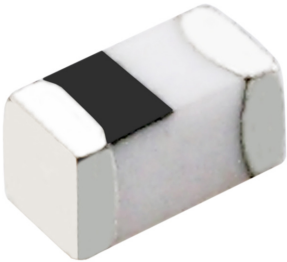


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**RoHS
Compliant**



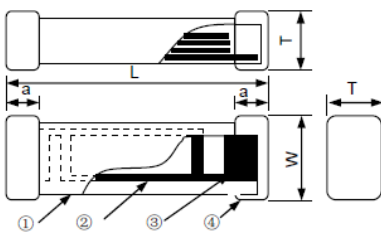
Features

- Monolithic structure for high reliability
- High self-resonant frequency
- Excellent solderability and high heat resistance

Applications

- RF circuit in telecommunication and other equipments

Construction



1	Ceramic Material
2	Internal Electrode
3	Pull Out Electrode
4	End-termination

Dimensions

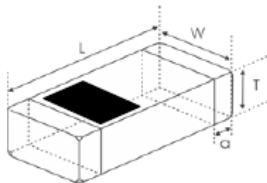


Figure1

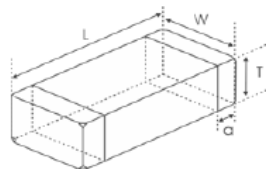


Figure2

High Q

Case Code	Figure	L	W	T	A
0201	1	0.6±0.05	0.3±0.05	0.3±0.05	0.12±0.05

Standard Frequency

Case Code	Figure	L	W	T	A
0603	2	1.65±0.2	0.8±0.2	0.8±0.2	0.3±0.2

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Standard Electrical Specifications

0603 Multilayer Chip Inductors / Standard Type

Operating temperature range: -55°C to +125°C

Inductance (nH)	Tolerance	Quality Factor /min.	L/Q Freq. (MHz)	Q(Typical) Freq.(MHz)			SRF min. (GHz)	RDC (Ω) max.	IDC (mA) max.
				100	800	1000			
1.2	±0.3nH	8	100	13	60	70	10	0.05	500
1.8		8	100	13	45	61	6	0.1	500
2.2		8	100	13	45	60	6	0.1	500
2.7		10	100	13	44	55	6	0.12	500
3.9		10	100	13	43	50	6	0.16	500
4.7		10	100	13	43	50	6	0.2	500
5.6		10	100	14	42	48	5	0.25	500
6.8	±5%	10	100	14	43	50	5	0.3	500
8.2		10	100	14	43	48	4.5	0.35	500
10		12	100	15	45	50	3.5	0.4	300
12		12	100	18	48	50	3	0.45	300

High Q Electrical Specifications

0201 Multilayer Chip Inductors / High Q Type

Operating temperature range: -55°C to +125°C

Inductance (nH)	Tolerance	Quality Factor /min.	L/Q Freq. (MHz)	Q (Typical) Freq.(MHz)					SRF (GHz) Min.	RDC (Ω) Max.	IDC (mA) Max.
				500	800	1800	2000	2400			
0.6	±0.1nH	13	500	>24	>32	>54	>57	>65	10	0.06	600
1		13	500	24	32	54	57	65	10	0.08	520
1.2		13	500	19	25	43	44	52	10	0.12	420
1.8		13	500	19	24	39	41	46	10	0.15	380
2.2		13	500	17	24	38	40	43	10	0.25	290
2.7		13	500	17	22	34	35	39	9.2	0.22	310
3.9		13	500	16	22	33	35	38	7.4	0.42	230
4.7		13	500	16	22	33	35	38	6.2	0.45	220
6.8	±5%	13	500	17	22	32	33	35	4.9	0.5	200
10		13	500	16	20	28	29	31	3.8	0.8	160
22		13	500	15	19	22	23	20	1.9	1.2	130
39		11	300	14	15	6	-	-	1.6	2.3	100
47		11	300	14	15	-	-	-	1.5	2.6	100
68		11	300	13	11	-	-	-	1.2	3.2	80

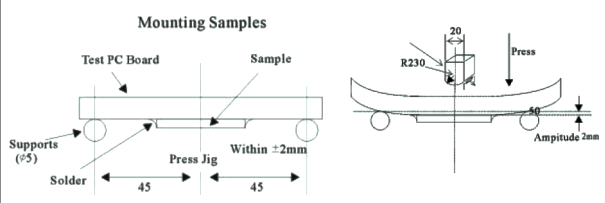
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Environmental Characteristics

Electrical Performance Test

Item	Requirement	Test Condition
Inductance	In Within specified tolerance	Temperature: 20±1°C Relative Humidity: 45 to 85%RH Atmospheric Pressure: 86 to 106kpa Measuring equipment and fixture: 0201: E991A+HP16197A 0402/0603: E991A+HP16192A Test Signal: -20dBm or 50mV Test compensation(for 0201 high Q): Product true value= test value + compensation value. for L<3.6nH, compensation value is 0.25nH; for 3.6nH≤L<6.8nH, compensation value is 0.43nH; for 6.8 nH≤L<9.1nH, compensation value is 0.5nH; for L≥9.1nH, compensation value is 0.85nH;
Q Value	In accordance with electrical specification	Temperature: 20±1°C Relative Humidity: 45%RH to 85%RH Atmospheric Pressure: 86kpa to 106kpa
DC Resistance	In accordance with electrical specification	Temperature: 20±1°C Relative Humidity: 45%RH to 85%RH Atmospheric Pressure: 86kpa to 106kpa Measuring equipment: HP 4338

Mechanical Characteristics Test

Item	Requirement	Test Condition
Bending Strength	No mechanical damage shall be observed	Flexure: 2mm Pressurizing speed: 0.5mm/sec Keep time: 30sec 
Solderability	No visible mechanical damage Wetting shall exceed 75% coverage for 0201 series; exceed 95% coverage for others	Solder temperature: 240±2°C Time: 3 seconds Solder: Sn/3Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight
Resistance to Soldering Heat	No visible mechanical damage Wetting shall exceed 75% coverage for 0201 series; exceed 95% coverage for others Inductance change: within±10% Q change: within±20%	Solder temperature: 260±3°C Time: 5 seconds Solder: Sn/3Ag/0.5Cu Flux: 25% resin and 75% ethanol in weight The chip shall be stabilized at normal condition for 1 to 2 hours before measuring
Dropping	No visible mechanical damage Inductance change: within±10% Q change: within±20%	Drop chip inductor 10 times on a concrete floor form a height of 100cm

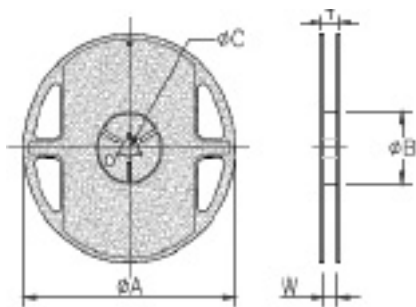
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Climatic Test

Item	Requirements	Test Condition
Thermal Shock	No visible damage Inductance variation within 10% Q variation within 20%	0201/0402 series: -55°C for 30±3 min→125°C for 30±3 min 0603 series: -40°C for 30±3 min→85°C for 30±3 min Transforming interval: max. 20 seconds Test cycle: 100 cycles The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring
Resistance to Low Temperature		Temperature: 0201/0402 series: -55±2°C ; 0603 series: -40±2°C Time: 1000±24 hours The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring
Resistance to High Temperature		Temperature: 0201/0402 series: 125±2°C ; 0603 series: 85±2°C Time: 1000±24 hours The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring
Damp Heat (Steady States)		Temperature: 60±2°C Humidity: 90% RH to 95% RH. Time: 1000±24 hours The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring
Loading Under Damp Heat		Temperature: 60±2°C Humidity: 90% RH to 95% RH. Time: 1000±24 hours Applied current: Rated current The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring
Loading at High Temperature (Life Test)		Temperature: 0201/0402 series: 125±2°C; 0603 series: 85±2°C Time: 1000±24 hours Applied current: Rated current The chip shall be stabilized at normal condition for 1 to 2 hours Before measuring

Packaging Specifications

Reel Dimension



Unit: mm

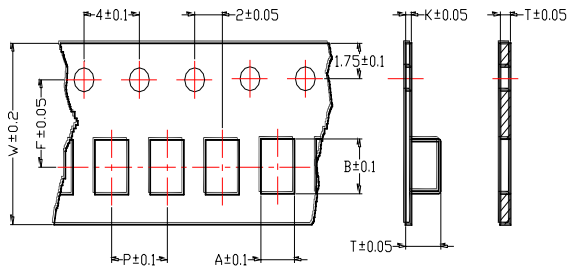
Type	A	B	C	W	T	Quantity (EA)
0201	178±1	60±0.5	13±0.2	9±0.5	12±0.15	15,000
0603	178±1	60±0.5	13±0.2	9±0.5	12±0.15	4,000

