Data Sheet

Customer：	
Product ：	Thin Film Chip Inductor - AL Series
Size.:	0201/0402
Issued Date：	20-Mar-23
Edition:	REV.D1

RoHS Compliant

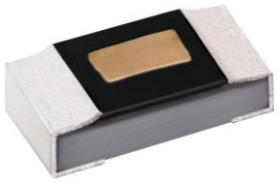
HONG KONG HELISTO INDUSTRIAL LIMITED
香港海利斯特实业有限公司

SHENZHEN HELISTO TECHNOLOGYCOLTD
深圳市海利斯特科技有限公司

ADD:5/F., A Block, Hongdu Industrial Park, Fanshen Road, 45 Area, Baoan, Shenzhen, China
TEL:+86-755-29741555 29749555
FAX:+86-755-29742111
E-mail:donnyhai@helisto.com
www.Helisto.com

Produced by (QC)	Checked by (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
20-Mar-23	20-Mar-23	20-Mar-23	20-Mar-23	
Chun	*Ben Chang*	*Ben Chang*		

Thin Film Chip Inductor





Scope

—Viking's 0201 and 0402 series inductor is a photo lithographically etched single layer ceramic chip. Viking's design provides high SRF, excellent Q, and superior temperature stability. This highly stable inductor family is specifically designed for critical tolerance needs.

Features

—Photolithographic single layer ceramic chip
—High SRF, excellent Q, superior temperature stability
—Tight tolerance of ± 1% or ± 0.1nH
—Self resonant frequency controlled within 10%
—Stable inductance in high frequency circuit
—Highly stable design for critical needs

Applications

—Cellular Telephone, Pagers and GPS Products
—VCO, TCXO Circuit and RF Transceiver Module
—Wireless LAN, Bluetooth Module, Communication Appliances

Construction

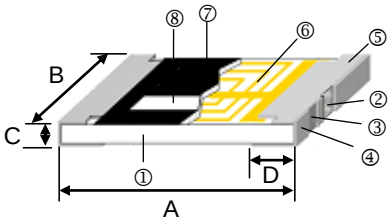


Figure1

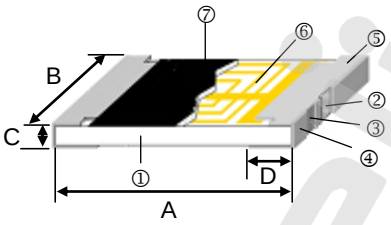
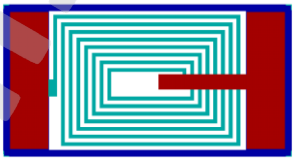


Figure2



①	Alumina Substrate	④	External Electrode	⑦	Overcoat
②	Inner Electrode	⑤	Edge Electrode	⑧	Marking
③	Barrier Layer	⑥	Cu Circuits		

Dimensions

Unit: mm

Type	Size (Inch)	Figure	A	B	C	D	Weight (g) (1000pcs)
AL01	0201	Figure2	0.60±0.05	0.30±0.05	0.23±0.05	0.15±0.05	0.23
AL02	0402	Figure1	1.0±0.05	0.5±0.05	0.32±0.05	0.2±0.10	0.9

Part Numbering

AL	02	G	T	10N	
Product Type	Dimensions	Inductance Tolerance	Packaging Code	Inductance	
	01: 0201 02: 0402	B: ±0.1nH C: ±0.2nH S: ±0.3nH F: ±1% G: ±2% H: ±3% J: ±5%	T: Taping Reel	1N0: 1nH 10N: 10nH 20N8: 20.8nH	:Standard 01: High Current 02: High Q

■ **Viking is capable of manufacturing the optional spec based on customer's requirement.**

