

# Inductors

## For General Applications

### SMD

## NLV Series NLV25 Type

### 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 0.01μH to 100μH, all of the products in the E-12 series are J(±5%) tolerance products.
- This product conforms to the RoHS standard.

### APPLICATIONS

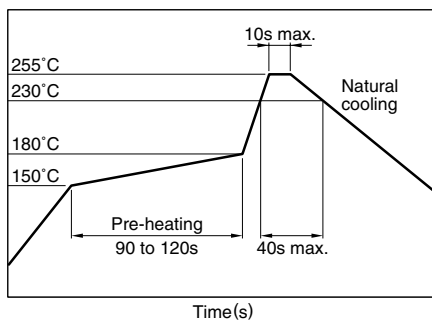
PCs, hard disk drives, and other types of electronics

### SPECIFICATIONS

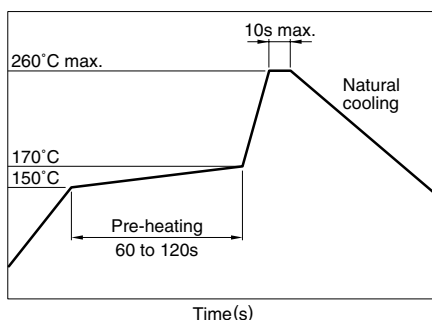
Operating temperature range	-40 to +85°C
Storage temperature range	-40 to +85°C [Unit of products]

### RECOMMENDED SOLDERING CONDITIONS

#### REFLOW SOLDERING



#### FLOW SOLDERING



#### IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 sec/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

NLV	25	T-	2R2	J	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	

(1) Series name

(2) Dimensions LxWxT

25	2.5×2.0×1.8mm
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(3) Packaging style

T	Taping (reel)
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(4) Inductance value

1R0	1μH
220	22μH

(5) Inductance tolerance

J	±5%
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(6) Lead-free compatible product

PF	Lead-free compatible product
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### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

### PRECAUTIONS

- The exterior of this product can melt since due to thermoplastic construction. During mechanical contact while at the plastic softening temperature, deformation can occur at the contact location. Therefore caution is required when utilizing a soldering iron during the soldering operation.

### FLUX AND CLEANING

Rosin-based flux is recommended.

#### Cleaning Conditions

Solvent	Please select the solvent of this product avoiding a strong acid and a strong alkali, and considering the environments.
Time	2min max.

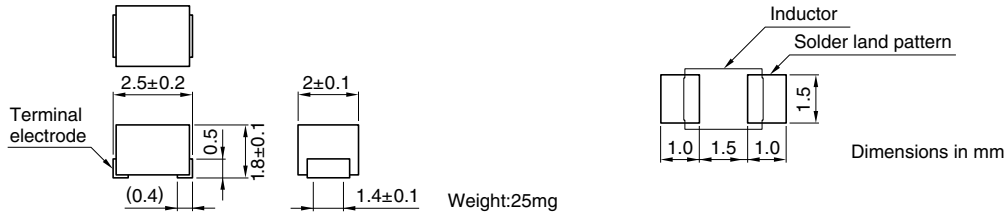
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### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

Inductance(μH)	Inductance tolerance	Q typ.	Test frequency L,Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
0.01	±5%	15	100	2150	0.26	530	NLV25T-010J-PF
0.012	±5%	15	100	2050	0.27	500	NLV25T-012J-PF
0.015	±5%	15	100	2000	0.29	480	NLV25T-015J-PF
0.018	±5%	15	100	1850	0.31	450	NLV25T-018J-PF
0.022	±5%	15	100	1650	0.37	420	NLV25T-022J-PF
0.027	±5%	15	100	1550	0.4	410	NLV25T-027J-PF
0.033	±5%	20	100	1450	0.42	400	NLV25T-033J-PF
0.039	±5%	20	100	1350	0.45	380	NLV25T-039J-PF
0.047	±5%	20	100	1200	0.5	360	NLV25T-047J-PF
0.056	±5%	20	100	1100	0.6	340	NLV25T-056J-PF
0.068	±5%	20	100	1050	0.65	320	NLV25T-068J-PF
0.082	±5%	20	100	900	0.75	300	NLV25T-082J-PF
0.1	±5%	20	100	800	0.8	280	NLV25T-R10J-PF
0.12	±5%	30	25.2	700	0.3	550	NLV25T-R12J-PF
0.15	±5%	30	25.2	550	0.35	500	NLV25T-R15J-PF
0.18	±5%	30	25.2	500	0.4	460	NLV25T-R18J-PF
0.22	±5%	30	25.2	450	0.5	430	NLV25T-R22J-PF
0.27	±5%	30	25.2	425	0.55	420	NLV25T-R27J-PF
0.33	±5%	30	25.2	400	0.6	400	NLV25T-R33J-PF
0.39	±5%	30	25.2	375	0.65	375	NLV25T-R39J-PF
0.47	±5%	30	25.2	350	0.68	350	NLV25T-R47J-PF
0.56	±5%	30	25.2	325	0.75	325	NLV25T-R56J-PF
0.68	±5%	30	25.2	300	0.85	300	NLV25T-R68J-PF
0.82	±5%	30	25.2	260	1	260	NLV25T-R82J-PF
1	±5%	30	7.96	245	1.1	245	NLV25T-1R0J-PF
1.2	±5%	30	7.96	230	1.2	230	NLV25T-1R2J-PF
1.5	±5%	30	7.96	182	1.3	220	NLV25T-1R5J-PF
1.8	±5%	30	7.96	135	1.45	210	NLV25T-1R8J-PF
2.2	±5%	30	7.96	105	1.55	200	NLV25T-2R2J-PF
2.7	±5%	30	7.96	70	1.7	195	NLV25T-2R7J-PF
3.3	±5%	30	7.96	55	1.9	185	NLV25T-3R3J-PF
3.9	±5%	30	7.96	48	2.1	180	NLV25T-3R9J-PF
4.7	±5%	30	7.96	43	2.3	175	NLV25T-4R7J-PF
5.6	±5%	25	7.96	42	2.5	170	NLV25T-5R6J-PF
6.8	±5%	25	7.96	39	2.7	165	NLV25T-6R8J-PF
8.2	±5%	25	7.96	36	3.05	160	NLV25T-8R2J-PF
10	±5%	25	2.52	33	3.5	155	NLV25T-100J-PF
12	±5%	25	2.52	30	3.8	150	NLV25T-120J-PF
15	±5%	25	2.52	26	4.4	140	NLV25T-150J-PF
18	±5%	25	2.52	24	4.8	130	NLV25T-180J-PF
22	±5%	25	2.52	22	5.5	125	NLV25T-220J-PF
27	±5%	25	2.52	21	6.3	115	NLV25T-270J-PF
33	±5%	25	2.52	20	7.1	110	NLV25T-330J-PF
39	±5%	20	2.52	18	9.5	90	NLV25T-390J-PF

