Inductors

For High Frequency
SMD

MLG Series MLG0603 Type

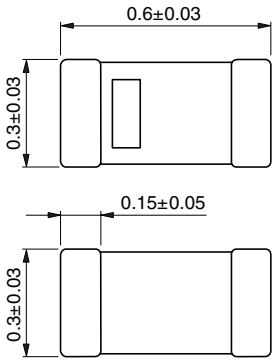
FEATURES

- 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

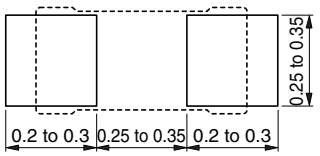
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

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

0603	0.6×0.3mm (L×W)

(3) Material code

(4) Inductance value

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

(5) Inductance tolerance

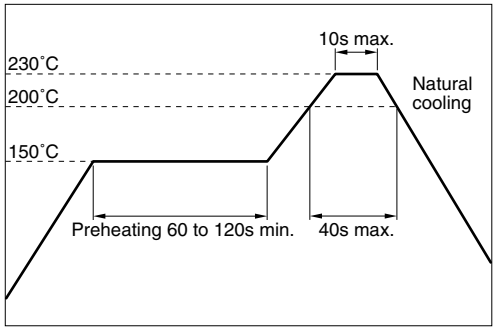
S	±0.3nH
J	±5%

(6) Packaging style

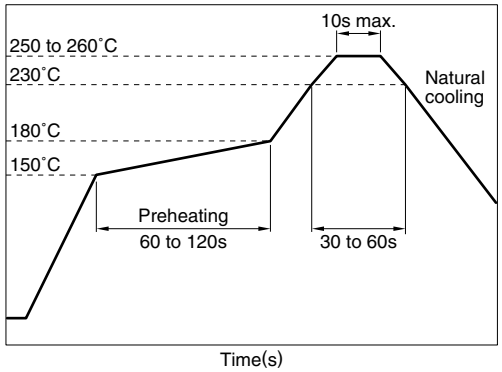
T	Taping (reel)

RECOMMENDED SOLDERING CONDITIONS(REFLOW)

EUTECTIC SOLDERING



LEAD-FREE SOLDERING



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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.

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
MLG0603S1N0ST	0.9	0.9	0.9	0.9	0.9	21	22	34	36	39
MLG0603S1N2ST	1.1	1.1	1.1	1.1	1.1	20	21	30	32	35
MLG0603S1N5ST	1.4	1.4	1.4	1.4	1.4	20	21	30	32	34
MLG0603S1N8ST	1.7	1.7	1.7	1.7	1.7	17	18	27	28	31
MLG0603S2N2ST	2.1	2.1	2.1	2.1	2.1	18	19	27	28	31
MLG0603S2N7ST	2.5	2.5	2.5	2.6	2.6	17	18	26	28	30
MLG0603S3N3ST	3.1	3.1	3.2	3.2	3.4	20	22	30	31	32
MLG0603S3N9ST	3.6	3.6	3.8	3.8	3.9	18	19	26	27	29
MLG0603S4N7ST	4.4	4.4	4.8	4.9	5.2	19	20	26	27	28
MLG0603S5N6ST	5.3	5.3	5.7	5.9	6.3	19	20	26	27	28
MLG0603S6N8JT	6.5	6.5	7.4	7.8	8.7	20	21	25	25	24
MLG0603S8N2JT	7.9	7.9	9.0	9.4	10.5	19	20	24	24	23
MLG0603S10NJT	9.6	9.7	11.5	12.3	14.3	19	20	24	23	22
MLG0603S12NJT	11.7	11.9	14.9	16.4	20.4	19	20	22	21	19
MLG0603S15NJT	15.0	15.2	21.1	24.8	36.0	19	20	19	17	12
MLG0603S18NJT	17.7	17.9	23.7	27.0	36.1	18	19	19	18	13
MLG0603S22NJT	22.7	23.4	42.0	66.1		18	18	14	10	
MLG0603S27NJT	27.6	28.3	47.2	66.6		18	18	14	11	
MLG0603S33NJT	34.4	35.6	71.2			17	17	11		
MLG0603S39NJT	41.9	43.6				16	16			
MLG0603S47NJT	58.3	64.1				14	13			
MLG0603S56NJT	71.5	78.5				13	13			

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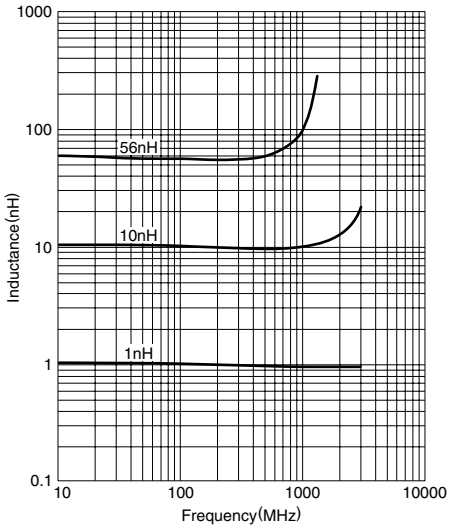
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS