Multilayer Chip Inductors
TL Series (Ferrite)

Features

- ✱ Monolithic structure for highly reliable surface mount applications.
- ✱ Excellent solderability and high heat resistance for either flow or reflow soldering.
- ✱ No cross coupling between inductors due to magnetic shield. Ideal for high density installation.
- ✱ Superior Q characteristics guaranteed over the wide frequency allow high frequency application.
- ✱ Dimensions are suitable for automatic mounting.

Applications

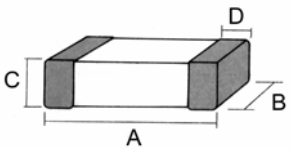
- ✱ Prevention of electromagnetic interference to signals on the secondary side of electric equipment.

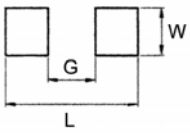
Product Identifications

MTL □□□□□□ □□□ □
(1) (2) (3) (4)

(1) Product Symbol: MTW's Wound Chip Inductors
(2) Dimensions: Length (A) × Width (B) × Thickness (C)
(3) Inductance
(4) Tolerance

Shapes and Dimensions / Recommended PC Board Pattern





Dimensions in mm (inch)

TYPE	A	B	C	D	L	W	G
100505	1.0±0.1 (0.040±0.004)	0.5±0.1 (0.020±0.004)	0.5±0.1 (0.020±0.004)	0.25±0.15 (0.01±0.006)	2.20 (0.086)	0.70 (0.028)	0.40 (0.016)
160808	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.012±0.008)	2.80 (0.110)	1.00 (0.039)	0.60 (0.024)
201209	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)	3.20 (0.126)	1.50 (0.059)	0.60 (0.024)
201212	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	1.2±0.2 (0.047±0.008)	0.5±0.3 (0.020±0.012)	3.20 (0.126)	1.50 (0.059)	0.60 (0.024)
321611	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.5±0.3 (0.020±0.012)	4.40 (0.173)	1.80 (0.071)	1.20 (0.047)

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Electrical Characteristics — 160808 Type

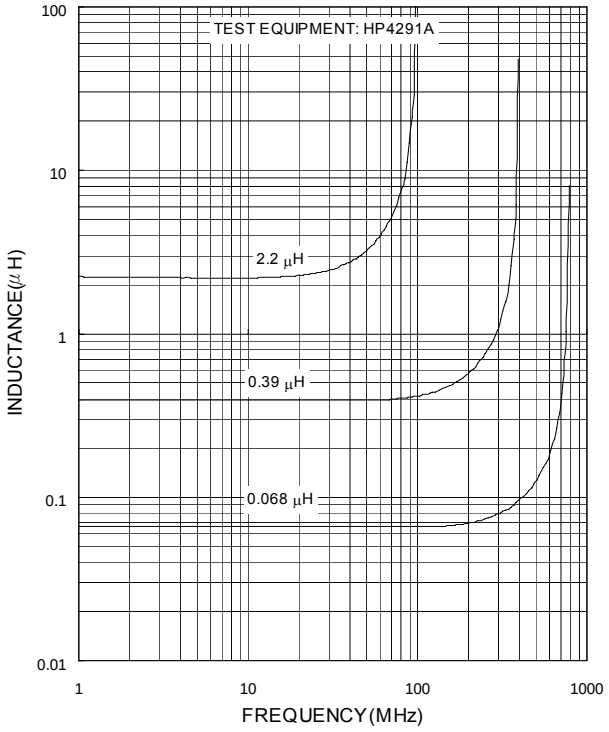
Part Number	Inductance (μH)	Percent Tolerance	Test Freq. (MHz)	Q MIN.	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Rated Current (mA) MAX.
MTL 160808-47N ☐	0.047	M	50	10	260	0.30	50
MTL 160808-68N ☐	0.068	M	50	10	250	0.30	50
MTL 160808-R10 ☐	0.10	K	25	15	240	0.50	50
MTL 160808-R12 ☐	0.12	K	25	15	205	0.50	50
MTL 160808-R15 ☐	0.15	K	25	15	180	0.60	50
MTL 160808-R18 ☐	0.18	K	25	15	165	0.60	50
MTL 160808-R22 ☐	0.22	K	25	15	150	0.80	50
MTL 160808-R27 ☐	0.27	K	25	15	136	0.80	50
MTL 160808-R33 ☐	0.33	K	25	15	125	0.85	35
MTL 160808-R39 ☐	0.39	K	25	15	110	1.00	35
MTL 160808-R47 ☐	0.47	K	25	15	105	1.35	35
MTL 160808-R56 ☐	0.56	K	25	15	95	1.55	35
MTL 160808-R68 ☐	0.68	K	25	15	90	1.70	35
MTL 160808-R82 ☐	0.82	K	25	15	85	2.10	35
MTL 160808-1R0 ☐	1.0	K	10	35	75	0.60	25
MTL 160808-1R2 ☐	1.2	K	10	35	65	0.80	25
MTL 160808-1R5 ☐	1.5	K	10	35	60	0.80	25
MTL 160808-1R8 ☐	1.8	K	10	35	55	0.95	25
MTL 160808-2R2 ☐	2.2	K	10	35	50	1.15	15
MTL 160808-2R7 ☐	2.7	K	10	35	45	1.35	15
MTL 160808-3R3 ☐	3.3	K	10	35	40	1.55	15
MTL 160808-3R9 ☐	3.9	K	10	35	35	1.70	15
MTL 160808-4R7 ☐	4.7	K	10	35	33	2.10	15
MTL 160808-5R6 ☐	5.6	K	4	35	22	1.55	5
MTL 160808-6R8 ☐	6.8	K	4	35	20	1.70	5
MTL 160808-8R2 ☐	8.2	K	4	35	18	2.10	5
MTL 160808-100 ☐	10	K	2	30	17	1.85	3
MTL 160808-120 ☐	12	K	2	30	15	2.10	3

