

DF10SC4M
Schottky Barrier Diodes
40V, 10A

Feature

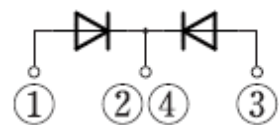
- SMD
- High Recovery Speed
- Low V_F
- Pb free terminal
- RoHS:Yes

OUTLINE

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



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_c=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	T_{stg}		-40 to 150	$^{\circ}\text{C}$
Junction temperature	T_j		150	$^{\circ}\text{C}$
Repetitive peak reverse voltage	V_{RRM}		40	V
Repetitive peak surge reverse voltage	V_{RRSM}	Pulse width 0.5ms, duty=1/40	45	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, Rating for each diode $I_F(AV)/2$, $T_c=125^{\circ}\text{C}$	10	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, Rating for each diode $I_F(AV)/2$, On Al-Cu substrate, $T_a=33^{\circ}\text{C}$	6.8	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, $T_j=125^{\circ}\text{C}$	100	A
Repetitive peak surge reverse power	P_{RRSM}	Pulse width 10 μs , $T_j=25^{\circ}\text{C}$, per diode	330	W

※ : See the original Specifications

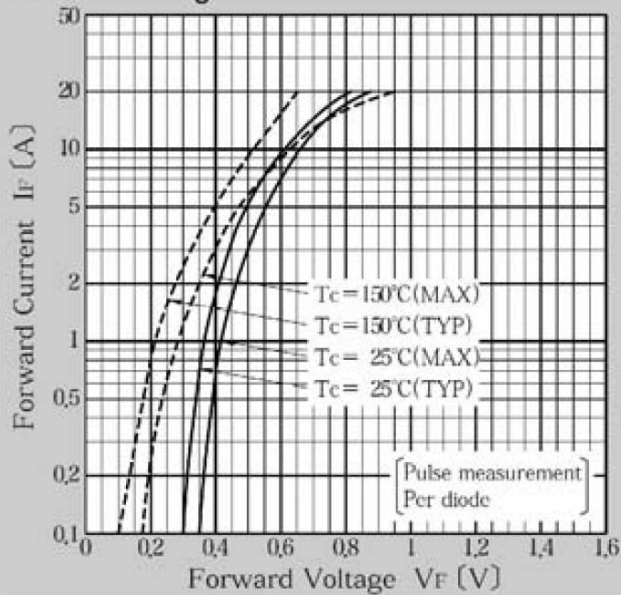
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	IF=5A, Pulse measurement, per diode			0.55	V
Reverse current	I _R	VR=40V, Pulse measurement, per diode			3.5	mA
Total capacitance	C _t	f=1MHz, VR=10V, per diode		180		pF
Thermal resistance	R _{th(j-c)}	Junction to case			3	°C/W
Thermal resistance	R _{th(j-a)}	Junction to ambient, On Al-Cu substrate			25	°C/W

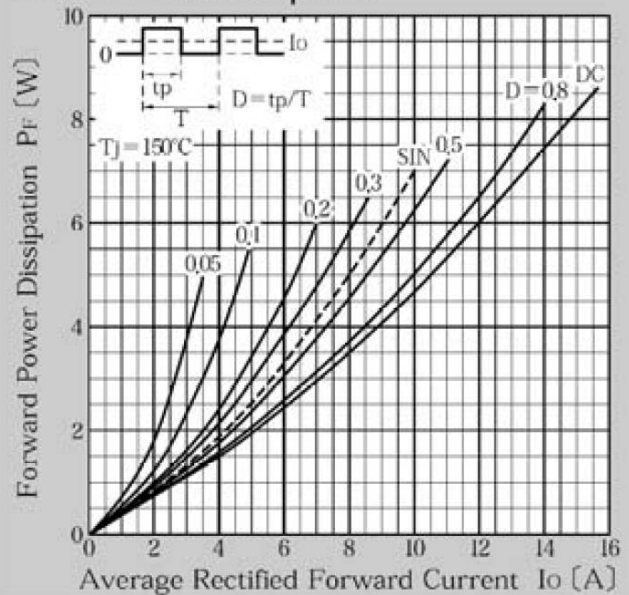
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