■Standard Electrical Specifications

AL01 Chip Inductors / Standard Type

Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0.1	±0.1nH	8 / 500MHz	9	0.20	400
0.2	±0.1, 0.2nH	8 / 500MHz	9	0.20	400
0.3	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.20	400
0.4	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.25	350
0.5	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.25	350
0.6	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.25	350
0.7	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.30	300
0.8	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.30	300
0.9	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.30	300
1.0	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.30	300
1.1	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.35	300
1.2	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.35	300
1.3	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.45	250
1.4	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.45	250
1.5	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.45	250
1.6	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.55	200
1.7	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.55	200
1.8	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.55	200
1.9	±0.1, 0.2, 0.3nH	8 / 500MHz	9	0.55	200
2.0	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.70	200
2.1	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.70	200
2.2	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.70	200
2.3	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.80	150
2.4	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.80	150
2.5	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.80	150
2.6	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.80	150
2.7	±0.1, 0.2, 0.3nH	8 / 500MHz	8	0.80	150
2.8	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
2.9	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
3.0	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
3.1	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
3.2	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
3.3	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.00	150
3.4	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
3.5	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
3.6	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
3.7	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
3.8	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
3.9	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
4.0	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.20	150
4.4	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.30	140
4.7	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.40	130
4.9	±0.1, 0.2, 0.3nH	8 / 500MHz	6	1.60	130
5.6	±2, ±3,±5%	8 / 500MHz	4	1.80	130
6.1	±2, ±3,±5%	8 / 500MHz	4	2.00	120
6.8	±2, ±3,±5%	8 / 500MHz	4	2.30	110
7.4	±2, ±3,±5%	8 / 500MHz	4	2.80	110
8.2	±2, ±3,±5%	8 / 500MHz	3	3.00	110
9.1	±2, ±3,±5%	8 / 500MHz	3	3.25	100
9.2	±2, ±3,±5%	8 / 500MHz	3	3.25	100
10	±2, ±3,±5%	8 / 500MHz	2	3.50	80

Operating Temperature Range: -55°C to +125°C

Test Equipment: HP4287A+Agilent 16196C

AL01-01 Chip Inductors / High Current Type

Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0.1	±0.1nH	10 / 500MHz	6	0.05	600
0.2	±0.1, 0.2nH	10 / 500MHz	6	0.05	600
0.3	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.05	600
0.4	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.05	600
0.5	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.10	600
0.6	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.10	600
0.7	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.10	600
0.8	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.10	600
0.9	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.10	600
1.0	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.15	600
1.1	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.15	600
1.2	±0.1, 0.2, 0.3nH	10/ 500MHz	6	0.15	600
1.3	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.20	600
1.4	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.20	600
1.5	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.25	600
1.6	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.25	600
1.7	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.30	500
1.8	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.30	500
1.9	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.30	500
2.0	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.30	500
2.1	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.30	500
2.2	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	500
2.3	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	500
2.4	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	450
2.5	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	450
2.6	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	450
2.7	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.35	450
2.8	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	450
2.9	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	450
3.0	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	400
3.1	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	400
3.2	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	400
3.3	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.50	400
3.4	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.80	350
3.5	±0.1, 0.2, 0.3nH	10 / 500MHz	6	0.80	350
3.6	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.80	350
3.7	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.80	350
3.8	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.80	350
3.9	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.80	350
4.0	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.80	350
4.4	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.50	300
4.7	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.50	300
4.9	±0.1, 0.2, 0.3nH/±3, ±5%	10 / 500MHz	6	0.60	300
5.6	±2, ±3,±5%	10 / 500MHz	6	0.60	250
6.1	±2, ±3,±5%	10 / 500MHz	5.5	0.70	250
6.8	±2, ±3,±5%	10 / 500MHz	5	0.75	250
7.4	±2, ±3,±5%	10 / 500MHz	5	0.80	200
8.2	±2, ±3,±5%	10 / 500MHz	4.5	0.90	200
9.1	±2, ±3,±5%	10 / 500MHz	4	1.05	175
9.2	±2, ±3,±5%	10 / 500MHz	4	1.15	150
10	±2, ±3,±5%	10 / 500MHz	3.5	1.30	150

