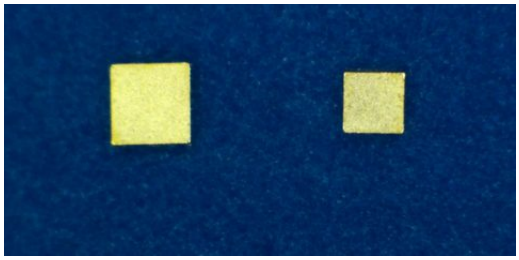
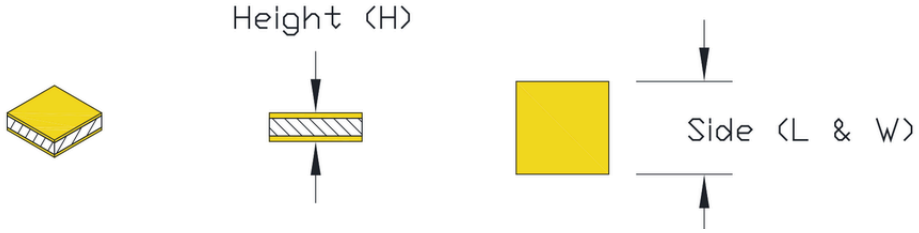
NORTH STAR SENSORS, LLC

A2 NTC Thermistor

Description:

Leadless chip NTC thermistor with top and bottom wire bondable gold metalized contacts. Available in a variety of R-T Curve and R25 values. RoHS compliant without exemptions - lead and cadmium free.





Features:

- **Gold wire bondable**
- **Suitable for die mounting with conductive epoxy**
- **Exceptional stability and reliability**
- **RoHS compliant without exemptions**
- **Available in point-matched tolerances from 0° C to 100° C**

The A2 leadless NTC thermistor style was developed specifically for applications where a gold wire bond is required and RoHS compliance without exemptions is desired. This configuration is ideal for mounting on hybrid substrates, integrated circuits, or printed circuit boards. Contact us at info@northstarsensors.com for assistance with your unique application.

Applications:

- **Integrated circuits**
- **Infrared detectors**
- **Tunable lasers and optical filters**
- **Small package electronics**
- **Industrial controls**
- **Cold junction compensation**

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Typical Configurations:

Part Number	Resistance at 25 °C	Resistance Tolerance	Die Size LxWxH	R/T Curve	25 °C / 85 °C β
A2A103R44P2W	10 kΩ	±2% at 25 °C	0.017″ x 0.017″ x 0.005″ (0.43 x 0.43 x 0.13) mm	44	3978
A2B303R43P5W	30 kΩ	±5% at 25 °C	0.027″ x 0.027″ x 0.011″ (0.69 x 0.69 x 0.28) mm	43	3943
A2A104R47P5W	100 kΩ	±5% at 25 °C	0.030″ x 0.030″ x 0.013″ (0.76 x 0.76 x 0.33) mm	47	4262
A2D102R38P5W	1 kΩ	±5% at 25 °C	0.034″ x 0.034″ x 0.011″ (0.86 x 0.86 x 0.28) mm	38	3486

A wide variety of configurations are possible. Contact us at info@northstarsensors.com for assistance with your unique application.

Other Specifications:

Recommended Operating Temperature	-50 °C to 100 °C
Recommended Measurement Current	< 50 µA when mounted
Time Constant	~ 100 ms unmounted in stirred liquid
Dissipation Constant	~ 0.3 mW / °C umounted in ambient air
RoHS and REACH	Compliant

Resistance Ratio vs Temperature Conversion Tables

°C	CURVE 38		CURVE 43		CURVE 44		CURVE 47	
	Ω RATIO	NTC	Ω RATIO	NTC	Ω RATIO	NTC	Ω RATIO	NTC
	R_T / R_{25}	(%/°C)	R_T / R_{25}	(%/°C)	R_T / R_{25}	(%/°C)	R_T / R_{25}	(%/°C)
0	2.815	-4.46	3.1660	-4.94	3.2651	-5.11	3.5102	-5.40
5	2.260	-4.33	2.4815	-4.80	2.5393	-4.95	2.6904	-5.24
10	1.826	-4.20	1.9583	-4.67	1.9901	-4.80	2.0780	-5.09
15	1.485	-4.07	1.5556	-4.54	1.5712	-4.66	1.6170	-4.94
20	1.215	-3.95	1.2434	-4.42	1.2493	-4.52	1.2673	-4.80
25	1.000	-3.84	1.0000	-4.30	1.0000	-4.39	1.0000	-4.67
30	0.8276	-3.73	0.80892	-4.18	0.80567	-4.26	0.7943	-4.54
35	0.6885	-3.63	0.65804	-4.07	0.65314	-4.14	0.6349	-4.42
40	0.5758	-3.53	0.53820	-3.97	0.53266	-4.02	0.51059	-4.30
45	0.4840	-3.43	0.44249	-3.87	0.43689	-3.91	0.41302	-4.18
50	0.4087	-3.33	0.36563	-3.77	0.36031	-3.81	0.33598	-4.07
55	0.3467	-3.24	0.30357	-3.67	0.29857	-3.71	0.27479	-3.97
60	0.2954	-3.16	0.25323	-3.58	0.24869	-3.61	0.22593	-3.87
65	0.2528	-3.07	0.21219	-3.49	0.20816	-3.51	0.18669	-3.77
70	0.2172	-2.99	0.17858	-3.41	0.17508	-3.42	0.15502	-3.67

Please visit
northstarsensors.com/temperature-curves
for additional tables

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