

# SMD Inductors(Coils) For High Frequency(Multilayer)

Conformity to RoHS Directive

## MLG Series MLG1608

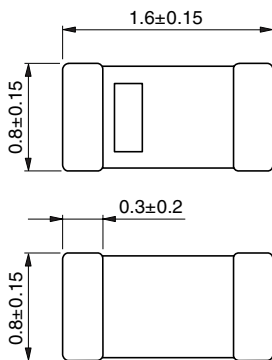
### FEATURES

- Nominal inductance values are supported from 1 to 270nH.
- Provides high Q characteristics.
- Advanced monolithic structure is formed using a multilayering and sintering process with ceramic and conductive materials for high-frequency.
- It is a product conforming to RoHS directive.

### APPLICATIONS

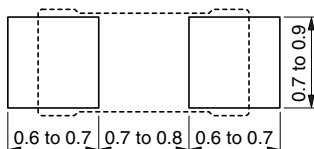
For high-frequency applications including mobile phones, portable phones, cordless phones and personal handy-phone systems (PHS).

### SHAPES AND DIMENSIONS



Weight: 4mg

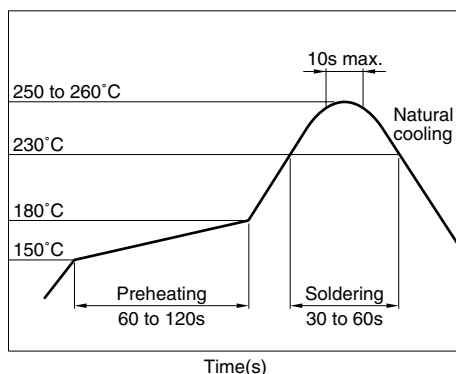
### RECOMMENDED PC BOARD PATTERN



Dimensions in mm



### RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



- 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.

- Please contact our Sales office when your application are considered the following:  
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

- All specifications are subject to change without notice.

### PRODUCT IDENTIFICATION

MLG	1608	B	2N2	S	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions

1608 1.6×0.8mm (L×W)

(3) Material code

(4) Inductance value

2N2	2.2nH
12N	12nH
R10	100nH

(5) Inductance tolerance

S	±0.3nH
D	±0.5nH
J	±5%

(6) Packaging style

T Taping (reel)

### SPECIFICATIONS

Operating temperature range	-55 to +125°C
Storage temperature range	-55 to +125°C [Unit of products]

### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	4000 pieces/reel

### HANDLING AND PRECAUTIONS

- Before soldering, be sure to preheat components.  
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 260°C. Soldering time should not exceed 3 seconds.

**ELECTRICAL CHARACTERISTICS**

Inductance (nH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (GHz)min.	DC resistance ( $\Omega$ )max.	Rated current (mA)max.	Part No.
1	$\pm 0.3$ nH	8	100	10	0.1	600	MLG1608B1N0ST
1.2	$\pm 0.3$ nH	8	100	10	0.1	600	MLG1608B1N2ST
1.5	$\pm 0.3$ nH	8	100	10	0.1	600	MLG1608B1N5ST
1.8	$\pm 0.3$ nH	8	100	9.8	0.1	600	MLG1608B1N8ST
2.2	$\pm 0.3$ nH	10	100	7.6	0.15	600	MLG1608B2N2ST
2.7	$\pm 0.3$ nH	10	100	7	0.15	600	MLG1608B2N7ST
3.3	$\pm 0.3$ nH	10	100	6.2	0.2	600	MLG1608B3N3ST
3.9	$\pm 0.3$ nH	10	100	5.6	0.2	600	MLG1608B3N9ST
4.7	$\pm 0.3$ nH	10	100	4.8	0.2	600	MLG1608B4N7ST
5.6	$\pm 0.5$ nH	10	100	4.6	0.2	600	MLG1608B5N6DT
6.8	$\pm 0.5$ nH	10	100	4.2	0.2	600	MLG1608B6N8DT
8.2	$\pm 0.5$ nH	10	100	3.6	0.25	600	MLG1608B8N2DT
10	$\pm 5\%$	12	100	3.2	0.25	600	MLG1608B10NJT
12	$\pm 5\%$	12	100	2.8	0.3	600	MLG1608B12NJT
15	$\pm 5\%$	12	100	2.6	0.35	600	MLG1608B15NJT
18	$\pm 5\%$	12	100	2.4	0.4	600	MLG1608B18NJT
22	$\pm 5\%$	12	100	2	0.5	500	MLG1608B22NJT
27	$\pm 5\%$	12	100	1.9	0.55	500	MLG1608B27NJT
33	$\pm 5\%$	12	100	1.6	0.6	500	MLG1608B33NJT
39	$\pm 5\%$	12	100	1.4	0.65	400	MLG1608B39NJT
47	$\pm 5\%$	14	100	1.2	0.7	400	MLG1608B47NJT
56	$\pm 5\%$	14	100	1	0.75	400	MLG1608B56NJT
68	$\pm 5\%$	14	100	0.9	0.8	300	MLG1608B68NJT
82	$\pm 5\%$	14	100	0.8	0.9	300	MLG1608B82NJT
100	$\pm 5\%$	14	100	0.7	1	300	MLG1608BR10JT
120	$\pm 5\%$	14	100	0.6	1.2	300	MLG1608SR12JT
150	$\pm 5\%$	14	100	0.5	1.3	250	MLG1608SR15JT
180	$\pm 5\%$	14	100	0.4	1.4	250	MLG1608SR18JT
220	$\pm 5\%$	14	100	0.4	1.7	200	MLG1608SR22JT
270	$\pm 5\%$	14	100	0.35	2	200	MLG1608SR27JT

