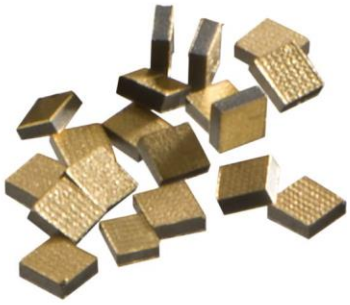
te.com

LEADLESS NTC GOLD CHIP THERMISTOR



FEATURES

- Gold electrodes suitable for wire bonding
- Mount directly to substrate for fast time-response
- Temperature range -40°C to +125°C
- High stability performance with additional aging steps
- Delivers advanced electro-ceramic materials with fine grained microstructure

APPLICATIONS

- WDM (Wavelength Division Multiplexing) for advanced frequency control in communications systems and wireless applications
- Thermopile sensors for thermal radiation recognition and infrared sensing
- Thermal protection of sensitive circuits Hybrid circuit temperature compensation
- Localized temperature sensing
- Custom sizes of part numbers listed above are available upon request.

GENERAL DESCRIPTION

TE Connectivity offers a comprehensive range of Gold terminated leadless NTC chip thermistors for today's hybrid microelectronics needs. With metallization on top and bottom surfaces, attachment to hybrid, IC or PC circuits is accomplished using industry standard die attach and wire bonding techniques. Chips may be soldered or bonded with conductive epoxy to board termination points where space is at a premium. Typical square-chip sizes range from 0.014" to 0.047" depending on the preferred ceramic system and nominal ohmic resistance. Leadless NTC chip thermistors are supplied in "waffle" packs for protection and ease of customer handling.

SPECIFICATION

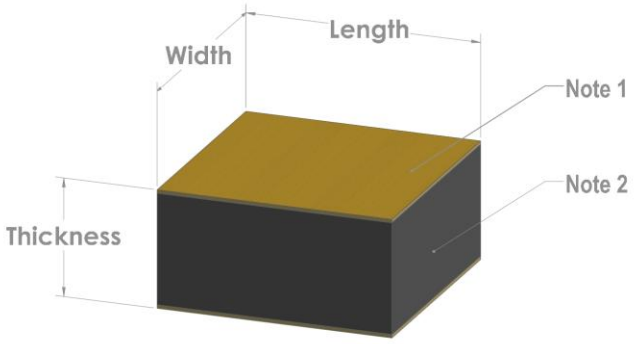
- 0.1K to 1M Ohms Resistance @25ºC
- ±5% and ±10% Tolerance
- Rapid Time Response
- Surface Mount Capability
- Supplied in "Waffle" Packs

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PRODUCT OVERVIEW

Gold NTC chip thermistor



Resistance @ 25°C (Ohms)	0/50°C Beta Value	Operating Temperature	Nominal Chip Dimensions (mm)			Nominal Chip Dimensions (inches)		
			L	W	T	L	W	T
100	3108	-40º to +100ºC	1.397	1.397	0.305	0.055	0.055	0.012
300	3108	-40º to +100ºC	0.914	0.914	0.381	0.036	0.036	0.015
1000	3263	-40º to +100ºC	0.762	0.762	0.381	0.03	0.03	0.015
1000	3422	-40º to +100ºC	1.067	1.067	0.381	0.042	0.042	0.015
2252	3892	-40º to +125ºC	1.905	1.905	0.254	0.075	0.075	0.01
3000	3892	-40º to +125ºC	1.651	1.651	0.254	0.065	0.065	0.01
5000	3892	-40º to +125ºC	1.397	1.397	0.305	0.055	0.055	0.012
10000	3892	-40º to +125ºC	1.016	1.016	0.305	0.04	0.04	0.012
10000	3575	-40º to +125ºC	1.143	1.143	0.254	0.045	0.045	0.01
30000	3811	-40º to +125ºC	0.889	0.889	0.381	0.035	0.035	0.015
30000	4143	-40º to +125ºC	1.397	1.397	0.305	0.055	0.055	0.012
50000	4143	-40º to +125ºC	1.143	1.143	0.381	0.045	0.045	0.015
100000	4143	-40º to +125ºC	0.889	0.889	0.381	0.035	0.035	0.015
1000000	4582	-40º to +125ºC	0.889	0.889	0.254	0.035	0.035	0.01

