

Inductors

For High Frequency SMD

MLG Series MLG0603 Type

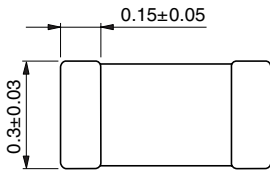
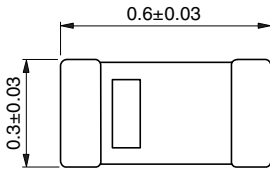
FEATURES

- Nominal inductance values are supported from 1 to 56nH.
- Provides high Q characteristics.
- Advanced monolithic structure is formed using a multilayering and sintering process with ceramic and conductive materials for high-frequency.
- The products contain no lead and also support lead-free soldering.

APPLICATIONS

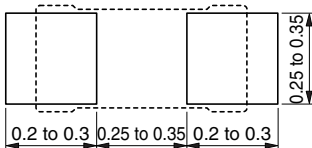
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

SHAPES AND DIMENSIONS



Weight: 0.2mg

RECOMMENDED PC BOARD PATTERN



Dimensions in mm



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	15000 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.

PRODUCT IDENTIFICATION

MLG	0603	S	2N2	S	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions L×W

0603	0.6×0.3mm
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(3) Material code

(4) Inductance value

2N2	2.2nH
12N	12nH
39N	39nH

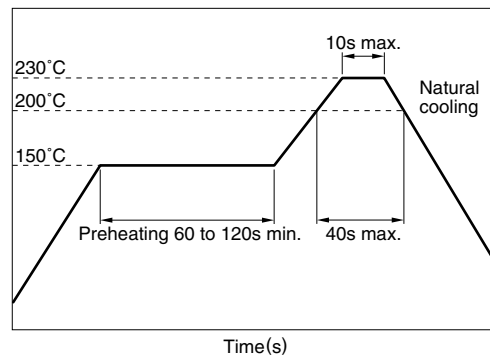
(5) Inductance tolerance

S	±0.3nH
J	±5%

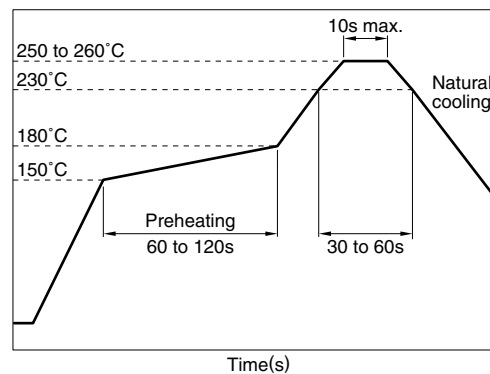
(6) Packaging style

T	Taping (reel)
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RECOMMENDED SOLDERING CONDITIONS(REFLOW) EUTECTIC SOLDERING



LEAD-FREE SOLDERING



Inductors

For High Frequency SMD

MLG Series MLG0603 Type

ELECTRICAL CHARACTERISTICS

Inductance (nH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (GHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
1	±0.3nH	4	100	10	0.2	300	MLG0603S1N0ST
1.2	±0.3nH	4	100	10	0.2	300	MLG0603S1N2ST
1.5	±0.3nH	4	100	9	0.3	300	MLG0603S1N5ST
1.8	±0.3nH	4	100	8.5	0.3	300	MLG0603S1N8ST
2.2	±0.3nH	4	100	7.5	0.4	300	MLG0603S2N2ST
2.7	±0.3nH	4	100	6.5	0.4	300	MLG0603S2N7ST
3.3	±0.3nH	4	100	5.5	0.5	300	MLG0603S3N3ST
3.9	±0.3nH	5	100	5.0	0.5	300	MLG0603S3N9ST
4.7	±0.3nH	5	100	4.5	0.6	300	MLG0603S4N7ST
5.6	±0.3nH	5	100	4.2	0.6	200	MLG0603S5N6ST
6.8	±5%	5	100	3.5	0.7	200	MLG0603S6N8JT
8.2	±5%	5	100	3.2	0.8	200	MLG0603S8N2JT
10	±5%	5	100	2.8	0.9	200	MLG0603S10NJT
12	±5%	6	100	2.4	1.1	150	MLG0603S12NJT
15	±5%	6	100	2.2	1.2	150	MLG0603S15NJT
18	±5%	6	100	2	1.4	150	MLG0603S18NJT
22	±5%	6	100	1.7	1.7	150	MLG0603S22NJT
27	±5%	6	100	1.5	1.7	100	MLG0603S27NJT
33	±5%	6	100	1.3	2.0	100	MLG0603S33NJT
39	±5%	6	100	1.1	2.2	50	MLG0603S39NJT
47	±5%	6	100	0.9	2.4	50	MLG0603S47NJT
56	±5%	5	100	0.6	4.0	50	MLG0603S56NJT

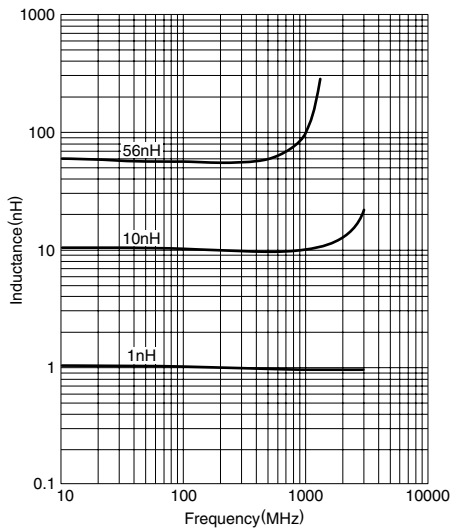
- Test equipment

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

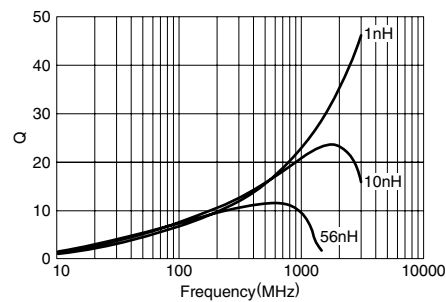
- Rated current : Value obtained when current flows and temperature has risen to 20°C.

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



Inductors

For High Frequency SMD

MLG Series MLG1005 Type

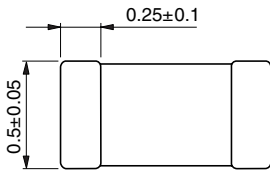
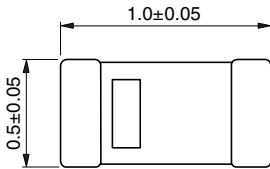
FEATURES

- 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.
- The products contain no lead and also support lead-free soldering.

APPLICATIONS

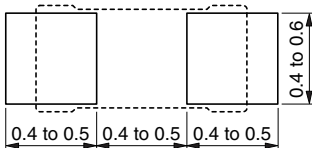
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

SHAPES AND DIMENSIONS



Weight: 1mg

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

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	10000 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.

PRODUCT IDENTIFICATION

MLG	1005	S	2N2	S	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions L×W

1005	1.0×0.5mm
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(3) Material code

(4) Inductance value

2N2	2.2nH
12N	12nH
39N	39nH

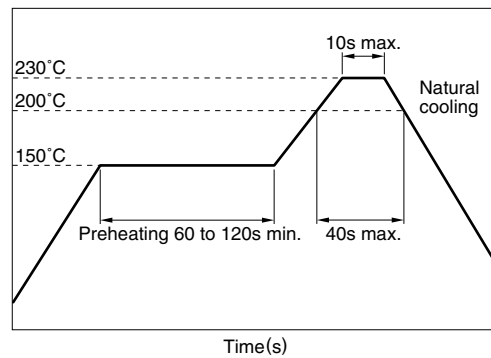
(5) Inductance tolerance

S	±0.3nH
J	±5%

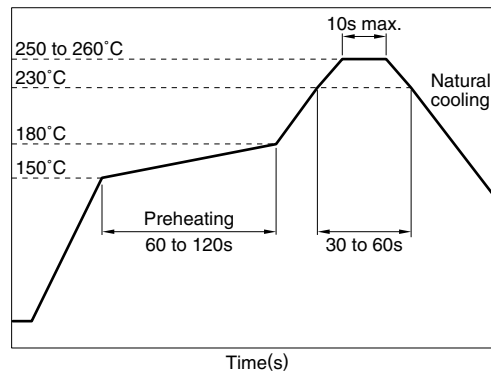
(6) Packaging style

T	Taping (reel)
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RECOMMENDED SOLDERING CONDITIONS(REFLOW) EUTECTIC SOLDERING