☐ Tolerance：K = ± 10%, M = ± 20%

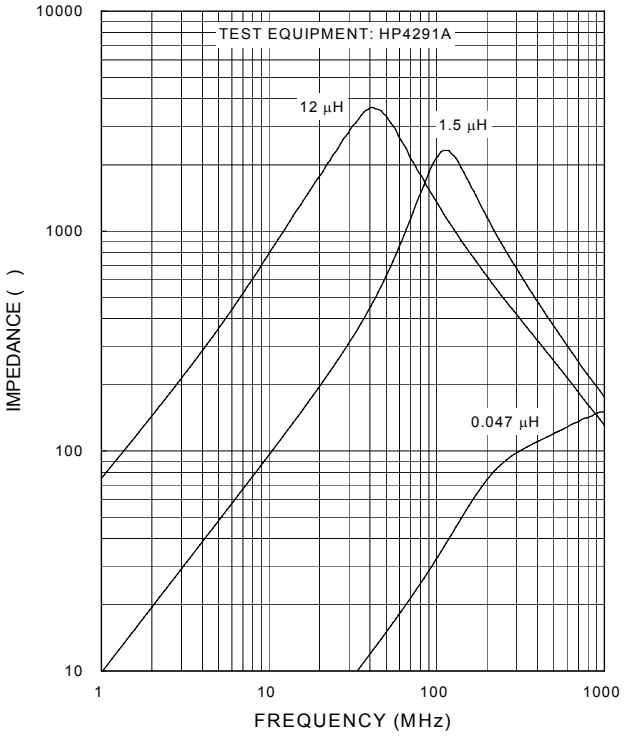
Multilayer Chip Inductors
TL Series (Ferrite)

Electrical Charts — 160808 Type

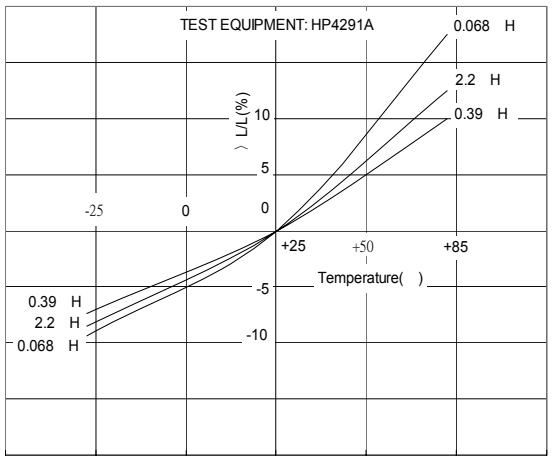
Inductance VS. Frequency



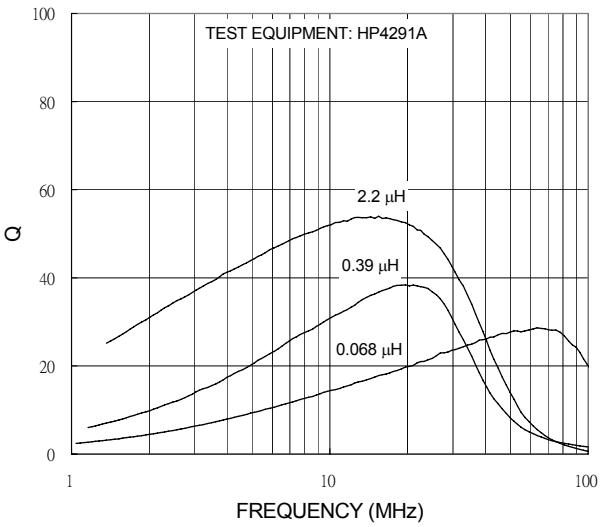
Impedance VS. Frequency



Inductance VS. Temperature



Q VS. Frequency



Multilayer Chip Inductors
TL Series (Ferrite)

Electrical Characteristics — 2012 Type

Part Number	Inductance (μH)	Percent Tolerance	Test Freq. (MHz)	Q MIN.	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Rated Current (mA) MAX.
MTL 201209-47N ☐	0.047	M	50	15	320	0.20	300
MTL 201209-68N ☐	0.068	M	50	15	280	0.20	300
MTL 201209-R10 ☐	0.10	K	25	20	235	0.30	250
MTL 201209-R12 ☐	0.12	K	25	20	220	0.30	250
MTL 201209-R15 ☐	0.15	K	25	20	200	0.40	250
MTL 201209-R18 ☐	0.18	K	25	20	185	0.40	250
MTL 201209-R22 ☐	0.22	K	25	20	170	0.50	250
MTL 201209-R27 ☐	0.27	K	25	20	150	0.50	250
MTL 201209-R33 ☐	0.33	K	25	20	145	0.55	250
MTL 201209-R39 ☐	0.39	K	25	25	135	0.65	200
MTL 201209-R47 ☐	0.47	K	25	25	125	0.65	200
MTL 201209-R56 ☐	0.56	K	25	25	115	0.75	150
MTL 201209-R68 ☐	0.68	K	25	25	105	0.80	150
MTL 201209-R82 ☐	0.82	K	25	25	100	1.00	150
MTL 201209-1R0 ☐	1.0	K	10	45	75	0.40	50
MTL 201209-1R2 ☐	1.2	K	10	45	65	0.50	50
MTL 201209-1R5 ☐	1.5	K	10	45	60	0.50	50
MTL 201209-1R8 ☐	1.8	K	10	45	55	0.60	50
MTL 201209-2R2 ☐	2.2	K	10	45	50	0.65	30
MTL 201212-2R7 ☐	2.7	K	10	45	45	0.75	30
MTL 201212-3R3 ☐	3.3	K	10	45	41	0.80	30
MTL 201212-3R9 ☐	3.9	K	10	45	38	0.90	30
MTL 201212-4R7 ☐	4.7	K	10	45	35	1.00	30
MTL 201212-5R6 ☐	5.6	K	4	50	32	0.90	15
MTL 201212-6R8 ☐	6.8	K	4	50	29	1.00	15
MTL 201212-8R2 ☐	8.2	K	4	50	26	1.10	15
MTL 201212-100 ☐	10	K	2	50	24	1.15	15
MTL 201212-120 ☐	12	K	2	50	22	1.25	15
MTL 201212-150 ☐	15	K	1	35	19	0.80	5
MTL 201212-180 ☐	18	K	1	35	18	0.90	5
MTL 201212-220 ☐	22	K	1	35	16	1.10	5
MTL 201212-270 ☐	27	K	1	35	14	1.15	5
MTL 201212-330 ☐	33	K	1	35	13	1.25	5

