

Inductors for high frequency circuits
Multilayer ceramic
MHQ series (for automotive)



AEC-Q200

MHQ1005075HA type



FEATURES

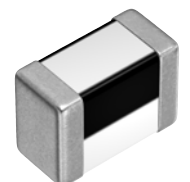
- Unique ceramic material and configuration allows for the realization of high Q characteristics that are equivalent to that of air core wound inductors.
- Multilayer method allows for a lineup with fine increments of inductance.
- A highly reliable product designed for automotive use.
- Operating temperature range: -55 to +125°C

APPLICATION

- Automotive equipment, smart phones, tablet terminals, high frequency modules, Bluetooth, W-LAN, UWB, tuners and other high frequency circuits for the mobile communication industry
- Application guides: [Car Infotainment](#)

PART NUMBER CONSTRUCTION

MHQ	1005	075	H	A	1N0	B	T	D25
Series name	LxW dimensions 1.0x0.5 mm	H dimensions 0.75 mm max.	Magnetic flux direction V: Vertical H: Horizontal	Characteristics	Inductance (nH)	Inductance tolerance	Packaging style	Internal code



MHQ1005075HA type

CHARACTERISTICS SPECIFICATION TABLE

L (nH)	L tolerance	L measuring frequency (MHz)	Q min.	Q measuring frequency (MHz)	Self-resonant frequency		DC resistance		Rated current (mA)max.	Part No.
					(GHz)min.	(GHz)typ.	(Ω)max.	(Ω)typ.		
1.0	± 0.1 nH	100	—	250	15.0	19.7	0.02	0.01	1000	MHQ1005075HA1N0BTD25
1.0	± 0.3 nH	100	—	250	15.0	19.7	0.02	0.01	1000	MHQ1005075HA1N0STD25
1.1	± 0.1 nH	100	—	250	14.0	16.7	0.02	0.01	1000	MHQ1005075HA1N1BTD25
1.1	± 0.3 nH	100	—	250	14.0	16.7	0.02	0.01	1000	MHQ1005075HA1N1STD25
1.2	± 0.1 nH	100	—	250	13.0	16.7	0.04	0.01	1000	MHQ1005075HA1N2BTD25
1.2	± 0.3 nH	100	—	250	13.0	16.7	0.04	0.01	1000	MHQ1005075HA1N2STD25
1.3	± 0.1 nH	100	—	250	12.0	19.7	0.03	0.02	1000	MHQ1005075HA1N3BTD25
1.3	± 0.3 nH	100	—	250	12.0	19.7	0.03	0.02	1000	MHQ1005075HA1N3STD25
1.4	± 0.1 nH	100	—	250	12.0	19.7	0.03	0.02	1000	MHQ1005075HA1N4BTD25
1.4	± 0.3 nH	100	—	250	12.0	19.7	0.03	0.02	1000	MHQ1005075HA1N4STD25
1.5	± 0.1 nH	100	—	250	11.0	19.8	0.04	0.02	1000	MHQ1005075HA1N5BTD25
1.5	± 0.3 nH	100	—	250	11.0	19.8	0.04	0.02	1000	MHQ1005075HA1N5STD25
1.6	± 0.1 nH	100	—	250	10.0	20.0	0.03	0.02	1000	MHQ1005075HA1N6BTD25
1.6	± 0.3 nH	100	—	250	10.0	20.0	0.03	0.02	1000	MHQ1005075HA1N6STD25
1.7	± 0.1 nH	100	20	250	10.0	19.7	0.04	0.03	1000	MHQ1005075HA1N7BTD25
1.7	± 0.3 nH	100	20	250	10.0	19.7	0.04	0.03	1000	MHQ1005075HA1N7STD25
1.8	± 0.1 nH	100	20	250	9.0	16.9	0.05	0.02	1000	MHQ1005075HA1N8BTD25
1.8	± 0.3 nH	100	20	250	9.0	16.9	0.05	0.02	1000	MHQ1005075HA1N8STD25
1.9	± 0.1 nH	100	20	250	8.0	16.3	0.06	0.03	1000	MHQ1005075HA1N9BTD25
1.9	± 0.3 nH	100	20	250	8.0	16.3	0.06	0.03	1000	MHQ1005075HA1N9STD25
2.0	± 0.1 nH	100	20	250	8.0	14.1	0.05	0.03	1000	MHQ1005075HA2N0BTD25
2.0	± 0.3 nH	100	20	250	8.0	14.1	0.05	0.03	1000	MHQ1005075HA2N0STD25
2.1	± 0.1 nH	100	20	250	8.0	13.6	0.05	0.03	1000	MHQ1005075HA2N1BTD25
2.1	± 0.3 nH	100	20	250	8.0	13.6	0.05	0.03	1000	MHQ1005075HA2N1STD25
2.2	± 0.1 nH	100	20	250	8.0	13.1	0.05	0.03	1000	MHQ1005075HA2N2BTD25
2.2	± 0.3 nH	100	20	250	8.0	13.1	0.05	0.03	1000	MHQ1005075HA2N2STD25
2.3	± 0.1 nH	100	20	250	7.0	12.5	0.06	0.04	1000	MHQ1005075HA2N3BTD25
2.3	± 0.3 nH	100	20	250	7.0	12.5	0.06	0.04	1000	MHQ1005075HA2N3STD25
2.4	± 0.1 nH	100	20	250	6.5	11.8	0.06	0.03	1000	MHQ1005075HA2N4BTD25
2.4	± 0.3 nH	100	20	250	6.5	11.8	0.06	0.03	1000	MHQ1005075HA2N4STD25
2.5	± 0.1 nH	100	20	250	6.5	11.8	0.07	0.05	900	MHQ1005075HA2N5BTD25
2.5	± 0.3 nH	100	20	250	6.5	11.8	0.07	0.05	900	MHQ1005075HA2N5STD25
2.6	± 0.1 nH	100	20	250	6.5	11.2	0.09	0.06	750	MHQ1005075HA2N6BTD25
2.6	± 0.3 nH	100	20	250	6.5	11.2	0.09	0.06	750	MHQ1005075HA2N6STD25
2.7	± 0.1 nH	100	20	250	6.5	8.9	0.07	0.04	850	MHQ1005075HA2N7BTD25
2.7	± 0.3 nH	100	20	250	6.5	8.9	0.07	0.04	850	MHQ1005075HA2N7STD25
2.8	± 0.1 nH	100	20	250	6.5	8.9	0.09	0.05	800	MHQ1005075HA2N8BTD25
2.8	± 0.3 nH	100	20	250	6.5	8.9	0.09	0.05	800	MHQ1005075HA2N8STD25
2.9	± 0.1 nH	100	20	250	6.5	8.7	0.10	0.06	750	MHQ1005075HA2N9BTD25
2.9	± 0.3 nH	100	20	250	6.5	8.7	0.10	0.06	750	MHQ1005075HA2N9STD25
3.0	± 0.1 nH	100	20	250	6.0	10.0	0.12	0.05	650	MHQ1005075HA3N0BTD25
3.0	± 0.3 nH	100	20	250	6.0	10.0	0.12	0.05	650	MHQ1005075HA3N0STD25
3.1	± 0.1 nH	100	20	250	6.0	9.5	0.08	0.05	850	MHQ1005075HA3N1BTD25
3.1	± 0.3 nH	100	20	250	6.0	9.5	0.08	0.05	850	MHQ1005075HA3N1STD25
3.2	± 0.1 nH	100	20	250	6.0	9.7	0.09	0.06	800	MHQ1005075HA3N2BTD25
3.2	± 0.3 nH	100	20	250	6.0	9.7	0.09	0.06	800	MHQ1005075HA3N2STD25

· Short bar residual inductance =0.556nH

Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4991A+16197A	Keysight Technologies
Self-resonant frequency	8720ET	Keysight Technologies
DC resistance	755611	Yokogawa

* Equivalent measurement equipment may be used.

MHQ1005075HA type

CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Tolerance	L measuring frequency (MHz)	Q min.	Q measuring frequency (MHz)	Self-resonant frequency		DC resistance		Rated current (mA)max.	Part No.
					(GHz)min.	(GHz)typ.	(Ω)max.	(Ω)typ.		
3.3	± 0.1 nH	100	20	250	6.0	9.8	0.10	0.06	750	MHQ1005075HA3N3BTD25
3.3	± 0.3 nH	100	20	250	6.0	9.8	0.10	0.06	750	MHQ1005075HA3N3STD25
3.4	± 0.1 nH	100	20	250	6.0	8.9	0.08	0.05	800	MHQ1005075HA3N4BTD25
3.4	± 0.3 nH	100	20	250	6.0	8.9	0.08	0.05	800	MHQ1005075HA3N4STD25
3.5	± 0.1 nH	100	20	250	5.8	7.8	0.07	0.04	900	MHQ1005075HA3N5BTD25
3.5	± 0.3 nH	100	20	250	5.8	7.8	0.07	0.04	900	MHQ1005075HA3N5STD25
3.6	± 0.1 nH	100	20	250	5.5	7.8	0.07	0.04	900	MHQ1005075HA3N6BTD25
3.6	± 0.3 nH	100	20	250	5.5	7.8	0.07	0.04	900	MHQ1005075HA3N6STD25
3.7	± 0.1 nH	100	20	250	5.5	7.7	0.08	0.04	800	MHQ1005075HA3N7BTD25
3.7	± 0.3 nH	100	20	250	5.5	7.7	0.08	0.04	800	MHQ1005075HA3N7STD25
3.8	± 0.1 nH	100	20	250	5.0	7.7	0.09	0.06	800	MHQ1005075HA3N8BTD25
3.8	± 0.3 nH	100	20	250	5.0	7.7	0.09	0.06	800	MHQ1005075HA3N8STD25
3.9	± 0.1 nH	100	20	250	5.0	7.6	0.09	0.06	750	MHQ1005075HA3N9BTD25
3.9	± 0.3 nH	100	20	250	5.0	7.6	0.09	0.06	750	MHQ1005075HA3N9STD25
4.0	± 0.1 nH	100	20	250	5.0	7.7	0.11	0.07	700	MHQ1005075HA4N0BTD25
4.0	± 0.3 nH	100	20	250	5.0	7.7	0.11	0.07	700	MHQ1005075HA4N0STD25
4.1	± 0.1 nH	100	20	250	5.0	7.8	0.12	0.07	650	MHQ1005075HA4N1BTD25
4.1	± 0.3 nH	100	20	250	5.0	7.8	0.12	0.07	650	MHQ1005075HA4N1STD25
4.2	± 0.1 nH	100	20	250	5.0	7.4	0.12	0.08	650	MHQ1005075HA4N2BTD25
4.2	± 0.3 nH	100	20	250	5.0	7.4	0.12	0.08	650	MHQ1005075HA4N2STD25
4.3	± 0.1 nH	100	20	250	5.0	7.3	0.12	0.08	600	MHQ1005075HA4N3BTD25
4.3	± 0.3 nH	100	20	250	5.0	7.3	0.12	0.08	600	MHQ1005075HA4N3STD25
4.7	± 0.1 nH	100	20	250	5.0	6.1	0.12	0.07	650	MHQ1005075HA4N7BTD25
4.7	± 0.3 nH	100	20	250	5.0	6.1	0.12	0.07	650	MHQ1005075HA4N7STD25
5.1	± 0.1 nH	100	20	250	4.5	5.9	0.14	0.10	600	MHQ1005075HA5N1BTD25
5.1	± 0.3 nH	100	20	250	4.5	5.9	0.14	0.10	600	MHQ1005075HA5N1STD25
5.6	± 0.1 nH	100	20	250	4.5	6.6	0.19	0.11	500	MHQ1005075HA5N6BTD25
5.6	± 0.3 nH	100	20	250	4.5	6.6	0.19	0.11	500	MHQ1005075HA5N6STD25
5.8	± 0.1 nH	100	20	250	4.0	6.2	0.19	0.11	500	MHQ1005075HA5N8BTD25
5.8	± 0.3 nH	100	20	250	4.0	6.2	0.19	0.11	500	MHQ1005075HA5N8STD25
6.2	± 0.1 nH	100	20	250	4.0	5.7	0.19	0.12	500	MHQ1005075HA6N2BTD25
6.2	± 0.3 nH	100	20	250	4.0	5.7	0.19	0.12	500	MHQ1005075HA6N2STD25
6.8	$\pm 3\%$	100	20	250	4.0	5.5	0.20	0.13	500	MHQ1005075HA6N8HTD25
6.8	$\pm 5\%$	100	20	250	4.0	5.5	0.20	0.13	500	MHQ1005075HA6N8JTD25
7.3	$\pm 3\%$	100	20	250	4.0	5.4	0.26	0.19	450	MHQ1005075HA7N3HTD25
7.3	$\pm 5\%$	100	20	250	4.0	5.4	0.26	0.19	450	MHQ1005075HA7N3JTD25
7.5	$\pm 3\%$	100	20	250	4.0	5.0	0.26	0.17	450	MHQ1005075HA7N5HTD25
7.5	$\pm 5\%$	100	20	250	4.0	5.0	0.26	0.17	450	MHQ1005075HA7N5JTD25
8.2	$\pm 3\%$	100	20	250	3.5	5.0	0.24	0.15	450	MHQ1005075HA8N2HTD25
8.2	$\pm 5\%$	100	20	250	3.5	5.0	0.24	0.15	450	MHQ1005075HA8N2JTD25
8.7	$\pm 3\%$	100	20	250	3.5	4.6	0.22	0.14	450	MHQ1005075HA8N7HTD25
8.7	$\pm 5\%$	100	20	250	3.5	4.6	0.22	0.14	450	MHQ1005075HA8N7JTD25
9.1	$\pm 3\%$	100	20	250	3.0	4.4	0.22	0.16	450	MHQ1005075HA9N1HTD25
9.1	$\pm 5\%$	100	20	250	3.0	4.4	0.22	0.16	450	MHQ1005075HA9N1JTD25
9.5	$\pm 3\%$	100	20	250	3.0	4.3	0.25	0.16	450	MHQ1005075HA9N5HTD25
9.5	$\pm 5\%$	100	20	250	3.0	4.3	0.25	0.16	450	MHQ1005075HA9N5JTD25

