

Inductors for Decoupling Circuits

Wound/For Current

NLCV/NLC series

Type:	NLCV25	2520[1008 inch]*
	NLCV32	3225[1210 inch]
	NLCV25T-R	2520[1008 inch]
	NLCV32T-R	3225[1210 inch]
	NLC453232	4532[1812 inch]
	NLC565050	5650[2220 inch]
* Dimensions Code JIS[EIA]		

Issue date: September 2011

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Inductors for Decoupling Circuits

Wound/For Current

Conformity to RoHS Directive

NLCV Series NLCV25

FEATURES

- The product has good heat durability that withstands lead-free compatible reflow soldering conditions.
- Lead-free material is used for the plating on the terminal
- The electrical characteristics, reliability, shape and pad shape are the same as the previous NL series.
- The product uses metal terminals, which realize excellent connection reliability.
- Highly heat resistant thermoplastic resin is used to form the exterior package.
- From 1μH to 33μH, all of the products are available in the E-6 series.
- This product is in compliance with the RoHS Directive. Other products with specifications that do not include exemption regulations are also available.

APPLICATIONS

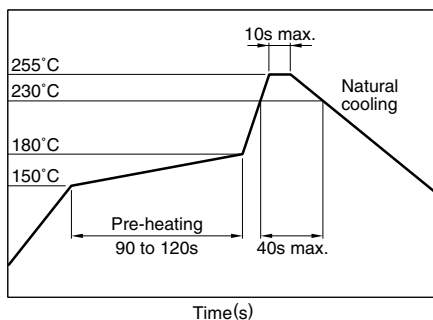
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Electronic equipment used in onboard automobile equipment including car audio and ECU systems.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

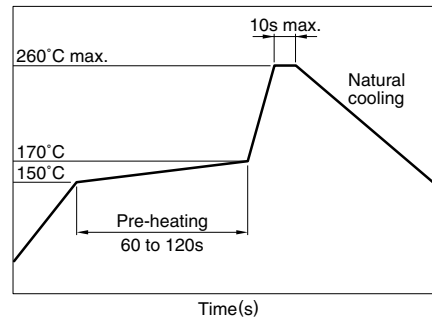
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: approx.1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLCV	25	T-	2R2	M	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	

(1) Series name

(2) Dimensions

25	2.5×2.0×1.8mm (L×W×T)
----	-----------------------

(3) Packaging style

T	Taping (reel)
---	---------------

(4) Inductance value

1R0	1μH
220	22μH

(5) Inductance tolerance

K	±10%
M	±20%

(6) Lead-free compatible product

PF	Conformity to RoHS directive, exemption regulations apply
EF	Conformity to RoHS directive

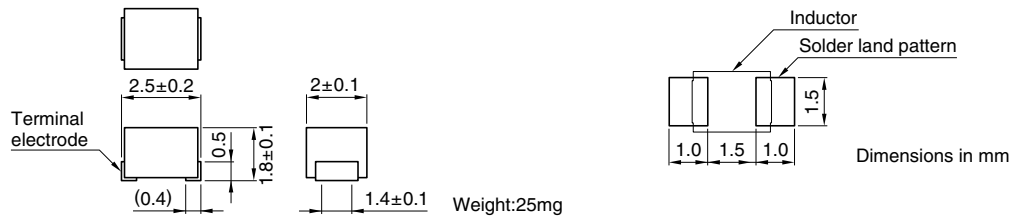
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Inductance(μH)	Inductance tolerance	Q ref.	Test frequency L,Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)±30%	Rated current*1 (mA)max.	Part No.
1	±20%	20	7.96	200	0.34	475	NLCV25T-1R0M-□*2
1.5	±20%	20	7.96	165	0.42	435	NLCV25T-1R5M-□
2.2	±20%	20	7.96	95	0.5	390	NLCV25T-2R2M-□
3.3	±20%	20	7.96	55	0.65	340	NLCV25T-3R3M-□
4.7	±20%	20	7.96	43	0.8	285	NLCV25T-4R7M-□
6.8	±20%	20	7.96	39	1	275	NLCV25T-6R8M-□
10	±10%	30	2.52	32	1.69	210	NLCV25T-100K-□
15	±10%	30	2.52	21	2.2	175	NLCV25T-150K-□
22	±10%	30	2.52	18	2.8	160	NLCV25T-220K-□
33	±10%	30	2.52	16	4.2	120	NLCV25T-330K-□

*1 Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

*2 □: Please specify lead-free compatible product, PF (Conformity to RoHS directive, exemption regulations apply) or EF (Conformity to RoHS directive)

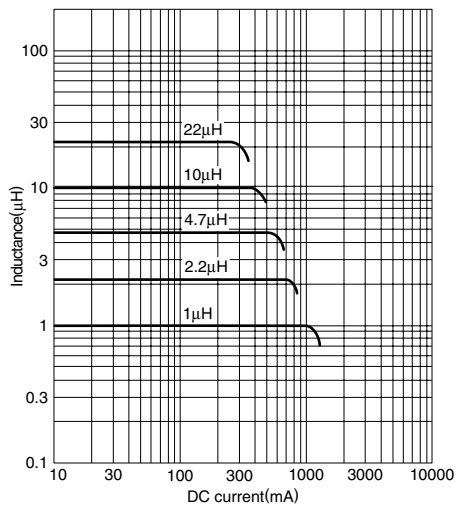
• Test equipment L, Q: HP4194A IMPEDANCE/GAIN PHASE ANALYZER+HP16085A+HP16093 B+TF-1

SRF: HP8753C NETWORK ANALYZER

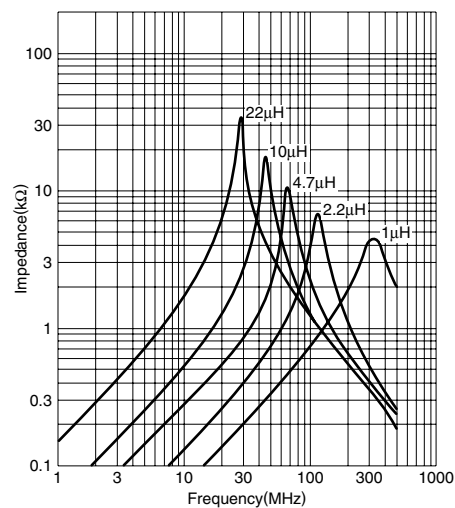
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Inductors for Decoupling Circuits

Wound/For Current

Conformity to RoHS Directive

NLCV Series NLCV32

FEATURES

- This is a renewed version of NLC322522.
- The product has good heat durability that withstands lead-free compatible reflow soldering conditions.
- Lead-free material is used for the plating on the terminal
- The electrical characteristics, reliability, shape and pad shape are the same as the previous NL series.
- The product uses metal terminals, which realize excellent connection reliability.
- Highly heat resistant thermoplastic resin is used to form the exterior package.
- From 1.0 μ H to 330 μ H, all of the products are available.
- This product is in compliance with the RoHS Directive. Other products with specifications that do not include exemption regulations are also available.

APPLICATIONS

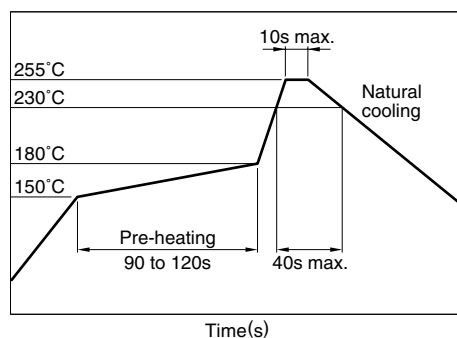
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Electronic equipment used in onboard automobile equipment including car audio and ECU systems.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

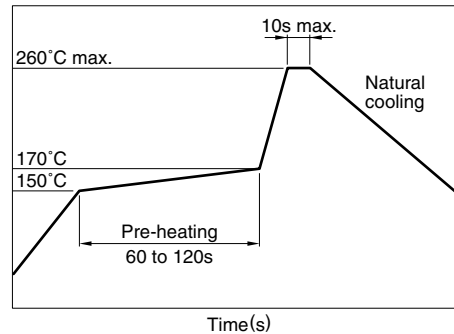
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: approx.1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLCV	32	T-	2R2	M	- PF
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions

32	3.2×2.5×2.2mm (L×W×T)
----	-----------------------

(3) Packaging style

T	Taping (reel)
---	---------------

(4) Inductance value

1R0	1 μ H
100	10 μ H
101	100 μ H

(5) Inductance tolerance

K	±10%
M	±20%

(6) Lead-free compatible product

PF	Conformity to RoHS directive, exemption regulations apply
EF	Conformity to RoHS directive

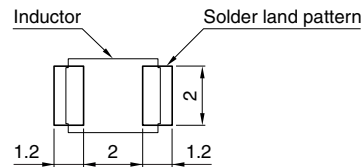
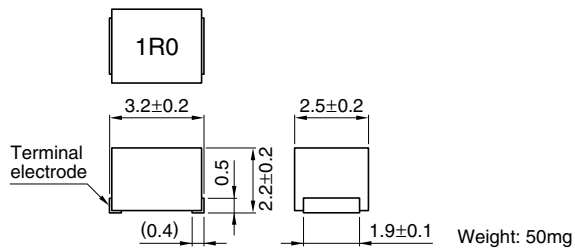
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q ref.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)±30%	Rated current* ¹ (mA)max.	Part No.
1	±20%	10	7.96	100	0.06	1000	NLCV32T-1R0M-□* ²
1.5	±20%	10	7.96	80	0.11	830	NLCV32T-1R5M-□
2.2	±20%	10	7.96	68	0.13	770	NLCV32T-2R2M-□
3.3	±20%	10	7.96	54	0.16	690	NLCV32T-3R3M-□
4.7	±20%	15	7.96	46	0.2	620	NLCV32T-4R7M-□
6.8	±20%	15	7.96	38	0.27	530	NLCV32T-6R8M-□
10	±10%	15	2.52	30	0.36	450	NLCV32T-100K-□
15	±10%	15	2.52	26	0.56	370	NLCV32T-150K-□
22	±10%	15	2.52	21	0.77	300	NLCV32T-220K-□
33	±10%	15	2.52	17	1.1	240	NLCV32T-330K-□
47	±10%	15	2.52	14	1.64	180	NLCV32T-470K-□
68	±10%	15	2.52	12	2.8	140	NLCV32T-680K-□
100	±10%	15	0.796	10	3.7	120	NLCV32T-101K-□
150	±10%	20	0.796	8	6.1	100	NLCV32T-151K-□
220	±10%	20	0.796	7	8.4	80	NLCV32T-221K-□
330	±10%	20	0.796	6	12.3	70	NLCV32T-331K-□

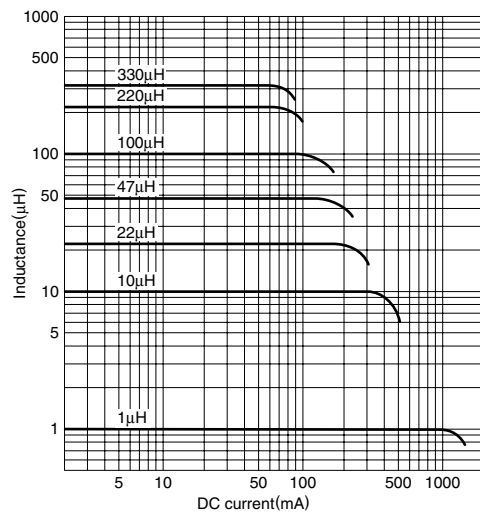
*¹ Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

*² □: Please specify lead-free compatible product, PF (Conformity to RoHS directive, exemption regulations apply) or EF (Conformity to RoHS directive)

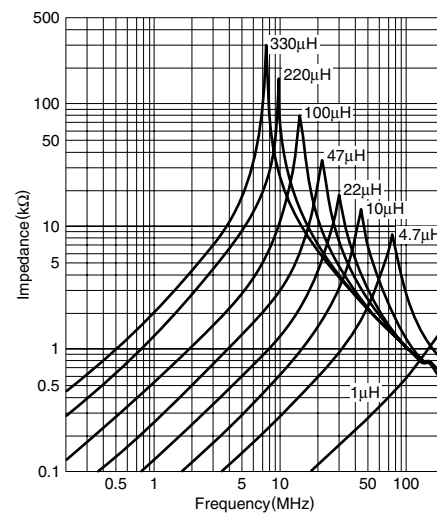
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
 SRF: HP8753C NETWORK ANALYZER
 Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Inductors for Decoupling Circuits Wound/For Current

Conformity to RoHS Directive

NLCV Series NLCV25T-R

FEATURES

- Rated current is maintained in the range of 1.7 to 2.0 times compared to the existing NLCV25 series.
- Stable inductance, as the inductance change in the maximum rated current load is within -10% .
- Maximum operating temperature is $+125^{\circ}\text{C}$ (including self-temperature rise).
- Lead-free material is adopted for terminal soldering.
- PC board pattern is compatible with the existing NLCV25 series.
- This product is in compliance with the RoHS Directive. Other products with specifications that do not include exemption regulations are also available.

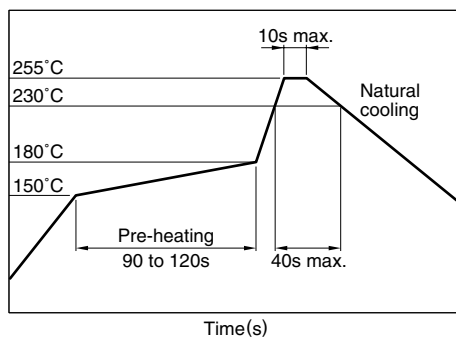
APPLICATIONS

Power supply lines, audio visual systems, electronic equipment for vehicle, IT equipment

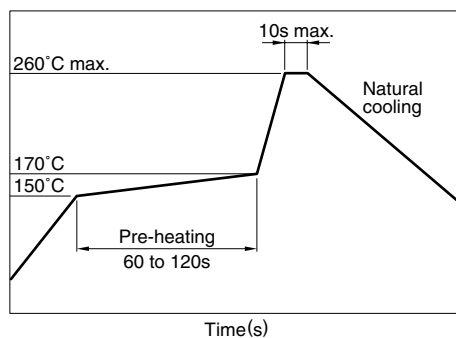
SPECIFICATIONS

Operating temperature range	-40 to $+125^{\circ}\text{C}$ [Including self-temperature rise]
Storage temperature range	-40 to $+125^{\circ}\text{C}$

RECOMMENDED SOLDERING CONDITIONS REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: 1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLCV	25	T	R10	M	-	PF	R
(1)	(2)	(3)	(4)	(5)	-	(6)	(7)

(1) Series name

(2) Dimensions

25	$2.5 \times 2.0 \times 1.8\text{mm}$ (L×W×T)
----	--

(3) Packaging style

T	Taping (reel)
---	---------------

(4) Inductance

R10	$0.1\mu\text{H}$
1R0	$1\mu\text{H}$
100	$10\mu\text{H}$

(5) Inductance tolerance

K	$\pm 10\%$
M	$\pm 20\%$

(6) Lead-free compatible product

PF	Conformity to RoHS directive, exemption regulations apply
EF	Conformity to RoHS directive

(7) TDK internal code

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q ref.	Test frequency L,Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)±20%	Rated current (mA)max.	Part No.
0.1	±20%	5	25.2	800	0.04	1890	NLCV25T-R10M-□*R
0.15	±20%	5	25.2	500	0.044	1800	NLCV25T-R15M-□R
0.22	±20%	5	25.2	400	0.05	1690	NLCV25T-R22M-□R
0.33	±20%	5	25.2	300	0.065	1480	NLCV25T-R33M-□R
0.47	±20%	5	25.2	220	0.08	1340	NLCV25T-R47M-□R
0.68	±20%	5	25.2	160	0.09	1260	NLCV25T-R68M-□R
1	±20%	10	7.96	100	0.14	1000	NLCV25T-1R0M-□R
1.5	±20%	10	7.96	80	0.18	890	NLCV25T-1R5M-□R
2.2	±20%	10	7.96	68	0.27	730	NLCV25T-2R2M-□R
3.3	±20%	10	7.96	54	0.44	570	NLCV25T-3R3M-□R
4.7	±20%	10	7.96	46	0.57	500	NLCV25T-4R7M-□R
6.8	±20%	10	7.96	38	0.92	390	NLCV25T-6R8M-□R
10	±10%	15	2.52	30	1.1	360	NLCV25T-100K-□R

* □: Please specify lead-free compatible product, PF (Conformity to RoHS directive, exemption regulations apply) or EF (Conformity to RoHS directive)

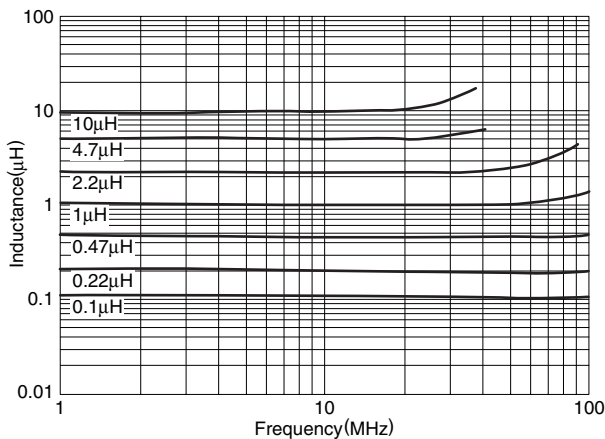
• Test equipment L, Q: HP4194A IMPEDANCE ANALYZER+16085A+16093B+TF-1

SRF: HP8753C NETWORK ANALYZER

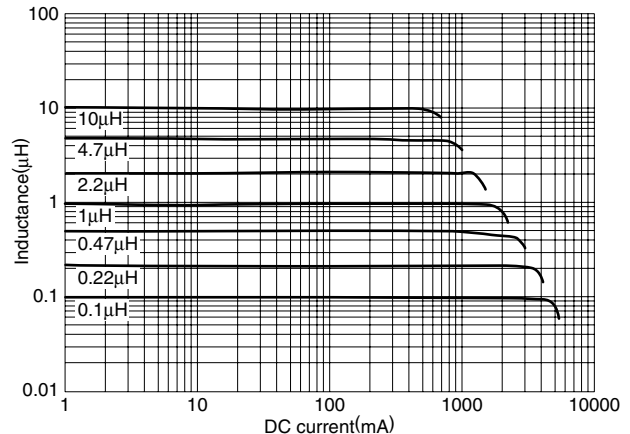
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

TYPICAL ELECTRICAL CHARACTERISTICS

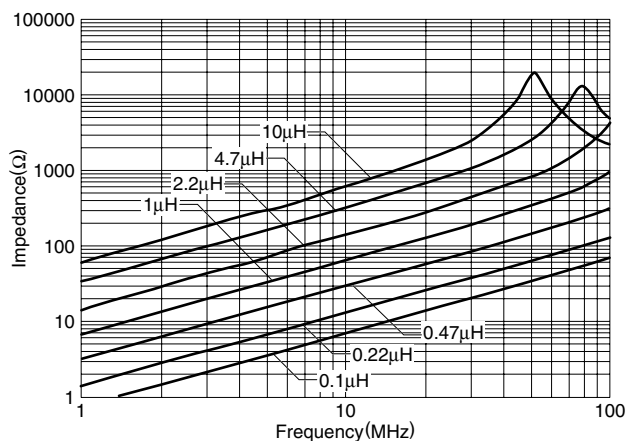
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



• All specifications are subject to change without notice.

Inductors for Decoupling Circuits

Wound/For Current

Conformity to RoHS Directive

NLCV Series NLCV32T-R

FEATURES

- Rated current is maintained in the range of 1.4 to 2.0 times compared to the existing NLCV32 series.
- Stable inductance, as the inductance change in the maximum rated current load is within -10% .
- Maximum operating temperature is $+125^{\circ}\text{C}$ (including self-temperature rise).
- Lead-free material is adopted for terminal soldering.
- PC board pattern is compatible with the existing NLCV32 series.
- This product is in compliance with the RoHS Directive. Other products with specifications that do not include exemption regulations are also available.

APPLICATIONS

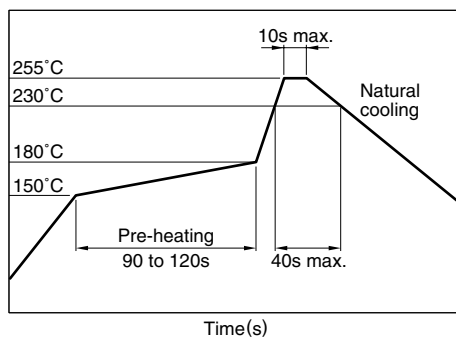
Power supply lines, audio visual systems, electronic equipment for vehicle, IT equipment

SPECIFICATIONS

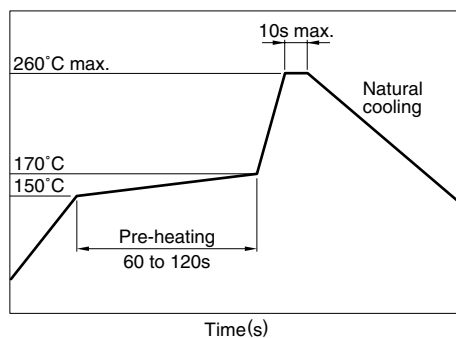
Operating temperature range	-40 to $+125^{\circ}\text{C}$ [Including self-temperature rise]
Storage temperature range	-40 to $+125^{\circ}\text{C}$

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: 1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLCV	32	T	R10	M	-	PF	R
(1)	(2)	(3)	(4)	(5)	-	(6)	(7)

(1) Series name

(2) Dimensions

32	$3.2 \times 2.5 \times 2.2\text{mm (L} \times \text{W} \times \text{T)}$
----	--

(3) Packaging style

T	Taping (reel)
---	---------------

(4) Inductance

R10	$0.1\mu\text{H}$
1R0	$1\mu\text{H}$
100	$10\mu\text{H}$

(5) Inductance tolerance

K	$\pm 10\%$
M	$\pm 20\%$

(6) Lead-free compatible product

PF	Conformity to RoHS directive, exemption regulations apply
EF	Conformity to RoHS directive

(7) TDK internal code

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



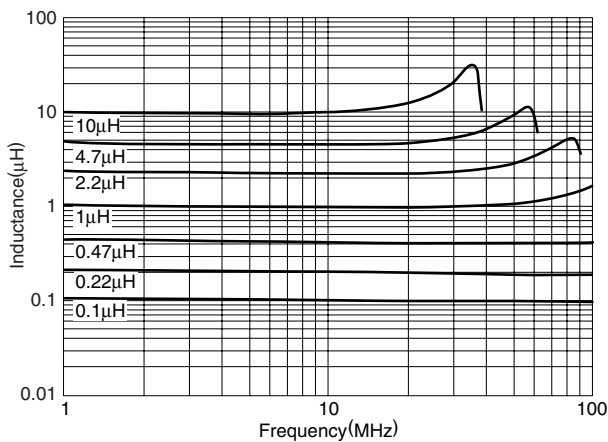
ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q ref.	Test frequency L,Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)±20%	Rated current (mA)max.	Part No.
0.1	±20%	10	25.2	800	0.02	2850	NLCV32T-R10M-□*R
0.15	±20%	10	25.2	500	0.024	2600	NLCV32T-R15M-□R
0.22	±20%	10	25.2	400	0.027	2400	NLCV32T-R22M-□R
0.33	±20%	10	25.2	300	0.035	2100	NLCV32T-R33M-□R
0.47	±20%	10	25.2	250	0.038	2000	NLCV32T-R47M-□R
0.68	±20%	10	25.2	180	0.045	1900	NLCV32T-R68M-□R
1	±20%	15	7.96	100	0.055	1700	NLCV32T-1R0M-□R
1.5	±20%	15	7.96	80	0.095	1400	NLCV32T-1R5M-□R
2.2	±20%	15	7.96	68	0.115	1200	NLCV32T-2R2M-□R
3.3	±20%	15	7.96	54	0.16	1000	NLCV32T-3R3M-□R
4.7	±20%	15	7.96	46	0.2	900	NLCV32T-4R7M-□R
6.8	±20%	15	7.96	38	0.29	700	NLCV32T-6R8M-□R
10	±10%	20	2.52	30	0.42	600	NLCV32T-100K-□R

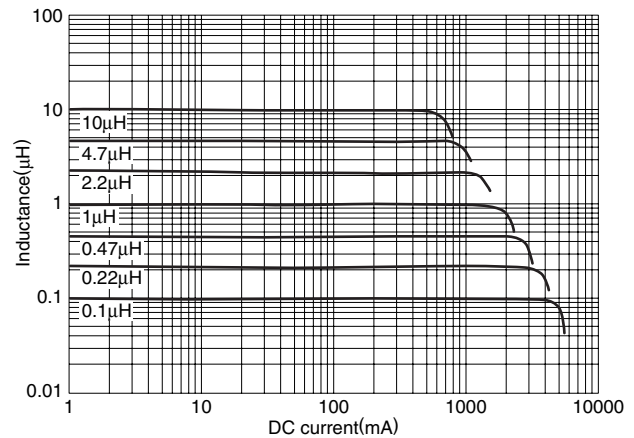
* □: Please specify lead-free compatible product, PF (Conformity to RoHS directive, exemption regulations apply) or EF (Conformity to RoHS directive)

TYPICAL ELECTRICAL CHARACTERISTICS

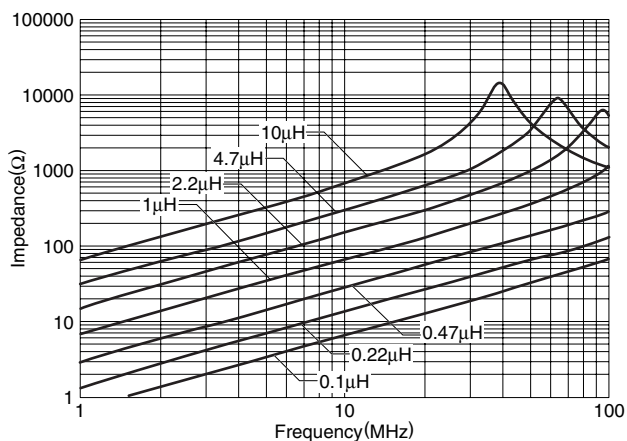
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Inductors for Decoupling Circuits Wound/For Current

Conformity to RoHS Directive

NLC Series NLC453232

FEATURES

- The NLC series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- The product has good heat durability that withstands lead-free compatible reflow soldering conditions.
- Lead-free material is used for the plating on the terminal.
- The product uses metal terminals, which realize excellent connection reliability.
- From 1 μ H to 330 μ H, all of the products in the E-12 series are K($\pm$ 10%) tolerance products.
- It is a product conforming to RoHS directive.

APPLICATIONS

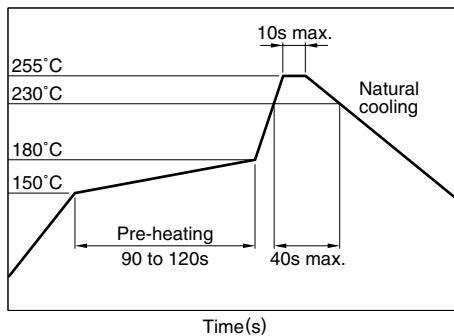
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Audio-visual equipment including TVs and VCRs.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

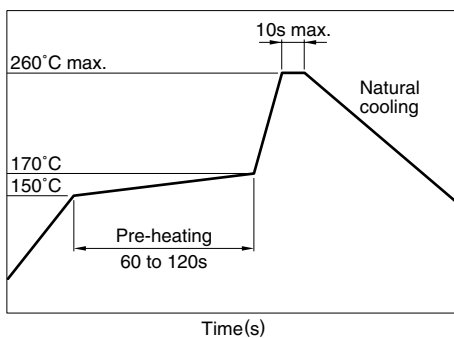
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: 1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLC	453232	T-	2R2	K	- PF
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions

453232	4.5×3.2×3.2mm (L×W×T)
--------	-----------------------

(3) Packaging style

T	Taping (reel)
---	---------------

(4) Inductance value

1R0	1 μ H
100	10 μ H
101	100 μ H

(5) Inductance tolerance

K	$\pm$ 10%
---	-----------

(6) Lead-free compatible product

PF	Lead-free compatible product
----	------------------------------

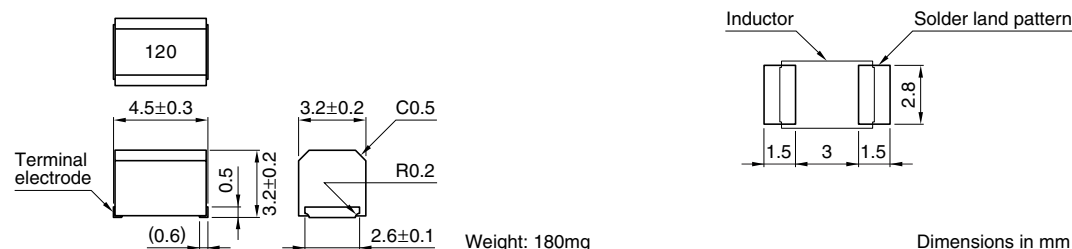
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	500 pieces/reel

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

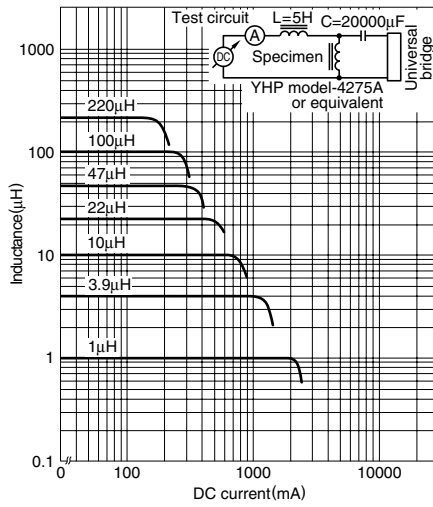
Inductance (μ H)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current* (mA)max.	Part No.
1	$\pm 10\%$	10	7.96	200	0.11	1050	NLC453232T-1R0K-PF
1.2	$\pm 10\%$	10	7.96	160	0.12	1000	NLC453232T-1R2K-PF
1.5	$\pm 10\%$	10	7.96	130	0.15	950	NLC453232T-1R5K-PF
1.8	$\pm 10\%$	10	7.96	100	0.16	900	NLC453232T-1R8K-PF
2.2	$\pm 10\%$	10	7.96	80	0.18	850	NLC453232T-2R2K-PF
2.7	$\pm 10\%$	10	7.96	60	0.2	800	NLC453232T-2R7K-PF
3.3	$\pm 10\%$	10	7.96	45	0.22	750	NLC453232T-3R3K-PF
3.9	$\pm 10\%$	10	7.96	40	0.24	700	NLC453232T-3R9K-PF
4.7	$\pm 10\%$	10	7.96	35	0.27	650	NLC453232T-4R7K-PF
5.6	$\pm 10\%$	10	7.96	30	0.3	650	NLC453232T-5R6K-PF
6.8	$\pm 10\%$	10	7.96	28	0.35	600	NLC453232T-6R8K-PF
8.2	$\pm 10\%$	10	7.96	25	0.4	600	NLC453232T-8R2K-PF
10	$\pm 10\%$	10	2.52	22	0.5	550	NLC453232T-100K-PF
12	$\pm 10\%$	10	2.52	21	0.6	500	NLC453232T-120K-PF
15	$\pm 10\%$	10	2.52	20	0.7	450	NLC453232T-150K-PF
18	$\pm 10\%$	10	2.52	19	0.8	400	NLC453232T-180K-PF
22	$\pm 10\%$	10	2.52	18	0.9	370	NLC453232T-220K-PF
27	$\pm 10\%$	10	2.52	16	1.2	330	NLC453232T-270K-PF
33	$\pm 10\%$	10	2.52	14	1.4	300	NLC453232T-330K-PF
39	$\pm 10\%$	10	2.52	12	1.6	280	NLC453232T-390K-PF
47	$\pm 10\%$	10	2.52	11.5	1.9	260	NLC453232T-470K-PF
56	$\pm 10\%$	10	2.52	11	2.2	240	NLC453232T-560K-PF
68	$\pm 10\%$	10	2.52	10	2.6	220	NLC453232T-680K-PF
82	$\pm 10\%$	10	2.52	9	3.5	200	NLC453232T-820K-PF
100	$\pm 10\%$	20	0.796	8	4	180	NLC453232T-101K-PF
120	$\pm 10\%$	20	0.796	7.5	4.5	160	NLC453232T-121K-PF
150	$\pm 10\%$	20	0.796	7	6.5	140	NLC453232T-151K-PF
180	$\pm 10\%$	20	0.796	6.5	7.5	120	NLC453232T-181K-PF
220	$\pm 10\%$	20	0.796	5.5	9	120	NLC453232T-221K-PF
270	$\pm 10\%$	20	0.796	5	11	100	NLC453232T-271K-PF
330	$\pm 10\%$	20	0.796	4	13	90	NLC453232T-331K-PF

* Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

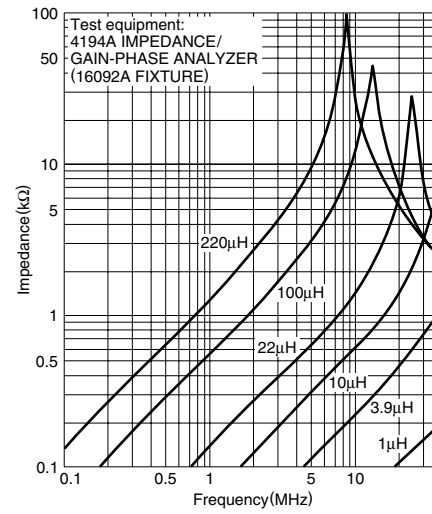
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
SRF: HP8753C NETWORK ANALYZER ($Z_{in}=Z_{out}=50\Omega$), or equivalent
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Inductors for Decoupling Circuits

Wound/For Current

Conformity to RoHS Directive

NLC Series NLC565050

FEATURES

- The NLC series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- The product has good heat durability that withstands lead-free compatible reflow soldering conditions.
- Lead-free material is used for the plating on the terminal.
- The product uses metal terminals, which realize excellent connection reliability.
- From 1μH to 1000μH, all of the products in the E-12 series are K(±10%) tolerance products.
- It is a product conforming to RoHS directive.

APPLICATIONS

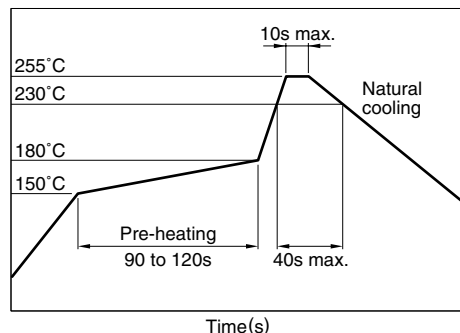
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Audio-visual equipment including TVs and VCRs.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

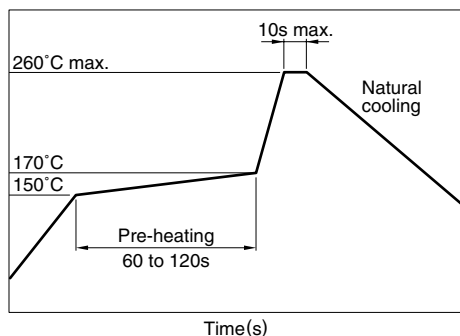
Operating temperature range	−40 to +105°C [Including self-temperature rise]
Storage temperature range	−40 to +105°C

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



FLOW SOLDERING



IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: 1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

PRODUCT IDENTIFICATION

NLC	565050	T-	2R2	K	- PF
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions

565050	5.6×5.0×5.0mm(L×W×T)
--------	----------------------

(3) Packaging style

T	Taping(reel)
---	--------------

(4) Inductance value

1R0	1μH
100	10μH
101	100μH
102	1000μH

(5) Inductance tolerance

K	±10%
---	------

(6) Lead-free compatible product

PF	Lead-free compatible product
----	------------------------------

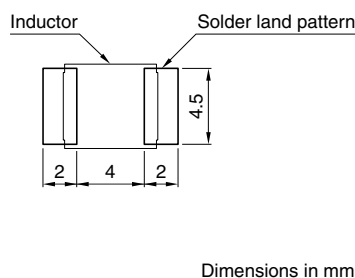
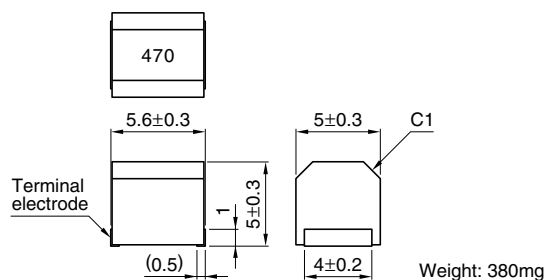
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	400 pieces/reel

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

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	$\pm 10\%$	10	7.96	95	0.03	1800	NLC565050T-1R0K-PF
1.2	$\pm 10\%$	10	7.96	70	0.035	1700	NLC565050T-1R2K-PF
1.5	$\pm 10\%$	10	7.96	55	0.04	1600	NLC565050T-1R5K-PF
1.8	$\pm 10\%$	10	7.96	47	0.05	1400	NLC565050T-1R8K-PF
2.2	$\pm 10\%$	10	7.96	42	0.06	1300	NLC565050T-2R2K-PF
2.7	$\pm 10\%$	10	7.96	37	0.07	1200	NLC565050T-2R7K-PF
3.3	$\pm 10\%$	10	7.96	34	0.08	1120	NLC565050T-3R3K-PF
3.9	$\pm 10\%$	10	7.96	32	0.09	1050	NLC565050T-3R9K-PF
4.7	$\pm 10\%$	10	7.96	29	0.11	950	NLC565050T-4R7K-PF
5.6	$\pm 10\%$	10	7.96	26	0.13	880	NLC565050T-5R6K-PF
6.8	$\pm 10\%$	10	7.96	24	0.15	810	NLC565050T-6R8K-PF
8.2	$\pm 10\%$	10	7.96	22	0.18	750	NLC565050T-8R2K-PF
10	$\pm 10\%$	10	2.52	19	0.21	690	NLC565050T-100K-PF
12	$\pm 10\%$	10	2.52	17	0.25	630	NLC565050T-120K-PF
15	$\pm 10\%$	10	2.52	16	0.3	580	NLC565050T-150K-PF
18	$\pm 10\%$	10	2.52	14	0.36	530	NLC565050T-180K-PF
22	$\pm 10\%$	10	2.52	13	0.43	480	NLC565050T-220K-PF
27	$\pm 10\%$	10	2.52	11.5	0.52	440	NLC565050T-270K-PF
33	$\pm 10\%$	10	2.52	10.5	0.62	400	NLC565050T-330K-PF
39	$\pm 10\%$	10	2.52	9.5	0.72	370	NLC565050T-390K-PF
47	$\pm 10\%$	10	2.52	8.5	0.85	340	NLC565050T-470K-PF
56	$\pm 10\%$	10	2.52	7.8	1	310	NLC565050T-560K-PF
68	$\pm 10\%$	10	2.52	7	1.2	290	NLC565050T-680K-PF
82	$\pm 10\%$	10	2.52	6.4	1.4	270	NLC565050T-820K-PF
100	$\pm 10\%$	20	0.796	6	1.6	250	NLC565050T-101K-PF
120	$\pm 10\%$	20	0.796	5.4	1.9	230	NLC565050T-121K-PF
150	$\pm 10\%$	20	0.796	4.8	2.2	210	NLC565050T-151K-PF
180	$\pm 10\%$	20	0.796	4.4	2.8	190	NLC565050T-181K-PF
220	$\pm 10\%$	20	0.796	3.9	3.4	170	NLC565050T-221K-PF
270	$\pm 10\%$	20	0.796	3.6	4.2	155	NLC565050T-271K-PF
330	$\pm 10\%$	20	0.796	3.2	4.9	140	NLC565050T-331K-PF
390	$\pm 10\%$	20	0.796	2.9	5.8	130	NLC565050T-391K-PF
470	$\pm 10\%$	20	0.796	2.6	7	120	NLC565050T-471K-PF
560	$\pm 10\%$	20	0.796	2.4	8.5	110	NLC565050T-561K-PF
680	$\pm 10\%$	20	0.796	2.2	10	100	NLC565050T-681K-PF
820	$\pm 10\%$	20	0.796	2	13	90	NLC565050T-821K-PF
1000	$\pm 10\%$	20	0.252	1.8	15	85	NLC565050T-102K-PF

* Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

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

TYPICAL ELECTRICAL CHARACTERISTICS **INDUCTANCE CHANGE vs. DC SUPERPOSITION** **CHARACTERISTICS**