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RESISTANCE V TEMPERATURE CHARACTERISTICS

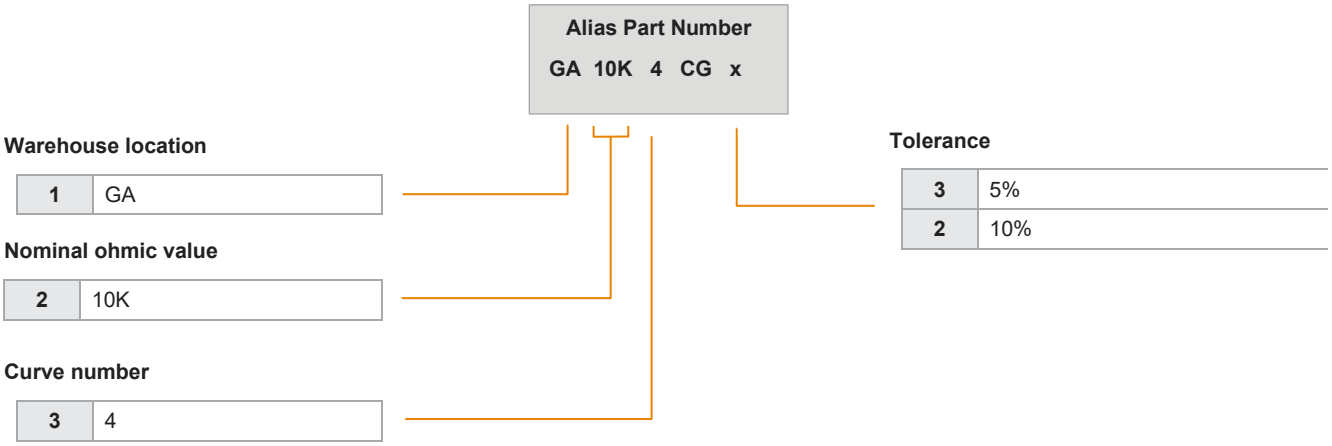
Beta value 25/85 (K)	3108		3263	3422	3892				3575	3811	4143			4582
Nominal resistance at +25°C	100 (Ω)	300 (Ω)	1000 (Ω)	1000 (Ω))	2252 (Ω)	3000 (Ω)	5000 (Ω))	10000 (Ω)	10000 (Ω)	30000 (Ω)	30000 (Ω)	50000 (Ω)	100000 (Ω)	1000000 (Ω)
Temp(°C)														
-40	1597.5	4814.7	18641.3	21681.1	75491.0	100619.1	167861.6	336097.6	239828.4	884198.2	1219113	2033475	4071185.7	54553812
-35	1239.0	3730.1	14231.4	16307.9	54489.3	72616.1	121113.9	242426.8	179281.5	648789.9	866698.4	1445347	2892929.6	38043843
-30	968.5	2913.1	10959.8	12381.7	39761.2	52982.3	88349.4	176802.7	135232.8	480620.2	622924.1	1038644	2078447.8	26800896
-25	762.8	2292.7	8511.0	9485.3	29317.3	39062.1	65126.8	130306.3	102889.5	359305.5	452412.9	754239.9	1509065.2	19065025
-20	605.2	1817.8	6662.1	7328.9	21832.4	29087.3	48490.3	97006.1	78930.1	270969.5	331870.6	553221.9	1106727.4	13689162
-15	483.4	1451.6	5254.9	5709.2	16413.5	21866.6	36449.5	72910.6	61030.6	206068.7	245781.5	409682.0	819492.7	9917590.7
-10	388.8	1167.0	4175.2	4482.4	12452.0	16588.4	27649.5	55303.6	47549.2	157975.0	183695.8	306177.6	612407.0	7247241.8
-5	314.7	944.4	3340.7	3545.8	9529.0	12694.1	21157.6	42316.5	37315.9	122041.2	138500.7	230839.4	461694.8	5339893.2
0	256.3	769.0	2691.0	2825.0	7353.0	9795.2	16325.4	32650.8	29490.0	94980.0	105305.0	175508.0	351017.0	3965970.0
5	210.0	630.0	2181.6	2266.3	5719.2	7618.7	12697.7	25395.0	23461.9	74445.3	80712.5	134518.9	269033.9	2968208.1
10	173.0	519.1	1779.6	1830.1	4482.4	5971.2	9951.8	19903.2	18786.5	58749.0	62342.6	103902.5	207800.6	2237922.5
15	143.4	430.1	1460.3	1487.2	3538.9	4714.3	7857.0	15713.6	15136.1	46666.8	48511.8	80851.7	161700.4	1699360.4
20	119.4	358.3	1205.1	1216.0	2813.6	3748.1	6246.7	12493.3	12267.8	37303.5	38018.9	63364.3	126727.2	1299288.0
25	**100.0**	**300.0**	**1000.0**	**1000.0**	**2252.0**	**3000.0**	**5000.0**	**10000.0**	**10000.0**	**30000.0**	**30000.0**	**50000.0**	**100000.0**	**1000000.0**
30	84.1	252.4	834.2	827.0	1814.2	2416.8	4028.0	8056.1	8196.4	24267.5	23828.5	39714.5	79430.1	774585.5
35	71.1	213.4	699.3	687.6	1470.5	1959.0	3265.1	6530.3	6753.9	19740.9	19046.5	31744.8	63491.2	603696.2
40	60.4	181.3	589.2	574.7	1199.1	1597.4	2662.4	5325.0	5593.7	16145.7	15317.0	25529.0	51059.9	473321.8
45	51.6	154.7	498.7	482.7	983.4	1310.0	2183.4	4367.0	4655.6	13274.3	12390.1	20650.7	41303.3	373247.5
50	44.2	132.5	424.0	407.4	810.9	1080.2	1800.5	3601.1	3893.3	10968.5	10079.0	16798.9	33599.4	295976.4
55	38.0	114.0	362.0	345.4	672.2	895.5	1492.5	2985.2	3270.7	9107.2	8243.6	13739.7	27480.8	235970.6
60	32.8	98.5	310.4	294.1	560.1	746.1	1243.5	2487.1	2759.9	7597.2	6777.8	11296.5	22594.0	189113.9
65	28.5	85.4	267.3	251.5	468.9	624.7	1041.2	2082.3	2338.7	6366.2	5600.7	9334.6	18669.8	152328.7
70	24.8	74.3	231.0	216.0	394.5	525.5	875.8	1751.6	1990.0	5358.0	4650.6	7750.9	15502.0	123300.0
75	21.6	64.9	200.4	186.2	333.3	444.1	740.1	1480.1	1700.0	4528.4	3879.8	6466.1	12932.0	100276.9
80	19.0	56.9	174.5	161.2	282.9	376.9	628.1	1256.1	1457.9	3842.9	3251.4	5418.6	10836.7	81927.9
85	16.7	50.0	152.4	140.0	241.1	321.2	535.3	1070.5	1254.8	3274.0	2736.7	4560.7	9120.5	67234.9
90	14.7	44.1	133.6	122.0	206.4	274.9	458.1	916.0	1084.0	2799.9	2313.2	3854.7	7708.4	55415.3
95	13.0	39.0	117.5	106.7	177.3	236.2	393.5	786.8	939.6	2403.3	1963.2	3271.3	6541.4	45865.0
100	11.6	34.6	103.7	93.7	152.9	203.6	339.3	678.4	817.2	2070.1	1672.7	2787.1	5572.8	38115.0
105	10.3	30.8	91.7	82.5	132.3	176.3	293.7	587.1	713.0	1789.3	1430.6	2383.6	4765.6	31799.5
110	9.2	27.5	81.4	72.8	114.9	153.1	255.0	509.8	624.1	1551.8	1228.1	2046.0	4090.3	26632.0
115	8.2	24.6	72.5	64.5	100.2	133.4	222.2	444.2	547.9	1350.1	1058.0	1762.4	3523.1	22387.1
120	7.4	22.1	64.7	57.3	87.6	116.7	194.3	388.4	482.5	1178.3	914.5	1523.4	3045.0	18886.8
125	6.6	19.9	57.9	51.0	76.8	102.3	170.4	340.6	426.0	1031.5	793.2	1321.1	2640.4	15989.6

