

DF10SC4M

Schottky Barrier Diodes

40V, 10A

Feature

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

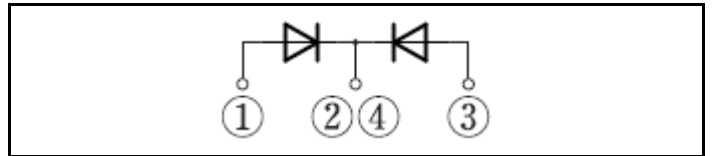
OUTLINE

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

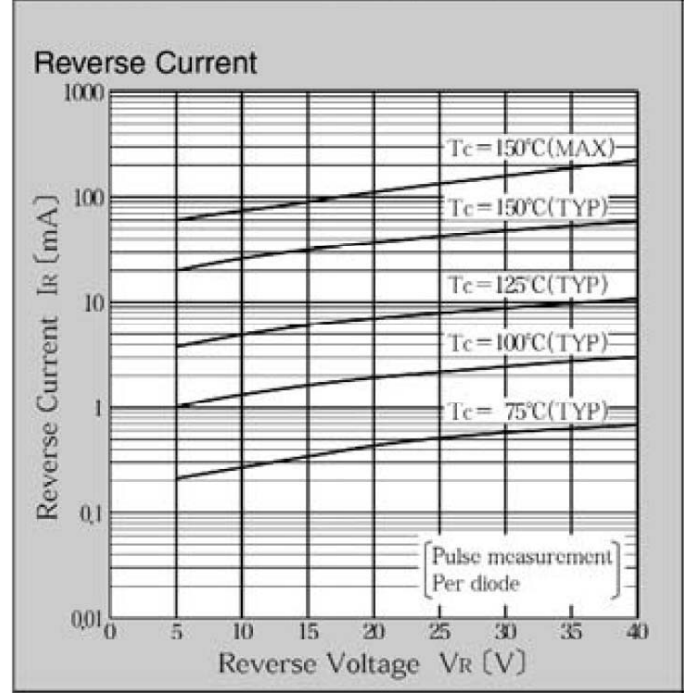
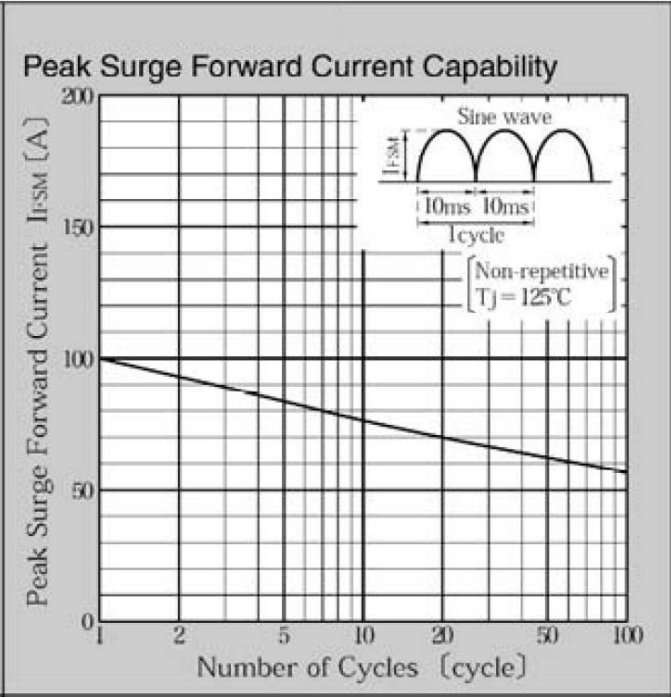
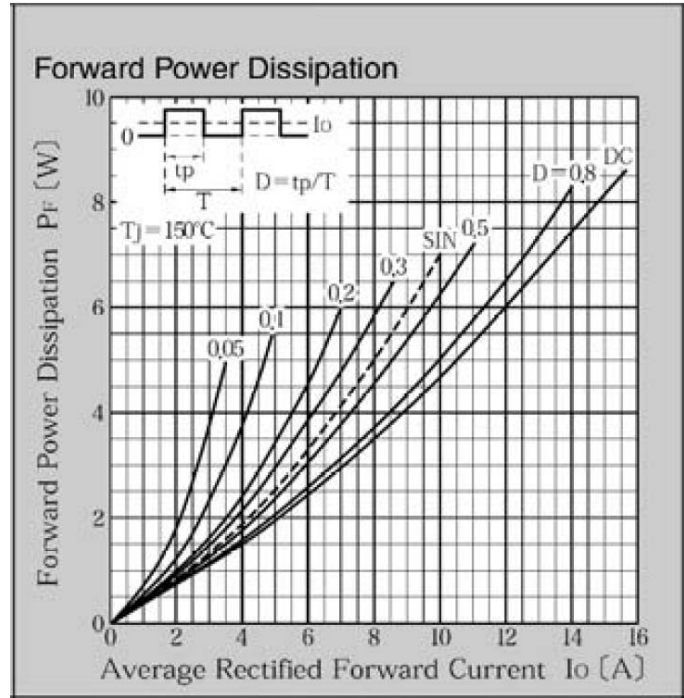
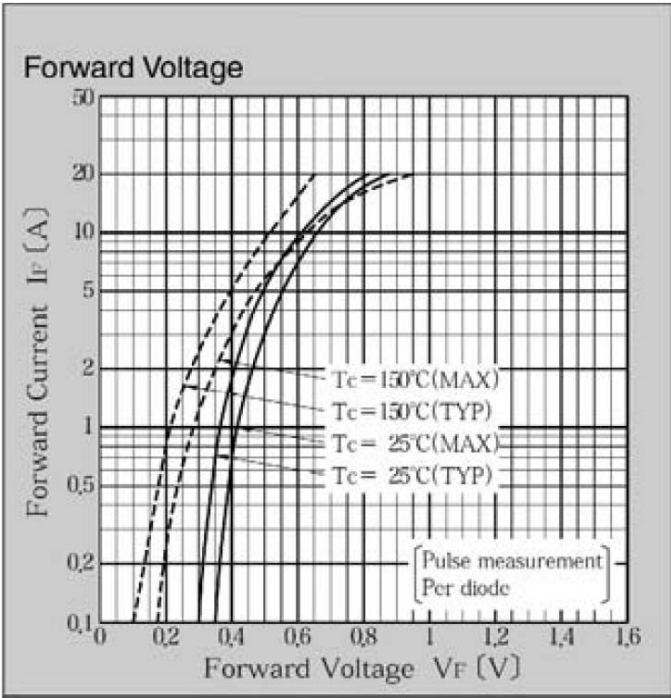
* :See the original Specifications