☐ Tolerance：K = ± 10%, M = ± 20%

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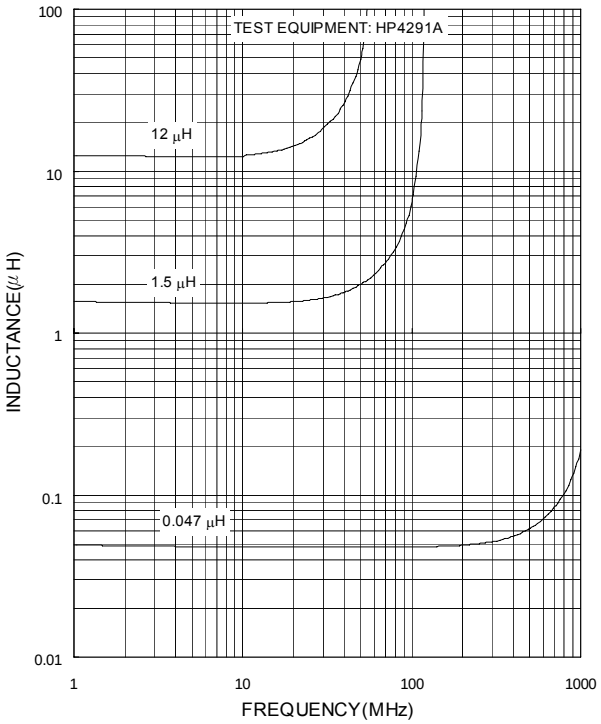
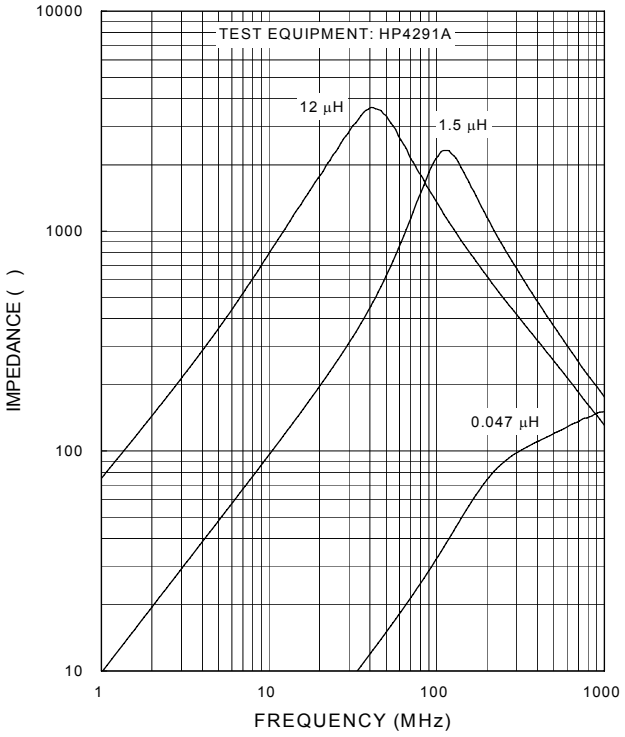
Electrical Charts **2012 Type**