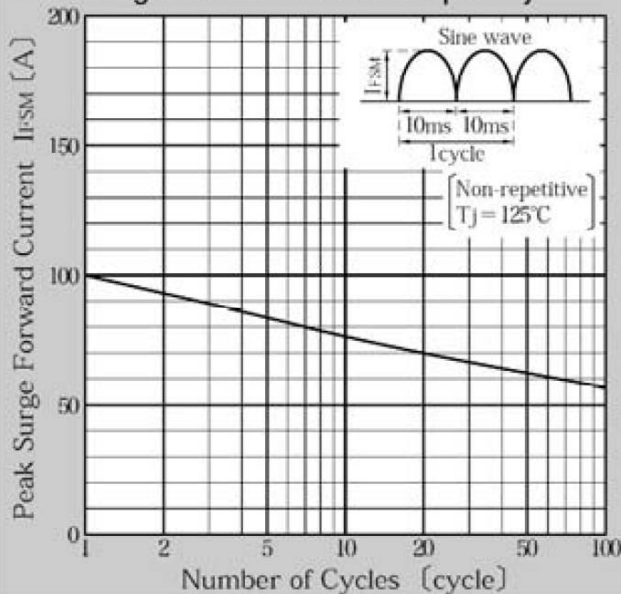
Forward Voltage



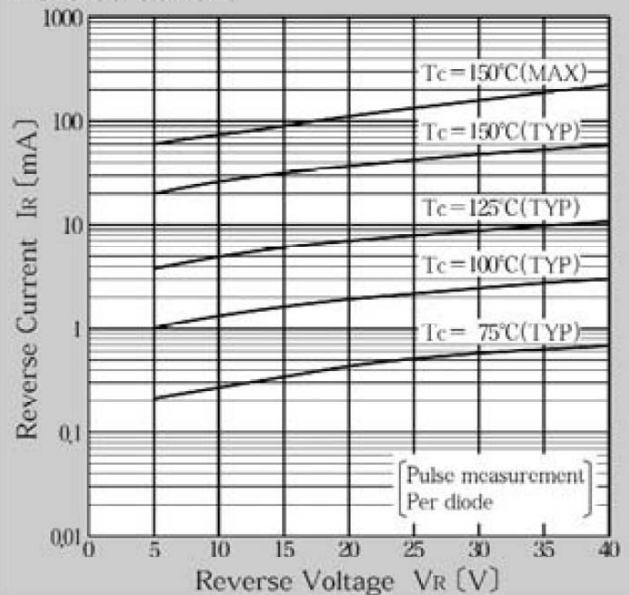
Forward Power Dissipation



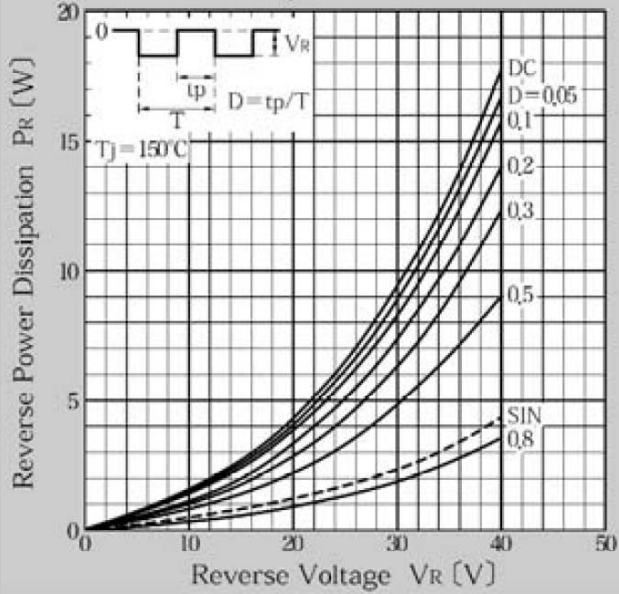
Peak Surge Forward Current Capability



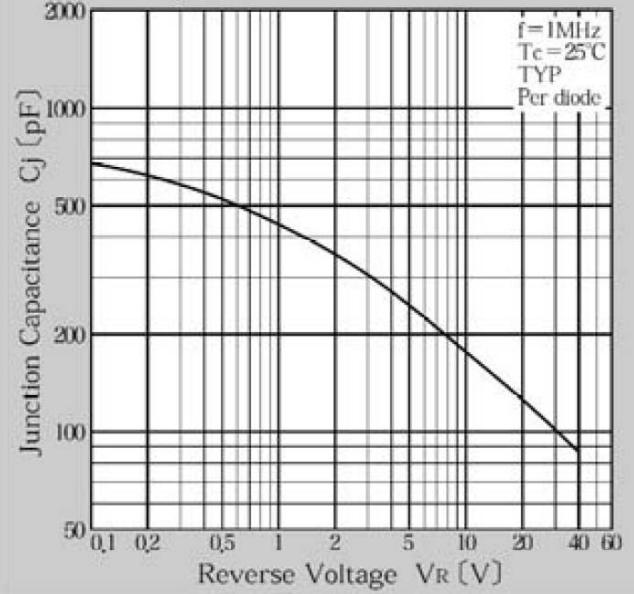