- Test equipment

Inductance Q : HP4291A+16193A SRF: HP8720C Rdc: YOKOGAWA TYPE7561

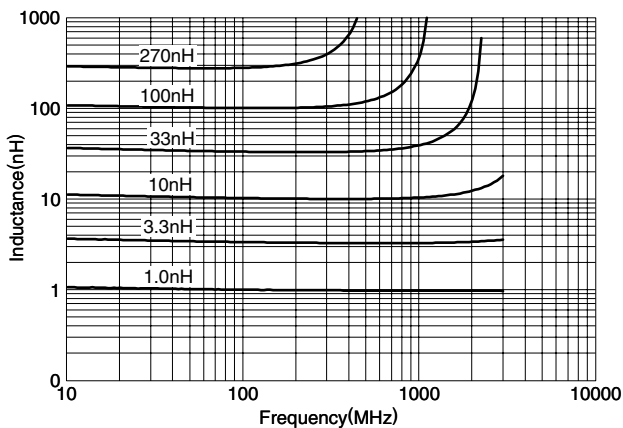
- Rated current : Value obtained when current flows and temperature has risen to 20°C.

## L, Q vs. FREQUENCY CHARACTERISTICS

Part No.	Inductance(nH)typ.					Q typ.				
	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz
MLG1608B1N0ST	1.0	1.0	1.0	1.0	1.0	36	39	56	62	71
MLG1608B1N2ST	1.1	1.1	1.1	1.1	1.1	31	33	48	52	58
MLG1608B1N5ST	1.4	1.4	1.4	1.4	1.4	43	47	67	73	85
MLG1608B1N8ST	1.7	1.7	1.7	1.7	1.8	44	47	68	74	85
MLG1608B2N2ST	2.1	2.1	2.2	2.2	2.2	44	47	68	75	85
MLG1608B2N7ST	2.6	2.6	2.7	2.7	2.8	44	47	67	72	80
MLG1608B3N3ST	3.2	3.2	3.3	3.3	3.3	43	46	66	71	79
MLG1608B3N9ST	3.8	3.8	3.9	4.0	4.1	43	47	68	72	80
MLG1608B4N7ST	4.6	4.6	4.8	4.9	5.1	46	49	69	72	77
MLG1608B5N6DT	5.5	5.5	5.8	5.9	6.1	42	45	62	65	68
MLG1608B6N8DT	6.7	6.7	7.3	7.5	8.0	46	48	66	67	68
MLG1608B8N2DT	8.1	8.1	8.9	9.2	9.9	45	48	65	66	66
MLG1608B10NJT	10.0	10.0	11.4	12.0	13.4	46	49	63	62	59
MLG1608B12NJT	12.2	12.4	15.4	16.9	20.8	47	49	56	52	44
MLG1608B15NJT	15.3	15.6	20.4	23.1	30.4	43	45	48	43	34
MLG1608B18NJT	18.5	18.9	25.6	29.6	41.1	43	45	47	43	31
MLG1608B22NJT	23.0	23.6	35.6	44.7	76.8	43	44	41	35	20
MLG1608B27NJT	28.7	29.7	51.4	75.6		42	43	34	26	8
MLG1608B33NJT	36.1	37.7	82.5			42	42	25	15	
MLG1608B39NJT	45.4	48.5				41	40	8		
MLG1608B47NJT	56.4	61.2				38	37			
MLG1608B56NJT	73.1	82.5				37	35			
MLG1608B68NJT	95.0	111.2				33	30			
MLG1608B82NJT	119.9	144.7				31	27			
MLG1608BR10JT	209.3					22	15			
MLG1608SR12JT										
MLG1608SR15JT										
MLG1608SR18JT										
MLG1608SR22JT										
MLG1608SR27JT										

## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



### Q vs. FREQUENCY CHARACTERISTICS

