

# SMD Inductors(Coils) For Signal Line(Wound)

Conformity to RoHS Directive

## NLV Series NLV25

### 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 0.01 $\mu$ H to 100 $\mu$ H, all of the products in the E-12 series are J( $\pm$ 5%) tolerance products.
- This product conforms to the standards that are slated to be introduced under the RoHS Directive.

### APPLICATIONS

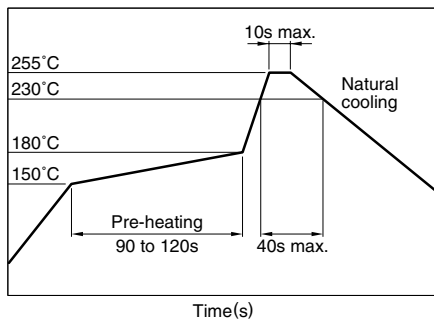
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Electronic equipment used in onboard automobile equipment including car audio and ECU systems.
- Other electronic equipment including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

### SPECIFICATIONS

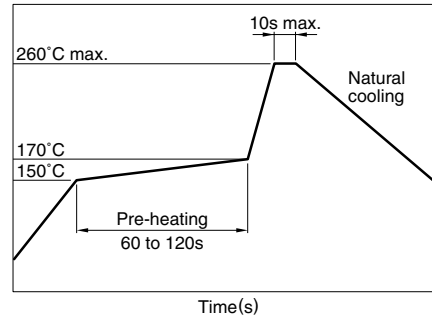
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

### 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: 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

25	2.5×2.0×1.8mm (L×W×T)
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(3) Packaging style

T	Taping (reel)
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(4) Inductance value

010	0.01 $\mu$ H
R10	0.1 $\mu$ H
1R0	1 $\mu$ H
100	10 $\mu$ H
101	100 $\mu$ H

(5) Inductance tolerance

J	$\pm$ 5%
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(6) Lead-free compatible product

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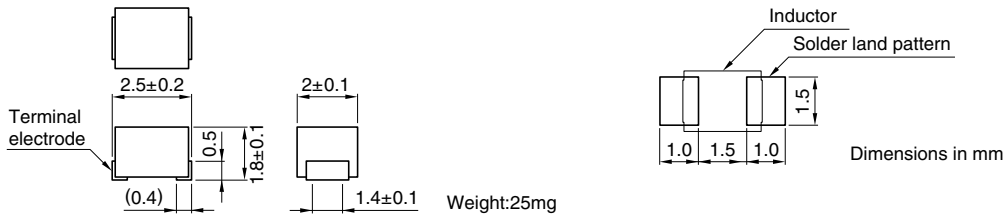
### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

• 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 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

\* 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: 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

### ELECTRICAL CHARACTERISTICS

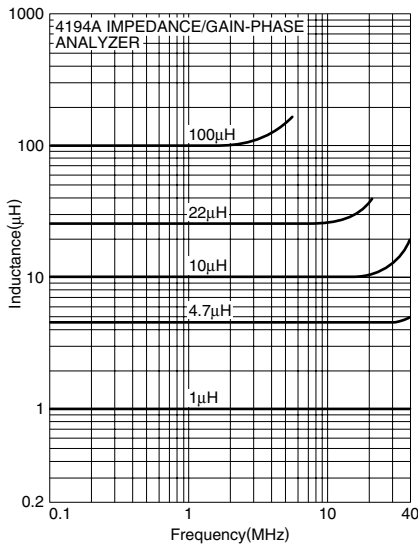
Inductance (μH)	Inductance tolerance	Q typ.	Test frequency L,Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current* (mA)max.	Part No.
47	±5%	20	2.52	17	11.1	80	NLV25T-470J-PF
56	±5%	20	2.52	16	12.1	75	NLV25T-560J-PF
68	±5%	20	2.52	15	16.6	70	NLV25T-680J-PF
82	±5%	20	2.52	13	19	66	NLV25T-820J-PF
100	±5%	15	0.796	12	21	60	NLV25T-101J-PF

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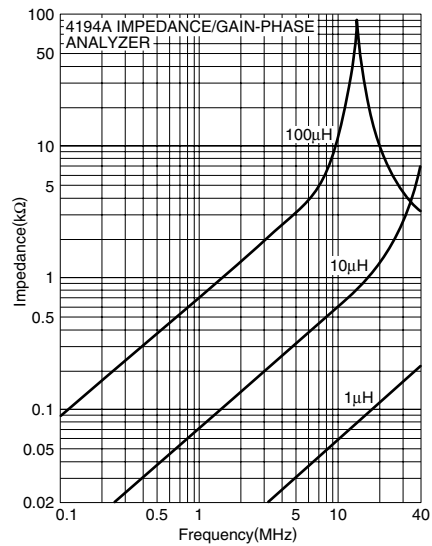
- Test equipment L, Q: HP4194A IMPEDANCE/GAIN PHASE ANALYZER(16085A+16093B+TDK TF-1)  
 SRF: HP8753C NETWORK ANALYZER  
 Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

### TYPICAL ELECTRICAL CHARACTERISTICS

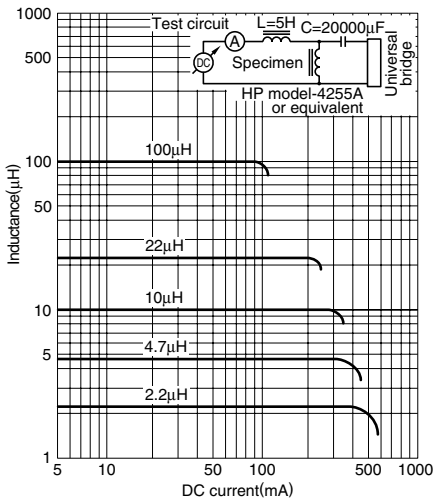
#### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



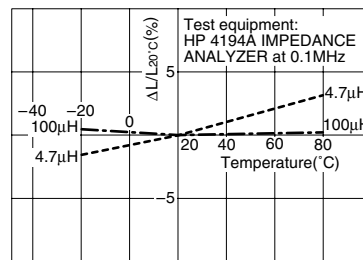
#### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



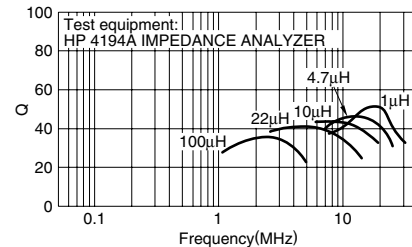
#### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



#### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



#### Q vs. FREQUENCY CHARACTERISTICS



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