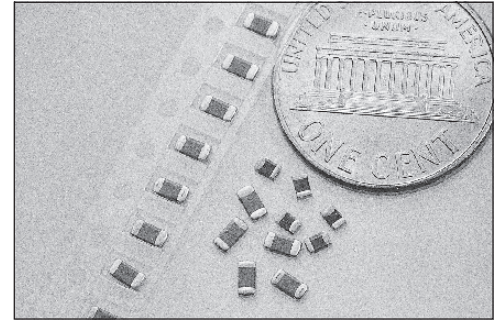


FEATURES

- NEGATIVE TEMPERATURE COEFFICIENT
- FAST RESPONSE TO TEMPERATURE VARIATIONS MAKE THEM IDEALLY SUITED FOR TEMPERATURE SENSORS AND COMPENSATORS
- STANDARD EIA 0402, 0603 AND 0805 SIZES
- NICKEL BARRIER SOLDER PLATE TERMINATIONS
- TAPE AND REEL FOR AUTOMATIC MOUNTING



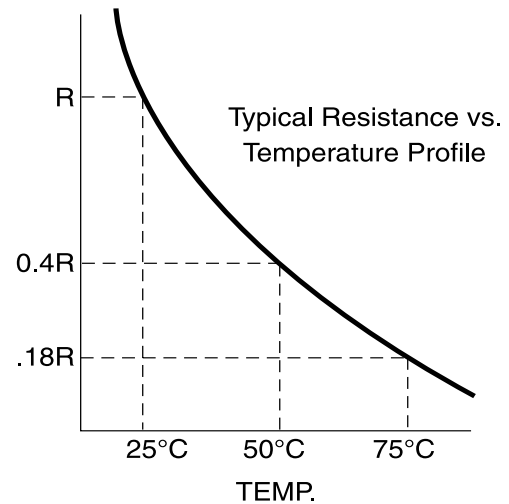
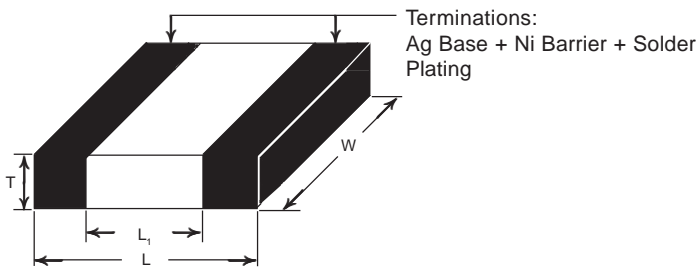
CHARACTERISTICS

Series	NTHC04	NTHC06	NTHC08
EIA Size	0402	0603	0805
Resistance Range (+25°C)*	1000 Ohm ~ 2MegOhm	30 Ohm ~ 150KOhm	40 Ohm ~ 2MegOhm
Resistance Tolerance (+25°C)*	(K) ±10% Std., (J) ±5% Opt.	(K) ±10% Std., (J) ±5% Opt.	(K) ±10% Std., (J) ±5% Opt.***
Operating Temperature Range	-40°C ~ +125°C	-40°C ~ +125°C	-40°C ~ +125°C
Storage Temperature Range	-40°C ~ +125°C	-40°C ~ +125°C	-40°C ~ +125°C
Maximum Power Rating**	240mW	300mW	500mW
Dissipation Constant	2.4mW/°C	3.0mW/°C	5.0mW/°C
Beta Value Range (+25°C~+50°C)	3110 ~ 4950	2150 ~ 4100	2300 ~ 5000
Beta Value Tolerance	(H) ±3%	(J) ±5%, (H) ±3% (values ≥100Ω)	(J) ±5%, (H) ±3% (values ≥100Ω)***

* -See Standard Products Table.

***-Special (F) ±1% Tolerance Available, Contact NIC For Details.

** -Test Method per JIS-C2571.

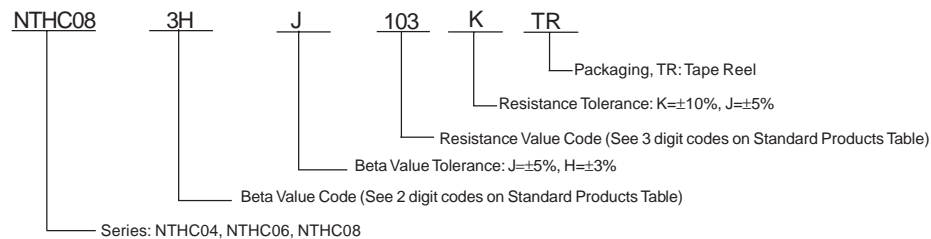


DIMENSIONS (mm)

Series	EIA Size	L	W	T _{max.}	L1 min.
NTHC04	0402	1.0 ± 0.15	0.50 ± 0.10	0.55	0.2
NTHC06	0603	1.6 ± 0.15	0.80 ± 0.15	0.95	0.3
NTHC08	0805	2.0 ± 0.20	1.25 ± 0.20	1.25	0.4

NIC's Application Bulletin #NTHC-002, Contains Resistance Over Temperature Information. Contact NIC Or download information at www.niccomp.com.

PART NUMBERING SYSTEM



STANDARD PRODUCTSTABLE

Resistance (+25°C)		Type: NTHC04 Size: 0402			Type: NTHC06 Size: 0603			Type: NTHC08 Size: 0805		
		Beta**		TC*	Beta**		TC*	Beta**		TC*
Value (OHM)	Code	Value	Code	%/°C	Value	Code	%/°C	Value	Code	%/°C
30	300	n/a	n/a	n/a	2150	2D	-2.40	n/a	n/a	n/a
40	400	n/a	n/a	n/a	2200	2E	-2.46	2300	2G	-2.57
40	400	n/a	n/a	n/a	2750	2S	-3.07	n/a	n/a	n/a
50	500	n/a	n/a	n/a	2250	2F	-2.51	2400	2I	-2.68
50	500	n/a	n/a	n/a	2750	2S	-3.07	n/a	n/a	n/a
56	560	n/a	n/a	n/a	n/a	n/a	n/a	2400	2I	-2.68
68	680	n/a	n/a	n/a	2350	2H	-2.63	2650	2N	-2.96
82	820	n/a	n/a	n/a	2700	2R	-3.02	n/a	n/a	n/a
100	101	n/a	n/a	n/a	2700	2R	-3.02	2750	2S	-3.07
120	121	n/a	n/a	n/a	2750	2S	-3.07	n/a	n/a	n/a
150	151	n/a	n/a	n/a	2800	2T	-3.13	2800	2T	3.13
180	181	n/a	n/a	n/a	2900	2V	-3.24	n/a	n/a	n/a
220	221	n/a	n/a	n/a	2900	2V	-3.24	2900	2V	-3.24
330	331	n/a	n/a	n/a	3000	3A	-3.35	3000	3A	-3.35
470	471	n/a	n/a	n/a	3100	3C	-3.46	3100	3C	-3.46
680	681	n/a	n/a	n/a	3150	3D	-3.52	3200	3E	-3.58
820	821	n/a	n/a	n/a	3250	3F	-3.63	n/a	n/a	n/a
1K	102	3110	3C	-3.48	3250	3F	-3.63	3200	3E	-3.58
1.2K	122	n/a	n/a	n/a	3400	3I	-3.80	n/a	n/a	n/a
1.5K	152	3200	3E	-3.58	3400	3I	-3.83	3400	3I	-3.80
1.5K	152	n/a	n/a	n/a	3900	3V	-4.36	n/a	n/a	n/a
1.8K	182	n/a	n/a	n/a	3900	3V	-4.36	n/a	n/a	n/a
2.0K	202	n/a	n/a	n/a	3900	3V	-4.36	3500	3K	-3.91
2.0K	202	n/a	n/a	n/a	4100	4C	-4.58	n/a	n/a	n/a
2.2K	222	3290	3G	-3.68	3500	3K	-3.91	n/a	n/a	n/a
3.0K	302	3370	3H	-3.77	4100	4C	-4.58	4100	4C	-4.58
3.3K	332	3420	3I	-3.82	3650	3N	-4.08	3750	3S	-4.19
4.7K	472	3530	3L	-3.94	3750	3S	-4.19	3950	3W	-4.41
6.8K	682	3670	3N	-4.10	3900	3V	-4.36	4100	4C	-4.58
10K	103	3820	3T	-4.27	4100	4C	-4.58	3370	3H	-3.77
10K	103	n/a	n/a	n/a	n/a	n/a	n/a	3924	3V	-4.38
15K	153	4030	4B	-4.50	3850	3U	-4.30	3650	3N	-4.08
22K	223	3900	3V	-4.36	3500	3K	-3.91	3750	3S	-4.19
30K	303	n/a	n/a	n/a	n/a	n/a	n/a	3950	3W	-4.41
33K	333	3650	3N	-4.08	3450	3J	-3.86	3800	3T	-4.25
47K	473	3400	3I	-3.80	3500	3K	-3.91	3850	3U	-4.30
68K	683	3450	3J	-3.86	3600	3M	-4.02	3650	3N	-4.08
80K	803	3500	3K	-3.91	n/a	n/a	n/a	3700	3R	-4.13
100K	104	3540	3L	-3.96	3700	3R	-4.13	4100	4C	-4.58
150K	154	3620	3M	-4.05	3750	3S	-4.19	4150	4D	-4.64
2MEG	205	4950	4W	-5.53	n/a	n/a	n/a	5000	5A	-5.59

*-TC IS TEMPERATURE COEFFICIENT AT +25°C EXPRESSED IN PERCENT RESISTANCE VALUE CHANGE PER DEGREE CELSIUS.

