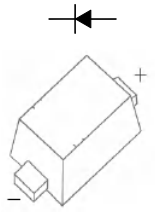
1SS400
Silicon Epitaxial Planar Switching Diode

VOLTAGE RANGE
80 Volts
CURRENT
100mA

FEATURES

Extremely small surface mounting type
High reliability
for high speed switching application



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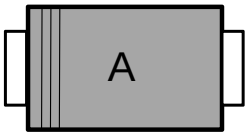


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	90	V
Reverse Voltage	V_R	80	V
Average Rectified Forward Current	$I_{F(AV)}$	100	mA
Peak Forward Current	I_{FM}	225	mA
Non-repetitive Peak Forward Surge Current (at t = 1 s)	I_{FSM}	500	mA
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Forward Voltage at I_F = 100 mA	V_F	1.2	V
Reverse Current at V_R = 80 V	I_R	0.1	μA
Capacitance Between Terminals at V_R = 0.5 V, f = 1 MHz	C_T	3	pF
Reverse Recovery Time at V_R = 6 V, I_F = 10 mA, R_L = 100 Ω	t_{rr}	4	ns

RATING AND CHARACTERISTIC CURVES

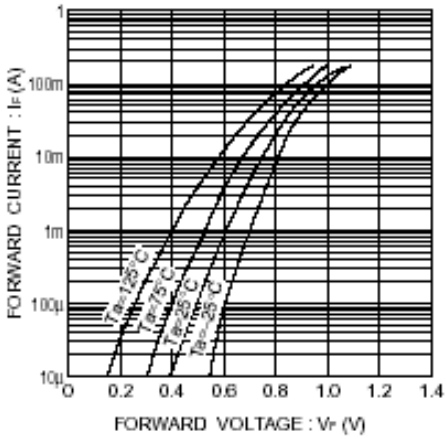


Fig.1 Forward characteristics

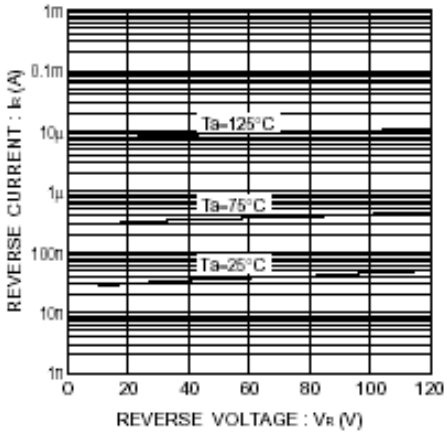


Fig.2 Reverse characteristics

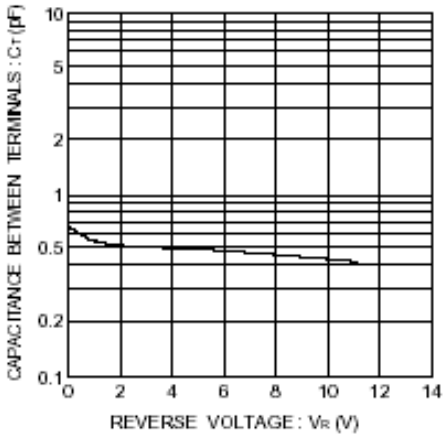


