

# MULTILAYER CHIP INDUCTORS

## TL SERIES (Ferrite)



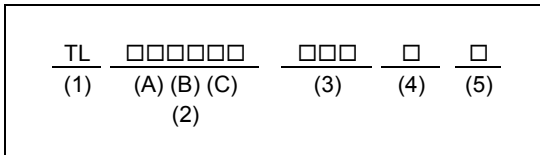
### FEATURES

- 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

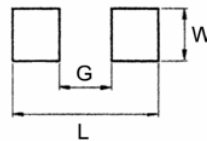
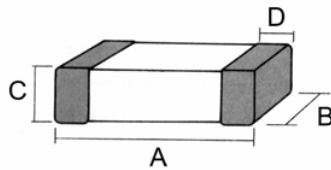
- Prevention of electromagnetic interference to signals on the secondary side of electric equipment.

### PRODUCT IDENTIFICATIONS



- (1) Product Symbol: Multilayer Chip Inductors
- (2) Dimensions: Length (A) × Width (B) × Thickness (C)
- (3) Inductance
- (4) Tolerance
- (5) Packaging style: B = bulk T = Tape & Reel

### SHAPES AND DIMENSIONS / RECOMMENDED PC BOARD PATTERN



Dimensions in mm ( inch )

TYPE	A	B	C	D	L	W	G
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)	2.1 (0.083)	0.7 (0.028)	0.7 (0.028)
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)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)
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)	2.6 (0.102)	1.0 (0.039)	1.0 (0.039)
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)	4.4 (0.173)	1.4 (0.055)	2.2 (0.087)

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### ELECTRICAL CHARACTERISTICS

#### 2012 TYPE

Part Number	Inductance ( $\mu$ H)	Q MIN.	Test Frequency (MHz)	Self-Resonant Frequency (MHz) MIN.	DC Resistance ( $\Omega$ ) MAX.	Rated Current (mA) MAX.
TL201209-47NM	0.047 $\pm$ 20%	15	50	320	0.20	300
TL201209-68NM	0.068 $\pm$ 20%	15	50	280	0.20	300
TL201209-R10K	0.10 $\pm$ 10%	20	25	235	0.30	250
TL201209-R12K	0.12 $\pm$ 10%	20	25	220	0.30	250
TL201209-R15K	0.15 $\pm$ 10%	20	25	200	0.40	250
TL201209-R18K	0.18 $\pm$ 10%	20	25	185	0.40	250
TL201209-R22K	0.22 $\pm$ 10%	20	25	170	0.50	250
TL201209-R27K	0.27 $\pm$ 10%	20	25	150	0.50	250
TL201209-R33K	0.33 $\pm$ 10%	20	25	145	0.55	250
TL201209-R39K	0.39 $\pm$ 10%	25	25	135	0.65	200
TL201209-R47K	0.47 $\pm$ 10%	25	25	125	0.65	200
TL201209-R56K	0.56 $\pm$ 10%	25	25	115	0.75	150
TL201209-R68K	0.68 $\pm$ 10%	25	25	105	0.80	150
TL201209-R82K	0.82 $\pm$ 10%	25	25	100	1.00	150
TL201209-1R0K	1.0 $\pm$ 10%	45	10	75	0.40	50
TL201209-1R2K	1.2 $\pm$ 10%	45	10	65	0.50	50
TL201209-1R5K	1.5 $\pm$ 10%	45	10	60	0.50	50
TL201209-1R8K	1.8 $\pm$ 10%	45	10	55	0.60	50
TL201209-2R2K	2.2 $\pm$ 10%	45	10	50	0.65	30
TL201212-2R7K	2.7 $\pm$ 10%	45	10	45	0.75	30
TL201212-3R3K	3.3 $\pm$ 10%	45	10	41	0.80	30
TL201212-3R9K	3.9 $\pm$ 10%	45	10	38	0.90	30
TL201212-4R7K	4.7 $\pm$ 10%	45	10	35	1.00	30
TL201212-5R6K	5.6 $\pm$ 10%	50	4	32	0.90	15
TL201212-6R8K	6.8 $\pm$ 10%	50	4	29	1.00	15
TL201212-8R2K	8.2 $\pm$ 10%	50	4	26	1.10	15
TL201212-100K	10 $\pm$ 10%	50	2	24	1.15	15
TL201212-120K	12 $\pm$ 10%	50	2	22	1.25	15
TL201212-150K	15 $\pm$ 10%	35	1	19	0.80	5
TL201212-180K	18 $\pm$ 10%	35	1	18	0.90	5
TL201212-220K	22 $\pm$ 10%	35	1	16	1.10	5
TL201212-270K	27 $\pm$ 10%	35	1	14	1.15	5
TL201212-330K	33 $\pm$ 10%	35	1	13	1.25	5

