Inductors

For High Frequency
SMD

MLG Series MLG1005 Type

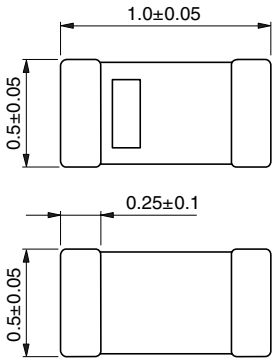
FEATURES

- 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

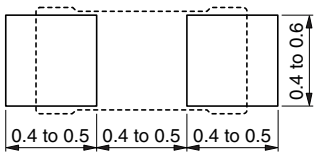
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

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

1005	1.0×0.5mm (L×W)

(3) Material code

(4) Inductance value

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

(5) Inductance tolerance

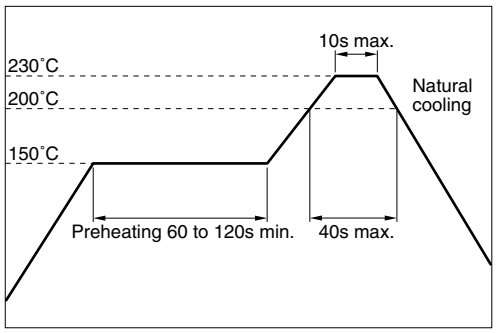
S	±0.3nH
J	±5%

(6) Packaging style

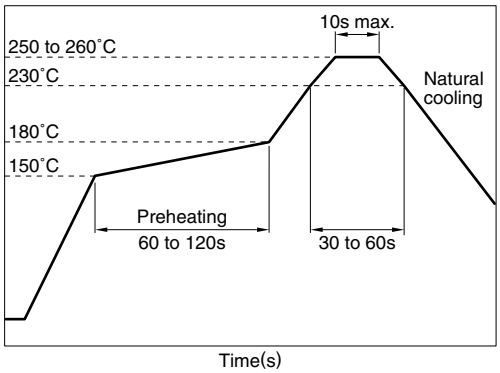
T	Taping (reel)

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	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.

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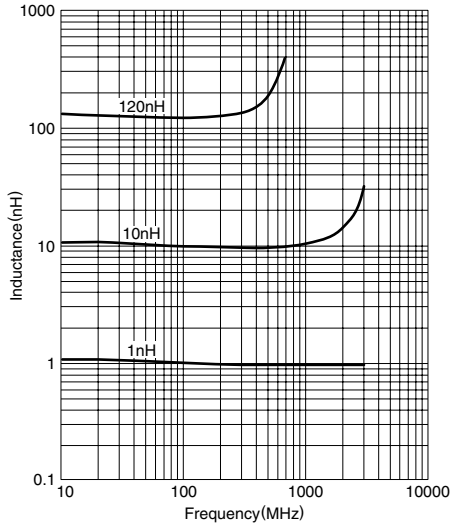
L, Q vs. FREQUENCY CHARACTERISTICS

Part No.	Inductance(nH)typ.					Q typ.				
	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz
MLG1005S1N0ST	0.9	0.9	0.9	0.9	0.9	27	29	40	43	48
MLG1005S1N2ST	1.1	1.1	1.1	1.1	1.1	28	29	41	44	48
MLG1005S1N5ST	1.4	1.4	1.4	1.5	1.5	30	32	45	48	53
MLG1005S1N8ST	1.7	1.7	1.7	1.7	1.7	25	26	37	39	42
MLG1005S2N2ST	2.1	2.1	2.1	2.1	2.1	27	29	41	43	47
MLG1005S2N7ST	2.6	2.6	2.7	2.7	2.7	28	30	41	43	46
MLG1005S3N3ST	3.2	3.2	3.3	3.4	3.4	29	31	43	45	47
MLG1005S3N9ST	3.7	3.7	3.9	4.0	4.0	29	30	42	43	46
MLG1005S4N7ST	4.5	4.5	4.8	5.0	5.1	29	31	42	43	45
MLG1005S5N6ST	5.4	5.4	5.8	6.0	6.2	28	30	40	41	42
MLG1005S6N8JT	6.6	6.7	7.5	7.8	8.1	30	31	40	40	40
MLG1005S8N2JT	8.0	8.1	9.4	10.0	10.6	29	31	38	37	35
MLG1005S10NJT	10.0	10.1	12.6	13.8	15.0	31	32	36	34	30
MLG1005S12NJT	12.2	12.4	16.7	19.3	21.9	30	31	32	29	22
MLG1005S15NJT	15.4	15.7	22.6	27.4	32.2	29	29	28	25	16
MLG1005S18NJT	18.8	19.3	31.2	42.4	53.7	29	29	25	20	9
MLG1005S22NJT	23.5	24.3	47.0	88.0		27	28	19	13	
MLG1005S27NJT	30.4	32.0				24	24	8		
MLG1005S33NJT	39.3	42.2				22	22			
MLG1005S39NJT	47.5	51.4				22	22			
MLG1005S47NJT	63.8	72.5				20	19			
MLG1005S56NJT	82.7	98.8				17	16			
MLG1005S68NJT	118.5					14	11			
MLG1005S82NJT						9				
MLG1005SR10JT										
MLG1005SR12JT										
MLG1005SR15JT										
MLG1005SR18JT										
MLG1005SR22JT										
MLG1005SR27JT										

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS