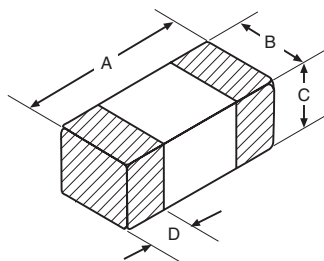
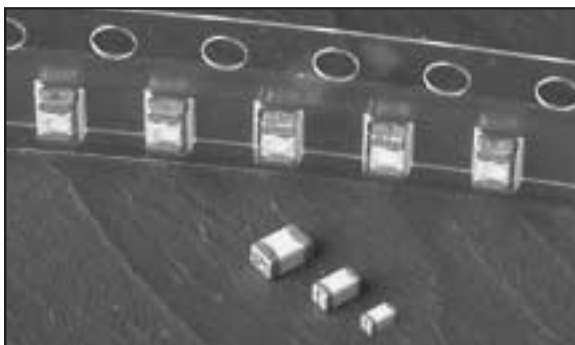




RL-7800-1 RL-7800-2, RL-7800-3

MULTILAYER CERAMIC CHIP INDUCTORS (High frequency application)



PART NUMBER IDENTIFICATION

RL-7800 -2 4N7 K
(1) (2) (3) (4)

- (1) SERIES NAME
 - (2) DIMENSIONS
 - (3) INDUCTANCE CODE
 - (4) TOLERANCE CODE
- S = ± 0.3 nH J = $\pm 5\%$
K = $\pm 10\%$

FEATURES

- Advanced monolithic construction with high frequency ceramic and conductive materials.
- Excellent high Q characteristics.
- Support operating frequency bands up to 10GHz.
- Excellent reliability.

APPLICATIONS

Wireless communications, cellular phones, cordless phones, pagers, etc. Miscellaneous high-frequency circuits. EMI countermeasure in high-frequency circuits.

SPECIFICATIONS

Operating Temperature Range: -55°C to $+125^{\circ}\text{C}$
Storage Conditions: -40°C max, 70%RH

PRECAUTIONS

- After mounting components onto printed circuit board, be careful not to bend or mishandle the board.
- When hand soldering, apply solder iron to the printed circuit board only. Temperature of the iron tip should not exceed 260°C with soldering time < 3 seconds.
- Reflow soldering condition:
- $230^{\circ}\text{C} + 5^{\circ}\text{C}$ ($260^{\circ}\text{C} + 5^{\circ}\text{C}$ for Pb free).

TAPE AND REEL PACKAGING

PART NO.	PIECES PER REEL	PLASTIC REEL SIZE
RL-7800-1	4000	7"
RL-7800-2	4000	7"
RL-7800-3	4000	7"

MECHANICAL DIMENSIONS (m/m)

Part Number	EIA Std	A	B	C	D
RL-7800-1	0402	1.00 ± 0.10	0.50 ± 0.10	0.50 ± 0.10	0.25 ± 0.10
RL-7800-2	0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
RL-7800-3	0805	2.00 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30



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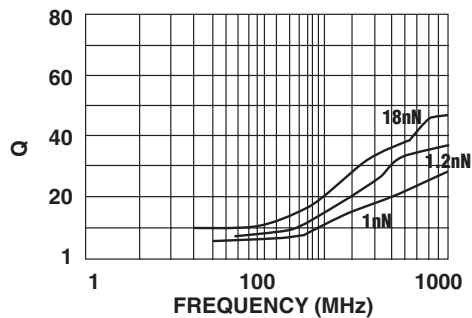
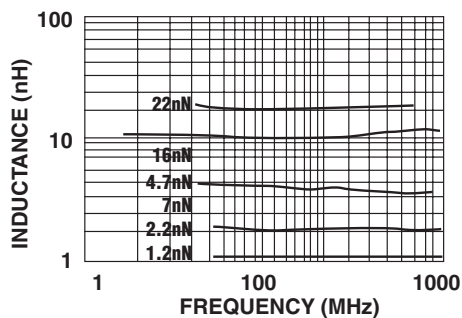
(321) 637-1000 • Toll Free Engineering Hot line 800-645-5828