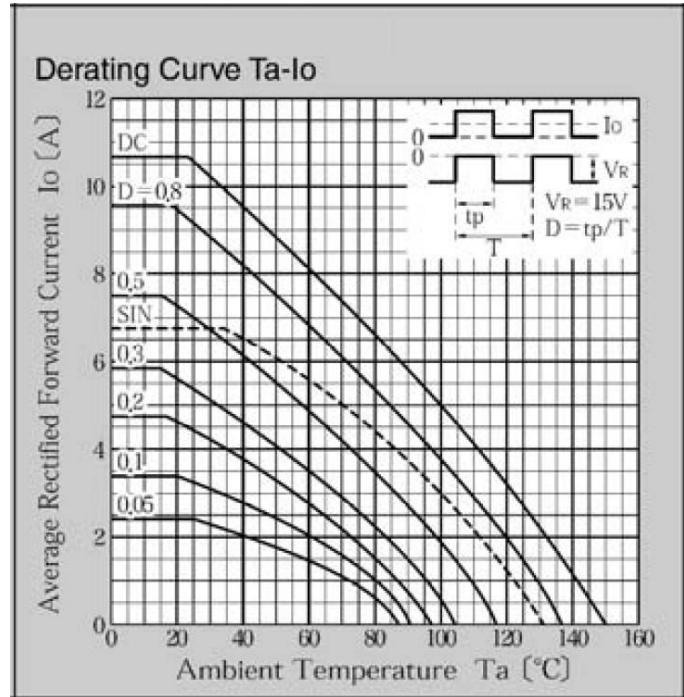
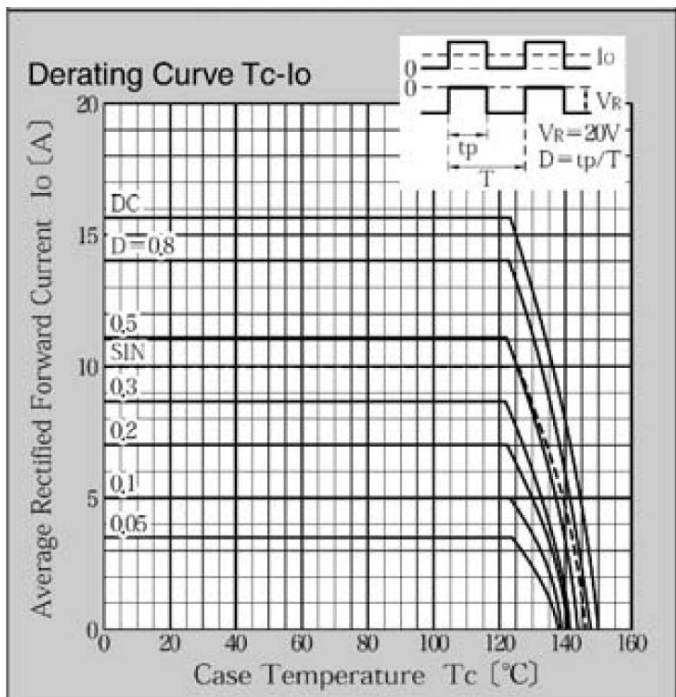
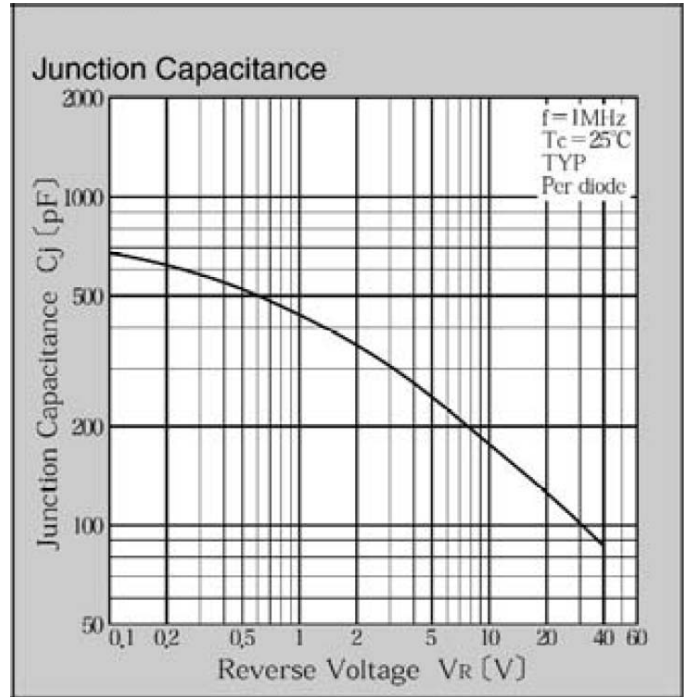
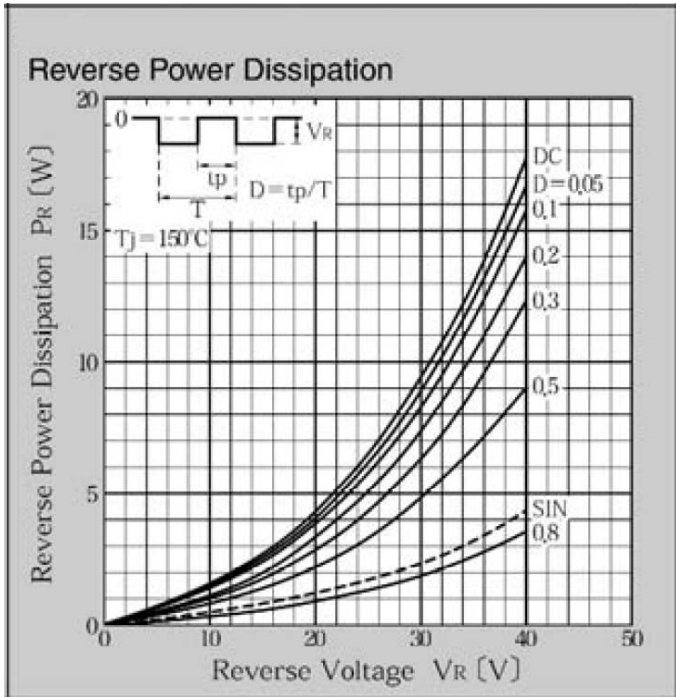
Electrical Characteristics (unless otherwise specified : Tc=25°C)