Operating Temperature Range: -55°C to +125°C

Test Equipment: HP4287A+Agilent 16196C

AL01-02 Chip Inductors / High Q Type

Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0.1	±0.1nH	14 / 500MHz	10	0.05	850
0.2	±0.1, 0.2nH	14 / 500MHz	10	0.05	800
0.3	±0.1, 0.2, 0.3nH	14 / 500MHz	10	0.05	800
0.4	±0.1, 0.2, 0.3nH	14 / 500MHz	10	0.05	750
0.5	±0.1, 0.2, 0.3nH	14 / 500MHz	10	0.10	750
0.6	±0.1, 0.2, 0.3nH	14 / 500MHz	9	0.10	750
0.7	±0.1, 0.2, 0.3nH	14 / 500MHz	9	0.10	600
0.8	±0.1, 0.2, 0.3nH	14 / 500MHz	9	0.10	600
0.9	±0.1, 0.2, 0.3nH	14 / 500MHz	9	0.10	600
1.0	±0.1, 0.2, 0.3nH	14 / 500MHz	9	0.15	600
1.1	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.2	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.3	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.4	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.5	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.6	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.15	600
1.7	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.2	500
1.8	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.2	500
1.9	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.2	500
2.0	±0.1, 0.2, 0.3nH	14 / 500MHz	8	0.2	500
2.1	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.2	500
2.2	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.2	500
2.3	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.2	500
2.4	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
2.5	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
2.6	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
2.7	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
2.8	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
2.9	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.25	450
3.0	±0.1, 0.2, 0.3nH	14 / 500MHz	7.5	0.3	400
3.1	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.3	400
3.2	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.3	400
3.3	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.3	400
3.4	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.4	350
3.5	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.4	350
3.6	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.4	350
3.7	±0.1, 0.2, 0.3nH	14 / 500MHz	7	0.4	350
3.8	±0.1, 0.2, 0.3nH	14 / 500MHz	6.5	0.4	350
3.9	±0.1, 0.2, 0.3nH	14 / 500MHz	6.5	0.4	350
4.0	±0.1, 0.2, 0.3nH	14 / 500MHz	6.5	0.4	350
4.4	±0.1, 0.2, 0.3nH	14 / 500MHz	6.5	0.5	300
4.7	±0.1, 0.2, 0.3nH	14 / 500MHz	6	0.5	300
4.9	±0.1, 0.2, 0.3nH	14 / 500MHz	6	0.6	300
5.6	±2, ±5%	14 / 500MHz	6	0.6	250
6.1	±2, ±5%	14 / 500MHz	5.5	0.7	250
6.8	±2, ±5%	14 / 500MHz	5	0.75	250
7.4	±2, ±5%	14 / 500MHz	5	0.8	200
8.2	±2, ±5%	14 / 500MHz	4.5	0.9	200
9.1	±2, ±5%	14 / 500MHz	4	1.05	175
9.2	±2, ±5%	14 / 500MHz	4	1.15	150
10	±2, ±5%	14 / 500MHz	3.5	1.3	150

Operating Temperature Range: -55°C to +125°C

Test Equipment: HP4287A+Agilent 16196B

AL02 Chip Inductors / Standard Type

Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0.2	±0.1, 0.2nH	13 / 500MHz	14	0.10	800
0.3	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.10	800
0.4	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.10	800
0.5	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.15	700
0.6	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.15	700
0.8	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.15	700
0.9	±0.1, 0.2, 0.3nH	13 / 500MHz	14	0.15	700
1.0	±0.1, 0.2, 0.3nH	13 / 500MHz	12	0.15	700
1.1	±0.1, 0.2, 0.3nH	13 / 500MHz	12	0.15	700
1.2	±0.1, 0.2, 0.3nH	13 / 500MHz	12	0.15	700
1.3	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	700
1.4	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	700
1.5	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	700
1.6	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	560
1.7	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	560
1.8	±0.1, 0.2, 0.3nH	13 / 500MHz	10	0.25	560
1.9	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	560
2.0	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	560
2.1	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.2	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.3	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.4	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.5	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.6	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.7	±0.1, 0.2, 0.3nH	13 / 500MHz	8	0.35	440
2.8	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
2.9	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
3.0	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
3.1	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
3.2	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
3.3	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.45	380
3.4	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	380
3.5	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	380
3.6	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	380
3.7	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	340
3.8	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	340
3.9	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.55	340
4.3	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.65	320
4.7	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.65	320
5.4	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.85	280
5.6	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.85	280
5.9	±0.1, 0.2, 0.3nH	13 / 500MHz	6	0.85	280
6.5	±0.1, 0.2, 0.3nH	13 / 500MHz	6	1.05	260
6.8	±0.1, 0.2, 0.3nH	13 / 500MHz	6	1.05	260
7.2	±0.1, 0.2, 0.3nH	13 / 500MHz	6	1.05	260
8.0	±0.1, 0.2, 0.3nH	13 / 500MHz	5.5	1.25	220
8.1	±0.1, 0.2, 0.3nH	13 / 500MHz	5.5	1.25	220
8.2	±0.1, 0.2, 0.3nH	13 / 500MHz	5.5	1.25	220
9.1	±0.1, 0.2, 0.3nH	13 / 500MHz	5.5	1.25	220
10.0	±1, 2, 3, 5%	13 / 500MHz	4.5	1.35	200
10.8	±1, 2, 3, 5%	13 / 500MHz	4.5	1.35	200
12.0	±1, 2, 3, 5%	13 / 500MHz	3.7	1.55	180
13.8	±1, 2, 3, 5%	13 / 500MHz	3.7	1.75	180
15.0	±1, 2, 3, 5%	13 / 500MHz	3.3	1.75	130
17.0	±1, 2, 3, 5%	13 / 500MHz	3.1	1.95	100
18.0	±1, 2, 3, 5%	13 / 500MHz	3.1	2.15	100
20.8	±1, 2, 3, 5%	13 / 500MHz	2.8	2.55	90
22.0	±1, 2, 3, 5%	13 / 500MHz	2.8	2.65	90
27.0	±1, 2, 3, 5%	13 / 500MHz	2.5	3.25	75
33.0	±5%	13 / 500MHz	2.5	4.50	75