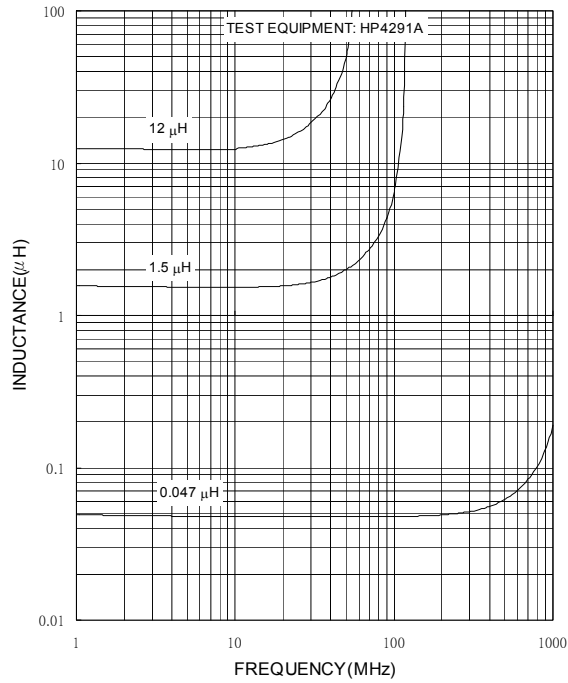
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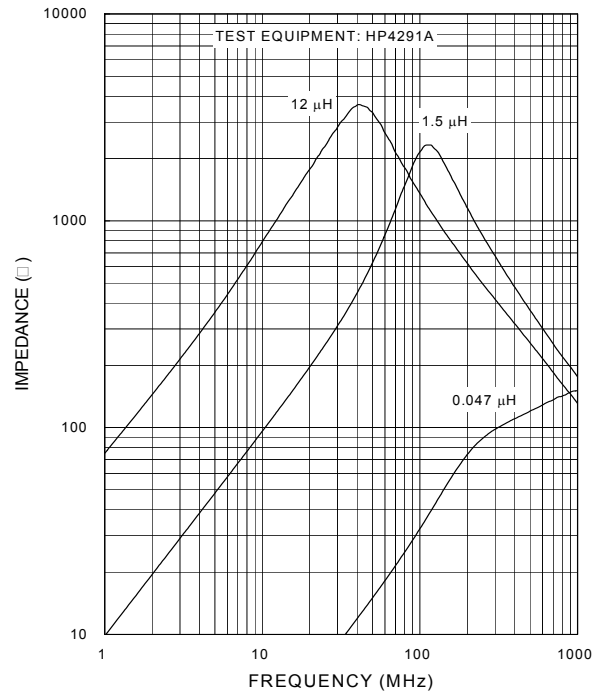


### 2012 TYPE

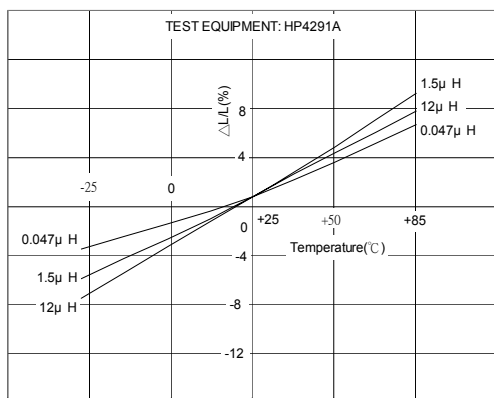
INDUCTANCE vs. FREQUENCY  
CHARACTERISTICS



IMPEDANCE vs. FREQUENCY  
CHARACTERISTICS



INDUCTANCE vs. TEMPERATURE  
CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS

