

Radial Lead Inductors(Coils) For Signal Line(Magnetic Shielded)

Conformity to RoHS Directive

ELF Series ELF0708

FEATURES

- The ELF series inductors are available in ranging from 0505 to 1010 types.
- Because they are magnetically shielded, these parts can be used in high-density mounting configurations.
- With a miniature winding construction, these inductors nonetheless achieve high Q characteristics.
- Available in tape packaging to support automated mounting machines.
- Terminal platings and internal connecting solder use lead-free materials.
- This product conforms to the standards that are slated to be introduced under the RoHS Directive.

APPLICATIONS

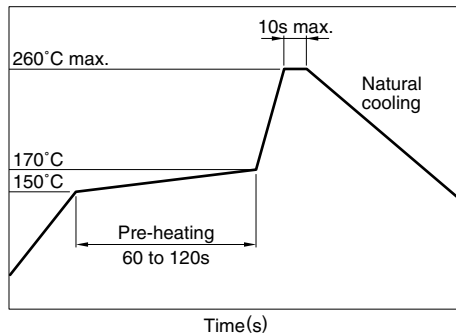
Televisions, VCRs, personal computers, and other electronic equipment.

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	24.5N min.

RECOMMENDED SOLDERING CONDITIONS

FLOW SOLDERING



IRON SOLDERING

Tip temperature	350°C max.
Heating time	5 seconds/soldering

- The use of reflow soldering is not guaranteed.

PRODUCT IDENTIFICATION

ELF	0708	RA-	100	K	- PF
(1)	(2)	(3)	(4)	(5)	(6)

(1)Series name

(2)Dimensions

0708	ø7.7×8mm (lead pitch 5mm)
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(3)Packaging style

RA	Ammo-pack
SKI	Bulk

(4)Inductance value

100	10μH
101	100μH
102	1000μH
103	10000μH

(5)Inductance tolerance

J	±5%
K	±10%

(6)Lead-free compatible product

PF	Lead-free compatible product
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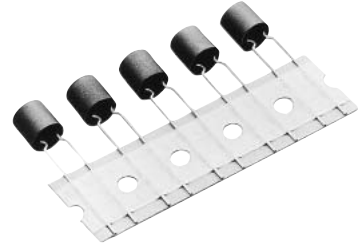
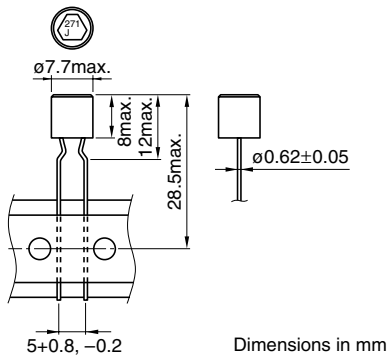
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Ammo-pack	1000 pieces
Bulk	200 pieces/pack

• 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.

AMMO-PACK TAPING STYLE SHAPES AND DIMENSIONS



ELECTRICAL CHARACTERISTICS

Inductance (μ H)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self- resonant frequency (MHz)ref.	DC resistance (Ω)max.	Rated current (mA)*1 max.		Part No.
						Based on inductance change	Based on temperature rise	
10	$\pm 10, \pm 5\%$	25[ref.]	2.52	23	0.19	550	795	ELF0708RA-100□*2.PF
12	$\pm 10, \pm 5\%$	25[ref.]	2.52	19	0.2	500	775	ELF0708RA-120□-PF
15	$\pm 10, \pm 5\%$	25[ref.]	2.52	16	0.22	450	740	ELF0708RA-150□-PF
18	$\pm 10, \pm 5\%$	25[ref.]	2.52	14	0.24	410	705	ELF0708RA-180□-PF
22	$\pm 10, \pm 5\%$	25[ref.]	2.52	13	0.26	380	680	ELF0708RA-220□-PF
27	$\pm 10, \pm 5\%$	25[ref.]	2.52	12	0.28	340	655	ELF0708RA-270□-PF
33	$\pm 10, \pm 5\%$	25[ref.]	2.52	11	0.3	310	630	ELF0708RA-330□-PF
39	$\pm 10, \pm 5\%$	25[ref.]	2.52	10	0.33	280	605	ELF0708RA-390□-PF
47	$\pm 10, \pm 5\%$	25[ref.]	2.52	9.4	0.35	260	585	ELF0708RA-470□-PF
56	$\pm 10, \pm 5\%$	25[ref.]	2.52	8.7	0.48	240	500	ELF0708RA-560□-PF
68	$\pm 10, \pm 5\%$	25[ref.]	2.52	8	0.52	215	480	ELF0708RA-680□-PF
82	$\pm 10, \pm 5\%$	25[ref.]	2.52	7.3	0.57	200	460	ELF0708RA-820□-PF
100	$\pm 10, \pm 5\%$	30	0.796	6.7	0.66	180	425	ELF0708RA-101□-PF
120	$\pm 10, \pm 5\%$	30	0.796	6.2	0.75	165	400	ELF0708RA-121□-PF
150	$\pm 10, \pm 5\%$	30	0.796	5.6	0.89	145	365	ELF0708RA-151□-PF
180	$\pm 10, \pm 5\%$	30	0.796	5.2	1	135	345	ELF0708RA-181□-PF
220	$\pm 10, \pm 5\%$	30	0.796	4.7	1.2	120	315	ELF0708RA-221□-PF
270	$\pm 10, \pm 5\%$	30	0.796	4.3	1.5	110	285	ELF0708RA-271□-PF
330	$\pm 10, \pm 5\%$	35	0.796	4	1.8	100	260	ELF0708RA-331□-PF
390	$\pm 10, \pm 5\%$	35	0.796	3.7	2.1	92	240	ELF0708RA-391□-PF
470	$\pm 10, \pm 5\%$	35	0.796	3.4	2.5	84	220	ELF0708RA-471□-PF
560	$\pm 10, \pm 5\%$	35	0.796	3.1	3	76	200	ELF0708RA-561□-PF
680	$\pm 10, \pm 5\%$	35	0.796	2.9	3.7	70	180	ELF0708RA-681□-PF
820	$\pm 10, \pm 5\%$	35	0.796	2.7	4.4	63	165	ELF0708RA-821□-PF
1000	$\pm 10, \pm 5\%$	40	0.252	2.4	5.6	58	145	ELF0708RA-102□-PF
1200	$\pm 10, \pm 5\%$	40	0.252	2.2	6.8	53	135	ELF0708RA-122□-PF
1500	$\pm 10, \pm 5\%$	40	0.252	2	9.8	47	110	ELF0708RA-152□-PF
1800	$\pm 10, \pm 5\%$	40	0.252	1.9	11	43	105	ELF0708RA-182□-PF
2200	$\pm 10, \pm 5\%$	40	0.252	1.7	13	40	100	ELF0708RA-222□-PF
2700	$\pm 10, \pm 5\%$	40	0.252	1.6	17	35	85	ELF0708RA-272□-PF
3300	$\pm 10, \pm 5\%$	30	0.252	1.4	34	33	59	ELF0708RA-332□-PF
3900	$\pm 10, \pm 5\%$	30	0.252	1.3	38	30	56	ELF0708RA-392□-PF

*1 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.

*2 □: Please specify inductance tolerance, K($\pm 10\%$) or J($\pm 5\%$)

• Test equipment L, Q: YHP4340A Q METER, or equivalent

L (Measurement frequency 1kHz): YHP4261A LCR METER or equivalent

Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

SRF: TAKEDA RIKEN TR-4100 TRACKING SCOPE, or equivalent

ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self- resonant frequency (MHz)ref.	DC resistance (Ω)max.	Rated current (mA) *1max.		Part No.
						Based on inductance change	Based on temperature rise	
4700	$\pm 10, \pm 5\%$	30	0.252	1.2	44	28	52	ELF0708RA-472□*2-PF
5600	$\pm 10, \pm 5\%$	30	0.252	1.1	51	25	49	ELF0708RA-562□-PF
6800	$\pm 10, \pm 5\%$	30	0.252	0.97	59	23	45	ELF0708RA-682□-PF
8200	$\pm 10, \pm 5\%$	30	0.252	0.9	68	21	42	ELF0708RA-822□-PF
10000	$\pm 10, \pm 5\%$	25	0.001*3/ 0.0796*4	0.8	80	19	39	ELF0708RA-103□-PF
12000	$\pm 10, \pm 5\%$	25	0.001/0.0796	0.75	92	17	36	ELF0708RA-123□-PF
15000	$\pm 10, \pm 5\%$	25	0.001/0.0796	0.68	110	15	33	ELF0708RA-153□-PF
18000	$\pm 10, \pm 5\%$	20	0.001/0.0796	0.6	120	14	30	ELF0708RA-183□-PF
22000	$\pm 10, \pm 5\%$	20	0.001/0.0796	0.54	130	12	25	ELF0708RA-223□-PF
27000	$\pm 10, \pm 5\%$	20	0.001/0.0796	0.48	160	11	20	ELF0708RA-273□-PF
33000	$\pm 10, \pm 5\%$	20	0.001/0.0796	0.42	180	10	17	ELF0708RA-333□-PF

*1 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.

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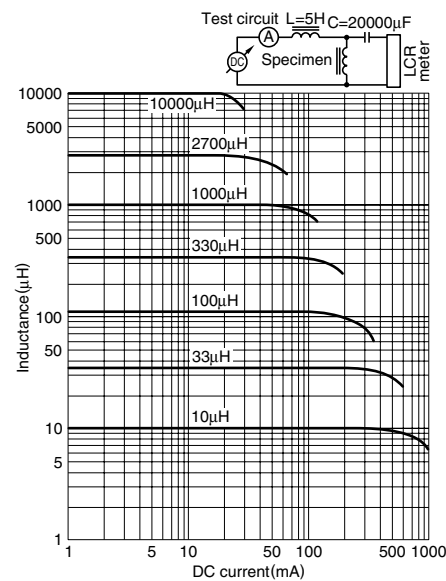
*3 for L

*4 for Q

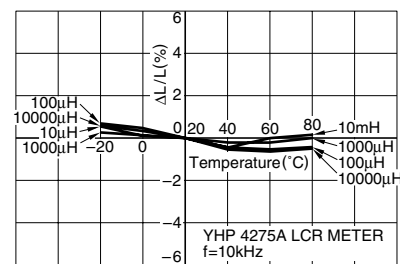
- Test equipment L (Measurement frequency 1kHz): LCR METER YHP4261A or equivalent
Q: YHP4340A Q METER, or equivalent
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent
SRF: TAKEDA RIKEN TR-4100 TRACKING SCOPE, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS

