

Inductors

For General Applications Radial

EL Series EL0405 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

EL	0405	RA-	1R0	K	-3
(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

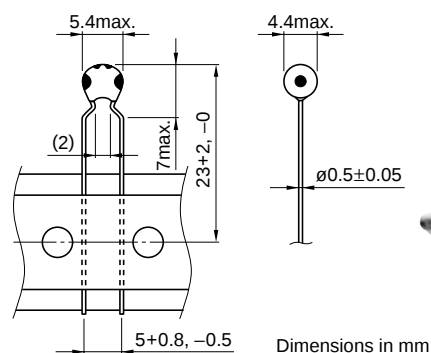
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AMMO-PACK TAPING STYLE

SHAPES AND DIMENSIONS



CHARACTERISTICS

Operating temperature range	-20 to +80°C [Including self-temperature rise 20°C max.]
Withstand voltage Erms	250V
Rated current	Based on inductance change [-10% to the initial value]
Terminal tensile strength	7.84N 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, ±10%	50	25.2	150	0.15	800	EL0405RA-R22X*-3
0.27	±20, ±10%	50	25.2	150	0.15	800	EL0405RA-R27X-3
0.33	±20, ±10%	50	25.2	150	0.15	800	EL0405RA-R33X-3
0.39	±20, ±10%	50	25.2	130	0.15	800	EL0405RA-R39X-3
0.47	±20, ±10%	50	25.2	130	0.15	800	EL0405RA-R47X-3
0.56	±20, ±10%	50	25.2	130	0.2	700	EL0405RA-R56X-3
0.68	±20, ±10%	50	25.2	120	0.2	700	EL0405RA-R68X-3
0.82	±20, ±10%	50	25.2	120	0.2	700	EL0405RA-R82X-3
1	±10, ±5%	50	7.96	85	0.22	674	EL0405RA-1R0X-3
1.2	±10, ±5%	50	7.96	75	0.24	645	EL0405RA-1R2X-3
1.5	±10, ±5%	50	7.96	65	0.27	608	EL0405RA-1R5X-3
1.8	±10, ±5%	50	7.96	55	0.3	577	EL0405RA-1R8X-3
2.2	±10, ±5%	50	7.96	50	0.33	550	EL0405RA-2R2X-3
2.7	±10, ±5%	50	7.96	45	0.37	520	EL0405RA-2R7X-3
3.3	±10, ±5%	50	7.96	40	0.42	488	EL0405RA-3R3X-3
3.9	±10, ±5%	50	7.96	35	0.46	466	EL0405RA-3R9X-3
4.7	±10, ±5%	50	7.96	30	0.53	434	EL0405RA-4R7X-3
5.6	±10, ±5%	50	7.96	27	0.56	422	EL0405RA-5R6X-3
6.8	±10, ±5%	50	7.96	25	0.63	398	EL0405RA-6R8X-3
8.2	±10, ±5%	50	7.96	22	0.7	378	EL0405RA-8R2X-3
10	±10, ±5%	50	2.52	20	0.8	353	EL0405RA-100X-3
12	±10, ±5%	50	2.52	18	0.87	339	EL0405RA-120X-3
15	±10, ±5%	50	2.52	15	1	316	EL0405RA-150X-3
18	±10, ±5%	50	2.52	12	1.11	301	EL0405RA-180X-3
22	±10, ±5%	40	2.52	11	1.35	272	EL0405RA-220X-3
27	±10, ±5%	40	2.52	10	1.55	254	EL0405RA-270X-3
33	±10, ±5%	40	2.52	9.5	1.75	239	EL0405RA-330X-3
39	±10, ±5%	40	2.52	9	2	223	EL0405RA-390X-3
47	±10, ±5%	40	2.52	8.5	2.2	213	EL0405RA-470X-3
56	±10, ±5%	40	2.52	8	2.4	204	EL0405RA-560X-3
68	±10, ±5%	40	2.52	7.5	3.3	174	EL0405RA-680X-3
82	±10, ±5%	40	2.52	7	3.7	164	EL0405RA-820X-3

* X: Please specify inductance tolerance, M(±20%), K(±10%) or J (±5%)

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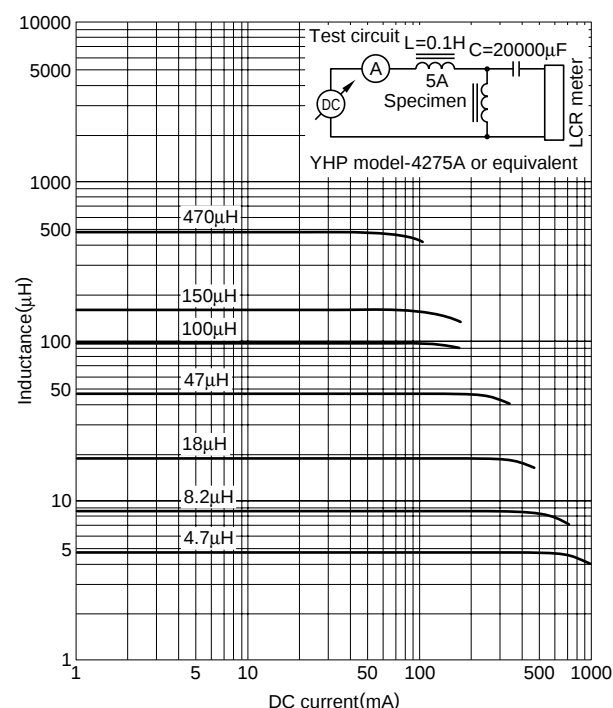
ELECTRICAL CHARACTERISTICS

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.
100	±10, ±5%	35	0.796	6.5	4.4	150	EL0405RA-101X*-3
120	±10, ±5%	35	0.796	6.2	5.1	140	EL0405RA-121X-3
150	±10, ±5%	35	0.796	5.7	5.95	130	EL0405RA-151X-3
180	±10, ±5%	35	0.796	5.3	7	120	EL0405RA-181X-3
220	±10, ±5%	35	0.796	4	8	112	EL0405RA-221X-3
270	±10, ±5%	35	0.796	3.6	12.4	90	EL0405RA-271X-3
330	±10, ±5%	35	0.796	3.3	13.2	87	EL0405RA-331X-3
390	±10, ±5%	35	0.796	3	15.4	80	EL0405RA-391X-3
470	±10, ±5%	35	0.796	2.8	17.3	76	EL0405RA-471X-3
560	±10, ±5%	30	0.796	2.4	21	69	EL0405RA-561X-3
680	±10, ±5%	30	0.796	2.2	23.5	65	EL0405RA-681X-3
820	±10, ±5%	30	0.796	2	26.5	61	EL0405RA-821X-3
1000	±10, ±5%	25	0.252	1.8	31.5	56	EL0405RA-102X-3

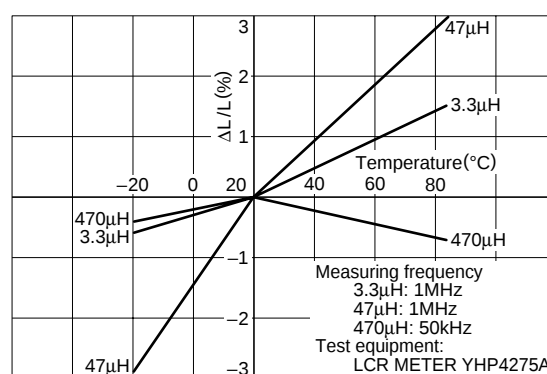
* X: Please specify inductance tolerance, K(±10%) or J (±5%)

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



Test terminal: Measuring at after the correction
Cycle: +20°C → +80°C → +20°C → -20°C
Temperature: Kept stabilized for 30+5, -0min each

Q vs. FREQUENCY CHARACTERISTICS