LEAD-FREE SOLDERING



Inductors

For High Frequency SMD

MLG Series MLG1005 Type

ELECTRICAL CHARACTERISTICS

Inductance (nH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (GHz)min.	DC resistance (Ω)min. max.	Rated current (mA)max.	Part No.
1	±0.3nH	7	100	10	0.1	1000	MLG1005S1N0ST
1.2	±0.3nH	7	100	10	0.1	1000	MLG1005S1N2ST
1.5	±0.3nH	7	100	8	0.1	1000	MLG1005S1N5ST
1.8	±0.3nH	7	100	8	0.15	900	MLG1005S1N8ST
2.2	±0.3nH	7	100	6	0.15	900	MLG1005S2N2ST
2.7	±0.3nH	7	100	5	0.15	800	MLG1005S2N7ST
3.3	±0.3nH	8	100	5	0.2	800	MLG1005S3N3ST
3.9	±0.3nH	8	100	5	0.2	700	MLG1005S3N9ST
4.7	±0.3nH	8	100	4	0.25	700	MLG1005S4N7ST
5.6	±0.3nH	8	100	3.5	0.25	600	MLG1005S5N6ST
6.8	±5%	8	100	3	0.3	600	MLG1005S6N8JT
8.2	±5%	8	100	3	0.35	500	MLG1005S8N2JT
10	±5%	8	100	2.5	0.4	500	MLG1005S10NJT
12	±5%	8	100	2	0.45	400	MLG1005S12NJT
15	±5%	8	100	1.8	0.6	400	MLG1005S15NJT
18	±5%	8	100	1.5	0.7	350	MLG1005S18NJT
22	±5%	8	100	1.3	0.8	350	MLG1005S22NJT
27	±5%	8	100	1.2	0.9	300	MLG1005S27NJT
33	±5%	8	100	1	1	300	MLG1005S33NJT
39	±5%	8	100	1	1.2	250	MLG1005S39NJT
47	±5%	8	100	0.7	1.4	250	MLG1005S47NJT
56	±5%	8	100	0.7	1.4	200	MLG1005S56NJT
68	±5%	8	100	0.6	1.5	200	MLG1005S68NJT
82	±5%	8	100	0.5	1.6	200	MLG1005S82NJT
100	±5%	8	100	0.5	2	200	MLG1005SR10JT
120	±5%	8	100	0.5	2.2	150	MLG1005SR12JT
150	±5%	8	100	0.45	3.5	150	MLG1005SR15JT
180	±5%	8	100	0.4	3.8	150	MLG1005SR18JT
220	±5%	8	100	0.35	4.2	100	MLG1005SR22JT
270	±5%	8	100	0.3	4.8	100	MLG1005SR27JT

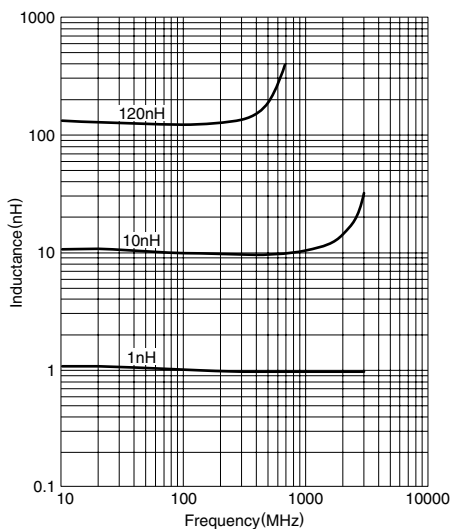
- Test equipment

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

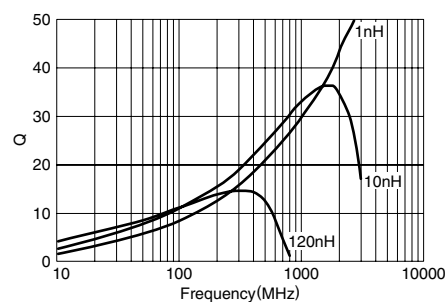
- Rated current : Value obtained when current flows and temperature has risen to 20°C.