Reverse Current



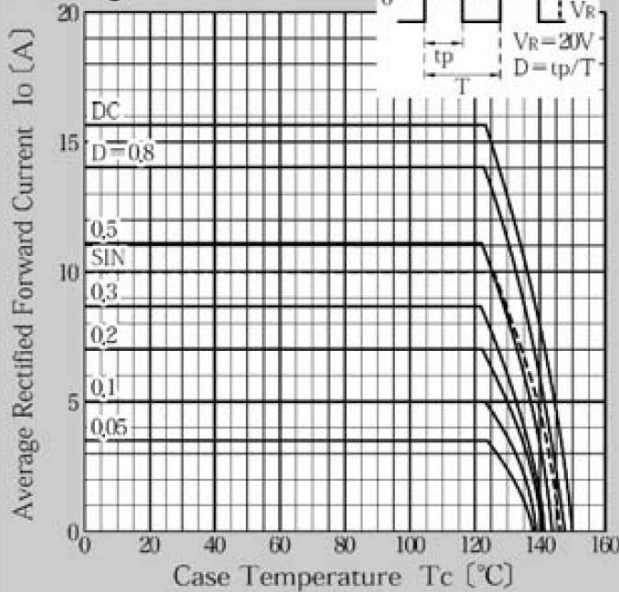
Reverse Power Dissipation



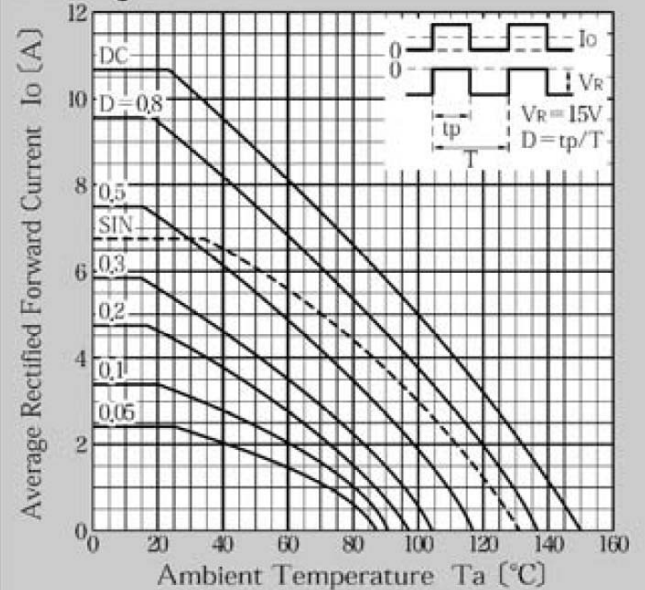
Junction Capacitance



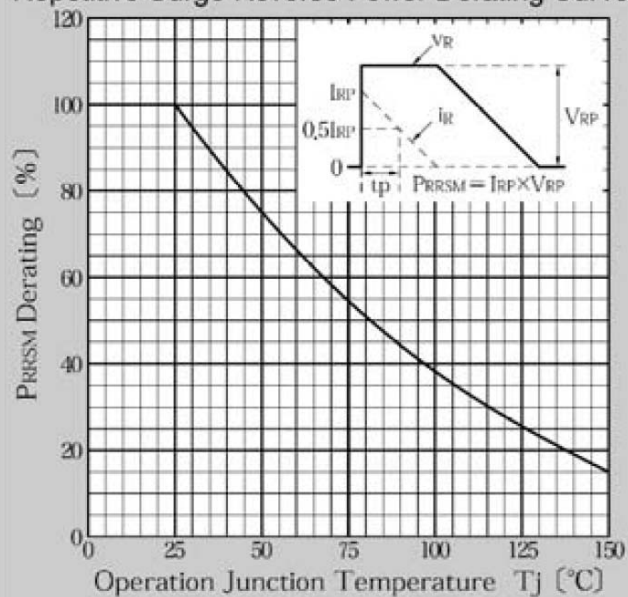
Derating Curve T_c - I_o



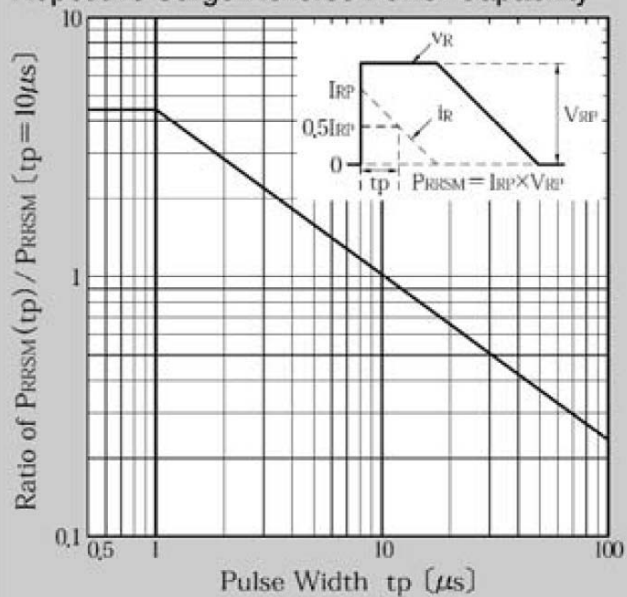
Derating Curve T_a - I_o



Repetitive Surge Reverse Power Derating Curve

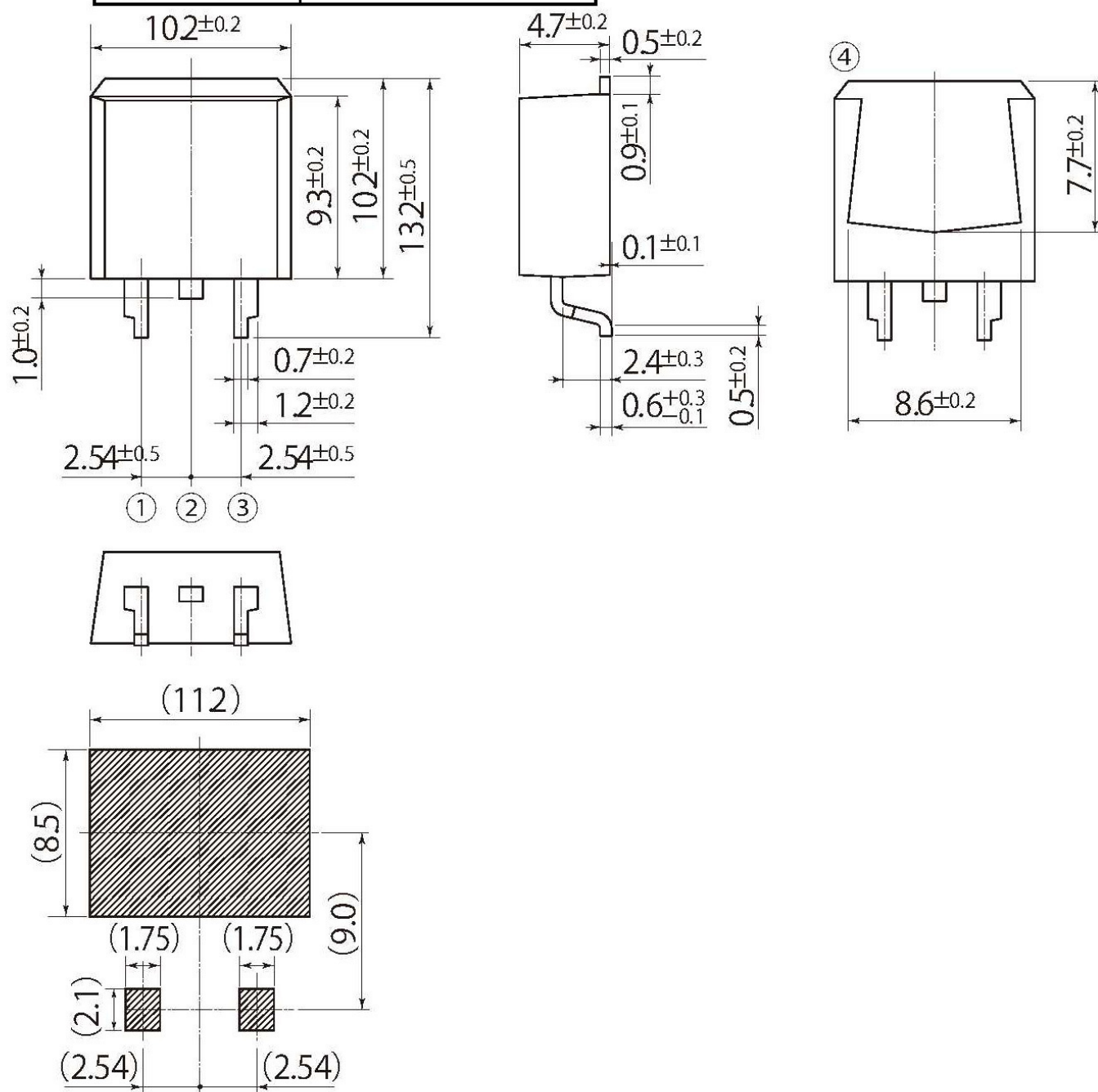


Repetitive Surge Reverse Power Capability



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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