

# Inductors

For General Applications  
Radial

## EL Series EL0304 Type

### FEATURES

- The EL series inductors are available in 6 form factors ranging from 0304 to 0909.
- With a miniature winding construction, these inductors nonetheless achieve high Q characteristics.
- Available in tape packaging to support automated mounting machines.

### APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipment.

### SPECIFICATIONS

Operating temperature range	-20 to +80°C [Including self-temperature rise]
Storage temperature range	-40 to +80°C [Unit of products]
Terminal tensile strength	EL0304: 4.9N min. EL0305: 7.84N min. EL0405: 7.84N min. EL0606: 14.7N min. EL0607: 14.7N min. EL0909: 14.7N min.

### PRODUCT IDENTIFICATION

<u>EL</u>	<u>0405</u>	<u>RA-</u>	<u>1R0</u>	<u>K</u>	<u>-3</u>
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions

0304	4×3×4mm (lead pitch 2.5mm)
0305	5×3.8×5mm (lead pitch 5mm)
0405	5.4×4.4×7mm (lead pitch 5mm)
0606	6.4×6×10mm (lead pitch 5mm)
0607	7.4×6.2×10mm (lead pitch 5mm)
0909	9.4×9×13.5mm (lead pitch 5mm)

(3) Packaging style

RA	Ammo-pack
RR	Reel

(4) Inductance value

R22	0.22μH
1R0	1μH

(5) Inductance tolerance

J	±5%
K	±10%
M	±20%

(6) TDK internal code

(Some products may not have this number. See the main body for details.)

### PACKAGING STYLE AND QUANTITIES

Packaging style	Type	Quantity
Ammo-pack	EL0304RA	3000 pieces
	EL0305RA	3000 pieces
	EL0405RA	3000 pieces
	EL0606RA	2000 pieces
	EL0607RA	2000 pieces
Taping	EL0909RR	500 pieces/reel

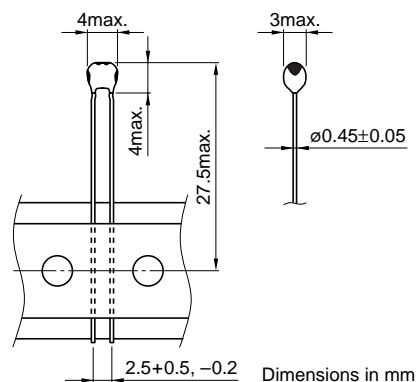
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### AMMO-PACK TAPING STYLE

#### SHAPES AND DIMENSIONS



#### CHARACTERISTICS

Operating temperature range	-20 to +80°C [Including self-temperature rise, 20°Cmax.]
Withstand voltage Erms	250V
Rated current	Based on the inductance variation [-10% to the initial value]
Terminal tensile strength	4.9N min.
Moisture resistance	$\Delta L/L \leq \pm 5\%$ $\Delta Q/Q \leq \pm 25\%$

#### 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.
0.22	±20%	30	25.2	220	0.18	745	EL0304RA-R22M
0.27	±20%	30	25.2	190	0.2	700	EL0304RA-R27M
0.33	±20%	30	25.2	160	0.24	645	EL0304RA-R33M
0.39	±20%	30	25.2	140	0.26	620	EL0304RA-R39M
0.47	±20%	30	25.2	120	0.29	585	EL0304RA-R47M
0.56	±20%	30	25.2	110	0.33	550	EL0304RA-R56M
0.68	±20%	30	25.2	94	0.37	515	EL0304RA-R68M
0.82	±20%	40	25.2	83	0.42	485	EL0304RA-R82M
1	±10%	40	7.96	74	0.45	470	EL0304RA-1R0K
1.2	±10%	40	7.96	66	0.5	445	EL0304RA-1R2K
1.5	±10%	40	7.96	58	0.58	415	EL0304RA-1R5K
1.8	±10%	40	7.96	52	0.64	395	EL0304RA-1R8K
2.2	±10%	40	7.96	45	0.72	365	EL0304RA-2R2K
2.7	±10%	40	7.96	41	0.86	340	EL0304RA-2R7K
3.3	±10%	40	7.96	37	0.92	325	EL0304RA-3R3K
3.9	±10%	40	7.96	34	1	315	EL0304RA-3R9K
4.7	±10%	40	7.96	31	1.1	300	EL0304RA-4R7K
5.6	±10%	40	7.96	28	1.2	285	EL0304RA-5R6K
6.8	±10%	40	7.96	26	1.4	265	EL0304RA-6R8K
8.2	±10%	40	7.96	23	1.6	250	EL0304RA-8R2K
10	±10%	40	2.52	21	1.7	240	EL0304RA-100K
12	±10%	40	2.52	19	1.9	225	EL0304RA-120K
15	±10%	40	2.52	17	2.1	215	EL0304RA-150K
18	±10%	40	2.52	16	2.3	205	EL0304RA-180K
22	±10%	40	2.52	14	2.6	195	EL0304RA-220K
27	±10%	40	2.52	13	3.5	165	EL0304RA-270K
33	±10%	40	2.52	12	4.2	150	EL0304RA-330K
39	±10%	40	2.52	11	4.9	140	EL0304RA-390K
47	±10%	40	2.52	10	5.6	130	EL0304RA-470K
56	±10%	40	2.52	9.4	8.4	109	EL0304RA-560K
68	±10%	40	2.52	8.6	9.4	105	EL0304RA-680K
82	±10%	40	2.52	7.8	10	100	EL0304RA-820K

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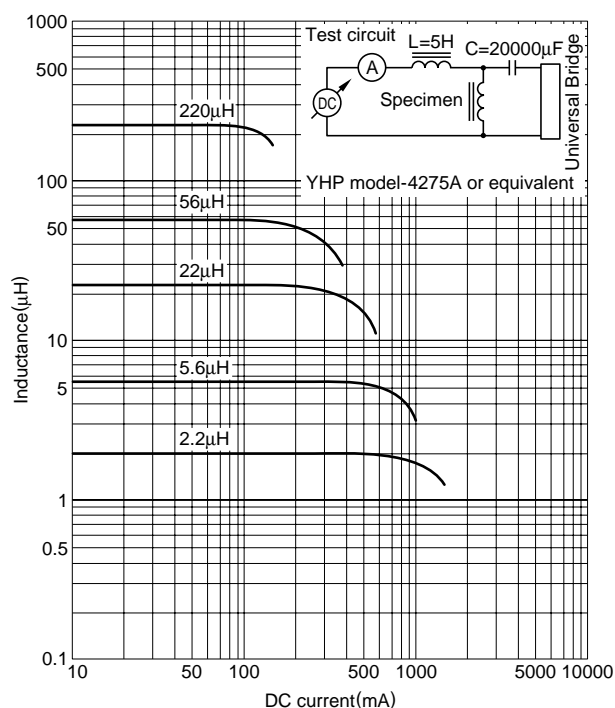
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### ELECTRICAL CHARACTERISTICS

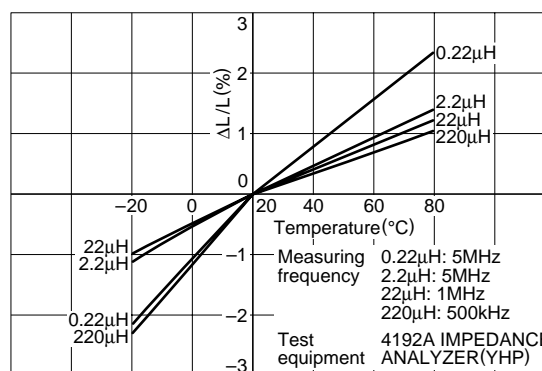
Inductance ( $\mu\text{H}$ )	Inductance tolerance	Q min.	Test frequency L, Q(MHz)	Self-resonant frequency (MHz)min.	DC resistance ( $\Omega$ )max.	Rated current (mA)max	Part No.
100	$\pm 10\%$	30	0.796	7	11	95	EL0304RA-101K
120	$\pm 10\%$	30	0.796	6.6	12	90	EL0304RA-121K
150	$\pm 10\%$	30	0.796	6	15	80	EL0304RA-151K
180	$\pm 10\%$	30	0.796	5.4	20	70	EL0304RA-181K
220	$\pm 10\%$	30	0.796	5	23	65	EL0304RA-221K

### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



#### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



#### Q vs. FREQUENCY CHARACTERISTICS

