



May 2013

Inductors for High Frequency

Multilayer Ceramic

MLG series

MLG0603S **0603 [0201 inch]***

MLG1005S **1005 [0402 inch]**

MLG1608 **1608 [0603 inch]**

* Dimensions Code JIS[EIA]

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

REMINDERS

- The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C, Humidity: 10 to 75% RH or less).
If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- | | |
|-------------------------------------------------------------------|------------------------------------------------------------------------------|
| (1) Aerospace/Aviation equipment | (8) Public information-processing equipment |
| (2) Transportation equipment (cars, electric trains, ships, etc.) | (9) Military equipment |
| (3) Medical equipment | (10) Electric heating apparatus, burning equipment |
| (4) Power-generation control equipment | (11) Disaster prevention/crime prevention equipment |
| (5) Atomic energy-related equipment | (12) Safety equipment |
| (6) Seabed equipment | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment | |

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

Inductors for High Frequency Circuits

Multilayer Ceramic

Product compatible with RoHS directive
Halogen-free
Compatible with lead-free solders

Overview of the MLG Series



■ FEATURES

- Advanced monolithic structure is formed using a multilayering and sintering process with ceramic and conductive materials for High-frequency.

■ APPLICATION

Smart phones, tablet terminals, high frequency modules (PAs, VCOs, FEMs , etc.), Bluetooth, W-LAN, UWB, tuners, and other high frequency circuits for the mobile communication industry

■ PART NUMBER CONSTRUCTION

MLG	0603	S	0N3	S	T	□ □ □
Series name	LxWxH Dimensions (mm)	Product internal code	Inductance (nH)	Inductance tolerance	Packaging style	Internal code
0603	0.6×0.3×0.3	B	1N1	1.1	B	±0.1nH
1005	1.0×0.5×0.5	S	11N	11	C	±0.2nH
1608	1.6×0.8×0.8		R10	100	S	±0.3nH
			1R0	1000	D	±0.5nH
					H	±3%
					J	±5%

■ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

Type	Temperature range		Package quantity	Individual weight
	Operating temperature	Storage temperature*		
	(°C)	(°C)		
MLG0603S	-55 to +125	-55 to +125	15000	0.2
MLG1005S	-55 to +125	-55 to +125	10000	1
MLG1608	-55 to +125	-55 to +125	4000	4

* The Storage temperature range is for after the circuit board is mounted.

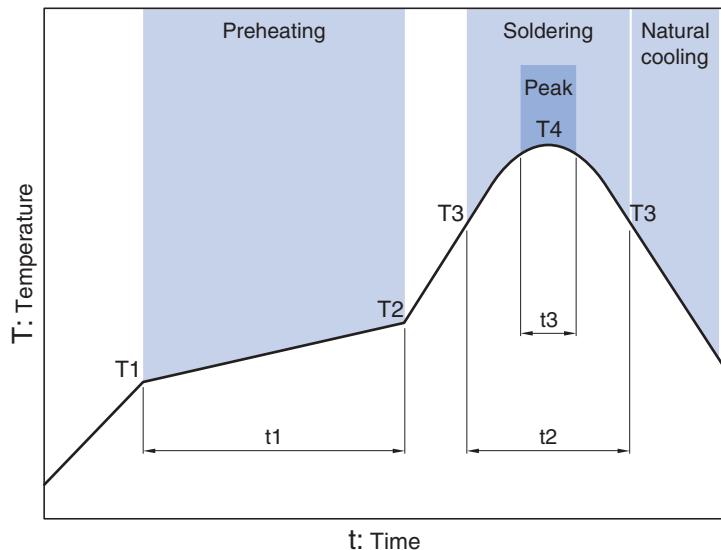
○ RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://www.tdk.co.jp/rohs/>

○ Halogen-free: Indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

• All specifications are subject to change without notice.

Overview of the MLG Series

■ RECOMMENDED REFLOW PROFILE

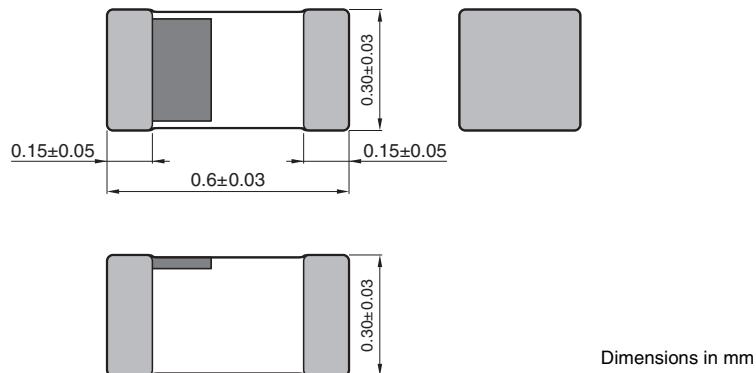


Preheating			Soldering		Peak	
Temp.	Time		Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30 to 60s	250 to 260°C	10s max.

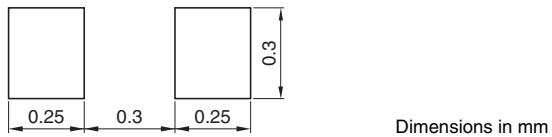
MLGseries

MLG0603S Type

■ SHAPE & DIMENSIONS



■ RECOMMENDED LAND PATTERN



MLGseries MLG0603S Type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (GHz)		DC resistance (Ω)		Rated current (mA) max.	Part No.*
			min.	typ.	max.	typ.		
0.3	±0.1, ±0.2nH	—	100	10.0	20 up	0.1	0.02	600
0.4	±0.1, ±0.2nH	—	100	10.0	20 up	0.1	0.02	600
0.5	±0.1, ±0.2nH	—	100	10.0	20 up	0.1	0.02	600
0.6	±0.1, ±0.2nH	—	100	10.0	20 up	0.1	0.02	600
0.7	±0.1, ±0.2nH	—	100	10.0	16.3	0.1	0.02	600
0.8	±0.1, ±0.2nH	—	100	10.0	16.1	0.1	0.03	600
0.9	±0.1, ±0.2nH	—	100	10.0	13.8	0.1	0.03	600
1.0	±0.1, ±0.2, 0.3nH	4	100	10.0	14.4	0.1	0.04	600
1.1	±0.1, ±0.2, 0.3nH	4	100	10.0	13.6	0.15	0.04	550
1.2	±0.1, ±0.2, 0.3nH	4	100	10.0	12.3	0.15	0.06	550
1.3	±0.1, ±0.2, 0.3nH	4	100	9.0	11.4	0.15	0.07	550
1.5	±0.1, ±0.2, 0.3nH	4	100	9.0	10.4	0.15	0.07	550
1.6	±0.1, ±0.2, 0.3nH	4	100	9.0	11.5	0.2	0.09	500
1.8	±0.1, ±0.2, 0.3nH	4	100	8.5	10.0	0.2	0.12	500
2.0	±0.1, ±0.2, 0.3nH	4	100	8.2	9.8	0.25	0.14	400
2.2	±0.1, ±0.2, 0.3nH	4	100	8.0	8.9	0.25	0.14	400
2.4	±0.1, ±0.2, 0.3nH	4	100	8.0	9.2	0.25	0.15	300
2.7	±0.1, ±0.2, 0.3nH	4	100	6.5	8.1	0.25	0.15	300
3.0	±0.1, ±0.2, 0.3nH	4	100	6.2	7.8	0.3	0.20	300
3.3	±0.1, ±0.2, 0.3nH	4	100	5.8	7.0	0.35	0.23	300
3.6	±0.1, ±0.2, 0.3nH	4	100	5.5	6.9	0.35	0.22	300
3.9	±0.1, ±0.2, 0.3nH	5	100	5.0	6.6	0.4	0.27	300
4.3	±3%, ±0.3nH	5	100	5.0	6.4	0.4	0.27	300
4.7	±3%, ±0.3nH	5	100	4.5	5.4	0.45	0.28	300
5.1	±3%, ±0.3nH	5	100	4.5	5.5	0.45	0.23	250
5.6	±3%, ±0.3nH	5	100	4.2	5.3	0.5	0.31	250
6.2	±3%, ±0.3nH	5	100	4.2	5.1	0.55	0.32	250
6.8	±3, ±5%	5	100	3.6	4.4	0.6	0.32	250
7.5	±3, ±5%	5	100	4.2	5.3	0.7	0.43	200
8.2	±3, ±5%	5	100	3.8	4.5	0.7	0.45	200
9.1	±3, ±5%	5	100	3.4	4.9	0.8	0.51	200
10	±3, ±5%	5	100	3.2	4.1	0.8	0.53	200
11	±3, ±5%	6	100	3.0	3.7	0.8	0.53	200
12	±3, ±5%	6	100	2.8	3.6	0.9	0.63	180
13	±3, ±5%	6	100	2.7	3.4	0.9	0.60	180
15	±3, ±5%	6	100	2.5	3.3	1.1	0.69	180
16	±3, ±5%	6	100	2.3	3.0	1.1	0.70	180
18	±3, ±5%	6	100	2.2	2.8	1.2	0.78	150
20	±3, ±5%	6	100	2.1	2.6	1.2	0.75	150
22	±3, ±5%	6	100	2.0	2.5	1.2	0.88	150
24	±3, ±5%	6	100	1.9	2.3	1.3	0.90	150
27	±3, ±5%	6	100	1.8	2.2	1.5	1.00	100
30	±3, ±5%	6	100	1.6	2.0	1.6	0.95	100
33	±3, ±5%	6	100	1.6	2.0	1.8	1.20	100

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).

Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

○ Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4291B+16197A	Agilent Technologies
Self-resonant frequency	8720C	Agilent Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

MLGseries MLG0603S Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (GHz)		DC resistance (Ω)		Rated current (mA) max.	Part No.*
			min.	typ.	max.	typ.		
36	±3, ±5%	6	100	1.5	1.8	2.0	1.68	50
39	±3, ±5%	6	100	1.4	1.6	2.0	1.40	50
43	±3, ±5%	6	100	1.3	1.6	2.2	1.91	50
47	±3, ±5%	6	100	1.3	1.5	2.2	1.48	50
51	±3, ±5%	5	100	1.2	1.5	2.8	1.98	50
56	±3, ±5%	5	100	1.2	1.4	3.2	2.11	50
62	±3, ±5%	5	100	1.1	1.3	3.3	2.22	50
68	±3, ±5%	5	100	1.05	1.24	3.5	2.40	50
75	±3, ±5%	5	100	0.95	1.17	3.8	2.67	50
82	±3, ±5%	5	100	0.90	1.08	4.0	2.80	50
91	±3, ±5%	5	100	0.77	0.94	4.3	2.97	50
100	±3, ±5%	5	100	0.77	0.94	4.5	3.13	50
110	±3, ±5%	5	100	0.77	0.94	6.5	5.24	50
120	±3, ±5%	5	100	0.70	0.88	7.0	5.53	50
130	±3, ±5%	5	100	0.67	0.84	7.3	5.68	50
150	±3, ±5%	5	100	0.64	0.77	8.0	6.24	50
160	±3, ±5%	5	100	0.60	0.73	8.3	6.67	50
180	±3, ±5%	5	100	0.56	0.68	8.5	6.99	50

* The " △ " of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).

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L, Q	4291B+16197A	Agilent Technologies
Self-resonant frequency	8720C	Agilent Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

MLGseries MLG0603S Type

■ ELECTRICAL CHARACTERISTICS

□ L, Q FREQUENCY CHARACTERISTICS TABLE

L(nH)typ.	Q typ.					Part No.*
	500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	
0.3	0.3	0.3	0.3	0.3	14min.	MLG0603S0N3△T□□□
0.4	0.4	0.4	0.4	0.4	14min.	MLG0603S0N4△T□□□
0.5	0.5	0.5	0.5	0.5	14	MLG0603S0N5△T□□□
0.6	0.6	0.5	0.5	0.5	16	MLG0603S0N6△T□□□
0.7	0.6	0.6	0.6	0.6	16	MLG0603S0N7△T□□□
0.7	0.7	0.7	0.7	0.7	15	MLG0603S0N8△T□□□
0.8	0.8	0.8	0.8	0.8	15	MLG0603S0N9△T□□□
0.9	0.9	0.9	0.9	0.9	14	MLG0603S1N0△T□□□
1.0	1.0	1.0	1.0	1.0	14	MLG0603S1N1△T□□□
1.1	1.1	1.1	1.1	1.1	14	MLG0603S1N2△T□□□
1.2	1.2	1.2	1.2	1.2	14	MLG0603S1N3△T□□□
1.4	1.4	1.4	1.4	1.4	15	MLG0603S1N5△T□□□
1.5	1.5	1.5	1.5	1.5	14	MLG0603S1N6△T□□□
1.7	1.7	1.7	1.7	1.7	15	MLG0603S1N8△T□□□
1.9	1.9	1.9	1.9	1.9	14	MLG0603S2N0△T□□□
2.1	2.0	2.1	2.1	2.1	14	MLG0603S2N2△T□□□
2.2	2.2	2.2	2.3	2.3	14	MLG0603S2N4△T□□□
2.5	2.5	2.6	2.6	2.7	15	MLG0603S2N7△T□□□
2.8	2.8	2.9	2.9	3.0	15	MLG0603S3N0△T□□□
3.1	3.1	3.2	3.3	3.4	15	MLG0603S3N3△T□□□
3.4	3.4	3.5	3.6	3.7	14	MLG0603S3N6△T□□□
3.7	3.7	3.8	3.9	4.1	15	MLG0603S3N9△T□□□
4.1	4.1	4.3	4.4	4.6	14	MLG0603S4N3△T□□□
4.4	4.4	4.8	4.9	5.2	15	MLG0603S4N7△T□□□
4.8	4.8	5.1	5.3	5.6	14	MLG0603S5N1△T□□□
5.3	5.3	5.7	5.9	6.4	16	MLG0603S5N6△T□□□
5.9	5.9	6.5	6.8	7.5	15	MLG0603S6N2△T□□□
6.4	6.5	7.4	7.8	8.7	15	MLG0603S6N8△T□□□
7.1	7.1	7.8	8.0	8.7	14	MLG0603S7N5△T□□□
7.8	7.8	8.8	9.3	10.4	15	MLG0603S8N2△T□□□
8.6	8.6	9.8	10.3	11.5	14	MLG0603S9N1△T□□□
10	10	12	12	15	15	MLG0603S10N△T□□□
10	11	13	14	16	15	MLG0603S11N△T□□□
11	12	14	15	19	16	MLG0603S12N△T□□□
12	13	16	17	22	14	MLG0603S13N△T□□□
14	15	20	23	33	15	MLG0603S15N△T□□□
15	16	22	25	37	14	MLG0603S16N△T□□□
17	18	28	35		17	MLG0603S18N△T□□□
19	20	32			13	MLG0603S20N△T□□□
21	23	40			15	MLG0603S22N△T□□□
23	24	45			13	MLG0603S24N△T□□□
27	29				15	MLG0603S27N△T□□□
29	32				13	MLG0603S30N△T□□□
33	36				14	MLG0603S33N△T□□□

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).
Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

Measurement equipment

Product No.	Manufacturer
4291B+16197A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG0603S Type

■ ELECTRICAL CHARACTERISTICS

□ L, Q FREQUENCY CHARACTERISTICS TABLE

L(nH)typ.	Q typ.					Part No.*
	500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	
36	40		14	15		MLG0603S36N△T□□□
40	47		13	14		MLG0603S39N△T□□□
44	53		14	14		MLG0603S43N△T□□□
49	60		13	13		MLG0603S47N△T□□□
52	64		11	11		MLG0603S51N△T□□□
59	77		12	11		MLG0603S56N△T□□□
66	88		11	10		MLG0603S62N△T□□□
74	104		13	11		MLG0603S68N△T□□□
82	119		10	8		MLG0603S75N△T□□□
96	161		12	8		MLG0603S82N△T□□□
109			9			MLG0603S91N△T□□□
129			11			MLG0603SR10△T□□□
134			10			MLG0603SR11△T□□□
156			9			MLG0603SR12△T□□□
172			8			MLG0603SR13△T□□□
223			7			MLG0603SR15△T□□□
238			7			MLG0603SR16△T□□□
318			6			MLG0603SR18△T□□□

* The " △ " of the Part Number contains the inductance tolerance code, B($\pm 0.1\text{nH}$), C($\pm 0.2\text{nH}$), S($\pm 0.3\text{nH}$), H($\pm 3\%$) or J($\pm 5\%$).

Please contact us for information on inductance tolerance, G ($\pm 2\%$).

* The " □□□ " of the Part Number contains the internal code.

○ Measurement equipment

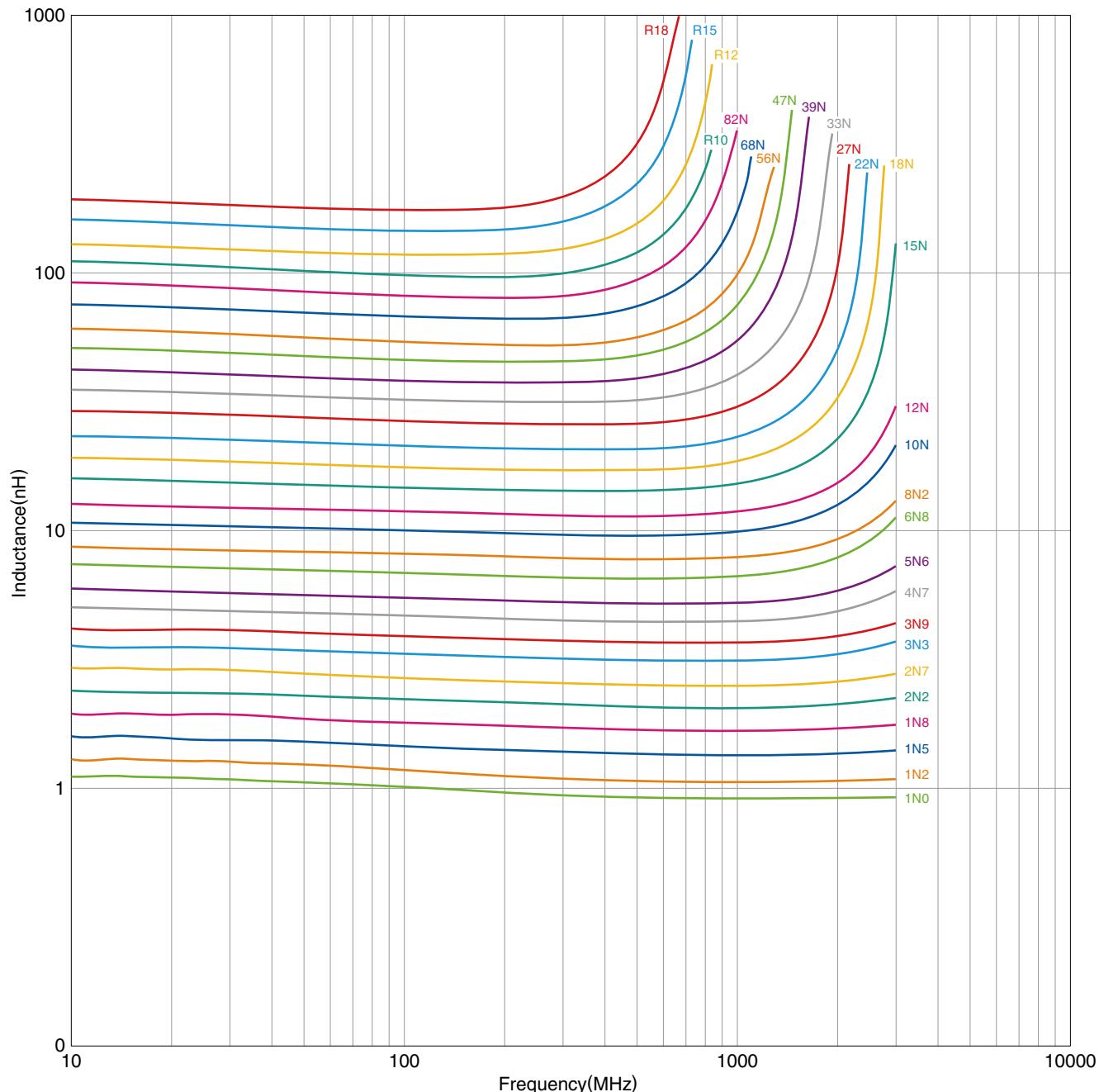
Product No.	Manufacturer
4291B+16197A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG0603S Type

■ ELECTRICAL CHARACTERISTICS

□ L FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



○ Measurement equipment

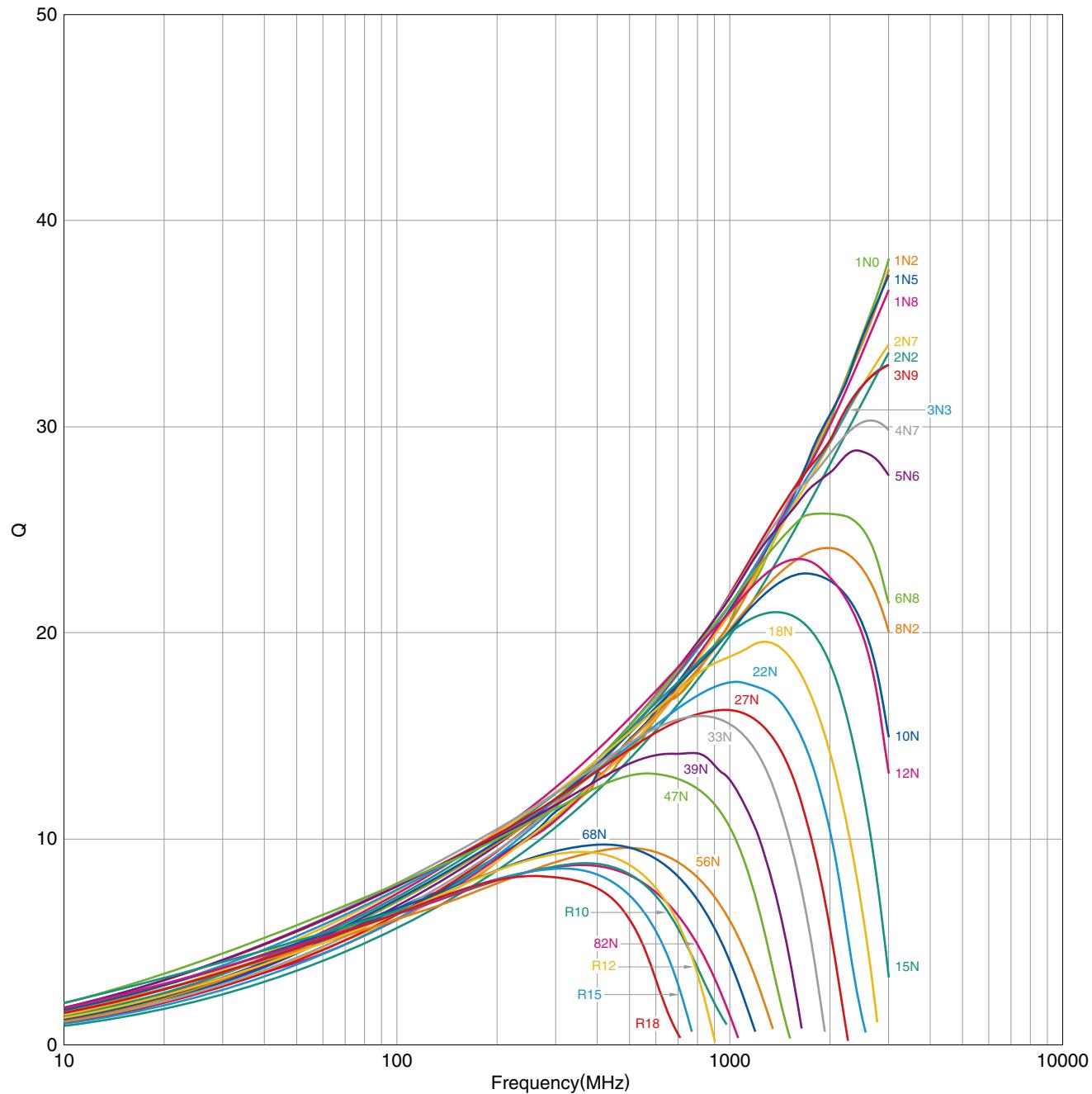
Product No.	Manufacturer
E4991A +16197A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG0603S Type

■ ELECTRICAL CHARACTERISTICS

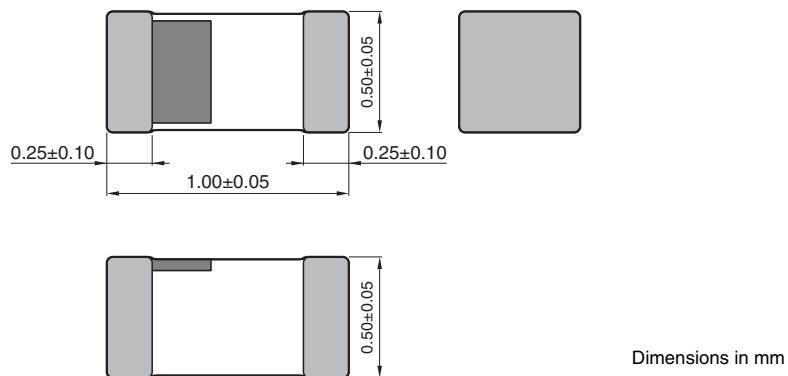
□ Q FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



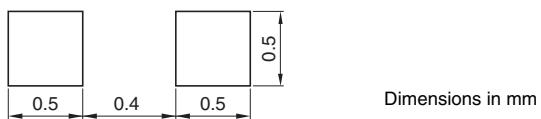
MLGseries

MLG1005S Type

■ SHAPE & DIMENSIONS



■ RECOMMENDED LAND PATTERN



MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (GHz)		DC resistance (Ω)		Rated current (mA) max.	Part No.*
			min.	typ.	max.	typ.		
0.3	±0.1nH, ±0.2nH	—	100	10.0	20up	0.10	0.01	1000
0.4	±0.1nH, ±0.2nH	—	100	10.0	20up	0.10	0.01	1000
0.5	±0.1nH, ±0.2nH	—	100	10.0	20up	0.10	0.01	1000
0.6	±0.1nH, ±0.2nH	—	100	10.0	20up	0.10	0.01	1000
0.7	±0.1nH, ±0.2nH	—	100	10.0	18.7	0.10	0.02	1000
0.8	±0.1nH, ±0.2nH	—	100	10.0	16.4	0.10	0.02	1000
0.9	±0.1nH, ±0.2nH	—	100	10.0	17.7	0.10	0.04	1000
1.0	±0.1nH, ±0.2, 0.3nH	7	100	10.0	13.8	0.10	0.04	1000
1.1	±0.1nH, ±0.2, 0.3nH	7	100	10.0	19.3	0.10	0.03	1000
1.2	±0.1nH, ±0.2, 0.3nH	7	100	10.0	11.6	0.10	0.04	1000
1.3	±0.1nH, ±0.2, 0.3nH	7	100	8.00	11.7	0.10	0.04	1000
1.5	±0.1nH, ±0.2, 0.3nH	7	100	8.00	9.6	0.10	0.06	1000
1.6	±0.1nH, ±0.2, 0.3nH	7	100	7.50	9.4	0.12	0.05	1000
1.8	±0.1nH, ±0.2, 0.3nH	7	100	8.00	10.3	0.15	0.06	900
2.0	±0.1nH, ±0.2, 0.3nH	7	100	7.50	9.3	0.15	0.07	900
2.2	±0.1nH, ±0.2, 0.3nH	7	100	7.00	8.6	0.15	0.08	900
2.4	±0.1nH, ±0.2, 0.3nH	7	100	7.00	8.2	0.15	0.08	800
2.7	±0.1nH, ±0.2, 0.3nH	7	100	6.00	7.3	0.15	0.08	800
3.0	±0.1nH, ±0.2, 0.3nH	7	100	5.50	6.8	0.20	0.09	800
3.3	±0.1nH, ±0.2, 0.3nH	8	100	5.00	6.1	0.20	0.09	800
3.6	±0.1nH, ±0.2, 0.3nH	8	100	5.00	6.7	0.20	0.09	700
3.9	±0.1nH, ±0.2, 0.3nH	8	100	5.00	6.5	0.20	0.11	700
4.3	±0.2nH, ±0.3nH	8	100	4.50	6.0	0.20	0.11	700
4.7	±0.2nH, ±0.3nH	8	100	4.50	5.4	0.25	0.12	700
5.1	±0.2nH, ±0.3nH	8	100	4.00	5.0	0.25	0.13	600
5.6	±0.2nH, ±0.3nH	8	100	4.00	5.3	0.25	0.14	600
6.2	±3%, ±0.3nH	8	100	4.00	4.7	0.25	0.16	600
6.8	±3%, ±5%	8	100	3.50	4.4	0.25	0.15	600
7.5	±3%, ±5%	8	100	3.00	4.1	0.25	0.15	500
8.2	±3%, ±5%	8	100	3.00	4.0	0.30	0.19	500
9.1	±3%, ±5%	8	100	3.00	3.8	0.30	0.20	500
10	±3%, ±5%	8	100	2.50	3.4	0.35	0.22	500
11	±3%, ±5%	8	100	2.50	3.5	0.40	0.28	400
12	±3%, ±5%	8	100	2.50	3.0	0.40	0.25	400
13	±3%, ±5%	8	100	2.40	2.9	0.50	0.26	400
15	±3%, ±5%	8	100	2.20	2.8	0.55	0.35	400
16	±3%, ±5%	8	100	2.10	2.7	0.55	0.32	400
18	±3%, ±5%	8	100	2.00	2.5	0.60	0.40	350
20	±3%, ±5%	8	100	1.90	2.4	0.60	0.38	350
22	±3%, ±5%	8	100	1.70	2.2	0.70	0.46	350
24	±3%, ±5%	8	100	1.70	2.1	0.70	0.43	350
27	±3%, ±5%	8	100	1.60	2.0	0.80	0.53	300
30	±3%, ±5%	8	100	1.50	1.9	0.80	0.50	300

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).

Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

○ Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4291B +16193A	Agilent Technologies
Self-resonant frequency	8720C	Agilent Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

- All specifications are subject to change without notice.

MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (GHz)		DC resistance (Ω)		Rated current (mA) max.	Part No.*
			min.	typ.	max.	typ.		
33	±3%, ±5%	8	100	1.40	1.8	0.90	0.59	300
36	±3%, ±5%	8	100	1.30	1.7	1.00	0.62	250
39	±3%, ±5%	8	100	1.20	1.6	1.00	0.65	250
43	±3%, ±5%	8	100	1.20	1.6	1.10	0.67	250
47	±3%, ±5%	8	100	1.10	1.4	1.20	0.75	250
51	±3%, ±5%	8	100	1.10	1.5	1.20	0.72	250
56	±3%, ±5%	8	100	1.00	1.3	1.30	0.83	200
62	±3%, ±5%	8	100	1.00	1.3	1.40	0.85	200
68	±3%, ±5%	8	100	0.80	1.1	1.50	0.87	200
75	±3%, ±5%	8	100	0.75	1.1	1.50	0.93	200
82	±3%, ±5%	8	100	0.70	1.0	1.60	1.01	200
91	±3%, ±5%	8	100	0.70	0.9	1.80	1.14	200
100	±3%, ±5%	8	100	0.70	0.9	2.00	1.37	200
110	±3%, ±5%	8	100	0.70	0.9	2.20	1.48	150
120	±3%, ±5%	8	100	0.60	0.8	2.20	1.48	150
130	±3%, ±5%	8	100	0.60	0.8	2.50	1.68	150
150	±3%, ±5%	8	100	0.55	0.7	3.50	2.44	150
160	±3%, ±5%	8	100	0.50	0.6	3.80	2.74	150
180	±3%, ±5%	8	100	0.50	0.6	3.80	2.88	150
200	±3%, ±5%	8	100	0.42	0.5	4.20	3.15	100
220	±3%, ±5%	8	100	0.45	0.5	4.20	3.02	100
240	±3%, ±5%	8	100	0.40	0.5	4.80	3.42	100
270	±3%, ±5%	8	100	0.40	0.5	4.80	3.54	100
300	±3%, ±5%	6	50	0.35	0.4	6.50	4.82	50
330	±3%, ±5%	6	50	0.35	0.4	7.00	5.21	50
360	±3%, ±5%	6	50	0.30	0.4	7.50	5.39	50
390	±3%, ±5%	6	50	0.30	0.4	8.00	5.97	50

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).

Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

○ Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4291B +16193A	Agilent Technologies
Self-resonant frequency	8720C	Agilent Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ L, Q FREQUENCY CHARACTERISTICS TABLE

L(nH)typ.					Q typ.					Part No.*
500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	
0.3	0.3	0.3	0.3	0.3	22min.	27min.	46min.	49min.	53min.	MLG1005S0N3 △ T □□□
0.4	0.4	0.4	0.4	0.4	22min.	27min.	46min.	49min.	53min.	MLG1005S0N4 △ T □□□
0.5	0.5	0.5	0.5	0.5	22min.	27min.	46min.	49min.	53min.	MLG1005S0N5 △ T □□□
0.6	0.6	0.6	0.6	0.6	22	27	46	49	53	MLG1005S0N6 △ T □□□
0.7	0.7	0.7	0.7	0.7	22	28	45	49	54	MLG1005S0N7 △ T □□□
0.8	0.8	0.8	0.8	0.8	26	34	57	60	66	MLG1005S0N8 △ T □□□
0.9	0.8	0.8	0.8	0.8	21	27	44	47	53	MLG1005S0N9 △ T □□□
0.9	0.9	0.9	0.9	0.9	22	29	48	50	56	MLG1005S1N0 △ T □□□
1.0	1.0	1.0	1.0	1.0	23	29	47	50	57	MLG1005S1N1 △ T □□□
1.1	1.1	1.1	1.1	1.1	23	29	48	50	56	MLG1005S1N2 △ T □□□
1.2	1.2	1.2	1.2	1.2	22	27	44	47	53	MLG1005S1N3 △ T □□□
1.4	1.4	1.4	1.5	1.5	23	29	47	50	56	MLG1005S1N5 △ T □□□
1.5	1.5	1.5	1.6	1.6	23	29	46	49	54	MLG1005S1N6 △ T □□□
1.7	1.7	1.7	1.7	1.7	20	26	41	43	49	MLG1005S1N8 △ T □□□
1.9	1.9	1.9	1.9	1.9	21	25	41	43	48	MLG1005S2N0 △ T □□□
2.1	2.1	2.1	2.1	2.2	22	27	44	47	52	MLG1005S2N2 △ T □□□
2.3	2.3	2.3	2.3	2.4	21	26	42	44	49	MLG1005S2N4 △ T □□□
2.6	2.6	2.6	2.7	2.7	22	27	43	45	50	MLG1005S2N7 △ T □□□
2.9	2.9	3.0	3.0	3.1	24	29	47	49	54	MLG1005S3N0 △ T □□□
3.2	3.2	3.3	3.4	3.5	24	30	46	48	53	MLG1005S3N3 △ T □□□
3.4	3.4	3.6	3.6	3.8	21	26	40	42	46	MLG1005S3N6 △ T □□□
3.7	3.7	3.9	3.9	4.1	22	28	43	45	50	MLG1005S3N9 △ T □□□
4.1	4.1	4.3	4.4	4.6	24	30	47	49	53	MLG1005S4N3 △ T □□□
4.5	4.5	4.8	4.9	5.2	23	30	45	47	50	MLG1005S4N7 △ T □□□
4.9	4.9	5.4	5.6	6.1	23	29	42	43	44	MLG1005S5N1 △ T □□□
5.4	5.4	5.8	5.9	6.3	22	28	42	43	45	MLG1005S5N6 △ T □□□
6.0	6.0	6.8	7.1	7.8	24	29	42	43	43	MLG1005S6N2 △ T □□□
6.5	6.6	7.4	7.8	8.6	23	28	40	41	41	MLG1005S6N8 △ T □□□
7.2	7.4	8.6	9.2	10.5	24	30	41	41	39	MLG1005S7N5 △ T □□□
7.9	8.0	9.3	9.9	11.3	23	28	38	38	36	MLG1005S8N2 △ T □□□
8.8	9.0	10.8	11.6	13.7	24	30	40	39	36	MLG1005S9N1 △ T □□□
9.7	9.9	12.4	13.5	16.7	24	30	37	36	31	MLG1005S10N △ T □□□
10.6	10.9	13.8	15.1	19.0	23	28	34	33	28	MLG1005S11N △ T □□□
11.7	12.1	16.2	18.3		23	29	33	31		MLG1005S12N △ T □□□
12.6	13.0	18.3	21.3		20	24	25	22		MLG1005S13N △ T □□□
14.7	15.3	22.0	26.0		23	28	29	26		MLG1005S15N △ T □□□
15.6	16.2	24.1	29.0		22	26	26	22		MLG1005S16N △ T □□□
17.7	18.6	29.0			23	28	26			MLG1005S18N △ T □□□
19.7	20.8	36.8			21	25	21			MLG1005S20N △ T □□□
21.8	23.3				22	27				MLG1005S22N △ T □□□
23.8	25.5				22	26				MLG1005S24N △ T □□□
27.0	29.6				20	23				MLG1005S27N △ T □□□
30.1	33.5				19	21				MLG1005S30N △ T □□□

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).

Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

○ Measurement equipment

Product No.	Manufacturer
4291B +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ L, Q FREQUENCY CHARACTERISTICS TABLE

L(nH)typ.	Q typ.					Part No.*
	500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	
33.5	37.8		20	23		MLG1005S33N △ T □□□
36.7	41.5		21	23		MLG1005S36N △ T □□□
40.3	46.9		20	21		MLG1005S39N △ T □□□
44.3	51.6		20	21		MLG1005S43N △ T □□□
50.2	63.2		19	20		MLG1005S47N △ T □□□
53.7	65.6		19	19		MLG1005S51N △ T □□□
60.9	80.2		19	18		MLG1005S56N △ T □□□
67.5	89.8		18	16		MLG1005S62N △ T □□□
75.8	107.5		17	15		MLG1005S68N △ T □□□
86.5	135.2		17	13		MLG1005S75N △ T □□□
96.9			16			MLG1005S82N △ T □□□
111.0			15			MLG1005S91N △ T □□□
128.9			14			MLG1005SR10 △ T □□□
140.8			15			MLG1005SR11 △ T □□□
175.2			12			MLG1005SR12 △ T □□□
187.8			13			MLG1005SR13 △ T □□□
284.7			11			MLG1005SR15 △ T □□□
						MLG1005SR16 △ T □□□
						MLG1005SR18 △ T □□□
						MLG1005SR20 △ T □□□
						MLG1005SR22 △ T □□□
						MLG1005SR24 △ T □□□
						MLG1005SR27 △ T □□□
						MLG1005SR30 △ T □□□
						MLG1005SR33 △ T □□□
						MLG1005SR36 △ T □□□
						MLG1005SR39 △ T □□□

* The "△" of the Part Number contains the inductance tolerance code, B(±0.1nH), C(±0.2nH), S(±0.3nH), H(±3%) or J(±5%).
Please contact us for information on inductance tolerance, G (±2%).

* The "□□□" of the Part Number contains the internal code.

○ Measurement equipment

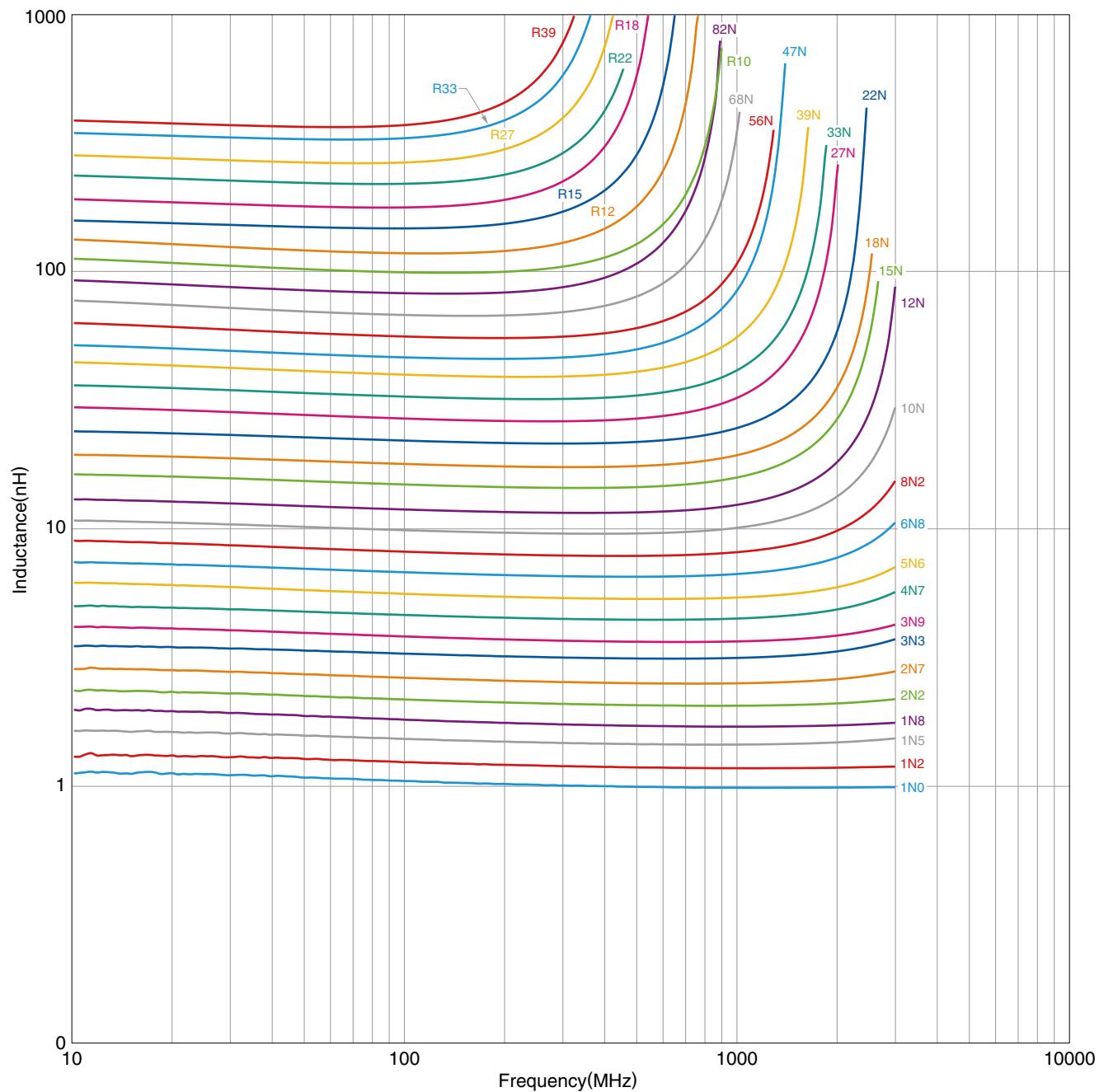
Product No.	Manufacturer
4291B +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ L FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



Measurement equipment

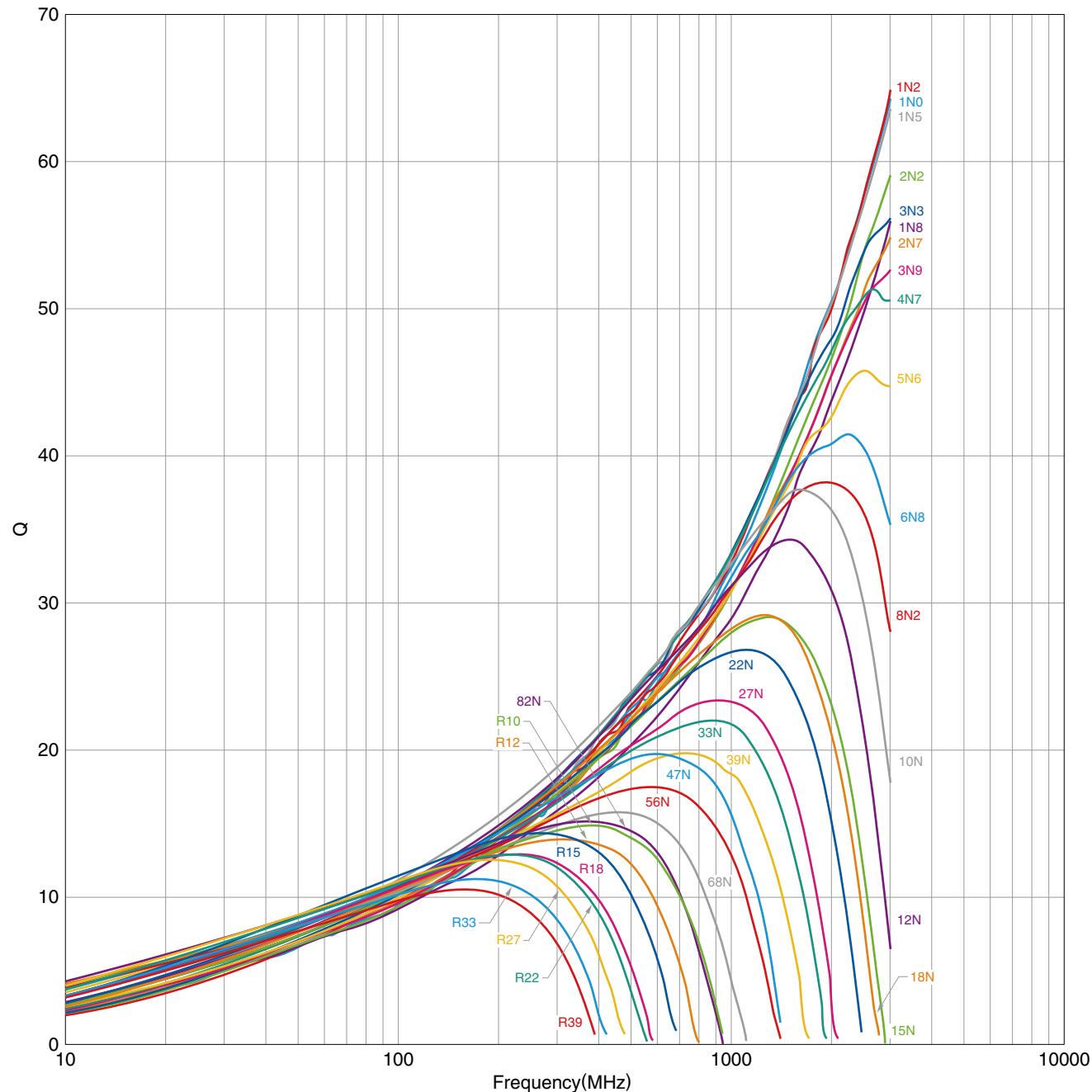
Product No.	Manufacturer
E4991A +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG1005S Type

■ ELECTRICAL CHARACTERISTICS

□ Q FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



○ Measurement equipment

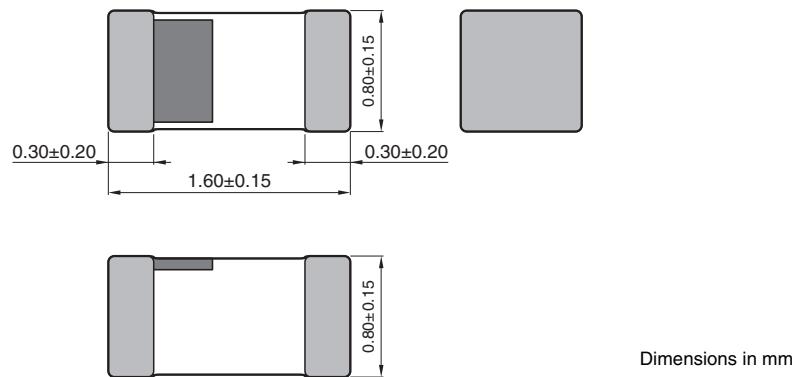
Product No.	Manufacturer
E4991A +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

