Inductors for Standard Circuits

Wound Ferrite

Product compatible with RoHS directive
Halogen-free
Compatible with lead-free solders

Overview of NLV32-PF Type

FEATURES

- Resin mold type wound inductor for standard circuits.
- E-12 Series, wide lineup compatible with J (±5%) tolerance, can be used for applications that need to meet strict L tolerance such as filter circuits.
- Has excellent inductance temperature characteristics in the operating temperature range.

APPLICATION

- Smart meters, AV equipment, xDSL, electronic devices for communications infrastructure such as mobile base stations, industrial equipment, other

PART NUMBER CONSTRUCTION

NLV | 32 | T | - | 010 | - | J | - | PF

Series name	L×W×H Dimensions (mm)		Packaging style		Inductance (μH)		Inductance tolerance		Internal code	
	32	3.2×2.5×2.2	T	Taping	010	0.01	J	±5%	PF	Compatible with the RoHS Directive, Exemption regulations apply
					R10	0.1				
					1R0	1				
					100	10				
					101	100				

OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

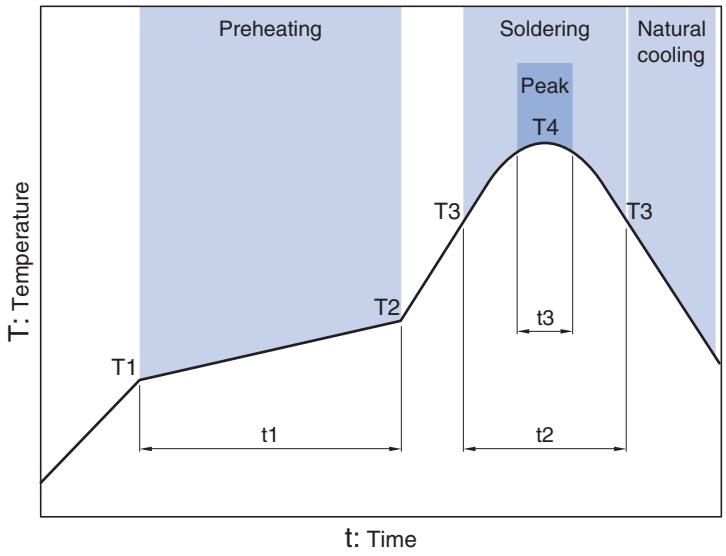
Type	Temperature range		Package quantity	Individual weight
	Operating temperature* (°C)	Storage temperature** (°C)	(pieces/reel)	(mg)
NLV32-PF	–40 to +105	–40 to +105	2000	50

* Operating temperature range includes self-temperature rise.
** The Storage temperature range is for after the circuit board is mounted.

- RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/en/environment/rohs/index.html
- Halogen-free: Indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

NLV32-PF Type

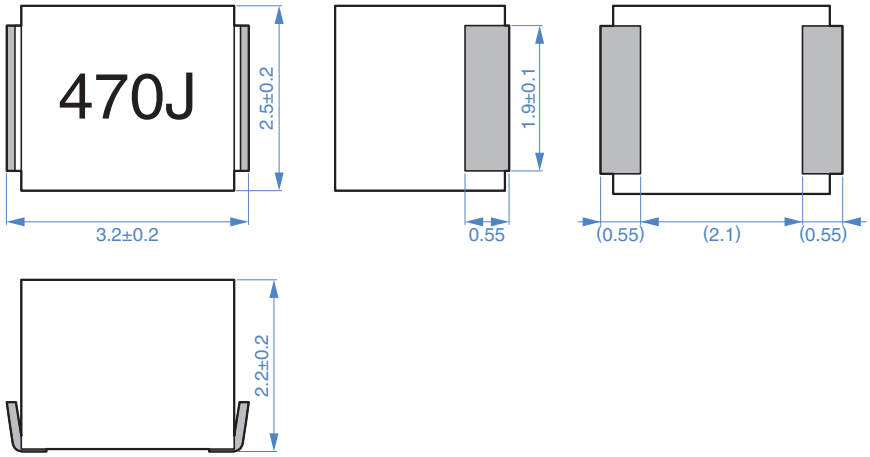
RECOMMENDED REFLOW PROFILE



Preheating			Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	90 to 120s	230°C	40s	255°C	10s max.