Operating Temperature Range: -55°C to +125°C

Test Equipment: HP4287A+Agilent 16196B

AL02-02 Chip Inductors / High Q Type

Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0.2	±0.1, 0.2nH	16 / 500MHz	14	0.1	1000
0.3	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.1	1000
0.4	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.1	1000
0.5	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.12	850
0.6	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.12	850
0.7	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.12	850
0.8	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.12	850
0.9	±0.1, 0.2, 0.3nH	16 / 500MHz	14	0.12	850
1.0	±0.1, 0.2, 0.3nH	16 / 500MHz	12	0.12	850
1.1	±0.1, 0.2, 0.3nH	16 / 500MHz	12	0.12	850
1.2	±0.1, 0.2, 0.3nH	16 / 500MHz	12	0.12	850
1.3	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	850
1.4	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	850
1.5	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	850
1.6	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	675
1.7	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	675
1.8	±0.1, 0.2, 0.3nH	16 / 500MHz	10	0.2	675
1.9	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	675
2.0	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	675
2.1	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.2	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.3	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.4	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.5	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.6	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.7	±0.1, 0.2, 0.3nH	16 / 500MHz	8	0.28	530
2.8	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
2.9	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
3.0	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
3.1	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
3.2	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
3.3	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.35	460
3.4	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	460
3.5	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	460
3.6	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	460
3.7	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	410
3.8	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	410
3.9	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.45	410
4.3	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.55	350
4.7	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.55	350
5.4	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.7	310
5.6	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.7	310
5.9	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.7	310
6.5	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.9	290
6.8	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.9	290
7.2	±0.1, 0.2, 0.3nH	16 / 500MHz	6	0.9	290
8.0	±0.1, 0.2, 0.3nH	16 / 500MHz	5.5	1.0	245
8.1	±0.1, 0.2, 0.3nH	16 / 500MHz	5.5	1.0	245
8.2	±0.1, 0.2, 0.3nH	16 / 500MHz	5.5	1.0	245
9.1	±0.1, 0.2, 0.3nH	16 / 500MHz	5.5	1.0	245
10	±1, 2, 3, 5%	16 / 500MHz	4.5	1.1	220