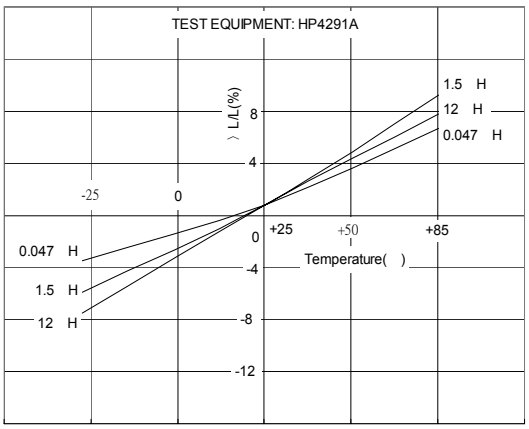
Inductance VS. Frequency



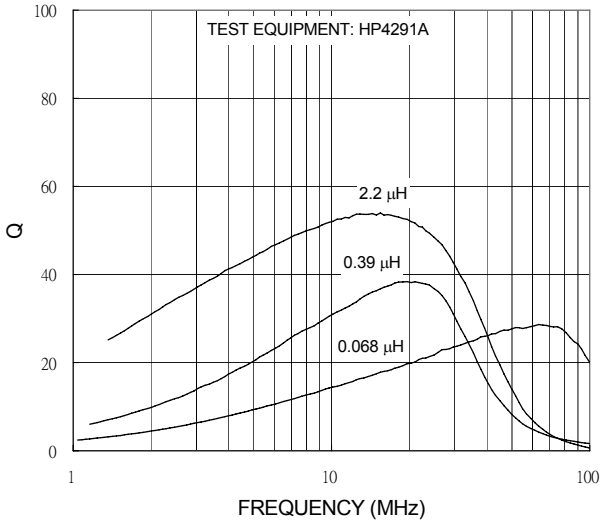
Impedance VS. Frequency



Inductance VS. Temperature



Q VS. Frequency



Multilayer Chip Inductors
TL Series (Ferrite)

Electrical Characteristics — 321611 Type

Part Number	Inductance (μH)	Percent Tolerance	Test Freq. (MHz)	Q MIN.	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Rated Current (mA) MAX.
MTL 321611-47N ☐	0.047	M	50	20	320	0.15	300
MTL 321611-68N ☐	0.068	M	50	20	280	0.25	300
MTL 321611-R10 ☐	0.10	K	25	20	235	0.25	250
MTL 321611-R12 ☐	0.12	K	25	20	220	0.30	250
MTL 321611-R15 ☐	0.15	K	25	20	200	0.30	250
MTL 321611-R18 ☐	0.18	K	25	20	185	0.40	250
MTL 321611-R22 ☐	0.22	K	25	20	170	0.40	250
MTL 321611-R27 ☐	0.27	K	25	20	150	0.50	250
MTL 321611-R33 ☐	0.33	K	25	20	145	0.60	250
MTL 321611-R39 ☐	0.39	K	25	25	135	0.50	200
MTL 321611-R47 ☐	0.47	K	25	25	125	0.60	200
MTL 321611-R56 ☐	0.56	K	25	25	115	0.70	150
MTL 321611-R68 ☐	0.68	K	25	25	105	0.80	150
MTL 321611-R82 ☐	0.82	K	25	25	100	0.90	150
MTL 321611-1R0 ☐	1.0	K	10	45	75	0.40	100
MTL 321611-1R2 ☐	1.2	K	10	45	65	0.50	100
MTL 321611-1R5 ☐	1.5	K	10	45	60	0.50	50
MTL 321611-1R8 ☐	1.8	K	10	45	55	0.50	50
MTL 321611-2R2 ☐	2.2	K	10	45	50	0.60	50
MTL 321611-2R7 ☐	2.7	K	10	45	45	0.60	50
MTL 321611-3R3 ☐	3.3	K	10	45	41	0.70	50
MTL 321611-3R9 ☐	3.9	K	10	45	38	0.80	50
MTL 321611-4R7 ☐	4.7	K	10	45	35	0.90	50
MTL 321611-5R6 ☐	5.6	K	4	50	32	0.70	25
MTL 321611-6R8 ☐	6.8	K	4	50	29	0.80	25
MTL 321611-8R2 ☐	8.2	K	4	50	26	0.90	25
MTL 321611-100 ☐	10	K	2	50	24	1.00	25
MTL 321611-120 ☐	12	K	2	50	22	1.05	15
MTL 321611-150 ☐	15	K	1	35	19	0.70	5
MTL 321611-180 ☐	18	K	1	35	18	0.70	5
MTL 321611-220 ☐	22	K	1	35	16	0.90	5
MTL 321611-270 ☐	27	K	1	35	14	0.90	5
MTL 321611-330 ☐	33	K	1	35	13	1.05	5