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

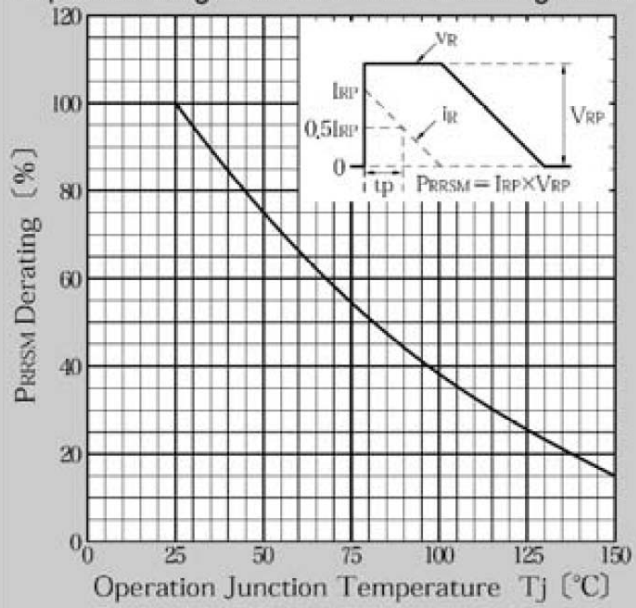
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