**-BETA VALUE IS SPECIFIED (+/-3%) FOR +25°C ~ +50°C TEMPERATURE RANGE.

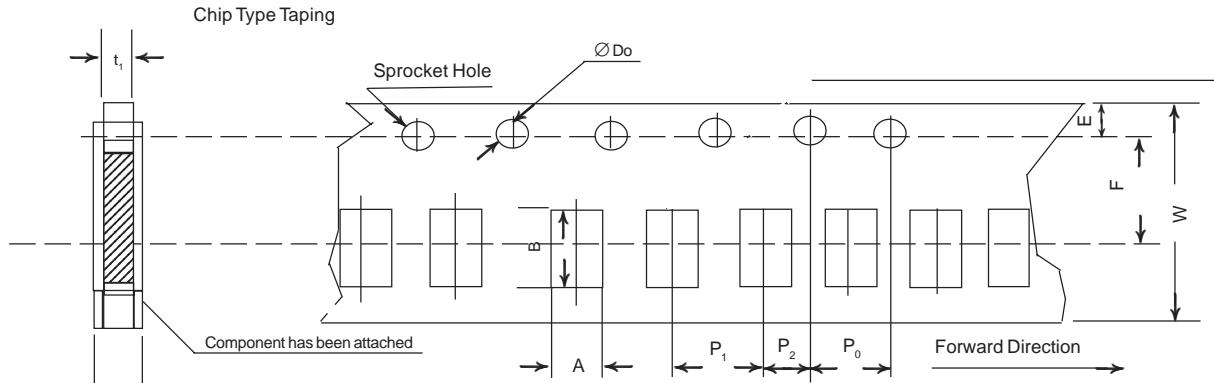
See our web site for Resistance versus Temperature Curves



TAPE PACKAGING (Paper Tape)

Tape Dimensions

Paper or tape of equal or higher grade with perforated rectangular hole

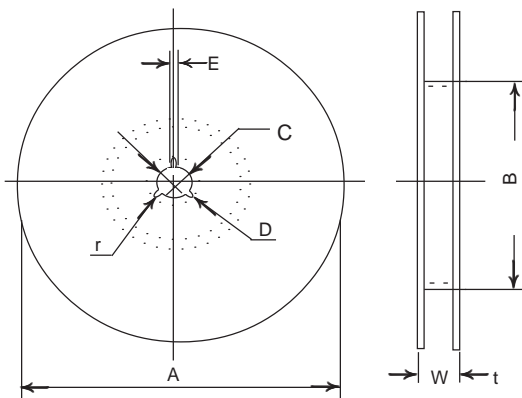


Series	EIA Size	A	B
NTHC04	0402	0.62 ± 0.1	1.15 ± 0.1
NTHC06	0603	1.1 ± 0.2	1.9 ± 0.2
NTHC08	0805	1.65 ± 0.2	2.4 ± 0.2

TAPE DIMENSIONS (mm)

W	F	E	P_1	P_2	P_0	D_0	t_1	t_2
8.0 ± 0.03	3.5 ± 0.05	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	4.0 ± 0.1	$\varnothing 1.5 \pm 0.1$	1.1 Min.	1.1 Min.

REEL



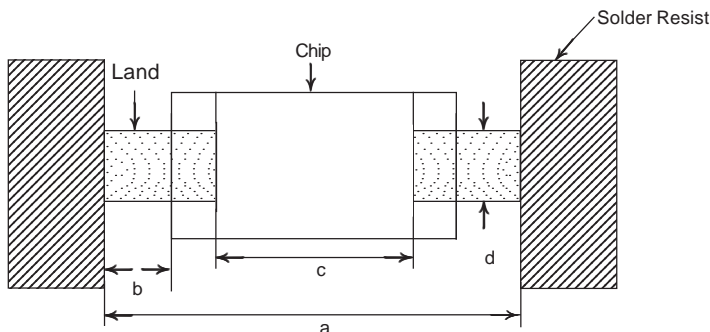
PACKAGE QUANTITY

Series	Size	Quantity Per Reel
NTHC04	0402	10,000
NTHC06	0603	4,000
NTHC08	0805	4,000

REEL DIMENSIONS (mm)

A	B	C	D	E	W	t	r
$\varnothing 178$ ± 2.0	$\varnothing 50$ Min.	$\varnothing 13.0$ ± 0.5	$\varnothing 21.0$ ± 0.8	2.0 ± 0.5	11.0 ± 1.5	0.8 ± 0.2	1.0

LAND PATTERN DIMENSIONS



LAND PATTERN DIMENSIONS (mm)

Dim	NTHC04 (0402)		NTHC06 (0603)		NTHC0805 (0805)	
	Reflow Soldering	Flow Soldering	Reflow Soldering	Flow Soldering	Reflow Soldering	Flow Soldering
a	1.5 ~ 1.7	2.6 ~ 3.2	2.6 ~ 3.2	3.0 ~ 4.0	3.0 ~ 4.5	3.0 ~ 4.5
b	0.2 ~ 0.3	0.4 ~ 0.9	0.4 ~ 0.9	0.6 ~ 1.2	0.6 ~ 1.6	0.6 ~ 1.6
c	0.5 ~ 0.6	0.8 ~ 1.0	0.8 ~ 1.0	0.8 ~ 1.4	0.8 ~ 1.4	0.8 ~ 1.4
d	0.5 ~ 0.6	0.7 ~ 0.8	0.7 ~ 0.8	0.9 ~ 1.2	0.9 ~ 1.5	0.9 ~ 1.5

