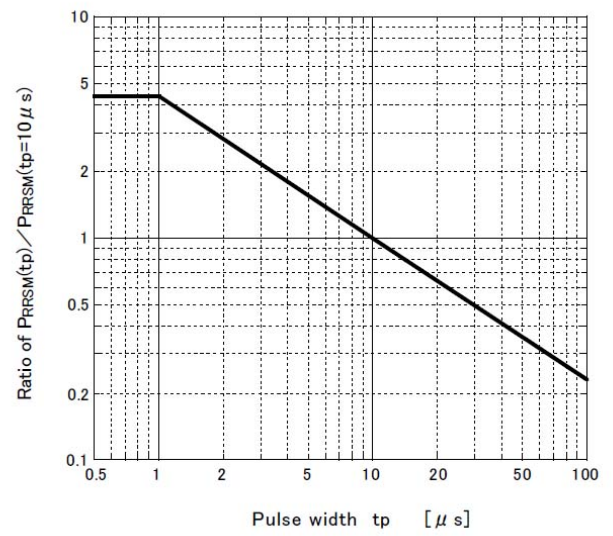
Repetitive surge reverse power derating
vs Junction temperature



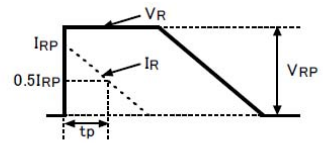
● $P_{RRSM} = I_{RP} \times V_{RP}$



Repetitive surge reverse power capability

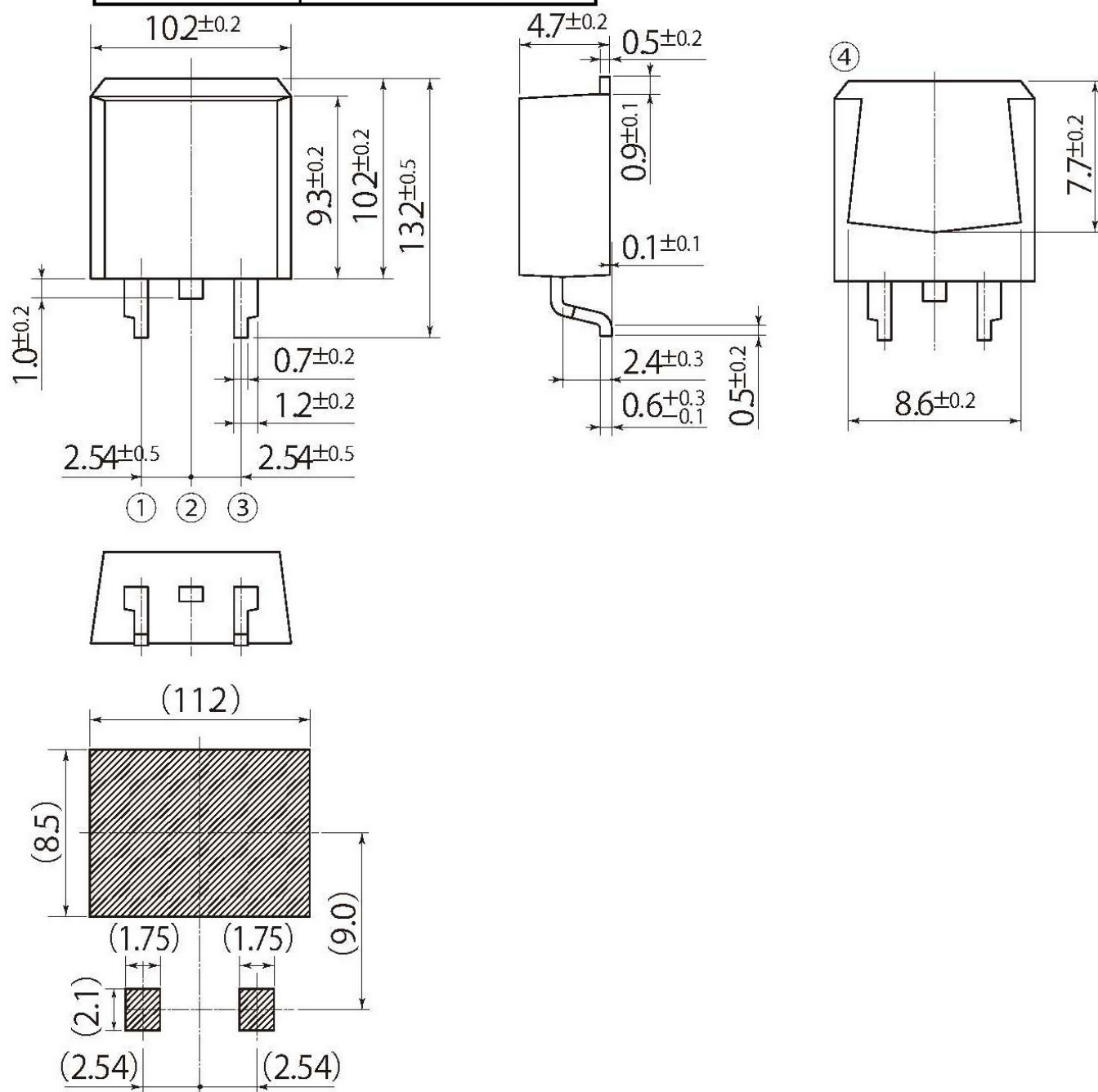


● $P_{RRSM} = I_{RP} \times V_{RP}$



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.

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