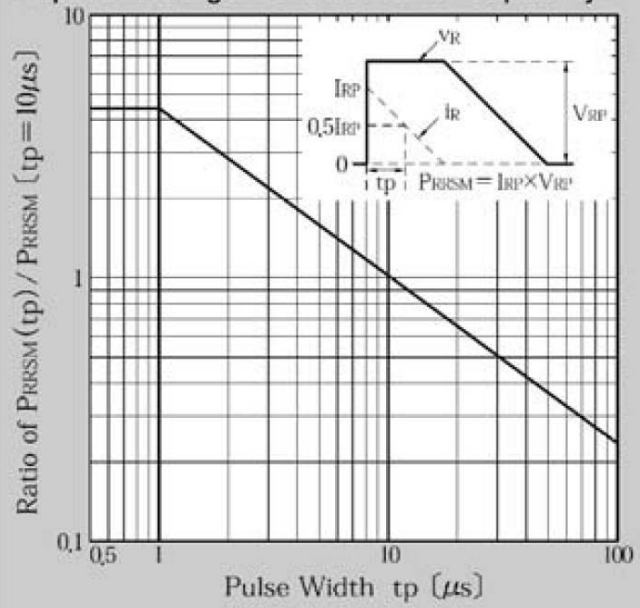




Repetitive Surge Reverse Power Derating Curve

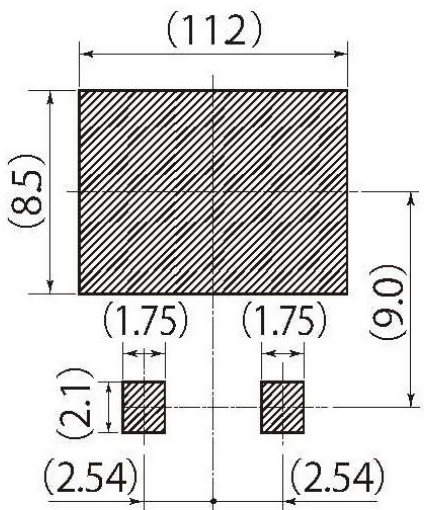
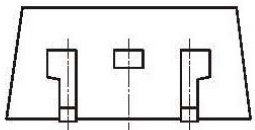
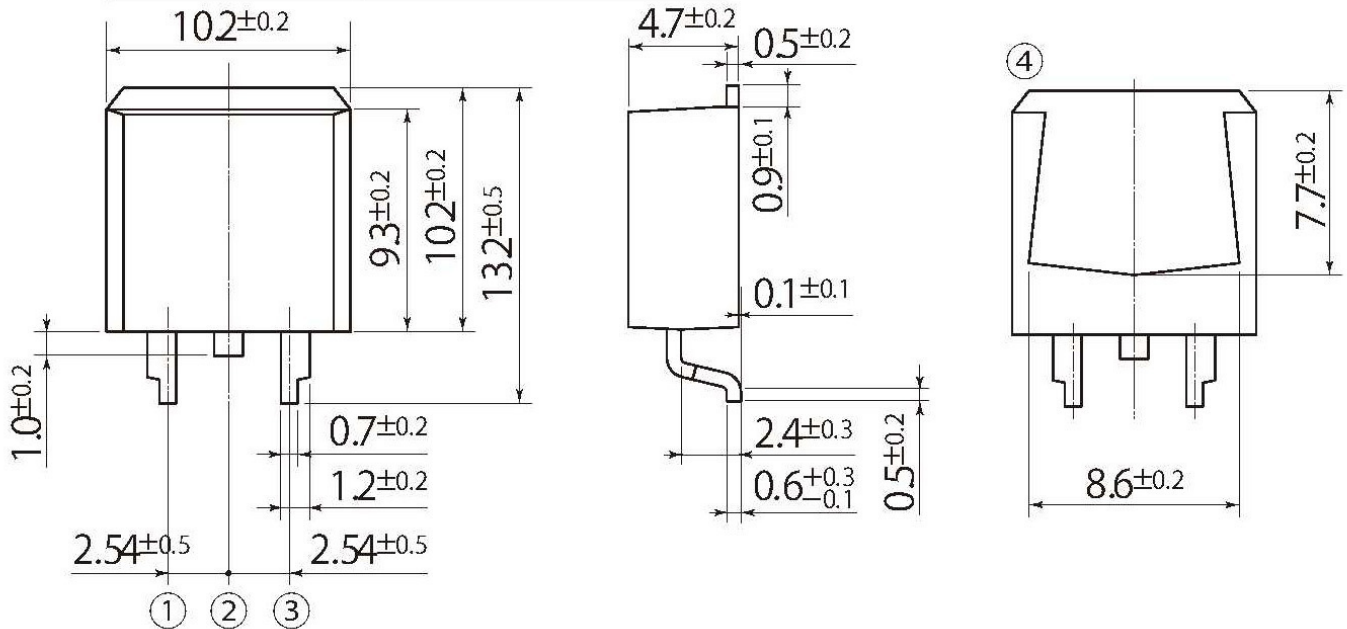


Repetitive Surge Reverse Power Capability



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.

Notes

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