· Short bar residual inductance =0.556nH

Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4991A+16197A	Keysight Technologies
Self-resonant frequency	8720ET	Keysight Technologies
DC resistance	755611	Yokogawa

* Equivalent measurement equipment may be used.

MHQ1005075HA type

CHARACTERISTICS SPECIFICATION TABLE

L (nH)	Tolerance	L measuring frequency (MHz)	Q min.	Q measuring frequency (MHz)	Self-resonant frequency		DC resistance		Rated current (mA)max.	Part No.
					(GHz)min.	(GHz)typ.	(Ω)max.	(Ω)typ.		
10	±3%	100	20	250	3.0	4.4	0.30	0.23	400	MHQ1005075HA10NHTD25
10	±5%	100	20	250	3.0	4.4	0.30	0.23	400	MHQ1005075HA10NJTD25
11	±3%	100	20	250	2.5	3.4	0.26	0.19	400	MHQ1005075HA11NHTD25
11	±5%	100	20	250	2.5	3.4	0.26	0.19	400	MHQ1005075HA11NJTD25
12	±3%	100	20	250	2.5	3.9	0.50	0.26	300	MHQ1005075HA12NHTD25
12	±5%	100	20	250	2.5	3.9	0.50	0.26	300	MHQ1005075HA12NJTD25
13	±3%	100	20	250	2.5	3.8	0.50	0.28	300	MHQ1005075HA13NHTD25
13	±5%	100	20	250	2.5	3.8	0.50	0.28	300	MHQ1005075HA13NJTD25
15	±3%	100	20	250	2.5	3.4	0.50	0.36	300	MHQ1005075HA15NHTD25
15	±5%	100	20	250	2.5	3.4	0.50	0.36	300	MHQ1005075HA15NJTD25
16	±3%	100	20	250	2.5	3.4	0.55	0.34	300	MHQ1005075HA16NHTD25
16	±5%	100	20	250	2.5	3.4	0.55	0.34	300	MHQ1005075HA16NJTD25
18	±3%	100	20	250	2.5	3.3	0.65	0.39	280	MHQ1005075HA18NHTD25
18	±5%	100	20	250	2.5	3.3	0.65	0.39	280	MHQ1005075HA18NJTD25
19	±3%	100	20	250	2.1	3.1	0.65	0.41	280	MHQ1005075HA19NHTD25
19	±5%	100	20	250	2.1	3.1	0.65	0.41	280	MHQ1005075HA19NJTD25
20	±3%	100	20	250	2.1	3.1	0.60	0.41	280	MHQ1005075HA20NHTD25
20	±5%	100	20	250	2.1	3.1	0.60	0.41	280	MHQ1005075HA20NJTD25
22	±3%	100	20	250	2.0	2.7	0.50	0.32	280	MHQ1005075HA22NHTD25
22	±5%	100	20	250	2.0	2.7	0.50	0.32	280	MHQ1005075HA22NJTD25
23	±3%	100	20	250	2.0	2.8	0.70	0.48	250	MHQ1005075HA23NHTD25
23	±5%	100	20	250	2.0	2.8	0.70	0.48	250	MHQ1005075HA23NJTD25
24	±3%	100	20	250	2.0	2.6	0.70	0.46	250	MHQ1005075HA24NHTD25
24	±5%	100	20	250	2.0	2.6	0.70	0.46	250	MHQ1005075HA24NJTD25
27	±3%	100	20	250	1.8	2.4	0.60	0.37	250	MHQ1005075HA27NHTD25
27	±5%	100	20	250	1.8	2.4	0.60	0.37	250	MHQ1005075HA27NJTD25
30	±3%	100	20	250	1.8	2.5	0.95	0.58	220	MHQ1005075HA30NHTD25
30	±5%	100	20	250	1.8	2.5	0.95	0.58	220	MHQ1005075HA30NJTD25
33	±3%	100	20	250	1.8	2.3	0.95	0.63	220	MHQ1005075HA33NHTD25
33	±5%	100	20	250	1.8	2.3	0.95	0.63	220	MHQ1005075HA33NJTD25
36	±3%	100	20	250	1.6	2.2	1.05	0.67	200	MHQ1005075HA36NHTD25
36	±5%	100	20	250	1.6	2.2	1.05	0.67	200	MHQ1005075HA36NJTD25
39	±3%	100	20	250	1.6	2.1	1.00	0.69	200	MHQ1005075HA39NHTD25
39	±5%	100	20	250	1.6	2.1	1.00	0.69	200	MHQ1005075HA39NJTD25
40	±3%	100	20	250	1.6	2.1	1.05	0.66	200	MHQ1005075HA40NHTD25
40	±5%	100	20	250	1.6	2.1	1.05	0.66	200	MHQ1005075HA40NJTD25
43	±3%	100	20	250	1.2	2.0	1.10	0.73	200	MHQ1005075HA43NHTD25
43	±5%	100	20	250	1.2	2.0	1.10	0.73	200	MHQ1005075HA43NJTD25
47	±3%	100	20	250	1.2	1.6	1.30	0.88	180	MHQ1005075HA47NHTD25
47	±5%	100	20	250	1.2	1.6	1.30	0.88	180	MHQ1005075HA47NJTD25
51	±3%	100	20	250	1.2	1.8	1.25	0.80	180	MHQ1005075HA51NHTD25
51	±5%	100	20	250	1.2	1.8	1.25	0.80	180	MHQ1005075HA51NJTD25
56	±3%	100	20	250	1.2	1.5	1.40	0.98	180	MHQ1005075HA56NHTD25
56	±5%	100	20	250	1.2	1.5	1.40	0.98	180	MHQ1005075HA56NJTD25

· Short bar residual inductance =0.556nH

Measurement equipment

Measurement item	Product No.	Manufacturer
L, Q	4991A+16197A	Keysight Technologies
Self-resonant frequency	8720ET	Keysight Technologies
DC resistance	755611	Yokogawa

* Equivalent measurement equipment may be used.

MHQ1005075HA type

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	
1.0	1.0	1.0	1.0	1.0	63	95	158	166	188	MHQ1005075HA1N0BTD25
1.0	1.0	1.0	1.0	1.0	63	95	158	166	188	MHQ1005075HA1N0STD25
1.1	1.1	1.1	1.1	1.1	49	74	131	139	151	MHQ1005075HA1N1BTD25
1.1	1.1	1.1	1.1	1.1	49	74	131	139	151	MHQ1005075HA1N1STD25
1.2	1.2	1.2	1.2	1.2	56	79	131	140	151	MHQ1005075HA1N2BTD25
1.2	1.2	1.2	1.2	1.2	56	79	131	140	151	MHQ1005075HA1N2STD25
1.3	1.3	1.3	1.3	1.3	39	51	83	89	98	MHQ1005075HA1N3BTD25
1.3	1.3	1.3	1.3	1.3	39	51	83	89	98	MHQ1005075HA1N3STD25
1.4	1.4	1.4	1.4	1.4	35	45	72	77	87	MHQ1005075HA1N4BTD25
1.4	1.4	1.4	1.4	1.4	35	45	72	77	87	MHQ1005075HA1N4STD25
1.5	1.5	1.5	1.5	1.5	35	44	69	75	83	MHQ1005075HA1N5BTD25
1.5	1.5	1.5	1.5	1.5	35	44	69	75	83	MHQ1005075HA1N5STD25
1.6	1.6	1.6	1.6	1.6	48	59	90	94	102	MHQ1005075HA1N6BTD25
1.6	1.6	1.6	1.6	1.6	48	59	90	94	102	MHQ1005075HA1N6STD25
1.7	1.7	1.7	1.7	1.7	42	52	81	85	93	MHQ1005075HA1N7BTD25
1.7	1.7	1.7	1.7	1.7	42	52	81	85	93	MHQ1005075HA1N7STD25
1.8	1.8	1.8	1.8	1.8	46	61	96	97	107	MHQ1005075HA1N8BTD25
1.8	1.8	1.8	1.8	1.8	46	61	96	97	107	MHQ1005075HA1N8STD25
1.9	1.9	1.9	1.9	1.9	47	62	95	95	106	MHQ1005075HA1N9BTD25
1.9	1.9	1.9	1.9	1.9	47	62	95	95	106	MHQ1005075HA1N9STD25
1.9	1.9	2.0	2.0	2.0	42	53	84	88	97	MHQ1005075HA2N0BTD25
1.9	1.9	2.0	2.0	2.0	42	53	84	88	97	MHQ1005075HA2N0STD25
2.1	2.1	2.1	2.1	2.1	50	64	99	104	116	MHQ1005075HA2N1BTD25
2.1	2.1	2.1	2.1	2.1	50	64	99	104	116	MHQ1005075HA2N1STD25
2.2	2.2	2.2	2.2	2.3	60	78	119	123	135	MHQ1005075HA2N2BTD25
2.2	2.2	2.2	2.2	2.3	60	78	119	123	135	MHQ1005075HA2N2STD25
2.3	2.3	2.3	2.3	2.4	57	72	113	118	130	MHQ1005075HA2N3BTD25
2.3	2.3	2.3	2.3	2.4	57	72	113	118	130	MHQ1005075HA2N3STD25
2.4	2.4	2.4	2.4	2.5	50	66	103	108	120	MHQ1005075HA2N4BTD25
2.4	2.4	2.4	2.4	2.5	50	66	103	108	120	MHQ1005075HA2N4STD25
2.4	2.5	2.5	2.5	2.6	50	64	99	102	112	MHQ1005075HA2N5BTD25
2.4	2.5	2.5	2.5	2.6	50	64	99	102	112	MHQ1005075HA2N5STD25
2.5	2.6	2.6	2.6	2.7	45	58	89	92	102	MHQ1005075HA2N6BTD25
2.5	2.6	2.6	2.6	2.7	45	58	89	92	102	MHQ1005075HA2N6STD25
2.6	2.6	2.7	2.8	2.8	43	54	80	83	90	MHQ1005075HA2N7BTD25
2.6	2.6	2.7	2.8	2.8	43	54	80	83	90	MHQ1005075HA2N7STD25
2.7	2.7	2.8	2.9	2.9	42	53	81	84	91	MHQ1005075HA2N8BTD25
2.7	2.7	2.8	2.9	2.9	42	53	81	84	91	MHQ1005075HA2N8STD25
2.8	2.8	2.9	3.0	3.0	39	50	74	77	82	MHQ1005075HA2N9BTD25
2.8	2.8	2.9	3.0	3.0	39	50	74	77	82	MHQ1005075HA2N9STD25
2.9	2.9	3.0	3.0	3.1	36	46	71	74	79	MHQ1005075HA3N0BTD25
2.9	2.9	3.0	3.0	3.1	36	46	71	74	79	MHQ1005075HA3N0STD25
3.0	3.0	3.1	3.2	3.2	41	51	77	81	88	MHQ1005075HA3N1BTD25
3.0	3.0	3.1	3.2	3.2	41	51	77	81	88	MHQ1005075HA3N1STD25
3.1	3.1	3.2	3.3	3.3	36	46	70	73	78	MHQ1005075HA3N2BTD25
3.1	3.1	3.2	3.3	3.3	36	46	70	73	78	MHQ1005075HA3N2STD25
3.2	3.2	3.3	3.4	3.4	38	48	72	76	83	MHQ1005075HA3N3BTD25
3.2	3.2	3.3	3.4	3.4	38	48	72	76	83	MHQ1005075HA3N3STD25

Measurement equipment

Product No.	Manufacturer
4991A+16197A	Keysight Technologies

* Equivalent measurement equipment may be used.

MHQ1005075HA type

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	
3.3	3.3	3.5	3.5	3.6	46	59	88	91	98	MHQ1005075HA3N4BTD25
3.3	3.3	3.5	3.5	3.6	46	59	88	91	98	MHQ1005075HA3N4STD25
3.4	3.4	3.6	3.6	3.7	36	45	67	69	74	MHQ1005075HA3N5BTD25
3.4	3.4	3.6	3.6	3.7	36	45	67	69	74	MHQ1005075HA3N5STD25
3.5	3.5	3.7	3.8	3.9	36	48	72	73	79	MHQ1005075HA3N6BTD25
3.5	3.5	3.7	3.8	3.9	36	48	72	73	79	MHQ1005075HA3N6STD25
3.6	3.6	3.8	3.9	4.0	35	45	69	71	77	MHQ1005075HA3N7BTD25
3.6	3.6	3.8	3.9	4.0	35	45	69	71	77	MHQ1005075HA3N7STD25
3.7	3.7	3.9	4.0	4.1	39	51	78	78	85	MHQ1005075HA3N8BTD25
3.7	3.7	3.9	4.0	4.1	39	51	78	78	85	MHQ1005075HA3N8STD25
3.8	3.8	4.0	4.1	4.2	44	56	84	87	94	MHQ1005075HA3N9BTD25
3.8	3.8	4.0	4.1	4.2	44	56	84	87	94	MHQ1005075HA3N9STD25
3.9	3.9	4.1	4.2	4.3	42	53	80	82	88	MHQ1005075HA4N0BTD25
3.9	3.9	4.1	4.2	4.3	42	53	80	82	88	MHQ1005075HA4N0STD25
4.0	4.0	4.2	4.3	4.4	40	51	77	80	85	MHQ1005075HA4N1BTD25
4.0	4.0	4.2	4.3	4.4	40	51	77	80	85	MHQ1005075HA4N1STD25
4.1	4.1	4.4	4.5	4.6	40	51	75	77	81	MHQ1005075HA4N2BTD25
4.1	4.1	4.4	4.5	4.6	40	51	75	77	81	MHQ1005075HA4N2STD25
4.2	4.2	4.5	4.6	4.7	40	50	74	76	82	MHQ1005075HA4N3BTD25
4.2	4.2	4.5	4.6	4.7	40	50	74	76	82	MHQ1005075HA4N3STD25
4.6	4.6	5.0	5.1	5.4	38	47	66	67	69	MHQ1005075HA4N7BTD25
4.6	4.6	5.0	5.1	5.4	38	47	66	67	69	MHQ1005075HA4N7STD25
5.0	5.0	5.4	5.6	5.9	32	41	62	64	66	MHQ1005075HA5N1BTD25
5.0	5.0	5.4	5.6	5.9	32	41	62	64	66	MHQ1005075HA5N1STD25
5.5	5.5	5.9	6.1	6.4	37	47	67	69	73	MHQ1005075HA5N6BTD25
5.5	5.5	5.9	6.1	6.4	37	47	67	69	73	MHQ1005075HA5N6STD25
5.7	5.7	6.1	6.3	6.6	32	41	59	61	63	MHQ1005075HA5N8BTD25
5.7	5.7	6.1	6.3	6.6	32	41	59	61	63	MHQ1005075HA5N8STD25
6.1	6.1	6.7	6.9	7.3	38	48	67	68	70	MHQ1005075HA6N2BTD25
6.1	6.1	6.7	6.9	7.3	38	48	67	68	70	MHQ1005075HA6N2STD25
6.6	6.7	7.4	7.7	8.3	33	42	58	59	59	MHQ1005075HA6N8HTD25
6.6	6.7	7.4	7.7	8.3	33	42	58	59	59	MHQ1005075HA6N8JTD25
7.1	7.2	8.0	8.4	9.0	31	40	55	56	55	MHQ1005075HA7N3HTD25
7.1	7.2	8.0	8.4	9.0	31	40	55	56	55	MHQ1005075HA7N3JTD25
7.3	7.4	8.4	8.8	9.6	34	42	57	57	56	MHQ1005075HA7N5HTD25
7.3	7.4	8.4	8.8	9.6	34	42	57	57	56	MHQ1005075HA7N5JTD25
8.0	8.1	9.2	9.6	10	33	41	55	56	55	MHQ1005075HA8N2HTD25
8.0	8.1	9.2	9.6	10	33	41	55	56	55	MHQ1005075HA8N2JTD25
8.5	8.7	10	11	12	32	40	51	51	49	MHQ1005075HA8N7HTD25
8.5	8.7	10	11	12	32	40	51	51	49	MHQ1005075HA8N7JTD25
8.9	9.1	11	11	13	34	42	54	53	49	MHQ1005075HA9N1HTD25
8.9	9.1	11	11	13	34	42	54	53	49	MHQ1005075HA9N1JTD25
9.3	9.5	11	12	14	35	43	55	54	50	MHQ1005075HA9N5HTD25
9.3	9.5	11	12	14	35	43	55	54	50	MHQ1005075HA9N5JTD25

Measurement equipment

Product No.	Manufacturer
4991A+16197A	Keysight Technologies

* Equivalent measurement equipment may be used.

MHQ1005075HA type

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	
10	10	12	12	14	32	40	51	51	47	MHQ1005075HA10NHTD25
10	10	12	12	14	32	40	51	51	47	MHQ1005075HA10NJTD25
11	11	15	16	21	34	41	47	44	36	MHQ1005075HA11NHTD25
11	11	15	16	21	34	41	47	44	36	MHQ1005075HA11NJTD25
12	12	15	16	19	31	38	46	45	40	MHQ1005075HA12NHTD25
12	12	15	16	19	31	38	46	45	40	MHQ1005075HA12NJTD25
13	13	16	18	22	31	38	45	43	36	MHQ1005075HA13NHTD25
13	13	16	18	22	31	38	45	43	36	MHQ1005075HA13NJTD25
15	15	21	24	31	29	36	38	35	27	MHQ1005075HA15NHTD25
15	15	21	24	31	29	36	38	35	27	MHQ1005075HA15NJTD25
16	16	22	25	32	31	38	41	38	29	MHQ1005075HA16NHTD25
16	16	22	25	32	31	38	41	38	29	MHQ1005075HA16NJTD25
18	18	25	29	39	31	37	39	35	27	MHQ1005075HA18NHTD25
18	18	25	29	39	31	37	39	35	27	MHQ1005075HA18NJTD25
19	20	30	36	58	33	39	37	32	20	MHQ1005075HA19NHTD25
19	20	30	36	58	33	39	37	32	20	MHQ1005075HA19NJTD25
20	21	32	38	62	31	38	34	29	18	MHQ1005075HA20NHTD25
20	21	32	38	62	31	38	34	29	18	MHQ1005075HA20NJTD25
22	23	42	57	159	30	35	28	20	7	MHQ1005075HA22NHTD25
22	23	42	57	159	30	35	28	20	7	MHQ1005075HA22NJTD25
23	25	43	57	142	32	38	30	23	9	MHQ1005075HA23NHTD25
23	25	43	57	142	32	38	30	23	9	MHQ1005075HA23NJTD25
24	26	46	63	184	33	39	29	21	7	MHQ1005075HA24NHTD25
24	26	46	63	184	33	39	29	21	7	MHQ1005075HA24NJTD25
27	29	67	120	—	28	33	19	10	—	MHQ1005075HA27NHTD25
27	29	67	120	—	28	33	19	10	—	MHQ1005075HA27NJTD25
30	33	74	131	—	30	35	20	11	—	MHQ1005075HA30NHTD25
30	33	74	131	—	30	35	20	11	—	MHQ1005075HA30NJTD25
34	37	100	246	—	29	34	16	7	—	MHQ1005075HA33NHTD25
34	37	100	246	—	29	34	16	7	—	MHQ1005075HA33NJTD25
37	40	117	329	—	31	35	16	5	—	MHQ1005075HA36NHTD25
37	40	117	329	—	31	35	16	5	—	MHQ1005075HA36NJTD25
40	45	194	—	—	29	33	9	—	—	MHQ1005075HA39NHTD25
40	45	194	—	—	29	33	9	—	—	MHQ1005075HA39NJTD25
41	46	212	—	—	29	33	9	—	—	MHQ1005075HA40NHTD25
41	46	212	—	—	29	33	9	—	—	MHQ1005075HA40NJTD25
44	50	308	—	—	31	34	6	—	—	MHQ1005075HA43NHTD25
44	50	308	—	—	31	34	6	—	—	MHQ1005075HA43NJTD25
50	60	—	—	—	29	29	—	—	—	MHQ1005075HA47NHTD25
50	60	—	—	—	29	29	—	—	—	MHQ1005075HA47NJTD25
53	62	—	—	—	29	32	—	—	—	MHQ1005075HA51NHTD25
53	62	—	—	—	29	32	—	—	—	MHQ1005075HA51NJTD25
61	79	—	—	—	28	27	—	—	—	MHQ1005075HA56NHTD25
61	79	—	—	—	28	27	—	—	—	MHQ1005075HA56NJTD25

