

DF10SC4M

Schottky Barrier Diodes

40V, 10A

Feature

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

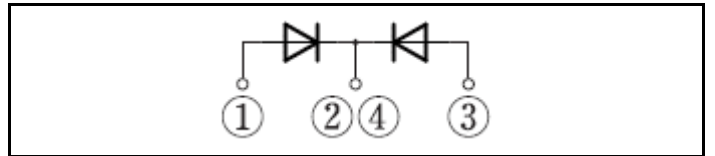
OUTLINE

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 temperature	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, 1 cycle, 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

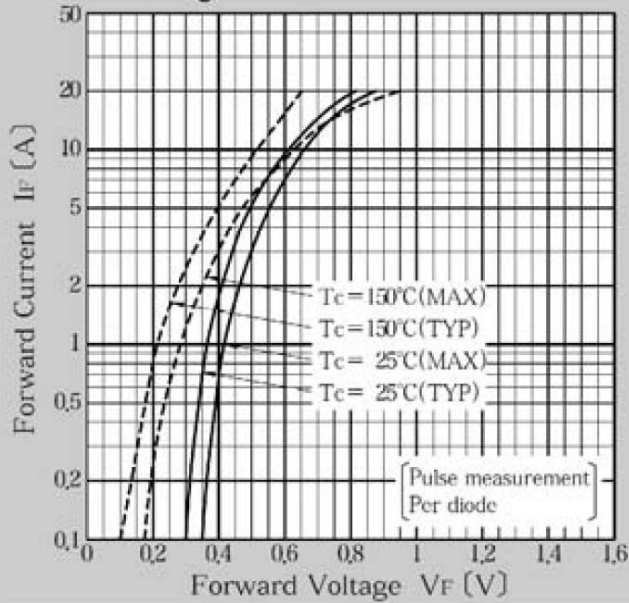
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	I _F =5A, Pulse measurement, per diode			0.55	V
Reverse current	I _R	V _R =40V, Pulse measurement, per diode			3.5	mA
Total capacitance	C _t	f=1MHz, V _R =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

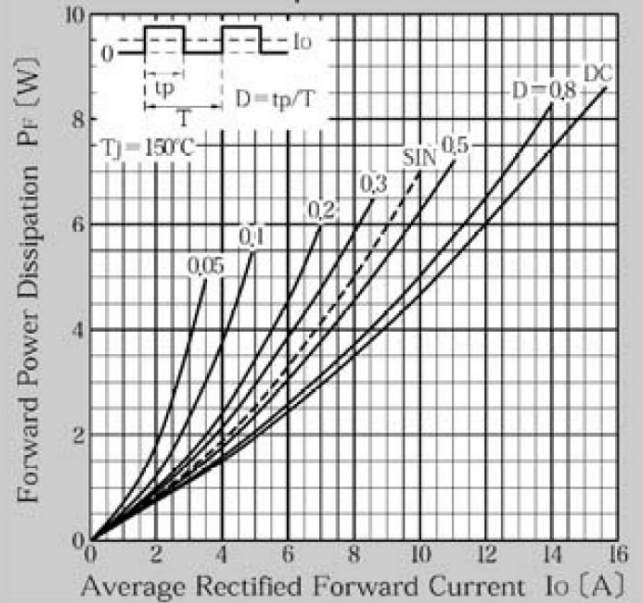
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

