

Inductors

For Power Line

SMD

NLC Series NLC5650 Type

FEATURES

- The NLC series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- They are available in form factors ranging from 2520 to 5650.

APPLICATIONS

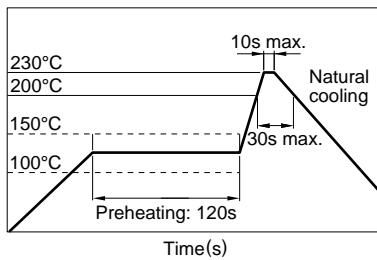
Portable telephones, personal computers, hard disk drives, and other electronic equipment.

SPECIFICATIONS

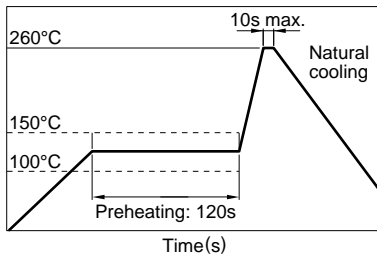
Operating temperature range	-20 to +85°C
Storage temperature range	-40 to +85°C [Unit of products]

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



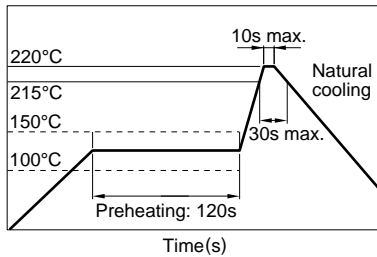
FLOW SOLDERING



IRON SOLDERING

Perform soldering at 250°C on 30W max. within 5 seconds.

VAPOR-PHASING



FLUX AND CLEANING

Rosin-based flux is recommended.

Cleaning Conditions

Solvent	Chlorine-based solvent (Do not use acid or alkali solvents.)
Time	2min max.

PRODUCT IDENTIFICATION

NLC	252018	T	2R2	M
(1)	(2)	(3)	(4)	(5)

(1) Series name

(2) Dimensions L×W×T

252018	2.5×2.0×1.8mm
322522	3.2×2.5×2.2mm
453232	4.5×3.2×3.2mm
565050	5.6×5.0×5.0mm

(3) Packaging style

T	Taping(reel)
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(4) Inductance value

1R0	1μH
330	33μH

(5) Inductance tolerance

K	±10%
M	±20%

PACKAGING STYLE AND QUANTITIES

Packaging style	Type	Quantity
Taping	NLC252018T	2000 pieces/reel
	NLC322522T	2000 pieces/reel
	NLC453232T	500 pieces/reel
	NLC565050T	400 pieces/reel

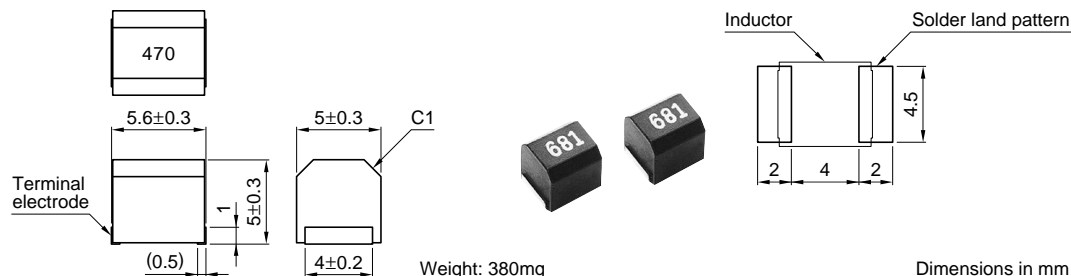
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SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
1	±10%	10	7.96	95	0.03	1800	NLC565050T-1R0K
1.2	±10%	10	7.96	70	0.035	1700	NLC565050T-1R2K
1.5	±10%	10	7.96	55	0.04	1600	NLC565050T-1R5K
1.8	±10%	10	7.96	47	0.05	1400	NLC565050T-1R8K
2.2	±10%	10	7.96	42	0.06	1300	NLC565050T-2R2K
2.7	±10%	10	7.96	37	0.07	1200	NLC565050T-2R7K
3.3	±10%	10	7.96	34	0.08	1120	NLC565050T-3R3K
3.9	±10%	10	7.96	32	0.09	1050	NLC565050T-3R9K
4.7	±10%	10	7.96	29	0.11	950	NLC565050T-4R7K
5.6	±10%	10	7.96	26	0.13	880	NLC565050T-5R6K
6.8	±10%	10	7.96	24	0.15	810	NLC565050T-6R8K
8.2	±10%	10	7.96	22	0.18	750	NLC565050T-8R2K
10	±10%	10	2.52	19	0.21	690	NLC565050T-100K
12	±10%	10	2.52	17	0.25	630	NLC565050T-120K
15	±10%	10	2.52	16	0.3	580	NLC565050T-150K
18	±10%	10	2.52	14	0.36	530	NLC565050T-180K
22	±10%	10	2.52	13	0.43	480	NLC565050T-220K
27	±10%	10	2.52	11.5	0.52	440	NLC565050T-270K
33	±10%	10	2.52	10.5	0.62	400	NLC565050T-330K
39	±10%	10	2.52	9.5	0.72	370	NLC565050T-390K
47	±10%	10	2.52	8.5	0.85	340	NLC565050T-470K
56	±10%	10	2.52	7.8	1	310	NLC565050T-560K
68	±10%	10	2.52	7	1.2	290	NLC565050T-680K
82	±10%	10	2.52	6.4	1.4	270	NLC565050T-820K
100	±10%	20	0.796	6	1.6	250	NLC565050T-101K
120	±10%	20	0.796	5.4	1.9	230	NLC565050T-121K
150	±10%	20	0.796	4.8	2.2	210	NLC565050T-151K
180	±10%	20	0.796	4.4	2.8	190	NLC565050T-181K
220	±10%	20	0.796	3.9	3.4	170	NLC565050T-221K
270	±10%	20	0.796	3.6	4.2	155	NLC565050T-271K
330	±10%	20	0.796	3.2	4.9	140	NLC565050T-331K
390	±10%	20	0.796	2.9	5.8	130	NLC565050T-391K
470	±10%	20	0.796	2.6	7	120	NLC565050T-471K
560	±10%	20	0.796	2.4	8.5	110	NLC565050T-561K
680	±10%	20	0.796	2.2	10	100	NLC565050T-681K
820	±10%	20	0.796	2	13	90	NLC565050T-821K
1000	±10%	20	0.252	1.8	15	85	NLC565050T-102K

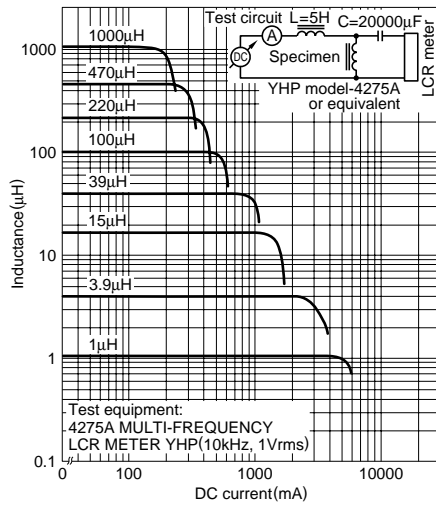
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
- SRF: HP8753C NETWORK ANALYZER (Z_{in}=Z_{out}=50Ω), or equivalent
- R_{dc}: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

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TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



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