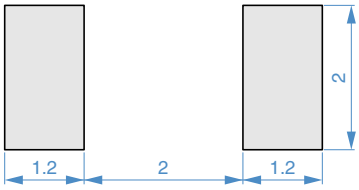
NLV32-PF Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

NLV32-PF Type

■ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

L (μH)	Tolerance	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current* (mA)max.	Part No.
0.01	±5%	15	100	2500	0.13	450	NLV32T-010J-PF
0.012	±5%	17	100	2300	0.14	450	NLV32T-012J-PF
0.015	±5%	19	100	2100	0.16	450	NLV32T-015J-PF
0.018	±5%	21	100	1900	0.18	450	NLV32T-018J-PF
0.022	±5%	23	100	1700	0.2	450	NLV32T-022J-PF
0.027	±5%	23	100	1500	0.22	450	NLV32T-027J-PF
0.033	±5%	25	100	1400	0.24	450	NLV32T-033J-PF
0.039	±5%	25	100	1300	0.27	450	NLV32T-039J-PF
0.047	±5%	26	100	1200	0.3	450	NLV32T-047J-PF
0.056	±5%	26	100	1100	0.33	450	NLV32T-056J-PF
0.068	±5%	27	100	1000	0.36	450	NLV32T-068J-PF
0.082	±5%	27	100	900	0.4	450	NLV32T-082J-PF
0.1	±5%	28	100	700	0.44	450	NLV32T-R10J-PF
0.12	±5%	30	25.2	500	0.22	450	NLV32T-R12J-PF
0.15	±5%	30	25.2	450	0.25	450	NLV32T-R15J-PF
0.18	±5%	30	25.2	400	0.28	450	NLV32T-R18J-PF
0.22	±5%	30	25.2	350	0.32	450	NLV32T-R22J-PF
0.27	±5%	30	25.2	320	0.36	450	NLV32T-R27J-PF
0.33	±5%	30	25.2	300	0.4	450	NLV32T-R33J-PF
0.39	±5%	30	25.2	250	0.45	450	NLV32T-R39J-PF
0.47	±5%	30	25.2	220	0.5	450	NLV32T-R47J-PF
0.56	±5%	30	25.2	180	0.55	450	NLV32T-R56J-PF
0.68	±5%	30	25.2	160	0.6	450	NLV32T-R68J-PF
0.82	±5%	30	25.2	140	0.65	450	NLV32T-R82J-PF
1	±5%	30	7.96	120	0.7	400	NLV32T-1R0J-PF
1.2	±5%	30	7.96	100	0.75	390	NLV32T-1R2J-PF
1.5	±5%	30	7.96	85	0.85	370	NLV32T-1R5J-PF
1.8	±5%	30	7.96	80	0.9	350	NLV32T-1R8J-PF
2.2	±5%	30	7.96	75	1	320	NLV32T-2R2J-PF
2.7	±5%	30	7.96	70	1.1	290	NLV32T-2R7J-PF
3.3	±5%	30	7.96	60	1.2	260	NLV32T-3R3J-PF
3.9	±5%	30	7.96	55	1.3	250	NLV32T-3R9J-PF
4.7	±5%	30	7.96	50	1.5	220	NLV32T-4R7J-PF
5.6	±5%	30	7.96	45	1.6	200	NLV32T-5R6J-PF
6.8	±5%	30	7.96	40	1.8	180	NLV32T-6R8J-PF
8.2	±5%	30	7.96	35	2	170	NLV32T-8R2J-PF

* Rated current: smaller value of either Idc1 or Idc2.
Idc1: When based on the inductance change rate (10% below the initial L value)
Idc2: When based on the temperature increase (Temperature increase of 20°C by self heating)

○ Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4191A+16092A 4194A+16085A+16093B	Keysight Technologies
Self-resonant frequency	8753C	Keysight Technologies
DC resistance	VP-2941A	Panasonic

＊ Equivalent measurement equipment may be used.

NLV32-PF Type

■ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

L (μH)	Tolerance	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current* (mA)max.	Part No.
10	±5%	30	2.52	30	2.1	150	NLV32T-100J-PF
12	±5%	30	2.52	20	2.5	140	NLV32T-120J-PF
15	±5%	30	2.52	20	2.8	130	NLV32T-150J-PF
18	±5%	30	2.52	20	3.3	120	NLV32T-180J-PF
22	±5%	30	2.52	20	3.7	110	NLV32T-220J-PF
27	±5%	30	2.52	20	5	80	NLV32T-270J-PF
33	±5%	30	2.52	17	5.6	70	NLV32T-330J-PF
39	±5%	30	2.52	16	6.4	65	NLV32T-390J-PF
47	±5%	30	2.52	15	7	60	NLV32T-470J-PF
56	±5%	30	2.52	13	8	55	NLV32T-560J-PF
68	±5%	30	2.52	12	9	50	NLV32T-680J-PF
82	±5%	30	2.52	11	10	45	NLV32T-820J-PF
100	±5%	20	0.796	10	10	40	NLV32T-101J-PF
120	±5%	20	0.796	10	11	70	NLV32T-121J-PF
150	±5%	20	0.796	8	15	65	NLV32T-151J-PF
180	±5%	20	0.796	7	17	60	NLV32T-181J-PF
220	±5%	20	0.796	7	21	50	NLV32T-221J-PF
270	±5%	20	0.796	6	28	45	NLV32T-271J-PF
330	±5%	20	0.796	5	34	40	NLV32T-331J-PF
390	±5%	20	0.796	5	36	35	NLV32T-391J-PF
470	±5%	20	0.796	4	40	25	NLV32T-471J-PF

* Rated current: smaller value of either Idc1 or Idc2.
Idc1: When based on the inductance change rate (10% below the initial L value)
Idc2: When based on the temperature increase (Temperature increase of 20°C by self heating)

○ Measurement equipment

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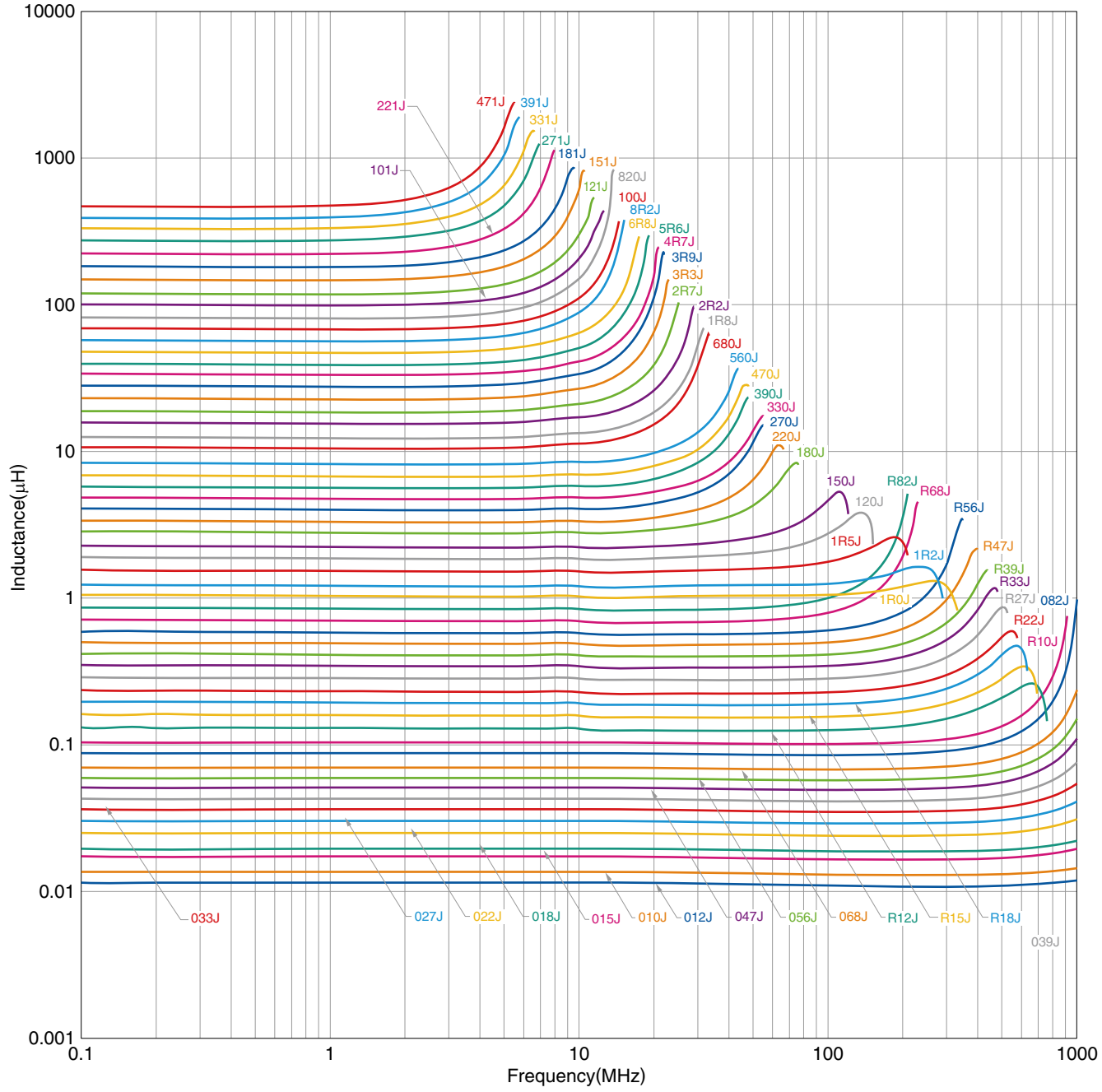
∗ Equivalent measurement equipment may be used.

NLV32-PF Type

■ELECTRICAL CHARACTERISTICS

□L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

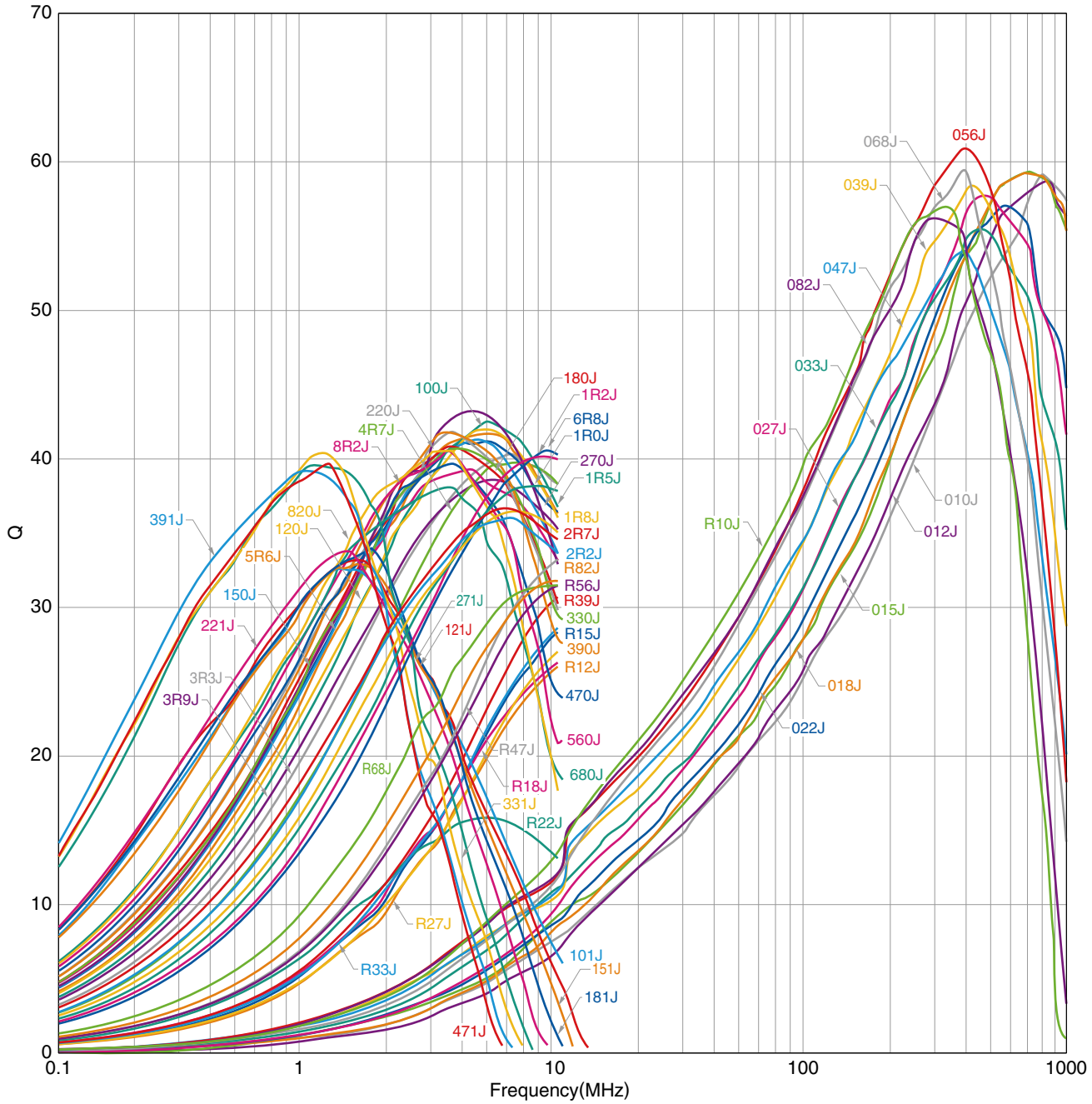
Product No.	Manufacturer
4291A	Keysight Technologies
4294A	Keysight Technologies