Fax: (321) 637-1600 Web Site: www.rencousa.com E-mail: sales@rencousa.com

Part Number	EIA Size	Inductance L (nH)	Test Freq. (MHz)	Q Min	Q Typical (MHz)					Rated Current (mA) Max	DCR (Ω)		SRF (MHz)	
					100	300	500	800	1000		Max	Typ	Min	Typ
RL-7800-1-1N0S	0402	1.0 \pm 0.3nH	100	8	11	20	26	34	39	300	0.12	0.04	10000	>13000
RL-7800-1-1N2S	0402	1.2 \pm 0.3nH	100	8	11	20	26	34	39	300	0.12	0.04	10000	>13000
RL-7800-1-1N5S	0402	1.5 \pm 0.3nH	100	8	11	20	26	34	39	300	0.13	0.05	6000	>13000
RL-7800-1-1N8S	0402	1.8 \pm 0.3nH	100	8	11	18	24	30	35	300	0.14	0.06	6000	11000
RL-7800-1-2N2S	0402	2.2 \pm 0.3nH	100	8	10	17	24	29	35	300	0.16	0.07	6000	10000
RL-7800-1-2N7S	0402	2.7 \pm 0.3nH	100	8	10	17	23	29	34	300	0.17	0.08	6000	9000
RL-7800-1-3N3X	0402	3.3 \pm 10% or \pm 0.3nH	100	8	10	17	23	28	34	300	0.19	0.10	6000	8000
RL-7800-1-3N9X	0402	3.9 \pm 10% or \pm 0.3nH	100	8	10	17	23	28	33	300	0.22	0.12	4000	7000
RL-7800-1-4N7X	0402	4.7 \pm 10% or \pm 0.3nH	100	8	10	17	23	28	33	300	0.24	0.12	4000	6000
RL-7800-1-5N6X	0402	5.6 \pm 10% or \pm 0.3nH	100	8	10	17	22	28	33	300	0.27	0.15	4000	5700
RL-7800-1-6N8X	0402	6.8 \pm 10% or \pm 5%	100	8	10	16	22	27	33	250	0.32	0.17	3900	5500
RL-7800-1-8N2X	0402	8.2 \pm 10% or \pm 5%	100	8	10	17	22	28	32	250	0.37	0.21	3600	4900
RL-7800-1-10NX	0402	10 \pm 10% or \pm 5%	100	8	10	17	22	30	32	250	0.42	0.23	3200	4300
RL-7800-1-12NX	0402	12 \pm 10% or \pm 5%	100	8	11	18	24	31	34	250	0.50	0.28	2700	3900
RL-7800-1-15NX	0402	15 \pm 10% or \pm 5%	100	8	11	18	24	30	33	250	0.55	0.31	2300	3500
RL-7800-1-18NX	0402	18 \pm 10% or \pm 5%	100	8	11	18	24	30	32	200	0.65	0.35	2100	3100
RL-7800-1-22NX	0402	22 \pm 10% or \pm 5%	100	8	11	18	24	30	31	200	0.80	0.42	1900	2800
RL-7800-1-27NX	0402	27 \pm 10% or \pm 5%	100	8	11	18	23	27	29	200	0.90	0.47	1600	2300
RL-7800-1-33NX	0402	33 \pm 10% or \pm 5%	100	8	11	18	22	25	25	200	1.00	0.50	1300	1900
RL-7800-1-39NX	0402	39 \pm 10% or \pm 5%	100	8	11	18	22	24	23	150	1.20	0.52	1200	1700
RL-7800-1-47NX	0402	47 \pm 10% or \pm 5%	100	8	11	18	21	23	21	150	1.30	0.58	1000	1500