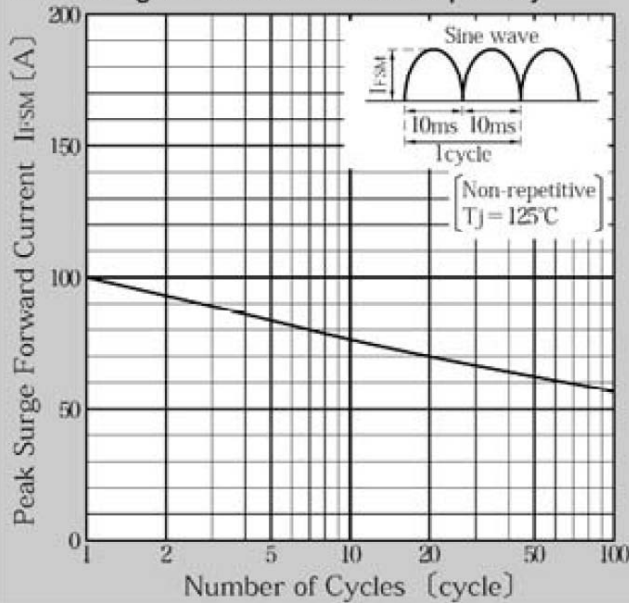
Forward Voltage



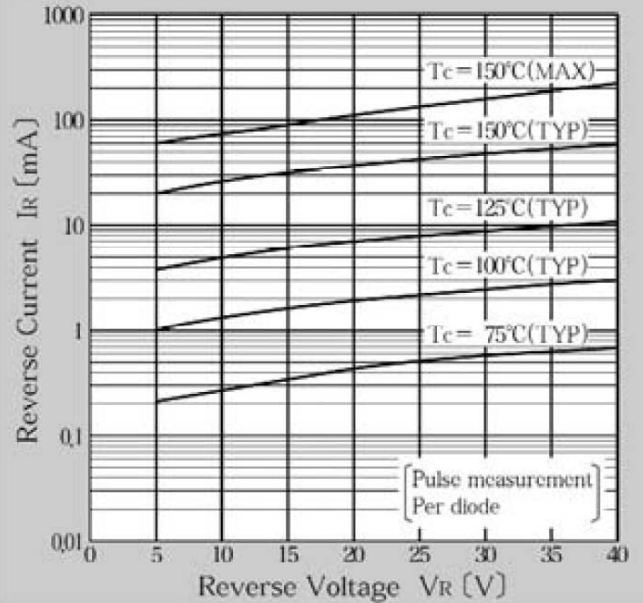
Forward Power Dissipation