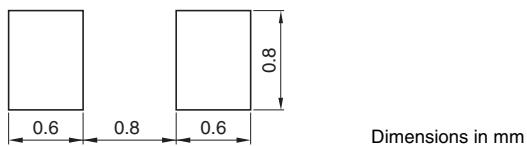
MLGseries

MLG1608Type

■ SHAPE & DIMENSIONS



■ RECOMMENDED LAND PATTERN



MLGseries MLG1608 Type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Q min.	L, Q measuring frequency (MHz)	Self-resonant frequency (GHz)		DC resistance (Ω)		Rated current (mA) max.	Part No.*
			min.	typ.	max.	typ.		
1	±0.3nH	8	100	10.0	20up	0.10	0.03	600
1.2	±0.3nH	8	100	10.0	20up	0.10	0.04	600
1.5	±0.3nH	8	100	10.0	19.6	0.10	0.03	600
1.8	±0.3nH	8	100	10.0	16.6	0.10	0.04	600
2.2	±0.3nH	10	100	8.0	10.8	0.10	0.05	600
2.7	±0.3nH	10	100	7.0	8.8	0.12	0.06	600
3.3	±0.3nH	10	100	6.5	8.8	0.12	0.06	600
3.9	±0.3nH	10	100	6.0	7.9	0.14	0.06	600
4.7	±0.3nH	10	100	5.0	6.8	0.15	0.08	600
5.6	±0.5nH	10	100	5.0	6.8	0.16	0.08	600
6.8	±0.5nH	10	100	4.5	5.7	0.18	0.10	600
8.2	±0.5nH	10	100	4.5	5.6	0.20	0.10	600
10	±5%	12	100	3.5	4.5	0.20	0.11	600
12	±5%	12	100	3.0	3.8	0.25	0.13	600
15	±5%	12	100	2.8	3.6	0.28	0.14	600
18	±5%	12	100	2.6	3.3	0.32	0.16	600
22	±5%	12	100	2.3	3.0	0.35	0.19	500
27	±5%	12	100	2.0	2.7	0.40	0.21	500
33	±5%	12	100	1.8	2.3	0.50	0.25	500
39	±5%	12	100	1.6	2.0	0.55	0.26	400
47	±5%	14	100	1.4	1.8	0.60	0.35	400
56	±5%	14	100	1.2	1.8	0.70	0.41	400
68	±5%	14	100	1.1	1.6	0.75	0.43	300
82	±5%	14	100	1.0	1.4	0.80	0.50	300
100	±5%	14	100	0.80	1.2	1.00	0.64	300
120	±5%	14	100	0.65	0.8	1.20	0.89	300
150	±5%	14	100	0.55	0.7	1.30	1.03	250
180	±5%	14	100	0.50	0.6	1.40	1.08	250
220	±5%	14	100	0.45	0.6	1.70	1.29	200
270	±5%	14	100	0.35	0.5	2.00	1.59	200
330	±5%	10	50	0.35	0.47	2.80	1.90	100
390	±5%	10	50	0.30	0.43	3.00	2.06	100
470	±5%	10	50	0.25	0.39	3.50	2.47	100
560	±5%	10	50	0.25	0.36	4.50	3.20	70
680	±5%	10	50	0.20	0.31	5.50	3.88	70
820	±5%	10	50	0.15	0.22	5.50	3.76	70
1000	±5%	10	50	0.13	0.19	5.50	4.27	70

* The "□□□" of the Part Number contains the internal code.

Because it provides for a product of smaller inductance tolerance, please refer.

Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4291B +16193A	Agilent Technologies
Self-resonant frequency	8720C	Panasonic
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

MLGseries MLG1608 Type

■ ELECTRICAL CHARACTERISTICS

□ L, Q FREQUENCY CHARACTERISTICS TABLE

L(nH)typ.	Q typ.					Part No.*
	500MHz	800MHz	1.8GHz	2.0GHz	2.4GHz	
1.0	1.0	1.0	1.0	1.0	39	MLG1608B1N0ST□□□
1.2	1.1	1.2	1.2	1.2	28	MLG1608B1N2ST□□□
1.5	1.5	1.5	1.5	1.5	37	MLG1608B1N5ST□□□
1.8	1.8	1.8	1.8	1.8	38	MLG1608B1N8ST□□□
2.2	2.1	2.2	2.2	2.2	44	MLG1608B2N2ST□□□
2.6	2.6	2.7	2.7	2.8	40	MLG1608B2N7ST□□□
3.2	3.2	3.3	3.3	3.4	38	MLG1608B3N3ST□□□
3.8	3.8	4.0	4.0	4.1	40	MLG1608B3N9ST□□□
4.6	4.6	4.9	5.0	5.2	41	MLG1608B4N7ST□□□
5.4	5.5	5.8	5.9	6.2	37	MLG1608B5N6DT□□□
6.6	6.7	7.3	7.5	8.0	38	MLG1608B6N8DT□□□
8.0	8.1	8.9	9.3	10	39	MLG1608B8N2DT□□□
9.8	10.0	11.5	12.1	13.6	38	MLG1608B10NJT□□□
11.8	12.1	14.8	16.0	19.3	39	MLG1608B12NJT□□□
14.8	15.4	20.6	23.4		38	MLG1608B15NJT□□□
17.8	18.5	25.5	29.3		36	MLG1608B18NJT□□□
21.9	22.9	33.6	40.2		36	MLG1608B22NJT□□□
27.1	28.8	50.6			37	MLG1608B27NJT□□□
33.4	36.0				37	MLG1608B33NJT□□□
40.2	45.0				36	MLG1608B39NJT□□□
49.1	56.0				38	MLG1608B47NJT□□□
59.6	71.1				37	MLG1608B56NJT□□□
74.0	92.8				34	MLG1608B68NJT□□□
91.1	120.6				33	MLG1608B82NJT□□□
118					35	MLG1608BR10NJT□□□
188					23	MLG1608SR12NJT□□□
						MLG1608SR15NJT□□□
						MLG1608SR18NJT□□□
						MLG1608SR22NJT□□□
						MLG1608SR27NJT□□□
						MLG1608SR33NJT□□□
						MLG1608SR39NJT□□□
						MLG1608SR47NJT□□□
						MLG1608SR56NJT□□□
						MLG1608SR68NJT□□□
						MLG1608SR82NJT□□□
						MLG1608S1R0NJT□□□

* The " □□□ " of the Part Number contains the internal code.

Because it provides for a product of smaller inductance tolerance, please refer.

○ Measurement equipment

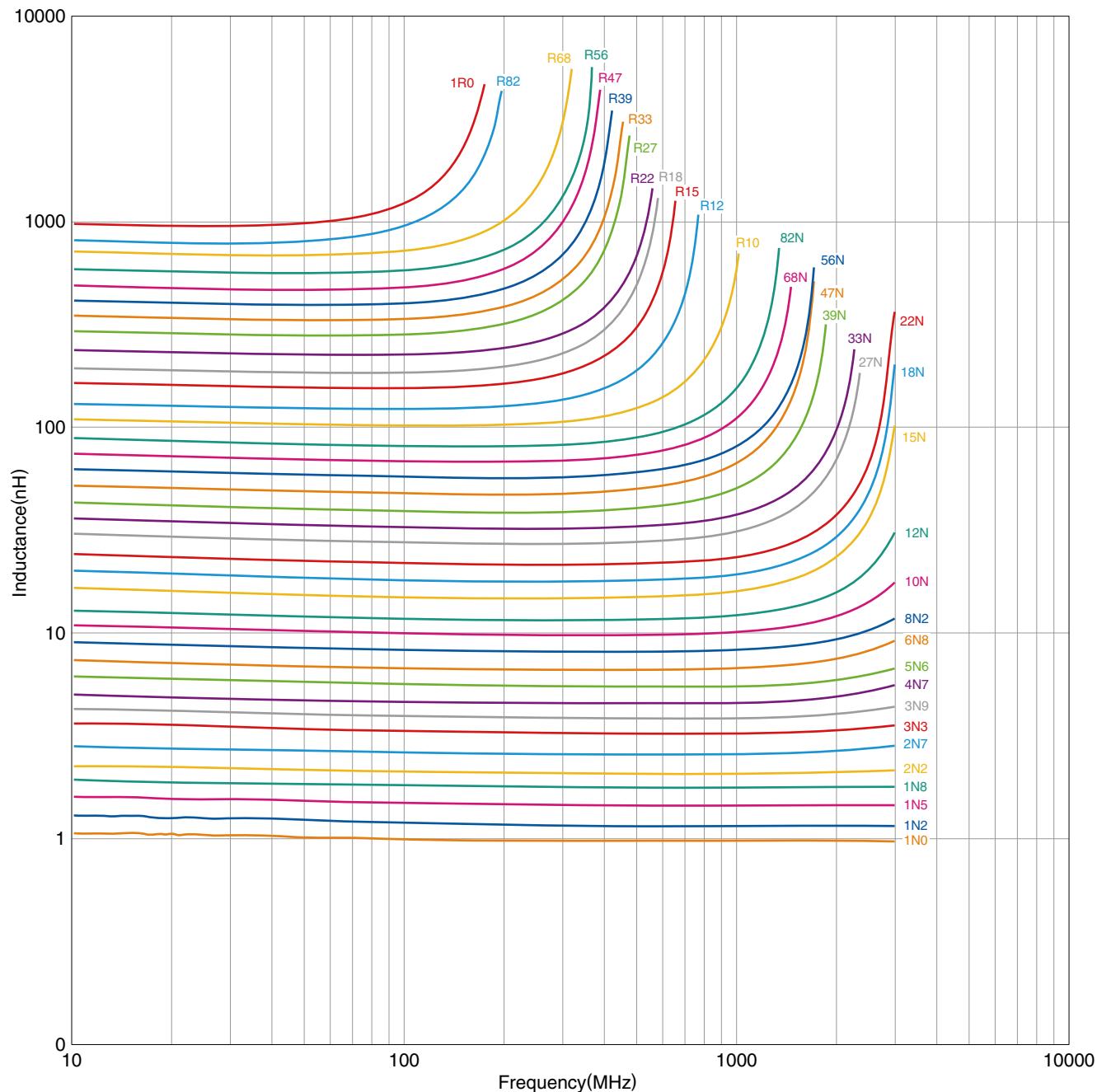
Product No.	Manufacturer
4291B +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG1608Type

■ ELECTRICAL CHARACTERISTICS

□ L FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



Measurement equipment

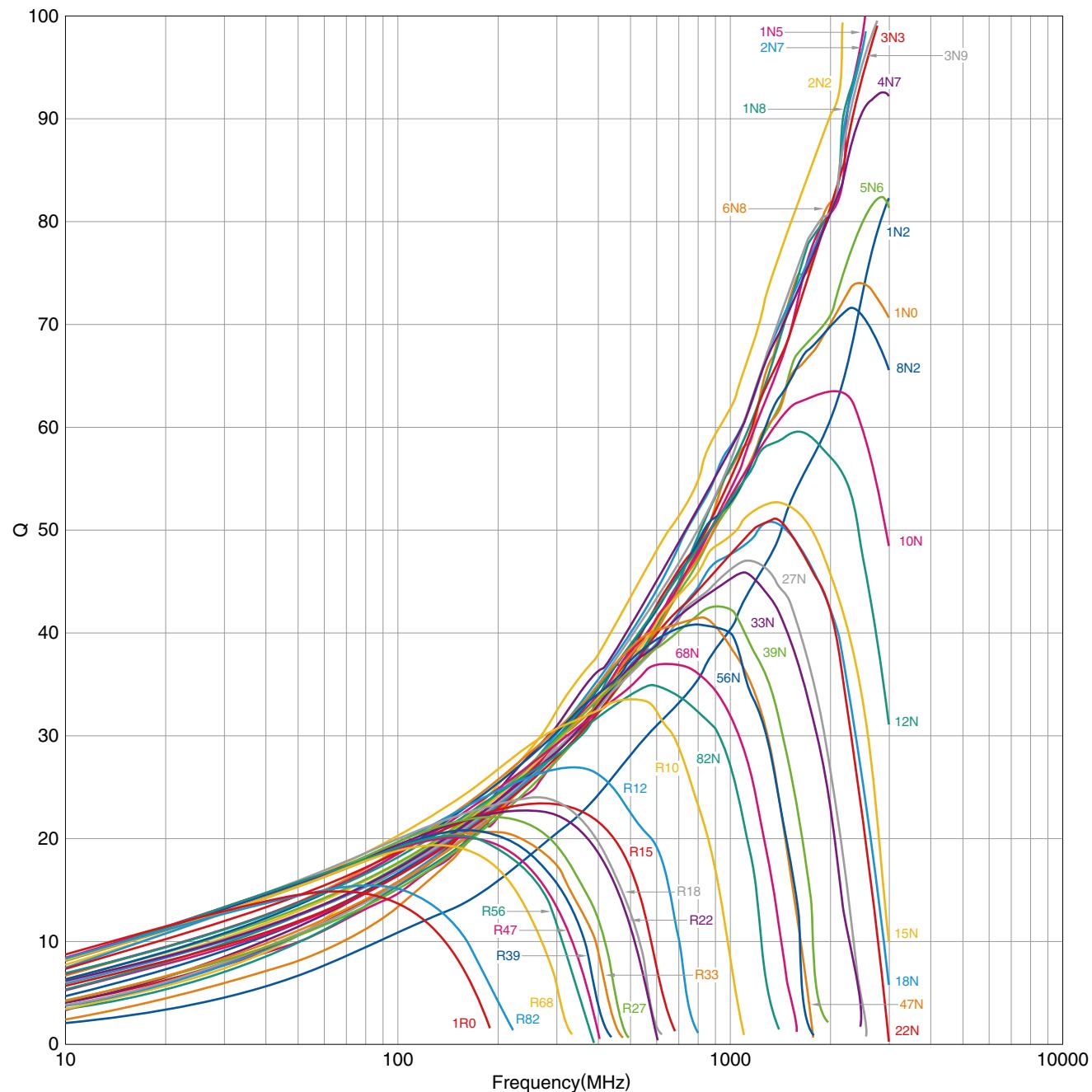
Product No.	Manufacturer
E4991A +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

MLGseries MLG1608Type

■ ELECTRICAL CHARACTERISTICS

□ Q FREQUENCY CHARACTERISTICS GRAPH (EXAMPLE)



○ Measurement equipment

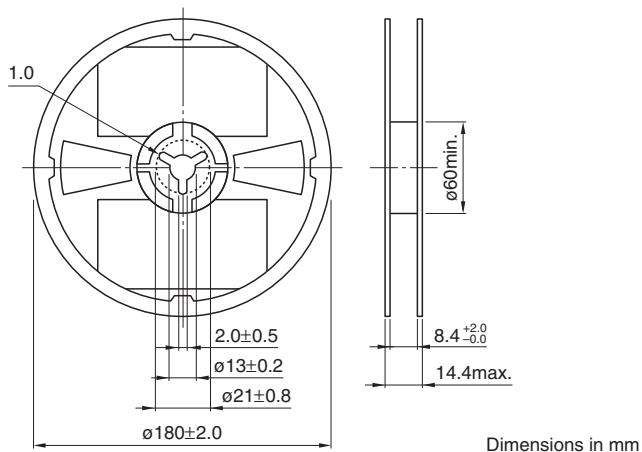
Product No.	Manufacturer
E4991A +16193A	Agilent Technologies

* Equivalent measurement equipment may be used.

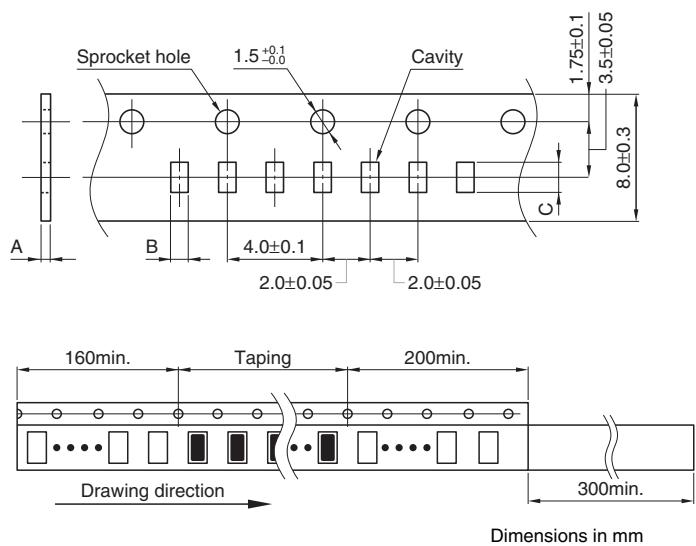
MLGseries

Packaging Style

■ REEL DIMENSIONS



■ TAPE DIMENSIONS



Type	A	B	C
MLG0603S	0.5 max.	0.38±0.05	0.68±0.05
MLG1005S	0.8 max.	0.62±0.1	1.12±0.1
MLG1608	1.1 max.	1.1±0.2	1.9±0.2