Operating Temperature Range: -55°C to +125°C

Test Equipment: HP4287A+Agilent 16196B

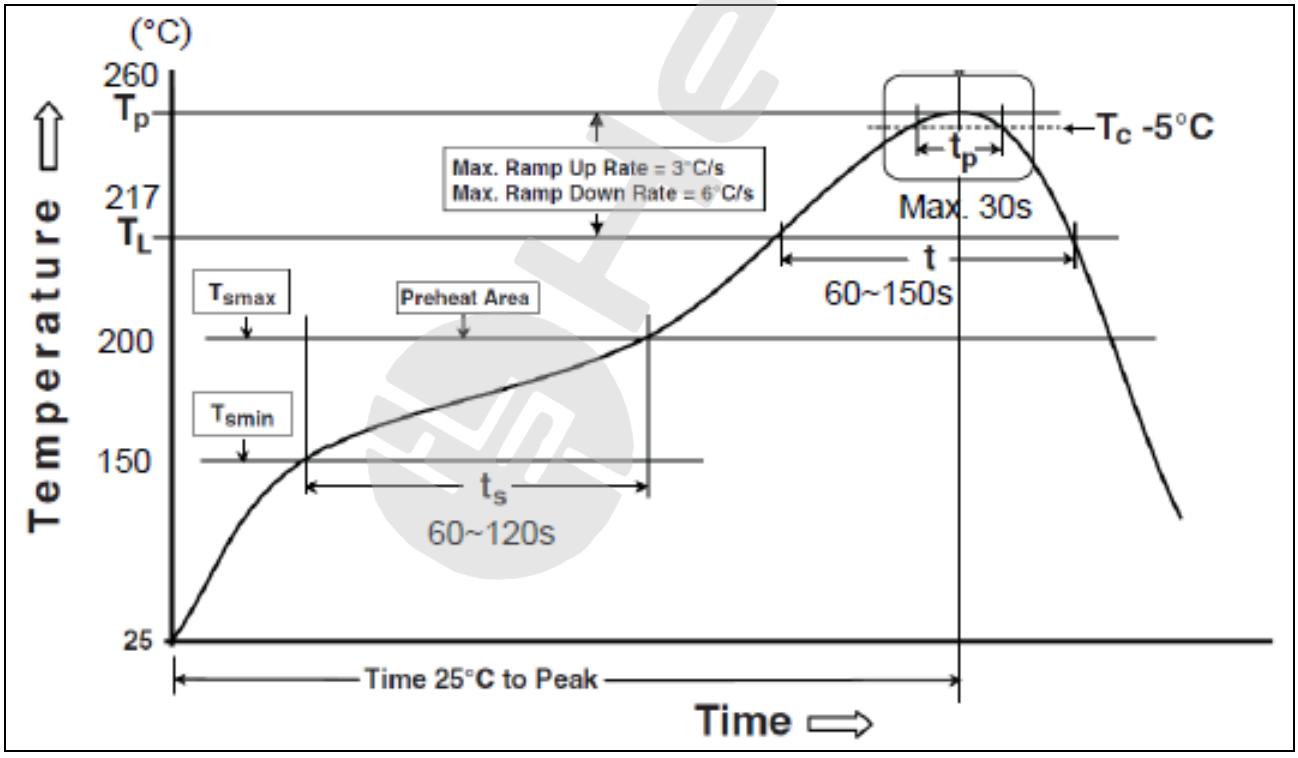
■Environmental Characteristics

Item	Requirement	Test Method
Inductance	As Spec.	Measuring equipment and fixture: 0201: HP4287+Agilent 16196C 0402: HP4287+Agilent 16196B
Insulation Resistance	>1000MΩ	**MIL-STD-202 Method 302** Apply 100V_{DC} for 1minute
Damp Heat with Load	△L≦10%	**MIL-STD-202 Method 103B** 40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Bending Strength	As Spec.	**JIS-C-5201-1 4.33** Bending amplitude 3 mm for 60 seconds.
Solderability	95% min. coverage	**MIL-STD-202 Method 208H** 245±5°C for 3 seconds
Resistance to Soldering Heat	△L≦10%	**MIL-STD-202 Method 210E** 260±5°C for 10 seconds
Dielectric Withstand Voltage	>100V	**MIL-STD-202 Method 301** Apply 100VA (rms) for 1minute
High Temperature Exposure	△L≦10%	**MIL-STD-202, Method 108** 125±3°C,1000 hours
Low Temperature Storage	△L≦10%	**IEC 60068-2-1** Exposed to a temperature of -55±3°C for 2H
Temperature Cycle	△L≦10%	**JESD22 Method JA-104** -55°C to +125°C, 10 cycles

■**Storage Temperature: 15~28℃; Humidity < 80%RH**

■**Shelf Life: 2 years from production date.**

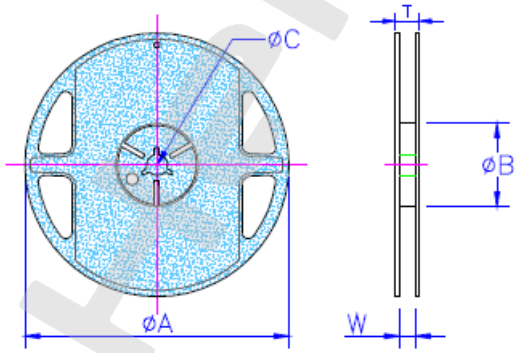
■Soldering Condition (Ref. IPC/JEDEC J-STD-020 & J-STD-002)



Reflow Profiles	
Profile Feature	**Pb-Free Assembly**
Preheat Min. Temperature (T_{smin}) Max Temperature (T_{smax}) Preheating time (t_s) from (T_{smin} to T_{smax})	 150 °C 200 °C 60-120 seconds
Ramp-up rate (T_L to Tp)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Min. Peak temperature (Tp min)	235°C
Max. Peak temperature (Tp max)	260°C
Time (tp) within 5 °C of the specified classification temperature (Tc)	30 seconds max.
Ramp-down rate (Tp to T_L)	6 °C/second max.
Time 25 °C to peak temperature	8 minutes max.

■Packaging

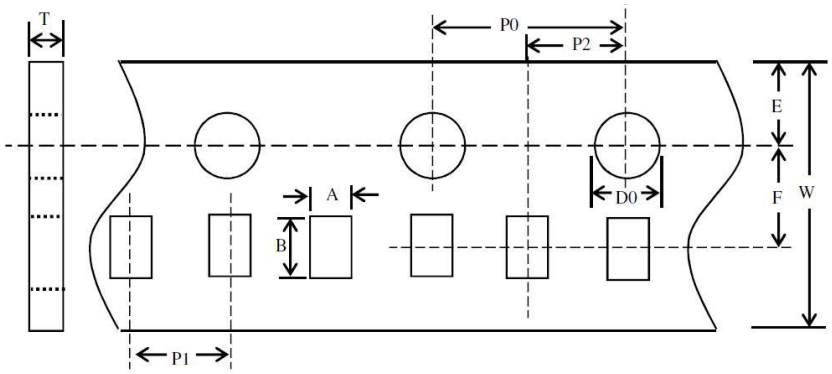
Reel Specifications & Packaging Quantity



Unit: mm

Type	ψA	ψB	ψC	W	T	Quantity (EA)
AL01	178±1.0	60.0+1.0	13.5±0.70	9.5±1.0	11.5±1.0	10,000
AL02	178±1.0	60.0+1.0	13.5±0.70	9.5±1.0	11.5±1.0	10,000

Paper Tape Specifications



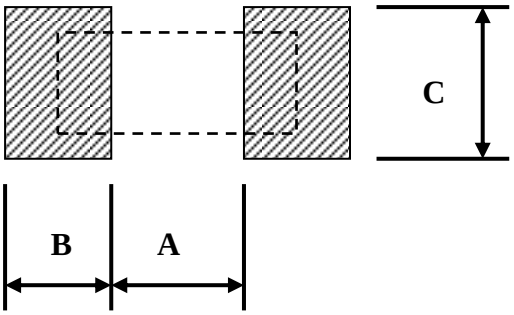
Unit: mm

Type	A	B	W	E	F	P0	P1	P2	ψD0	T
AL01	0.40±0.05	0.70±0.05	8.00±0.10	1.75±0.05	3.50±0.05	4.00±0.10	2.00±0.05	2.00±0.05	1.55±0.03	0.42±0.02
AL02	0.70±0.05	1.16±0.05	8.00±0.10	1.75±0.05	3.50±0.05	4.00±0.10	2.00±0.05	2.00±0.05	1.55±0.05	0.43±0.03

Remark：Test Method

Test direction：bar mark faces left

■Recommend Land Pattern



Unit: mm

Type	A	B	C
AL01	0.30	0.25	0.30±0.2
AL02	0.50	0.45	0.60±0.2

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version C2	Feb. 27,2013	-	- Add AL01-02 (High Q) specification - Delete AL0603 series specification
Version C3	May 07,2015	-	- Modify SRF specifications of AL01-02 Type (from 6.0 to 6.5~10). - Add 4.4~10nH specifications of AL01-01 and AL01-02 Types.
Version C4	Jun. 02,2015	-	- Add AL02-02 Chip Inductors / High Q Type specification.
Version C5	Aug. 20,2015	-	- Note Operating Temperature Range and Test Equipment. - Correct the Inductance Tolerance for AL01-02 5.6~10 nH.
Version C6	May. 02, 2016	-	- Modify Storage Temperature. - Remove Material Description.
Version C7	Apr.05, 2017	-	- Modify Inductance Tolerance(nH or %). - Modify Paper Tape Specifications.
Version C8	Nov.11, 2017	-	- Correct the reference standard in Environmental Characteristics.
Version C9	Oct.21, 2020	-	- Change Operating Temperature Range. - Modify test methods and reference standard of Environmental Characteristics.
Version D	Jan.28, 2022	-	- Modify IR reflow profile to comply IPC/JEDEC J-STD-020. - Add shelf life description.
Version D1	Mar.20, 2023	-	- Add Reflow Profiles table.