

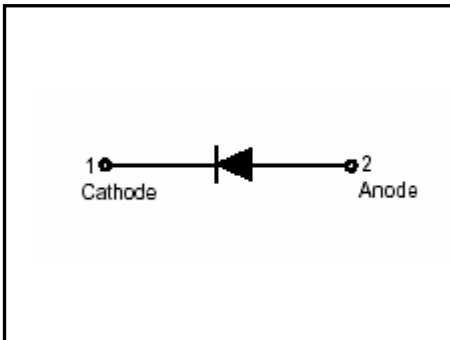
High Speed Switching diode

1SS400Y2

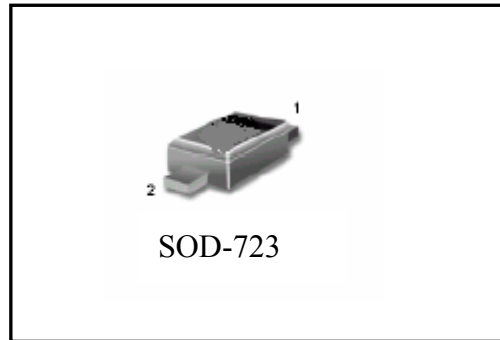
Features

- Extremely small surface mounting type.(SOD723)
- High speed switching applications
- Low reverse current

Symbol



Outline



Absolute Maximum Ratings(T_A=25°C)

- Maximum Temperatures
 - Storage Temperature T_{stg}..... -55~+150°C
 - Junction Temperature T_j +150°C
- Maximum Voltages and Currents (T_a=25°C)
 - DC Reverse Voltage V_R 100 V
 - Peak Forward Current I_F..... 225mA
 - Mean Rectifying Current I_o..... 100mA
 - Peak Forward Surge Current I_{FSM}..... 500mA
- Thermal Characteristics
 - Total Device Dissipation @ T_A=25°C (Note) P_D.....150mW
 - Thermal Resistance, Junction to Ambient R_{θJA}.....833°C/W

Note: FR-5 board minimum pad.

Ordering Information

Device	Package	Shipping	Marking
1SS400Y2	SOD-723 (Pb-free lead plating package)	8000 pcs / Tape & Reel	7

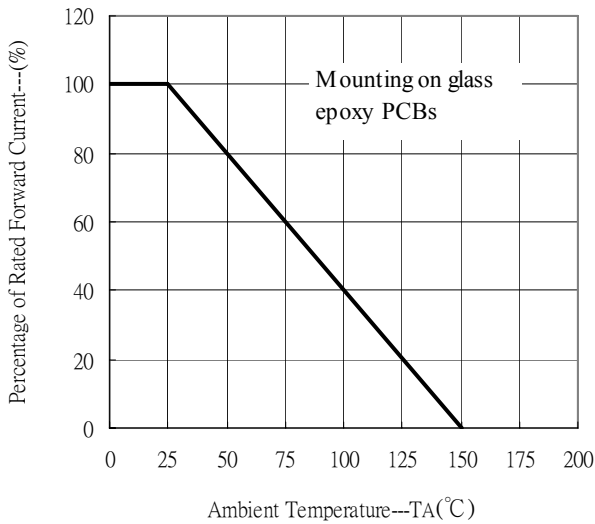


Characteristics (Ta=25°C)

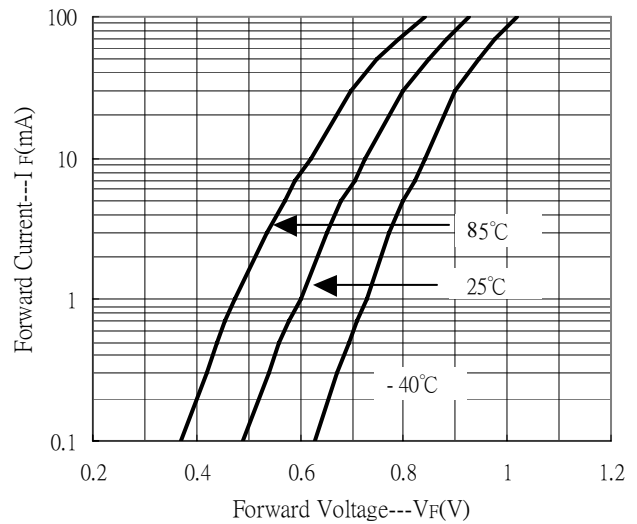
Characteristic	Symbol	Condition	Min.	Max.	Unit
Forward Voltage	V _F	I _F =100mA	-	1.2	V
Reverse Leakage Current	I _R	V _R =100V	-	0.1	μA
Diode Capacitance	C _D	V _R =0.5V, f=1MHz	-	3	pF
Reverse Recovery Time	t _{rr}	I _F =I _R =10mA	-	4	ns