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



Inductors

For High Frequency SMD

MLG Series MLG1608 Type

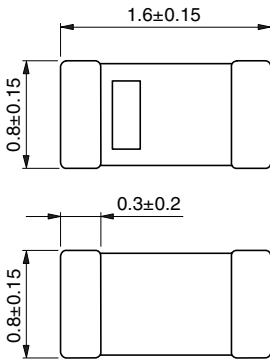
FEATURES

- 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.

APPLICATIONS

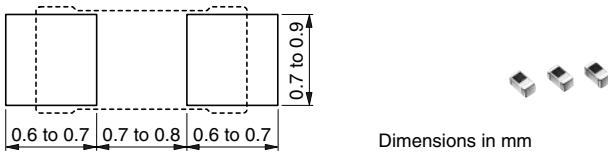
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

SHAPES AND DIMENSIONS



Weight: 4mg

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

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.

PRODUCT IDENTIFICATION

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

(1) Series name

(2) Dimensions L×W

1608	1.6×0.8mm
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(3) Material code

(4) Inductance value

2N2	2.2nH
12N	12nH
39N	39nH

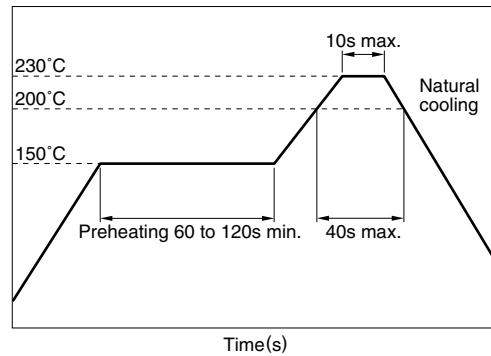
(5) Inductance tolerance

S	±0.3nH
D	±0.5nH
J	±5%

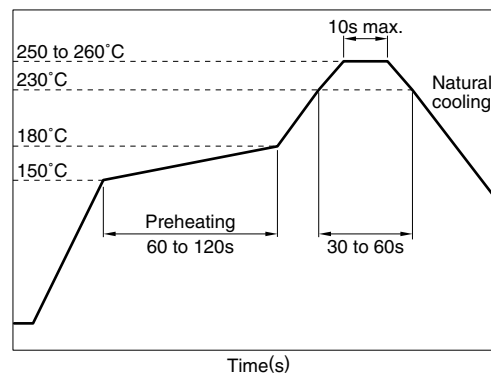
(6) Packaging style

T	Taping (reel)
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RECOMMENDED SOLDERING CONDITIONS(REFLOW) EUTECTIC SOLDERING



LEAD-FREE SOLDERING



Inductors

For High Frequency SMD

MLG Series MLG1608 Type

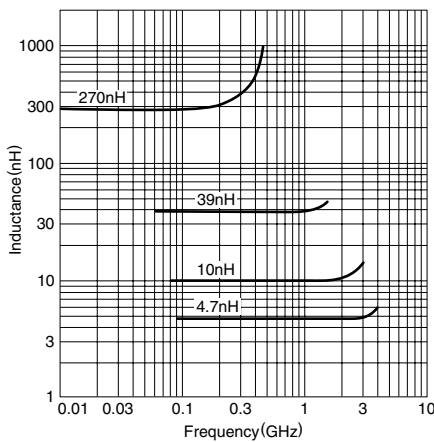
ELECTRICAL CHARACTERISTICS

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

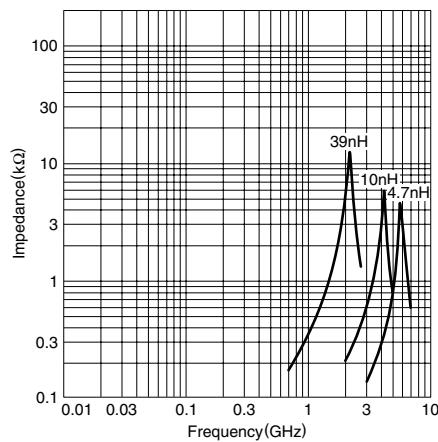
- Test equipment
Inductance Q : HP4291A+16193A SRF: HP8720C Rdc: YOKOGAWA TYPE7561
- Rated current : Value obtained when current flows and temperature has risen to 20°C.

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS