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Ordering Information

Replace “x” in the selected part number with the required tolerance band (3 or 2). See page 5 for ordering information.

Alias Part Number	Resistance @ 25°C (Ohms)	0/50°C Beta Value
GA0.1K1CGx	100	3108
GA0.3K1CGx	300	3108
GA1K2CGx	1000	3263
GA1K7CGx	1000	3422
GA2.2K3CGx	2252	3892
GA3K3CGx	3000	3892
GA5K3CGx	5000	3892
GA10K3CGx	10000	3892
GA10K4CGx	10000	3575
GA30K5CGx	30000	3811
GA30K6CGx	30000	4143
GA50K6CGx	50000	4143
GA100K6CGx	100000	4143
GA1M9CGx	1000000	4582



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Alias Part Number	Ordering Part Number
GA0.1K1CG3	11016484-00
GA0.1K1CG2	11016511-00
GA0.3K1CG3	11021066-00
GA0.3K1CG2	11021117-00
GA1K2CG3	GA1K2CG3
GA1K2CG2	GA1K2CG2
GA1K7CG3	GA1K7CG3
GA1K7CG2	10202568-00
GA2.2K3CG3	11021163-00
GA2.2K3CG2	20033671-00
GA3K3CG3	GA3K3CG3
GA3K3CG2	GA3K3CG2
GA5K3CG3	GA5K3CG3
GA5K3CG2	GA5K3CG2
GA10K3CG3	GA10K3CG3
GA10K3CG2	GA10K3CG2
GA10K4CG3	GA10K4CG3
GA10K4CG2	20033697-00
GA30K5CG3	GA30K5CG3
GA30K5CG2	GA30K5CG2
GA30K6CG3	20033698-00
GA30K6CG2	20033699-00
GA50K6CG3	20033700-00
GA50K6CG2	20033701-00
GA100K6CG3	GA100K6CG3
GA100K6CG2	GA100K6CG2
GA1M9CG3	10219021-00
GA1M9CG2	20033702-00

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