Test Equipment: RF Impedance Analyzer HP4291A + HP4195A

DC BIAS, FREQ Vs IMPEDANCE & Q CHARACTERISTICS



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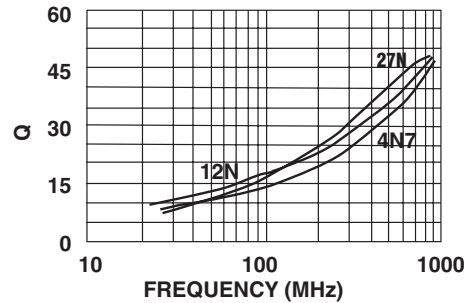
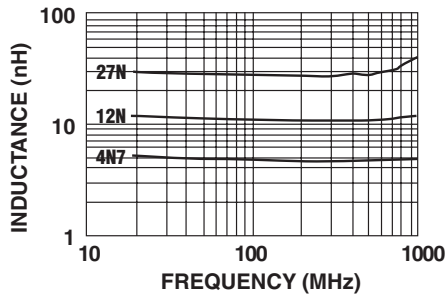
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Part Number	EIA Size	Inductance L (nH)	Test Freq. (MHz)	Q Min	Q Typical (MHz)					Rated Current (mA) Max	DCR (Ω)		SRF (MHz)	
					100	300	500	800	1000		Max	Typ	Min	Typ
RL-7800-2-1N0S	0603	1.0 \pm 0.3nH	100	8	14	30	40	70	90	300	0.05	0.015	10000	>13000
RL-7800-2-1N2S	0603	1.2 \pm 0.3nH	100	8	14	30	40	70	90	300	0.05	0.015	10000	>13000
RL-7800-2-1N5S	0603	1.5 \pm 0.3nH	100	8	14	26	34	47	50	300	0.10	0.03	6000	>13000
RL-7800-2-1N8S	0603	1.8 \pm 0.3nH	100	8	10	18	24	30	34	300	0.10	0.06	6000	>13000
RL-7800-2-2N2S	0603	2.2 \pm 0.3nH	100	8	12	22	29	37	40	300	0.10	0.06	6000	12000
RL-7800-2-2N7S	0603	2.7 \pm 0.3nH	100	10	13	24	32	41	45	300	0.10	0.06	6000	11000
RL-7800-2-3N3X	0603	3.3 \pm 10% or \pm 0.3nH	100	10	14	25	33	42	47	300	0.12	0.06	6000	9000
RL-7800-2-3N9X	0603	3.9 \pm 10% or \pm 0.3nH	100	10	13	25	33	42	46	300	0.14	0.07	6000	8000
RL-7800-2-4N7X	0603	4.7 \pm 10% or \pm 0.3nH	100	10	13	25	33	42	47	300	0.16	0.08	4000	6500
RL-7800-2-5N6X	0603	5.6 \pm 10% or \pm 0.3nH	100	10	14	25	33	42	46	300	0.18	0.09	4000	5800
RL-7800-2-6N8X	0603	6.8 \pm 10% or \pm 5%	100	10	14	25	33	43	47	300	0.22	0.11	4000	5600
RL-7800-2-8N2X	0603	8.2 \pm 10% or \pm 5%	100	10	14	26	34	44	48	300	0.24	0.13	3500	5200
RL-7800-2-10NX	0603	10 \pm 10% or \pm 5%	100	12	14	26	34	43	47	300	0.26	0.16	3400	4600
RL-7800-2-12NX	0603	12 \pm 10% or \pm 5%	100	12	14	27	35	45	49	300	0.28	0.17	2600	4000
RL-7800-2-15NX	0603	15 \pm 10% or \pm 5%	100	12	15	28	37	46	51	300	0.32	0.20	2300	3400
RL-7800-2-18NX	0603	18 \pm 10% or \pm 5%	100	12	15	27	36	44	48	300	0.35	0.21	2000	3000
RL-7800-2-22NX	0603	22 \pm 10% or \pm 5%	100	12	16	28	36	44	47	300	0.40	0.25	1600	2900
RL-7800-2-27NX	0603	27 \pm 10% or \pm 5%	100	12	16	29	37	45	46	300	0.45	0.28	1400	2200
RL-7800-2-33NX	0603	33 \pm 10% or \pm 5%	100	12	17	31	40	46	47	300	0.55	0.35	1200	1800
RL-7800-2-39NX	0603	39 \pm 10% or \pm 5%	100	12	18	31	39	44	44	300	0.60	0.38	1100	1600
RL-7800-2-47NX	0603	47 \pm 10% or \pm 5%	100	12	17	28	34	35	34	300	0.70	0.45	900	1600
RL-7800-2-56NX	0603	56 \pm 10% or \pm 5%	100	12	17	28	34	34	31	300	0.75	0.50	900	1400
RL-7800-2-68NX	0603	68 \pm 10% or \pm 5%	100	12	18	29	34	30	22	300	0.85	0.55	700	1200
RL-7800-2-82NX	0603	82 \pm 10% or \pm 5%	100	12	18	28	33	27	-	300	0.95	0.60	600	1100
RL-7800-2-R10X	0603	100 \pm 10% or \pm 5%	100	12	18	27	28	16	-	300	1.00	0.65	600	1000