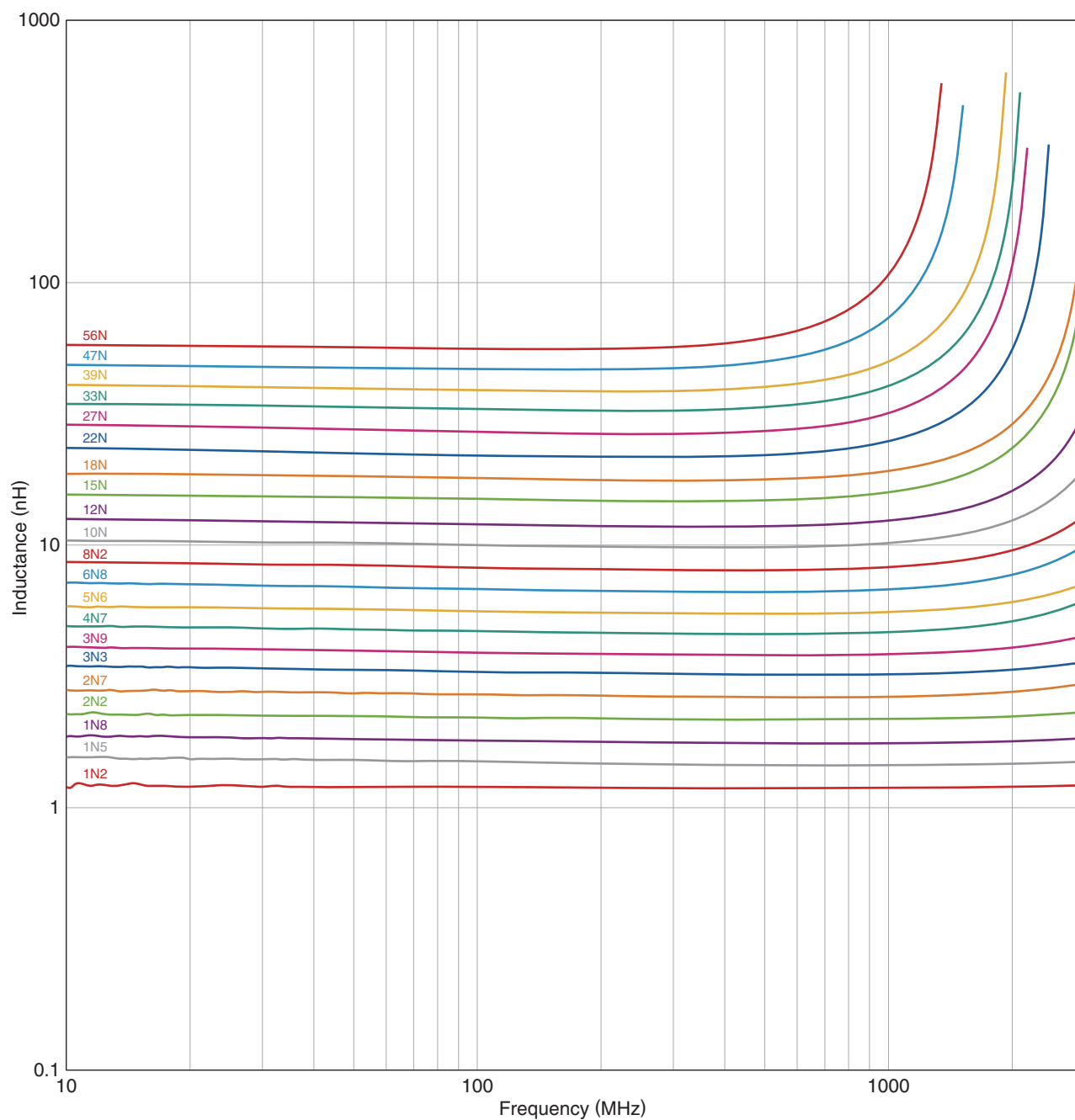
Measurement equipment

Product No.	Manufacturer
4991A+16197A	Keysight Technologies

* Equivalent measurement equipment may be used.

MHQ1005075HA type

L FREQUENCY CHARACTERISTICS (EXAMPLE)



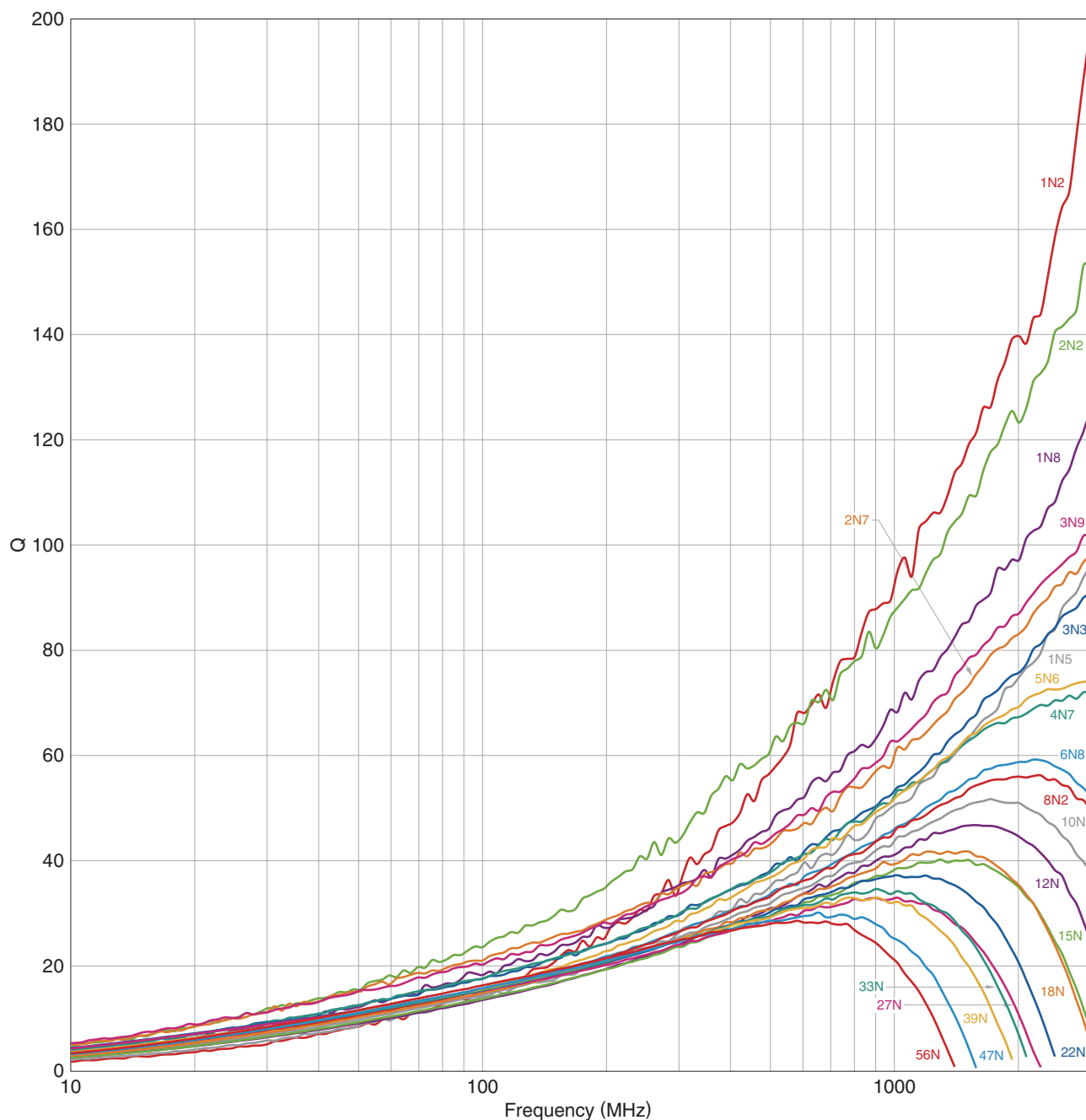
Measurement equipment

Product No.	Manufacturer
4991A+16197A	Keysight Technologies

* Equivalent measurement equipment may be used.

MHQ1005075HA type

Q FREQUENCY CHARACTERISTICS (EXAMPLE)



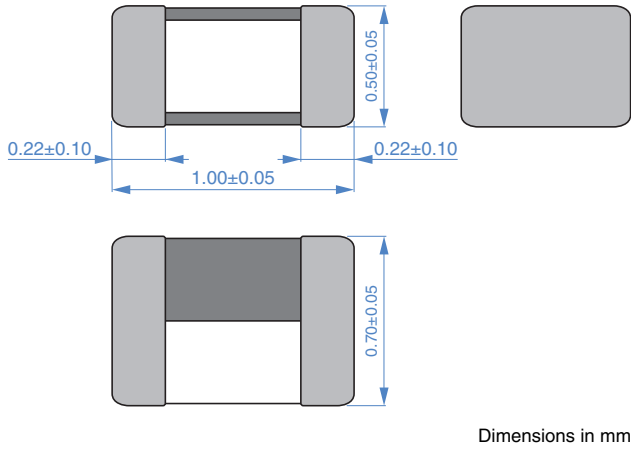
Measurement equipment

Product No.	Manufacturer
4991A+16197A	Keysight Technologies

* Equivalent measurement equipment may be used.