＊ Equivalent measurement equipment may be used.

NLV32-PF Type

■ELECTRICAL CHARACTERISTICS

□Q FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

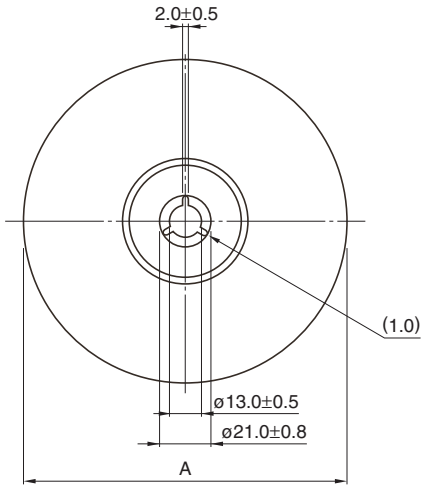
Product No.	Manufacturer
4291A	Keysight Technologies
4294A	Keysight Technologies

＊ Equivalent measurement equipment may be used.

NLV32-PF Type

■PACKAGING STYLE

□REEL DIMENSIONS

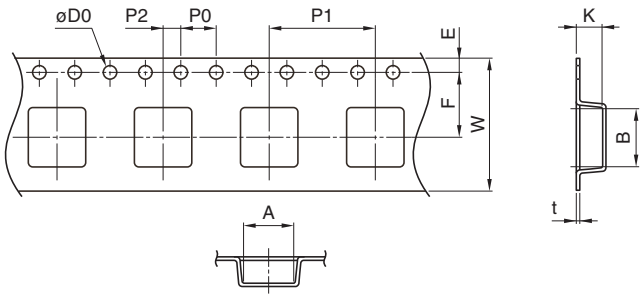


Dimensions in mm

Type	A	W1	W2	N	E
NLV32-PF	ø180	9	13	ø60	0.5

* These values are typical values.

□TAPE DIMENSIONS



Dimensions in mm

Type	A	B	øD0	E	F	P0	P1	P2	W	K	t
NLV32-PF	2.8	3.5	1.5+0.1/-0	1.75±0.1	3.50±0.05	4.00±0.10	4.00±0.10	2.00±0.05	8.00±0.30	2.3	0.4