Characteristic Curves

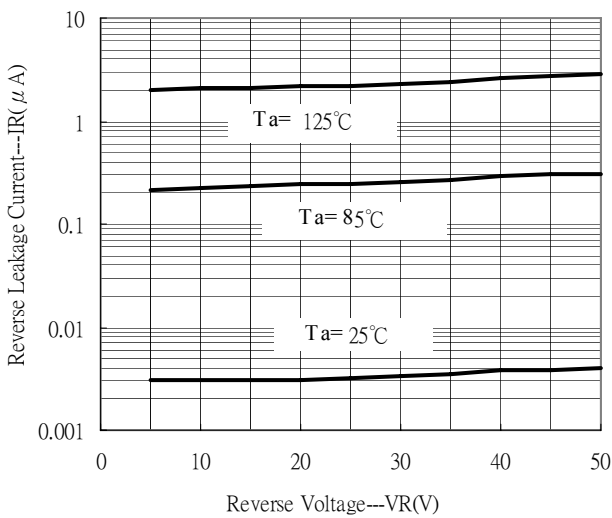
Forward Current Derating Curve



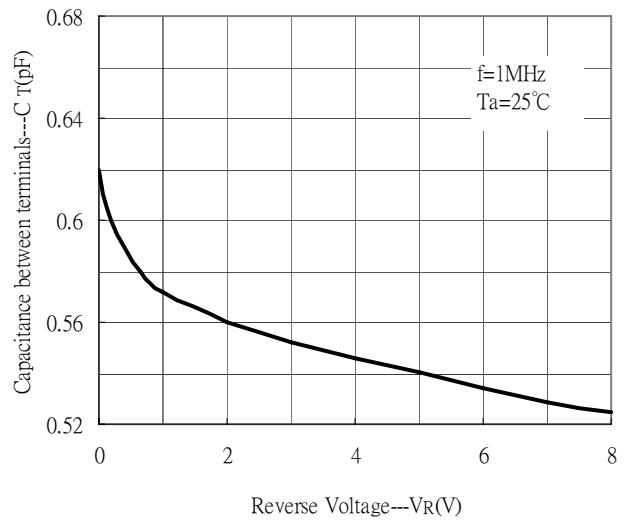
Forward Current vs Forward Voltage



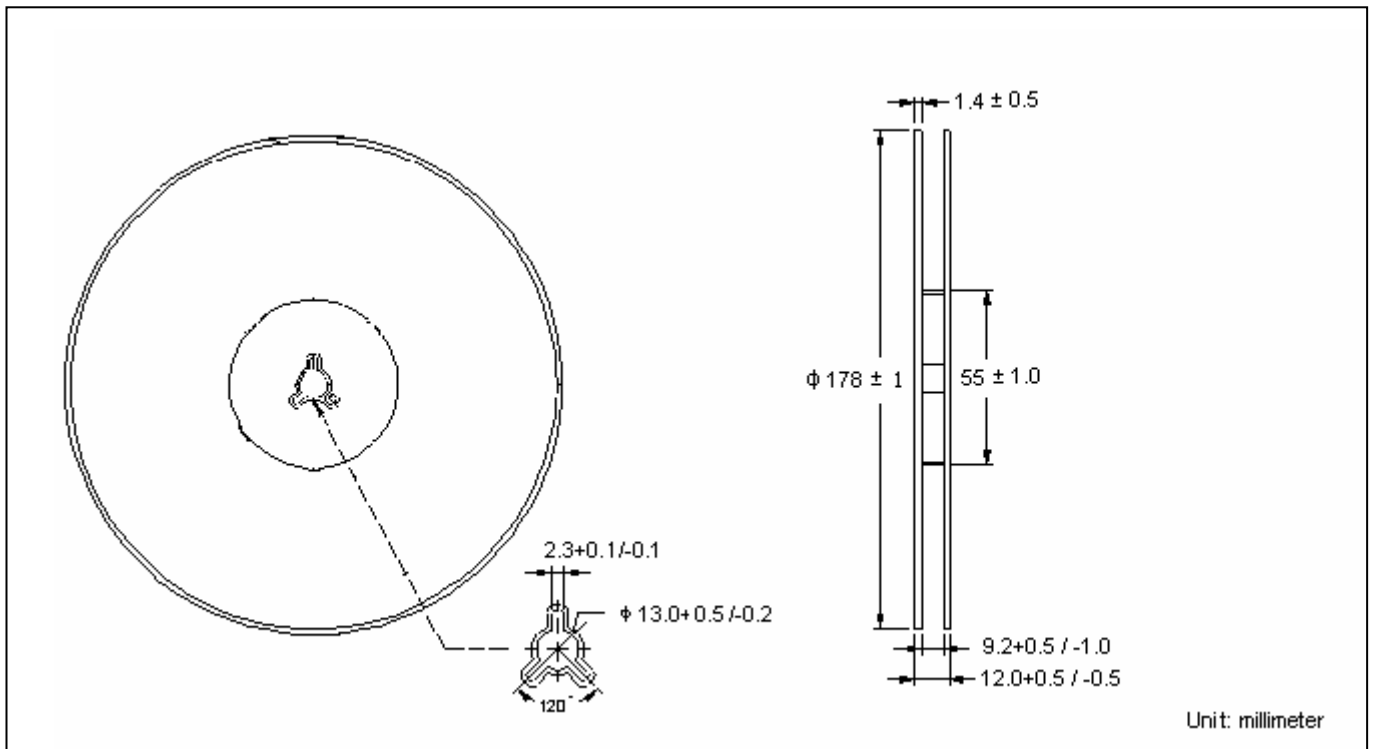
Reverse Leakage Current vs Reverse Voltage



