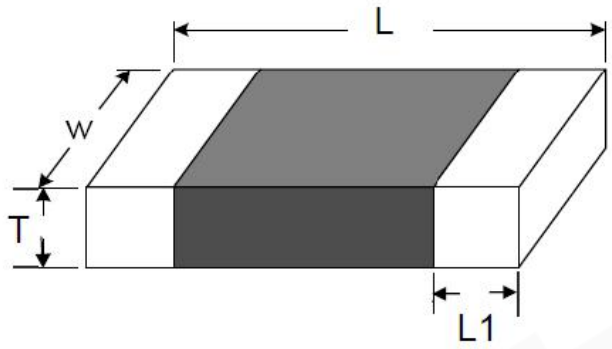
SOCAY

Chip NTC Thermistor

SN0402 Series

Shape and Dimensions Unit: (mm)



Type	L	W	T	L1
Dimensions	1.0±0.15	0.50±0.15	0.50±0.15	0.25±0.1

Part Number Code

SN	0402	X	103	F	3435	F	A
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(1) SN: Socay Chip NTC Thermistor.

(2) 0402: External Dimensions (L x W x T): 1.00mm x 0.50mm x 0.50mm.

(3) X: Delimiter.

(4) 103: Nominal Zero-Power Resistance at 25℃: 222 = 2.2kΩ; 103 = 10kΩ; 474 = 470kΩ.

(5) F: Tolerance of Resistance: F: ±1%; H: ±3%; J: ±5%.

(6) 3435: B Constant: 3435 = 3435K; 3950 = 3950K; 4250 = 4250K.

(7) F: Tolerance of B Constant: F: ±1%.

(8) A: B Constant Calculation Method: A: 25℃ & 85℃; B: 25℃ & 50℃.

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Chip NTC Thermistor

SN0402 Series

Electrical Characteristics

1) F Series

Part Number	Resistance (25℃) (kΩ)	B Constant (25/50℃) (K)	B Constant (25/85℃) (K)	Dissipation Factor (mW/℃)	Thermal Time Constant (s)	Rated Electric Power (25℃) (mW)	Operating Ambient Temperature (℃)
SN0402X103F3380FB	10±1%	3380±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103F3435FA	10±1%	--	3435±1%	1.7	3.0	170	-40 ~ +125
SN0402X103F3450FB	10±1%	3450±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103F3950FB	10±1%	3950±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X473F4050FA	47±1%	--	4050±1%	1.7	3.0	170	-40 ~ +125
SN0402X104F4250FB	100±1%	4250±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X104F4310FA	100±1%	--	4310±1%	1.7	3.0	170	-40 ~ +125

2) H Series

Part Number	Resistance (25℃) (kΩ)	B Constant (25/50℃) (K)	B Constant (25/85℃) (K)	Dissipation Factor (mW/℃)	Thermal Time Constant (s)	Rated Electric Power (25℃) (mW)	Operating Ambient Temperature (℃)
SN0402X103H3380FB	10±3%	3380±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103H3435FA	10±3%	--	3435±1%	1.7	3.0	170	-40 ~ +125
SN0402X103H3450FB	10±3%	3450±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103H3950FB	10±3%	3950±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X473H4050FA	47±3%	--	4050±1%	1.7	3.0	170	-40 ~ +125
SN0402X104H4250FB	100±3%	4250±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X104H4310FA	100±3%	--	4310±1%	1.7	3.0	170	-40 ~ +125

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Electrical Characteristics （Continue）

3) J Series

Part Number	Resistance (25℃) (kΩ)	B Constant (25/50℃) (K)	B Constant (25/85℃) (K)	Dissipation Factor (mW/℃)	Thermal Time Constant (s)	Rated Electric Power (25℃) (mW)	Operating Ambient Temperature (℃)
SN0402X103J3380FB	10±5%	3380±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103J3435FA	10±5%	--	3435±1%	1.7	3.0	170	-40 ~ +125
SN0402X103J3450FB	10±5%	3450±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X103J3950FB	10±5%	3950±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X473J4050FA	47±5%	--	4050±1%	1.7	3.0	170	-40 ~ +125
SN0402X104J4250FB	100±5%	4250±1%	--	1.7	3.0	170	-40 ~ +125
SN0402X104J4310FA	100±5%	--	4310±1%	1.7	3.0	170	-40 ~ +125

Test and Measurement Procedures

◆ Test Conditions:

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:

a. Ambient Temperature: 25±2℃

b. Relative Humidity: 65±5%

c. Air Pressure: 86kPa to 106kPa

Storage Conditions of Products

◆ Storage Conditions:

Storage Temperature: -10℃ ~ +40℃.

Relative Humidity: ≤ 75%RH.

Keep away from corrosive atmosphere and sunlight.

◆ Period of Storage: 6 months.

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Chip NTC Thermistor

SN0402 Series

Reliability-SMD Type NTC Thermistor for Temperature Sensing

Test description	Standard	Test condition	Test requirement
Bending strength	IEC 60068-2-21	Speed <0.5mm/sec Duration : 10sec on PCB Warp : 2mm	No visible damage △R25/R25≦±5%
Solder ability	IEC 60068-2-58	245±5℃，3±0.3 sec.	Above 95% in the terminal surface shall be with new solder
Resistance to soldering heat	IEC 60068-2-58	260±5℃，10±1 sec.	No visible damage △R25/R25≦±3%
High temperature storage	IEC 60068-2-2	125±5℃，1000±24 hrs.	No visible damage △R25/R25≦±5%
Damp Heat,Steady State	IEC 60068-2-78	40±2℃，90～95%RH，1000±24 hrs.	No visible damage △R25/R25≦±3%
Rapid Change of temperature	IEC 60068-2-14	Temperature cycle shall be repeated 5 cycles on PCB Step / Temperature(℃) / Period(minutes) 1 / -40±5 / 30±3 2 / Room temperature / 5±3 3 / 125±5 / 30±3 4 / Room temperature / 5±3	No visible damage △R25/R25≦±3%
Max. Power Dissipation	IEC 60539-14.26.3	25±5℃，Pmax，1000±24 hrs.	No visible damage △R25/R25≦±5%

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Recommended Soldering Technologies

◆ **Re-flowing Profile**

(1)1~2℃/sec. Ramp

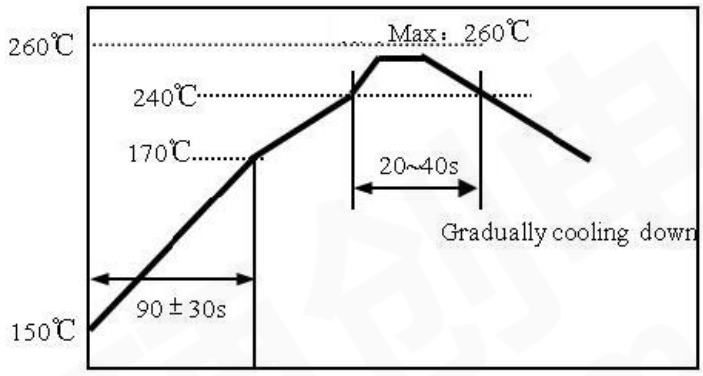
(2)Pre-heating: 150~170℃/90±30 sec.

(3)Time above 240℃: 20~40 sec.

(4)Peak temperature: 260℃Max./10 sec.

(5)Solder paste: Sn/3.0Ag/0.5Cu

(6)Max.2 times for re-flowing



◆ **Iron Soldering Profile**

(1)Iron soldering power: Max.20W

(2)Pre-heating: 150℃/60sec.

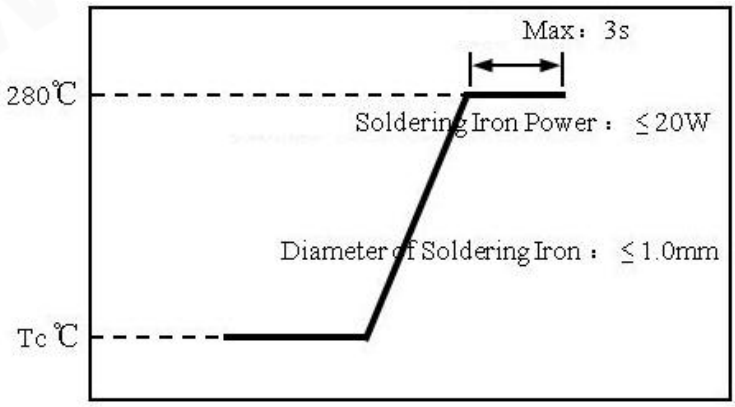
(3)Soldering Tip temperature: 280℃Max.

(4)Soldering time: 3 sec Max.

(5)Solder paste: Sn/3.0Ag/0.5Cu

(6)Max.1 times for iron soldering

Note: *Take care not to apply the tip of the soldering iron to the terminal electrodes.*



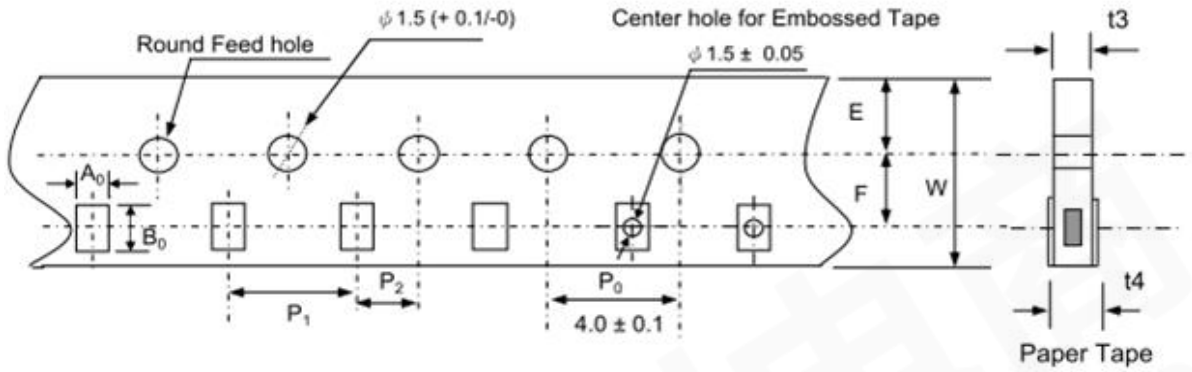
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Chip NTC Thermistor

SN0402 Series

Tape Specifications (Unit: mm)

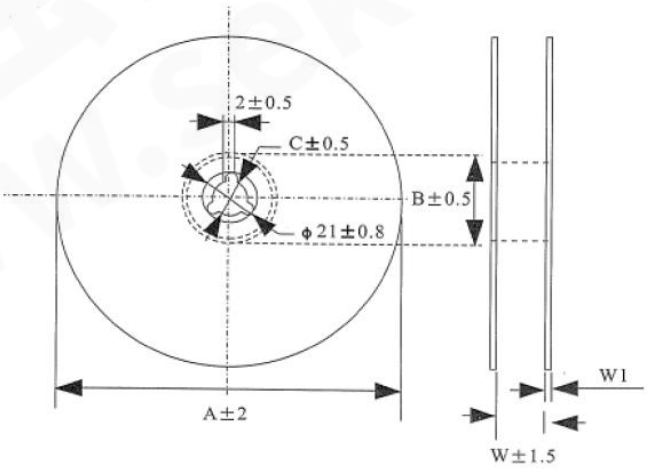
Tape Component Dimensions



Symbol	A_0	B_0	P_1	P_2	T_3/T_4	Quantity per Reel
Dimensions	0.62±0.1	1.10±0.1	2.00±0.1	2.00±0.1	1.0max/1.1max	10,000 PCS

Reel Specifications (Unit: mm)

Reel Dimensions



Symbol	A	B	C	W	W_1
Dimensions	178	60	13	10	1.6

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