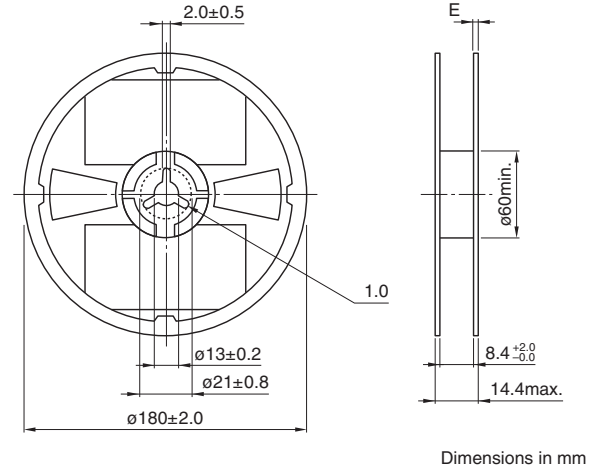
MHQ1005075HA type

SHAPE & DIMENSIONS

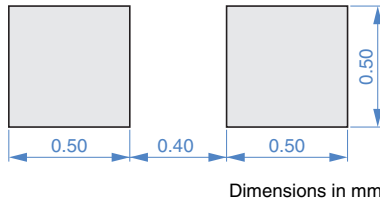


PACKAGING STYLE

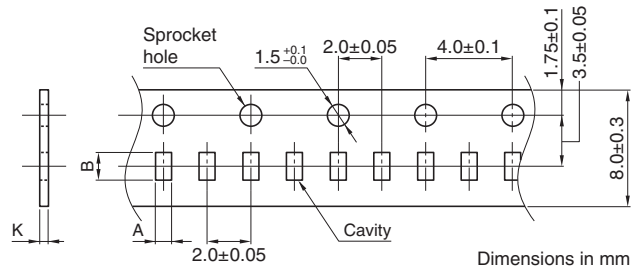
REEL DIMENSIONS



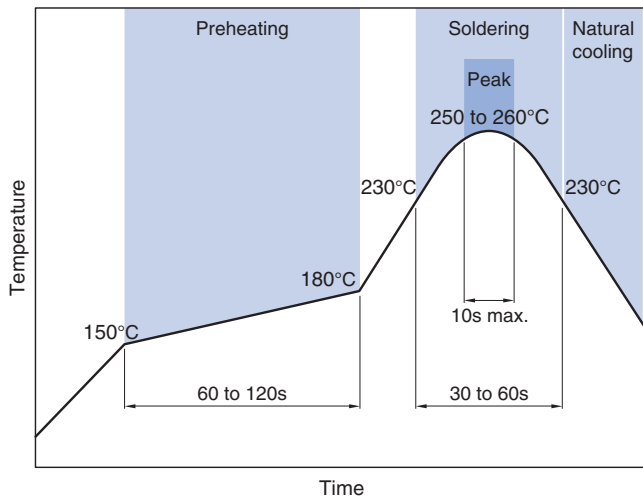
RECOMMENDED LAND PATTERN



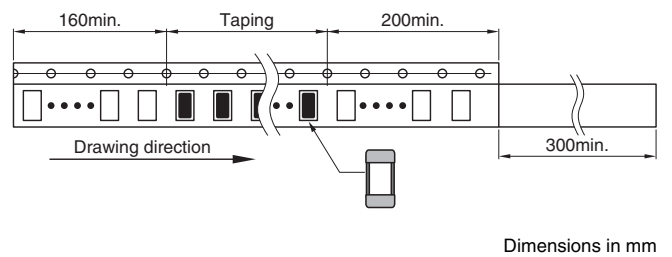
TAPE DIMENSIONS



RECOMMENDED REFLOW PROFILE



Type	A	B	K
MHQ1005075HA	0.60+0.03/-0.05	1.12±0.03	0.80±0.03



PACKAGE QUANTITY

Package quantity	8000 pcs/reel
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TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Operating temperature range	Storage temperature range*	Individual weight
-55 to +125 °C	-55 to +125 °C	1.14 mg

* The storage temperature range is for after the assembly.

- REMINDERS FOR USING THESE PRODUCTS -

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

REMINDERS

1. Introduction

This product is a multilayer inductor designed for high-frequency applications, with a lineup tailored to various purposes. By following proper handling and usage conditions, you can maximize product performance and prevent failures or safety issues.

2. General Precautions

- Do not use the product beyond its rated current. Overcurrent may cause degradation of performance or damage.
- Use the product within the operating temperature range specified in the product datasheet.
Failure to do so may lead to performance degradation or solder deterioration.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Please use a wrist strap to discharge static electricity from the human body to the ground.
- Do not expose the products to magnets or magnetic fields.
- Do not use the product beyond the specifications described in the delivery specifications or product datasheet.

3. Precautions for Mounting and Implementation

- Applying excessive external impact to the product may cause cracks or chipping.
- 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.
- For products with direction marks, the orientation of the mark may affect the set characteristics. Please verify the performance of the set in advance.
- Use the reflow soldering conditions specified in the product datasheet.
- Be sure to preheat the product before soldering.
The temperature difference between the solder and the product during preheating should be within 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.
Some products do not support rework by manual soldering.
- Land pattern design affects mountability. If you change it from the recommended design, please verify it before use.
- Thermal and mechanical stress from the board can be affected by the type and amount of solder, potentially degrading performance.
Solder Type: Use lead-free solder SAC305.
Solder Amount: Solder with an appropriate fillet shape to avoid excessive solder.
- The original characteristics may not be achieved due to the influence of other components mounted around the product.
In such cases, please consider changing the layout or combining inductors with different winding structures.
- The storage period is within 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.
- Avoid drops or strong impacts during transport, and avoid high temperatures caused by direct sunlight. Excessive heat can degrade the quality of packaging materials such as boxes, reels, and tapes.

4. Disclaimer

These precautions are based on general usage conditions.

For detailed specifications and conditions for each product, please refer to the product datasheet and delivery specifications.

Our company assumes no responsibility for any direct or indirect damage resulting from use based on these precautions.

The contents are subject to change without notice due to improvements or other reasons.

- SAFETY REMINDERS -

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

REMINDERS

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 (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.