Test Equipment: RF Impedance Analyzer HP4291A + HP4195A

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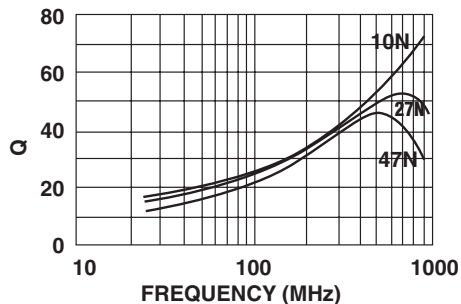
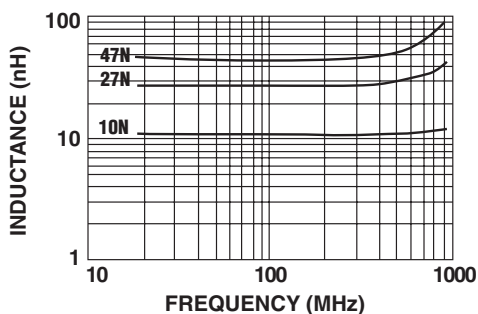
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Part Number	EIA Size	Inductance L (nH)	Test Freq. (MHz)	Q Min	Q Typical (MHz)					Rated Current (mA) Max	DCR (Ω)		SRF (MHz)	
					100	300	500	800	1000		Max	Typ	Min	Typ
RL-7800-3-1N5S	0805	1.5±0.3nH	100	10	21	39	57	61	68	300	0.10	0.02	4000	>6000
RL-7800-3-1N8S	0805	1.8±0.3nH	100	10	18	35	49	55	59	300	0.10	0.02	4000	>6000
RL-7800-3-2N2S	0805	2.2±0.3nH	100	10	18	33	46	53	58	300	0.10	0.03	4000	>6000
RL-7800-3-2N7S	0805	2.7±0.3nH	100	12	19	36	50	56	60	300	0.10	0.03	4000	>6000
RL-7800-3-3N3X	0805	3.3±10% or ±0.3nH	100	12	16	29	40	47	51	300	0.13	0.04	4000	>6000
RL-7800-3-3N9X	0805	3.9±10% or ±0.3nH	100	12	18	33	46	54	60	300	0.15	0.05	4000	>6000
RL-7800-3-4N7X	0805	4.7±10% or ±0.3nH	100	12	18	34	46	55	60	300	0.20	0.05	3500	>6000
RL-7800-3-5N6X	0805	5.6±10% or ±0.3nH	100	15	20	38	51	60	66	300	0.23	0.05	3200	5400
RL-7800-3-6N8X	0805	6.8±10% or ±5%	100	15	20	39	52	63	69	300	0.25	0.06	2800	4200
RL-7800-3-8N2X	0805	8.2±10% or ±5%	100	15	21	40	54	63	70	300	0.28	0.07	2400	3700
RL-7800-3-10NX	0805	10±10% or ±5%	100	15	20	38	51	60	67	300	0.30	0.90	2100	3100
RL-7800-3-12NX	0805	12±10% or ±5%	100	15	21	39	52	60	67	300	0.35	0.10	1900	3000
RL-7800-3-15NX	0805	15±10% or ±5%	100	15	22	42	55	63	72	300	0.40	0.11	1600	2600
RL-7800-3-18NX	0805	18±10% or ±5%	100	15	24	4	57	63	72	300	0.45	0.13	1500	2300
RL-7800-3-22NX	0805	22±10% or ±5%	100	18	23	43	55	60	69	300	0.50	0.15	1400	2100
RL-7800-3-27NX	0805	27±10% or ±5%	100	18	23	42	53	58	68	300	0.55	0.17	1300	1800
RL-7800-3-33NX	0805	33±10% or ±5%	100	18	24	43	54	55	60	300	0.60	0.19	1200	1700
RL-7800-3-39NX	0805	39±10% or ±5%	100	18	23	41	50	47	47	300	0.65	0.25	1000	1400
RL-7800-3-47NX	0805	47±10% or ±5%	100	18	23	41	49	43	41	300	0.70	0.26	900	1200
RL-7800-3-56NX	0805	56±10% or ±5%	100	18	23	42	48	39	38	300	0.75	0.28	800	1100
RL-7800-3-68NX	0805	68±10% or ±5%	100	18	25	42	45	30	-	300	0.80	0.33	700	900
RL-7800-3-82NX	0805	82±10% or ±5%	100	18	24	41	41	-	-	300	0.90	0.37	600	800
RL-7800-3-R10X	0805	100±10% or ±5%	100	18	23	37	37	-	-	300	0.90	0.40	600	800
RL-7800-3-R12X	0805	120±10% or ±5%	50	13	22	33	29	-	-	300	0.95	0.43	500	700
RL-7800-3-R15X	0805	150±10% or ±5%	50	13	22	34	26	-	-	300	1.00	0.46	500	700
RL-7800-3-R18X	0805	180±10% or ±5%	50	13	23	34	20	-	-	300	1.00	0.50	400	600
RL-7800-3-R22X	0805	220±10% or ±5%	50	12	20	23	-	-	-	300	1.20	0.75	350	550
RL-7800-3-R27X	0805	270±10% or ±5%	50	12	20	19	-	-	-	300	1.30	0.85	300	480
RL-7800-3-R33X	0805	330±10% or ±5%	50	12	22	15	-	-	-	300	1.40	0.90	250	400
RL-7800-3-R39X	0805	390±10% or ±5%	50	10	17	12	-	-	-	300	1.30	0.85	250	400
RL-7800-3-R47X	0805	470±10% or ±5%	50	17	-	-	-	-	-	300	1.50	0.95	200	350

Test Equipment: RF Impedance Analyzer HP4291A + HP4195A

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