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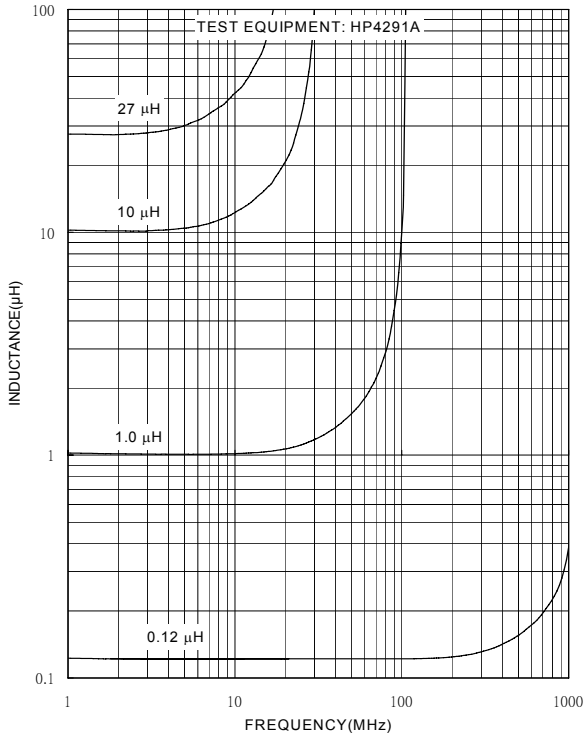
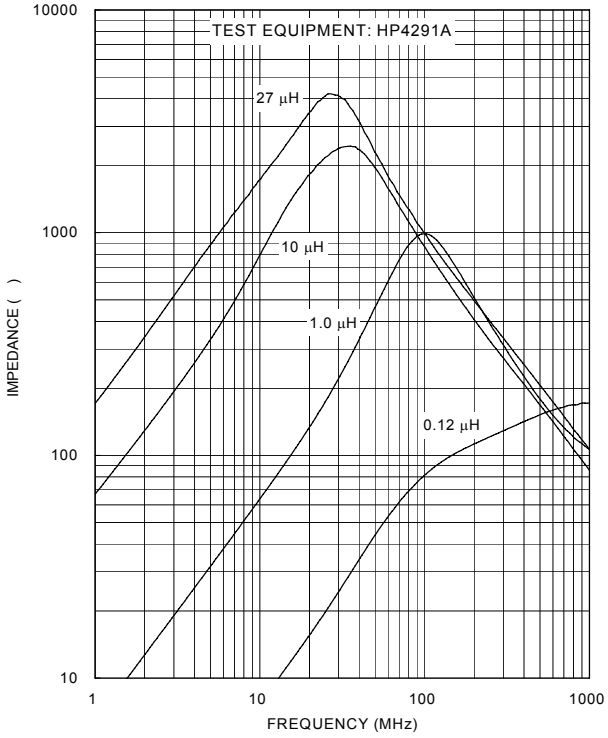
Electrical Charts **321611 Type**

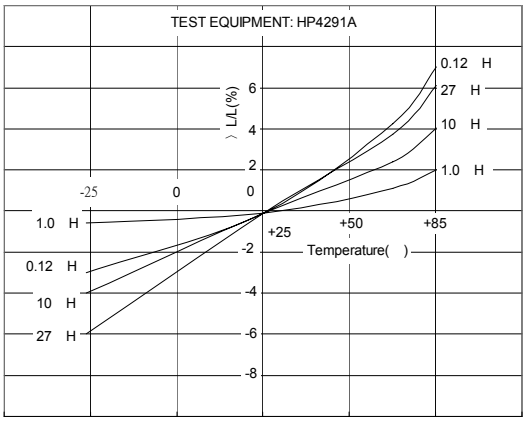
Inductance VS. Frequency



Impedance VS. Frequency



Inductance VS. Temperature



Q VS. Frequency