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Tape Specifications



Unit: mm

Type	A	B	T	W	P	F	K	Tape
0201	0.4	0.7	0.5	8	2	3.5	-	B
0603	1.1	1.8	1.1		4			

Type A **Type B**

Part Number Table

Description	Part Number
Multilayer Chip Inductor, High Q, 0.6nH, ± 0.1 nH, 0201	MP002888
Multilayer Chip Inductor, High Q, 1nH, ± 0.1 nH, 0201	MP002889
Multilayer Chip Inductor, High Q, 1.2nH, ± 0.1 nH, 0201	MP002890
Multilayer Chip Inductor, High Q, 1.8nH, ± 0.1 nH, 0201	MP002891
Multilayer Chip Inductor, High Q, 2.2nH, ± 0.1 nH, 0201	MP002892
Multilayer Chip Inductor, High Q, 2.7nH, ± 0.1 nH, 0201	MP002893
Multilayer Chip Inductor, High Q, 3.9nH, ± 0.1 nH, 0201	MP002894
Multilayer Chip Inductor, High Q, 4.7nH, ± 0.1 nH, 0201	MP002895
Multilayer Chip Inductor, High Q, 6.8nH, $\pm 5\%$, 0201	MP002896
Multilayer Chip Inductor, High Q, 10nH, $\pm 5\%$, 0201	MP002897
Multilayer Chip Inductor, High Q, 22nH, $\pm 5\%$, 0201	MP002898
Multilayer Chip Inductor, High Q, 39nH, $\pm 5\%$, 0201	MP002899
Multilayer Chip Inductor, High Q, 47nH, $\pm 5\%$, 0201	MP002900
Multilayer Chip Inductor, High Q, 68nH, $\pm 5\%$, 0201	MP002901
Multilayer Chip Inductor, Standard, 1.2nH, ± 0.3 nH, 0603	MP002902
Multilayer Chip Inductor, Standard, 1.8nH, ± 0.3 nH, 0603	MP002903
Multilayer Chip Inductor, Standard, 2.2nH, ± 0.3 nH, 0603	MP002904
Multilayer Chip Inductor, Standard, 2.7nH, ± 0.3 nH, 0603	MP002905
Multilayer Chip Inductor, Standard, 3.9nH, ± 0.3 nH, 0603	MP002906
Multilayer Chip Inductor, Standard, 4.7nH, ± 0.3 nH, 0603	MP002907
Multilayer Chip Inductor, Standard, 5.6nH, ± 0.3 nH, 0603	MP002908
Multilayer Chip Inductor, Standard, 6.8nH, $\pm 5\%$, 0603	MP002909
Multilayer Chip Inductor, Standard, 8.2nH, $\pm 5\%$, 0603	MP002910
Multilayer Chip Inductor, Standard, 10nH, $\pm 5\%$, 0603	MP002911
Multilayer Chip Inductor, Standard, 12nH, $\pm 5\%$, 0603	MP002912

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Description	Part Number
Multilayer Chip Inductor, Standard, 15nH, $\pm 5\%$, 0603	MP002913
Multilayer Chip Inductor, Standard, 18nH, $\pm 5\%$, 0603	MP002914
Multilayer Chip Inductor, Standard, 22nH, $\pm 5\%$, 0603	MP002915
Multilayer Chip Inductor, Standard, 39nH, $\pm 5\%$, 0603	MP002916
Multilayer Chip Inductor, Standard, 47nH, $\pm 5\%$, 0603	MP002917
Multilayer Chip Inductor, Standard, 56nH, $\pm 5\%$, 0603	MP002918
Multilayer Chip Inductor, Standard, 68nH, $\pm 5\%$, 0603	MP002919
Multilayer Chip Inductor, Standard, 82nH, $\pm 5\%$, 0603	MP002920
Multilayer Chip Inductor, Standard, 100nH, $\pm 5\%$, 0603	MP002921
Multilayer Chip Inductor, Standard, 120nH, $\pm 5\%$, 0603	MP002922
Multilayer Chip Inductor, Standard, 150nH, $\pm 5\%$, 0603	MP002923
Multilayer Chip Inductor, Standard, 180nH, $\pm 5\%$, 0603	MP002924
Multilayer Chip Inductor, Standard, 220nH, $\pm 5\%$, 0603	MP002925
Multilayer Chip Inductor, Standard, 390nH, $\pm 5\%$, 0603	MP002926
Multilayer Chip Inductor, Standard, 470nH, $\pm 5\%$, 0603	MP002927
Multilayer Chip Inductor, Standard, 680nH, $\pm 5\%$, 0603	MP002928

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