- Test equipment L, Q: YHP4191A IMPEDANCE ANALYZER (16092A) [ $L \leq 0.1\mu\text{H}$ ]  
YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1) [ $L \geq 0.12\mu\text{H}$ ]  
SRF:HP8753C NETWORK ANALYZER  
Rdc:MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

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SMD

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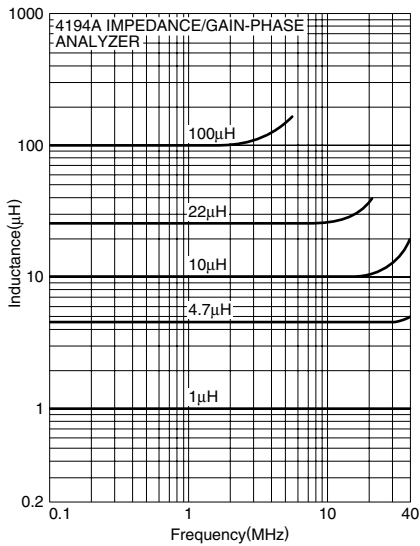
### ELECTRICAL CHARACTERISTICS

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.
47	±5%	20	2.52	17	11.1	80	NLV25T-470J-PF
56	±5%	20	2.52	16	12.1	75	NLV25T-560J-PF
68	±5%	20	2.52	15	16.6	70	NLV25T-680J-PF
82	±5%	20	2.52	13	19	66	NLV25T-820J-PF
100	±5%	15	0.796	12	21	60	NLV25T-101J-PF

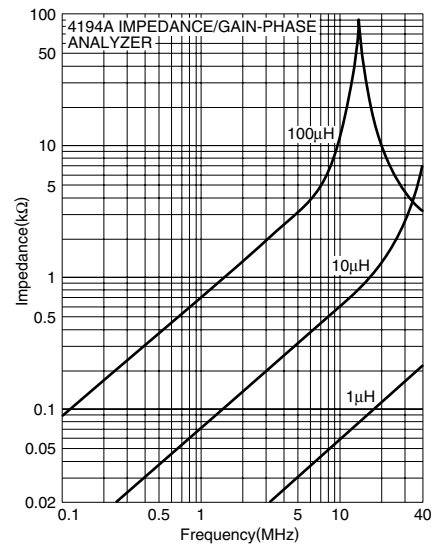
- Test equipment L, Q: HP4194A IMPEDANCE/GAIN PHASE ANALYZER(16085A+16093B+TDK TF-1)  
SRF: HP8753C NETWORK ANALYZER  
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

### TYPICAL ELECTRICAL CHARACTERISTICS

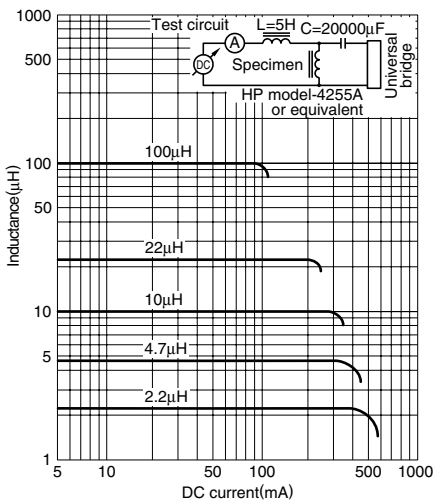
#### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



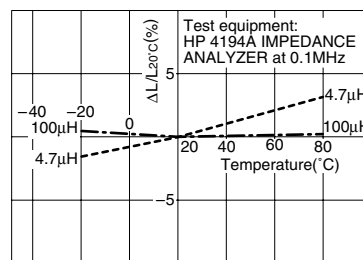
#### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



#### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



#### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



#### Q vs. FREQUENCY CHARACTERISTICS