Fig.3 Capacitance between terminals

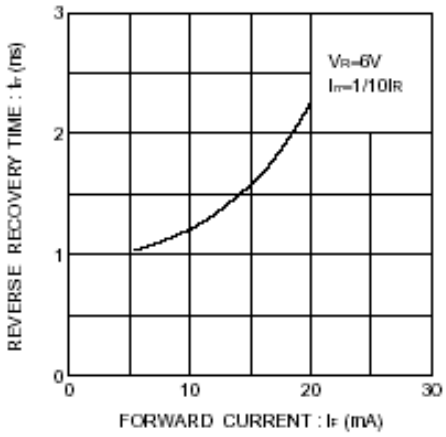


Fig.4 Reverse recovery time characteristics

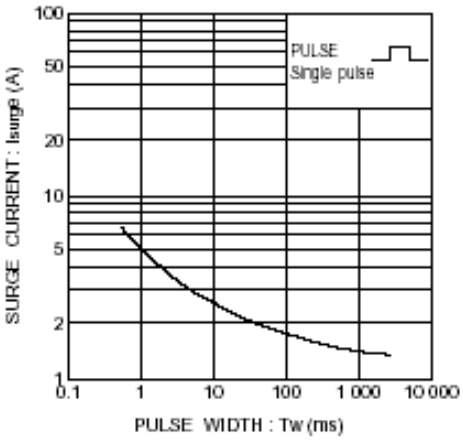


Fig.5 Surge current characteristics

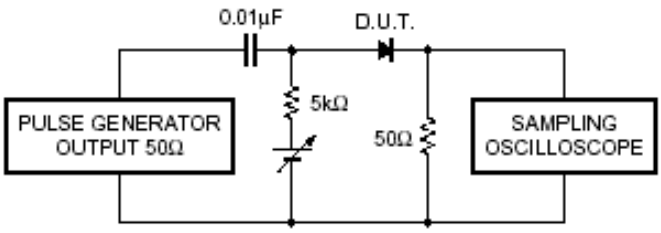
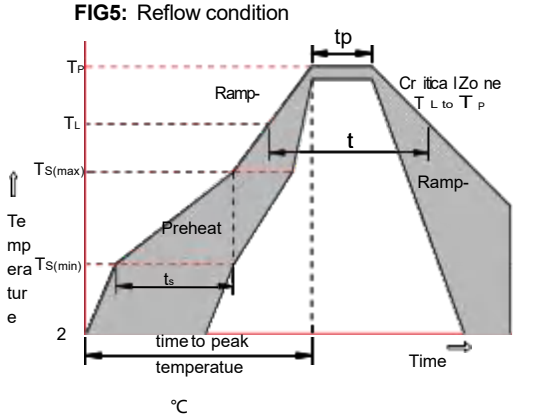


Fig.6 Reverse recovery time (t_{rr}) measurement circuit

Soldering parameters

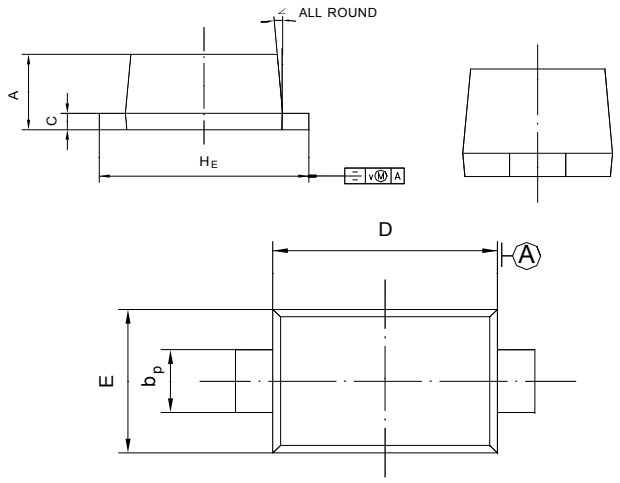
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

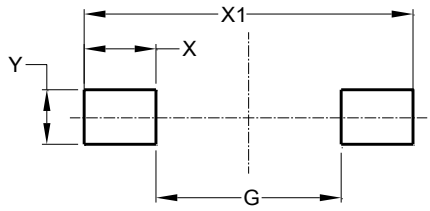
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOD523



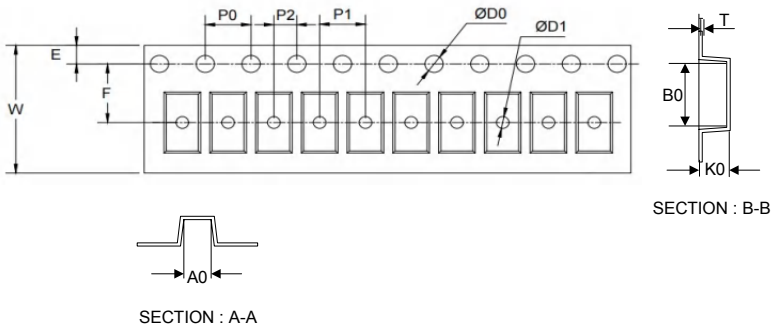


UNIT	A	b_p	C	D	E	H_E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°

Dimensions	Value (in mm)
G	0.85
X	0.70
X1	2.25
Y	0.80

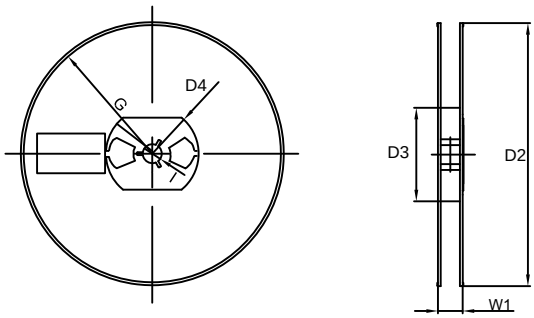
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	2.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	0.50±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	1.30±0.20
B0	2.35±0.20
K0	0.95±0.20
T	0.20±0.20

7” Reel



D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 3000PCS