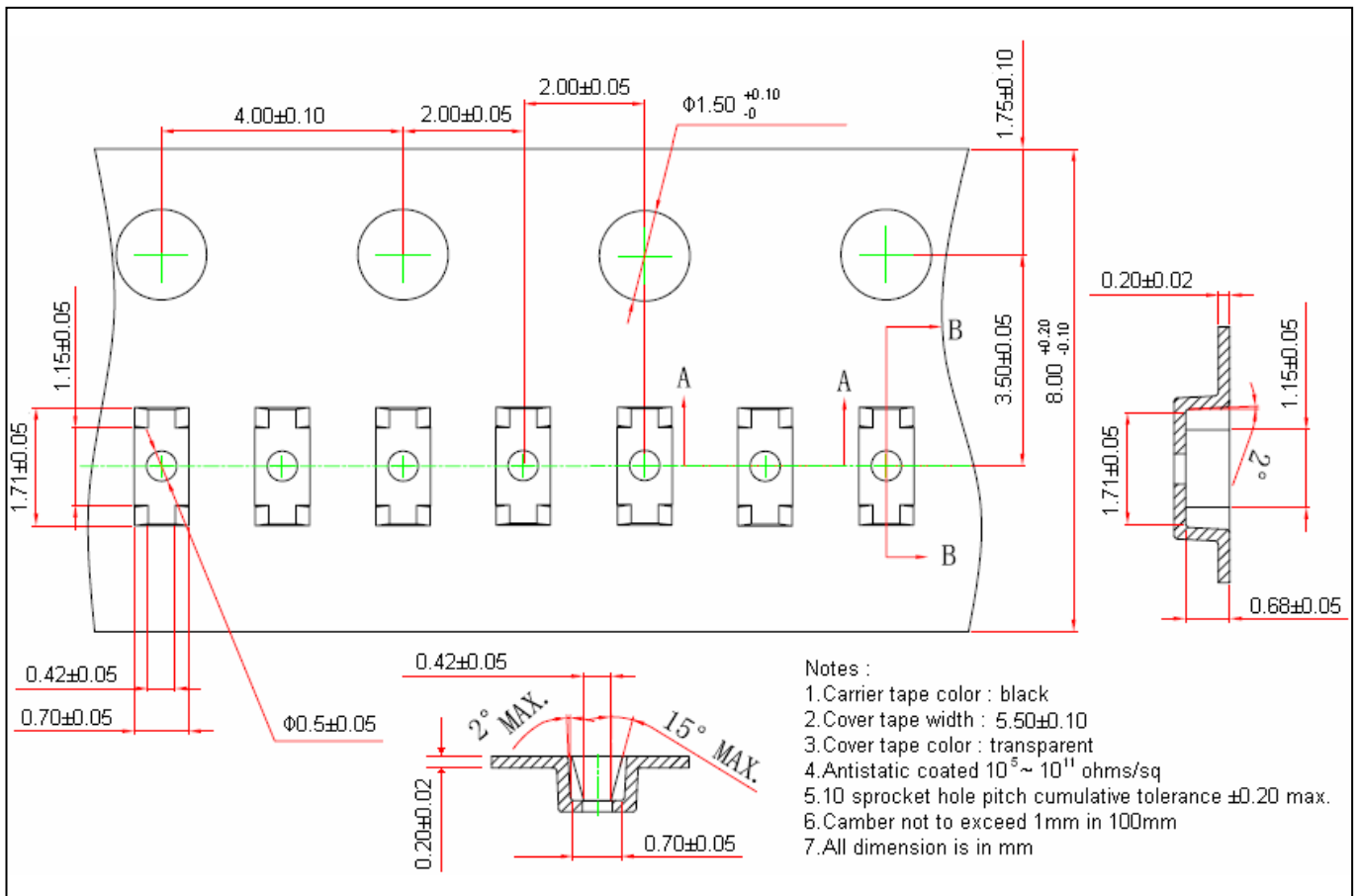
Capacitance vs Reverse Voltage



Reel Dimension



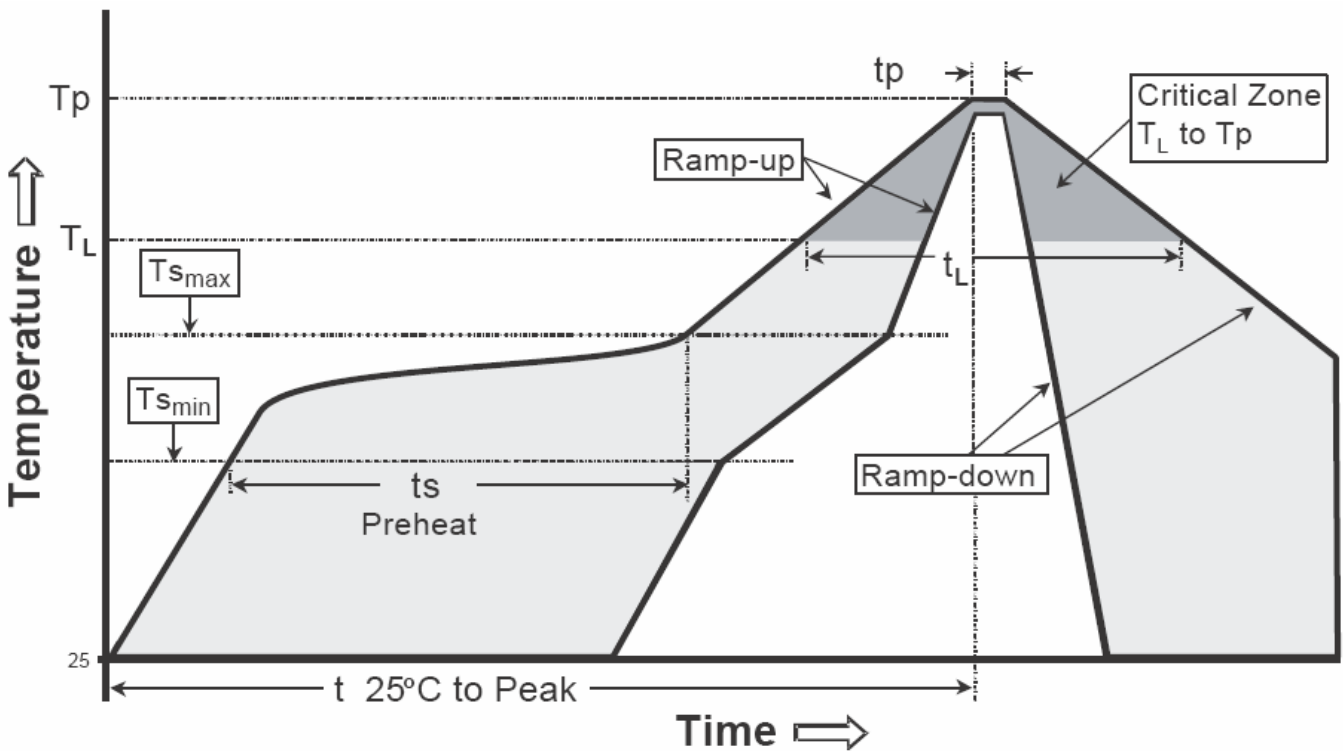
Carrier Tape Dimension



Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

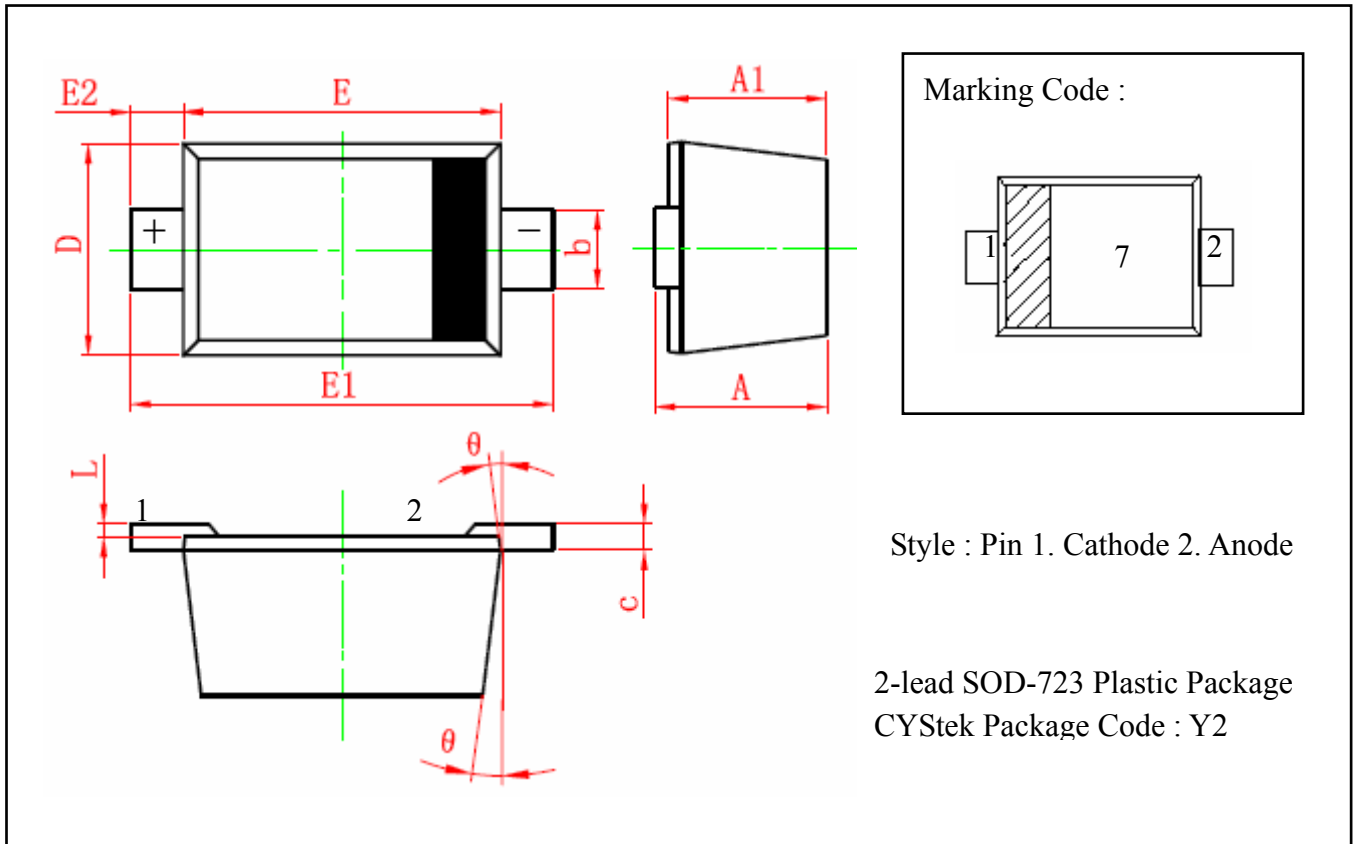
Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (T _{smax} to T _p)	3°C/second max.	3°C/second max.
Preheat		
-Temperature Min(T _{s min})	100°C	150°C
-Temperature Max(T _{s max})	150°C	200°C
-Time(t _{s min} to t _{s max})	60-120 seconds	60-180 seconds
Time maintained above:		
-Temperature (T _L)	183°C	217°C
- Time (t _L)	60-150 seconds	60-150 seconds
Peak Temperature(T _P)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

SOD-723 Dimension



*: Typical

DIM	Millimeters		Inches		DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.525	0.650	0.021	0.026	E	0.900	1.100	0.035	0.043
A1	0.515	0.580	0.020	0.023	E1	1.300	1.500	0.051	0.059
b	0.250	0.350	0.010	0.014	E2	0.200	REF	0.008	REF
c	0.080	0.150	0.003	0.006	L	0.010	0.070	0.001	0.003
D	0.550	0.650	0.022	0.026	θ	7° REF		7° REF	

Notes: 1.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 2.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

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