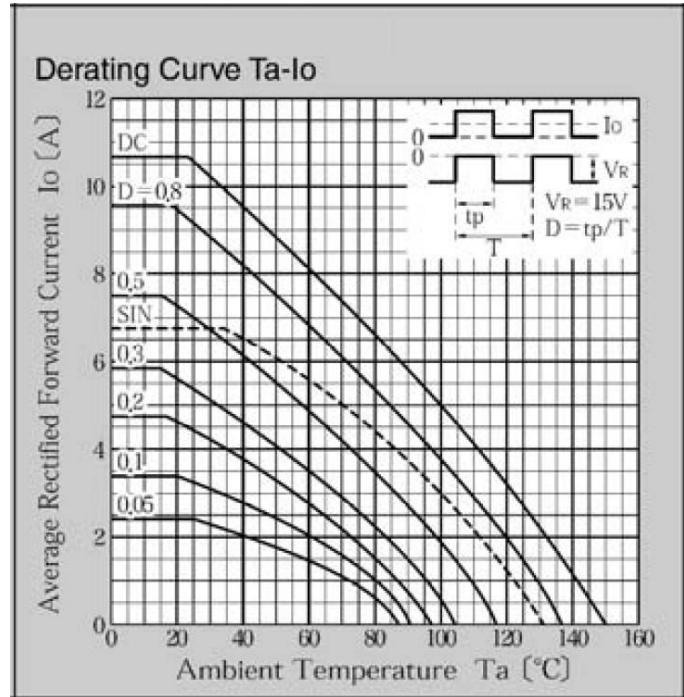
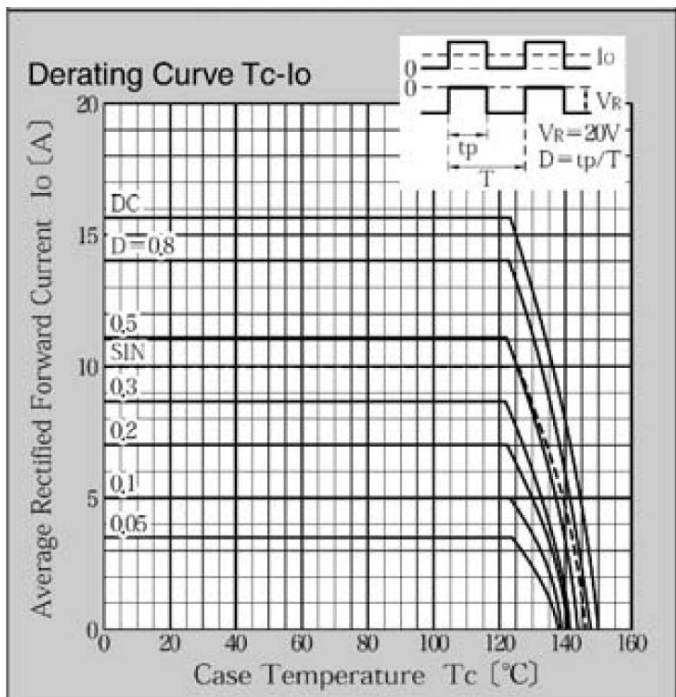
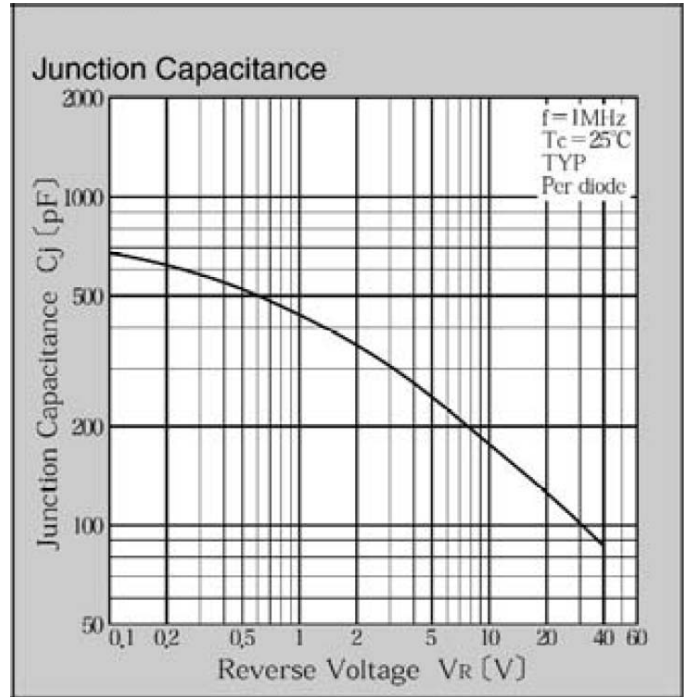
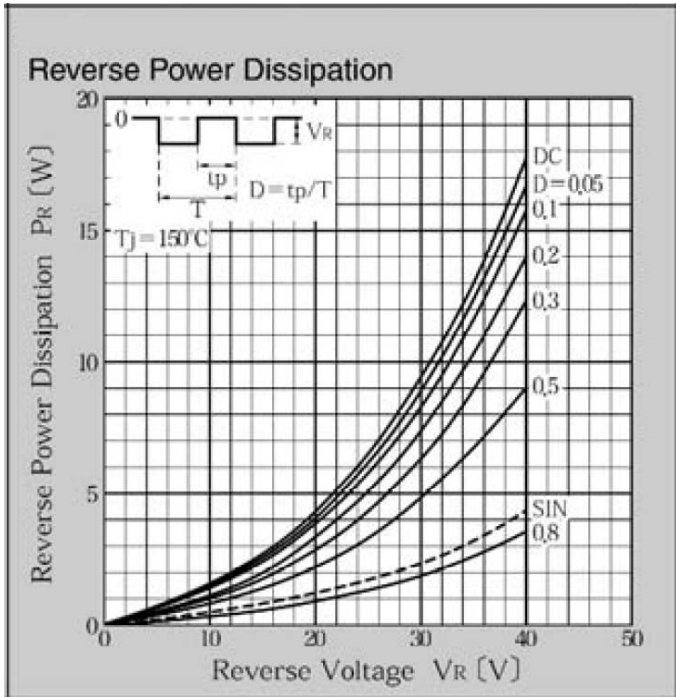


