

PRODUKTINFORMATION

Vi reserverar oss mot fel samt förbehåller oss rätten till ändringar utan föregående meddelande

ELFA artikelnr

58-500-03 Drossel doppad 0.1uH	LF10.0R10T52AM
58-500-11 Drossel doppad 0.15uH	LF10.0R15T52AM
58-500-29 Drossel doppad 0.22uH	LF10.0R22T52AM
58-500-37 Drossel doppad 0.33uH	LF10.0R33T52AM
58-500-45 Drossel doppad 0.47uH	LF10.0R47T52AM
58-500-52 Drossel doppad 0.68uH	LF10.0R68T52AM
58-500-60 Drossel doppad 1.0uH	LF10.01R0T52AK
58-500-78 Drossel doppad 1.5uH	LF10.01R5T52AK
58-500-86 Drossel doppad 2.2uH	LF10.02R2T52AK
58-500-94 Drossel doppad 3.3uH	LF10.03R3T52AK
58-501-02 Drossel doppad 4.7uH	LF10.04R7T52AK
58-501-10 Drossel doppad 6.8uH	LF10.06R8T52AK
58-501-28 Drossel doppad 10uH	LF10.0100T52AK
58-501-36 Drossel doppad 15uH	LF10.0150T52AK
58-501-44 Drossel doppad 22uH	LF10.0220T52AK
58-501-51 Drossel doppad 33uH	LF10.0330T52AK
58-501-69 Drossel doppad 47uH	LF10.0470T52AK
58-501-77 Drossel doppad 68uH	LF10.0680T52AK
58-501-85 Drossel doppad 100uH	LF10.0101T52AK
58-501-93 Drossel doppad 150uH	LF10.0151T52AK
58-502-01 Drossel doppad 220uH	LF10.0221T52AK
58-502-19 Drossel doppad 330uH	LF10.0331T52AK
58-502-27 Drossel doppad 470uH	LF10.0471T52AK
58-502-35 Drossel doppad 680uH	LF10.0681T52AK
58-502-43 Drossel doppad 1000uH	LF10.0102T52AK

SPECIFICATIONS FOR APPROVAL

CUSTOMER: ELFA

FIXED HIGH-FREQUENCY INDUCTORS LF10.0 SERIES

DESCRIPTION:

INDUCTANCE ITEM: R10M to 102K

BULK products : LF10.0-****

Taping products : LF10.0T52-****

or : LF10.0T26-****

KOA CORPORATION

Regarding the use of
Ozon Depleting Substances(ODS)

No Ozon Depleting substances (ODS)
are used in our manufacturing process of
these products (Parts, Materials).

production by: **OEL CORPORATION**

DATE: Dec. 20, 2002

Drafted by

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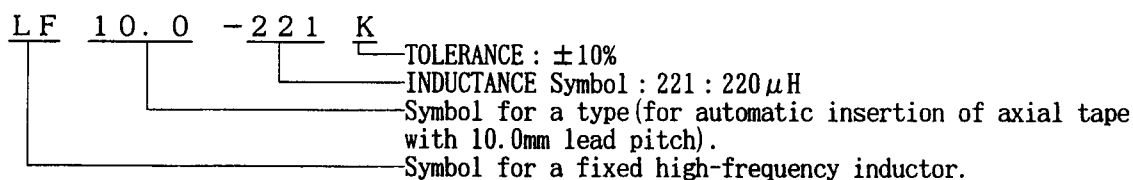
FIXED HIGH-FREQUENCY INDUCTORS

1. Scope

This specifications shall be applied to fixed high-frequency inductors for an automatic insertion of axial tape LF10.0-TYPE.

2. Type Designation

(1) The type designation shall be the following form. Example of "LF10.0-221K"



(2) Nominal inductance and tolerance.
 The nominal inductance shall be expressed in " μH " and consist of a number of three figures. The first 2 figures are significant figures while the last figure shall show the number of zero. A decimal point shall be replaced by a alphabetical letter R. in this case shall be significant figures.

(example)
 R10... $0.1\mu\text{H}$ 1R0... $1\mu\text{H}$ 100... $10\mu\text{H}$ 101... $100\mu\text{H}$ 221... $220\mu\text{H}$ 102... 1mH

The tolerance shall be J($\pm 5\%$) and K($\pm 10\%$) and M($\pm 20\%$), each of which is indicated behind the inductance as follows.

(example)
 R10M 1R0K 100K 101K 102K

3. Dimensions

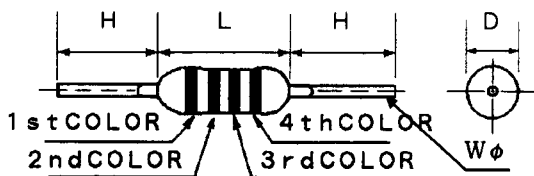
Outer dimensions

UNIT: m/m

TYPE	D (mm)	L (mm)	H (mm)	W ϕ (mm)	F ± 1.0 (mm)
LF10.0-TYPE	3.0 MAX	7.5 MAX	28 ± 3	0.5 ± 0.05	10.0

"F" is shown forming pitch.

LF10.0-SERIES



4. Test conditions

Unless otherwise specified, the test shall be performed in accordance with JIS-C-5001 specifying at the temperature of 15~35°C and at humidity of 25~85%. In case doubts arose about the test results, the test shall be performed at temperature of 20 ± 2 °C at the humidity of $65 \pm 5\%$

5. Ratings

Item	Specifications
(1) Nominal inductance range	0.10 μH ~ 1000 μH (E-12series)
(2) Nominal inductance tolerance	The rating shall be shown in the TABLE 1.
(3) Q (Quality factor)	
(4) Self-resonance frequency f_0 (MHZ)	
(5) DC resistance RDC(OHM)	
(6) Allowable current I(mA)	
(7) Measurement frequency	
(8) Operating temperature range	-25 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$

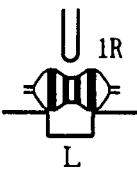
6. Making of nominal inductance

Nominal inductance shall be code with 4 color-bands. No tolerance of inductance shall be indicated. Please refer to the TABLE 1 for the information.

7. Electrical Characteristics

REQUIREMENTS	CHARACTERISTICS	TEST METHOD
DC Superimposition	$\Delta L/L$ within $\pm 10\%$	Inductance, when the allowable current is applied, to be measured by LCR-METER-YHP 4284A.
Rise Temperature	Within 20 $^{\circ}\text{C}$	A rise in temperature, when the allowable current is applied for 30 min., to be measured by a thermoelectric thermometer. (YEW 2542)
Temperature Characteristics	$\Delta L/L$ within $\pm 5\%$	$\Delta L/L$ to be measured at the temperature of between -25 $^{\circ}\text{C}$ and +85 $^{\circ}\text{C}$ as based on the temperature of 20 $^{\circ}\text{C}$.
Overcurrent Test	No evidence of fuming or flaming	The current twice the allowable current to be applied for 5 min.
Resistance to Soldering Heat	No evidence of outer damage	Immerse in the solder (H62A) of 260 \pm 5 $^{\circ}\text{C}$ for 10 \pm 1 sec.
Solderability	More than 90% toward circumference to be covered with new soldering.	Immerse in the solder (H63A) of 235 \pm 5 $^{\circ}\text{C}$ for 2 \pm 0.5 SEC.
Dielectric withstand-voltage	No evidence of fuming, flaming or breakdown	250V 5sec.:V Block
Insulation Resistance	1000 M Ω and over	250V 1min.:V Block

8. Mechanical Characteristics

REQUIREMENTS	CHARACTERISTICS	TEST METHOD
Terminal Strength (PULL)	No evidence of Break-down	Terminals shall withstand a pull of 1.0 kgs in a horizontal direction for 30 sec.
Terminal Strength (BEND)	No evidence of Break-down	Terminals shall withstand a return bend of 250 gs for 5 sec at a right angle to the axis, while being repeated the same right angle to the opposite direction.
Body Strength	No evidence of Breakdown	A load of 5 kg for 10 sec.  <p>R: a radius of push-bar L: slot width 2mm (LF10.0)</p>
Dropping	No evidence of damage	Dropping 1m over the ground of concrete or cement 10 times.
Vibration	$\Delta L/L$ shall be within $\pm 5\%$. Q factor shall be 30 and over	2 hours in each direction of X, Y, Z on P-Board at frequency range of 10-55-10HZ with 1.5mm amplitude.

9. Endurance Test

REQUIREMENTS	CHARACTERISTICS	TEST METHOD
Moisture Endurance	$\Delta L/L$: within $\pm 10\%$ Q: 30 and over	TEMP: 40 ± 2 °C. Humidity: 90 ~ 95% 1000 hrs.
Endurance (moisture load)	$\Delta L/L$: within $\pm 10\%$ Q: 30 and over	Allowable current on 1000 hrs continuously TEMP: 40 ± 2 °C Humidity: 90 ~ 95%
Low TEMP. Characteristics	"	Leave for 1000 hrs in a bath of TEMP: -25 ± 2 °C
TEMP. Cycling	"	Keep for 30 min. at TEMP. of $-25 \sim +85$ °C at 5 cycles in case of temp. change from low to high and V.V. Leave for 10~15 min. at normal temp.
Endurance (high temp. overload)	"	Allowable current on for 1000 hrs continuously at temp. of 85 ± 2 °C.
Resistance of Heat	"	Leave for 2 hrs in a bath of temp. 85 ± 2 °C.

*Unless otherwise specified, measurements shall be performed within 2 hours after leaving test samples for more than one hour at the normal temperature and at the normal humidity.

10. Preservation Temperature

-40 ~ 100 °C

11. Operating Temperature Range

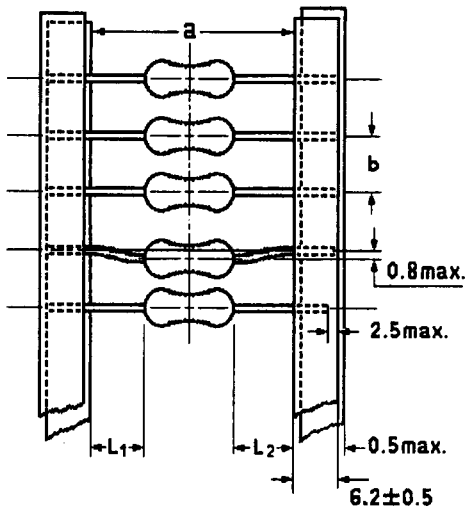
-25 ~ 85 °C

12. Packaging

PACKAGING				
Item	Form of products	First Polysthylene Bag	Secondary Packaging Box	Q' ty per Box
Q' TY	Bulk	200PCS	5 Bags	1,000 PCS
	Taping	—	—	T/R:5,000 PCS, T/B: 2,000PCS

T/R:Tape Reel packing, T/B:Tape Box packing

AXIAL TAPING



CONFIGURATION SYMBOL	DIMENSION (mm)		
	a	b	c
T-26	26 ± 1	5.0 ± 0.3	0.5
T-52	52 ± 1	5.0 ± 0.38	1.0

$$|L_1 - L_2| \leq C$$

TABLE-1(RATING) LF10.0
FIXED HIGH-FREQUENCY INDUCTORS

TYPE	INDUCTANCE and TOLERANCE		Q FACTOR (MIN)	SRF MIN (MHZ)	RDC MAX (Ω)	IDC MIN (mA)	TEST FREQ (MHZ)	COLOR CODE
	(μ H)	(%)						1ST-2ND-3RD-4TH
R10M R12M R15M R18M R22M R27M R33M R39M R47M R56M R68M R82M	0.10 0.12 0.15 0.18 0.22 0.27 0.33 0.39 0.47 0.56 0.68 0.82	± 20	45	480 450 420 400 380 360 320 310 300 280 240 200	0.06 0.06 0.07 0.07 0.08 0.09 0.10 0.12 0.15 0.18 0.20 0.22	1400 1350 1270 1200 1150 1110 1110 1000 1000 950 900 900	25.2	BN-BK-SIL BN-R -SIL BN-GN-SIL BN-GY-SIL R -R -SIL R -V -SIL O -O -SIL O -W -SIL Y -V -SIL GN-BU-SIL BU-GY-SIL GY-R -SIL
1R0K	1.0	± 10		180	0.25	815	7.96	BN-BK-GD-SIL
1R2K 1R5K 1R8K 2R2K 2R7K 3R3K 3R9K 4R7K 5R6K 6R8K 8R2K 100K	1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 10			160 140 120 110 85 74 62 48 35 28 20 18	0.28 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.80 0.85	740 700 655 630 595 575 555 530 500 470 425 370	BN-R -GD-SIL BN-GN-GD-SIL BN-GY-GD-SIL R -R -GD-SIL R -V -GD-SIL O -O -GD-SIL O -W -GD-SIL Y -V -GD-SIL GN-BU-GD-SIL BU-GY-GD-SIL GY-R -GD-SIL BN-BK-BK-SIL	
120K 150K 180K 220K 270K 330K 390K	12 15 18 22 27 33 39			16 14 12 10 9.0 8.0 7.5	0.90 1.00 1.20 1.35 1.80 2.10 2.30	350 335 315 285 270 255 240	2.52	BN-R -BK-SIL BN-GN-BK-SIL BN-GY-BK-SIL R -R -BK-SIL R -V -BK-SIL O -V -BK-SIL O -W -BK-SIL
470K 560K 680K 820K 101K	47 56 68 82 100			7.0 6.5 6.0 5.5 5.0	2.60 2.90 3.20 3.80 4.20	205 195 185 175 165	0.796	Y -V -BK-SIL GN-BU-BK-SIL BU-GY-BK-SIL GY-R -BK-SIL BN-BK-BN-SIL
121K 151K 181K 221K 271K 331K 391K 471K 561K 681K 821K 102K	120 150 180 220 270 330 390 470 560 680 820 1000			4.8 4.5 4.0 3.5 3.0 2.8 2.6 2.4 2.0 1.8 1.6 1.4	4.50 5.00 6.00 7.00 7.50 8.00 10.00 13.00 15.00 16.00 23.00 26.00	160 150 140 130 120 100 95 90 85 75 65 60	0.796	BN-R -BN-SIL BN-GN-BN-SIL BN-GY-BN-SIL R -R -BN-SIL R -V -BN-SIL O -O -BN-SIL O -W -BN-SIL Y -V -BN-SIL GN-BU-BN-SIL BU-GY-BN-SIL GY-R -BN-SIL BN-BK-R -SIL