Peak Surge Forward Current Capability

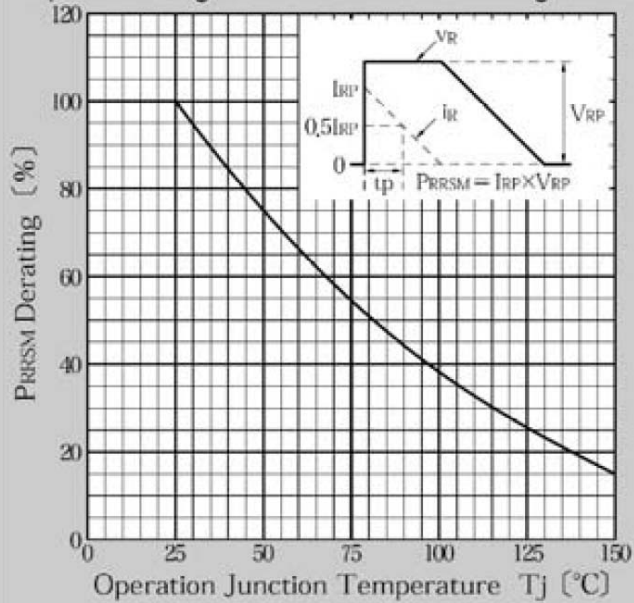


Reverse Current

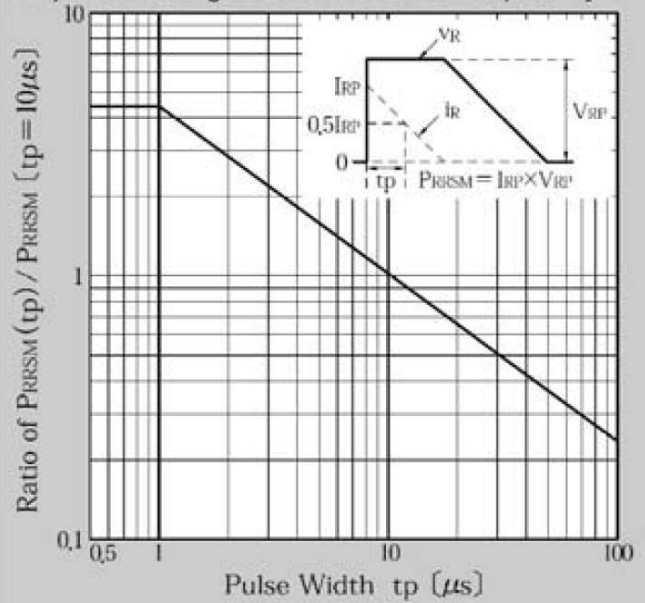




Repetitive Surge Reverse Power Derating Curve

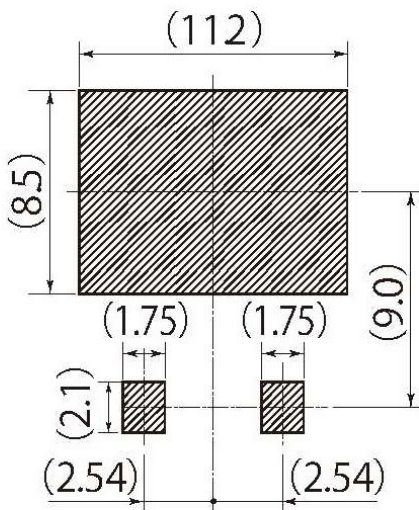
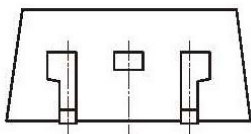
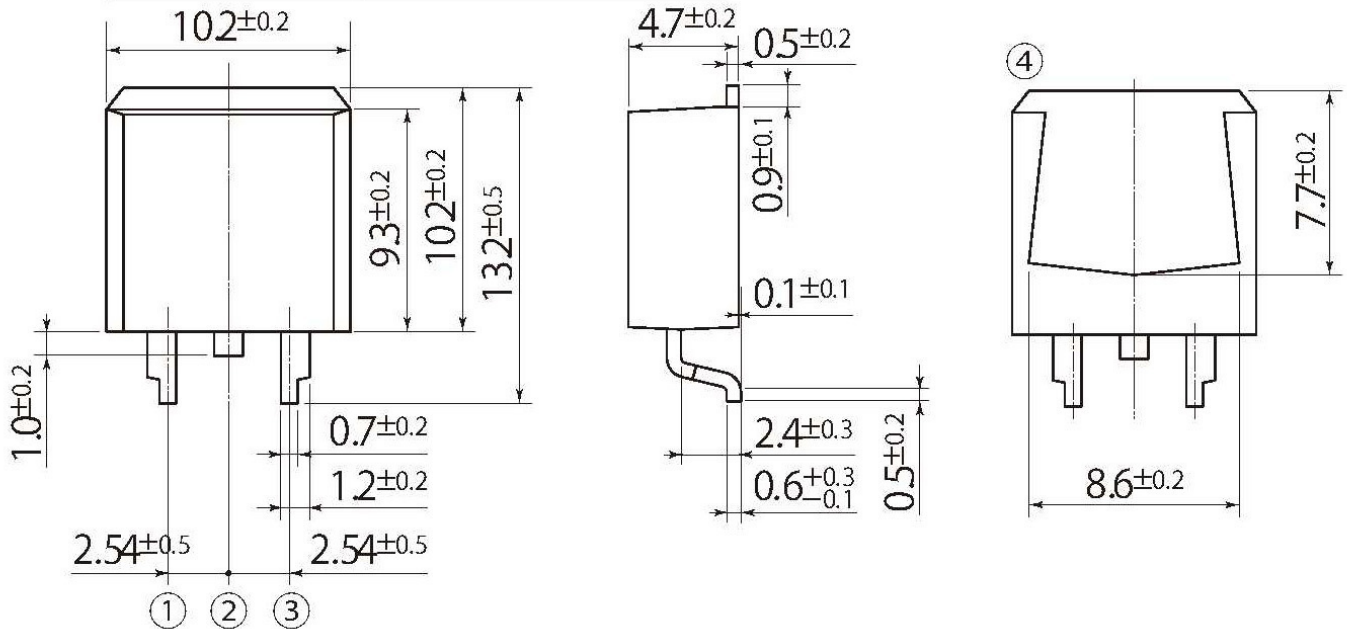


Repetitive Surge Reverse Power Capability



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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