

SMD CERAMIC WIRE-WOUND INDUCTORS

AISC-1210-xxx



RoHS
Compliant



3.65 x 2.95 x 2.70mm

FEATURES:

- Exceptional high Q and SRF for high frequency applications
- Low DCR and high rated current
- Tight tolerances, many values at 2%
- Small size suitable for surface mounting
- Epoxy coating protects wound wire

APPLICATIONS:

- Widely used in mobile phones
- Bluetooth, W-LAN, Broadband Network
- High Frequency Communication Circuits
- Camcorders, TVs and other electronic devices

ELECTRICAL SPECIFICATIONS:

PARAMETERS

ABRACON P/N:	AISC-01210-xxx Series
Operating temperature	-40°C to +125°C
Storage temperature	-10°C to +40°C, 70% RH max.

Part Number AISC-1210- Inductance	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	MHz
Symbol	L	-	Q	Freq.	DCR	Ir	S.R.F
AISC-1210-3N9	3.9	J, K	30	100/300	0.05	1000	6000
AISC-1210-4N7	4.7	J, K	30	100/300	0.065	1000	5800
AISC-1210-8N2	8.2	J, K	30	100/300	0.07	1000	5500
AISC-1210-10N	10	G, J, K	40	100/300	0.08	1000	4000
AISC-1210-12N	12	G, J, K	40	100/300	0.08	1000	3200
AISC-1210-15N	15	G, J, K	40	100/300	0.10	1000	3200
AISC-1210-18N	18	G, J, K	50	100/300	0.10	1000	2800
AISC-1210-22N	22	G, J, K	50	100/300	0.10	1000	2200
AISC-1210-27N	27	G, J, K	50	100/300	0.11	1000	1800
AISC-1210-33N	33	G, J, K	55	100/300	0.11	1000	1800
AISC-1210-39N	39	G, J, K	55	100/300	0.12	1000	1500
AISC-1210-43N	43	G, J, K	55	100/300	0.12	1000	1500
AISC-1210-47N	47	G, J, K	55	100/300	0.13	1000	1500
AISC-1210-56N	56	G, J, K	55	100/300	0.14	1000	1450
AISC-1210-68N	68	G, J, K	55	100/300	0.15	900	1200
AISC-1210-82N	82	G, J, K	55	100/300	0.20	900	1000
AISC-1210-R10	100	G, J, K	55	100/300	0.20	850	900
AISC-1210-R12	120	G, J, K	60	100/300	0.25	800	800
AISC-1210-R15	150	G, J, K	60	100/300	0.25	750	700
AISC-1210-R18	180	G, J, K	60	50/300	0.30	700	650
AISC-1210-R22	220	G, J, K	60	50/300	0.40	770	650
AISC-1210-R27	270	G, J, K	40	50/300	0.40	630	580
AISC-1210-R33	330	G, J, K	45	50/150	0.58	590	580
AISC-1210-R39	390	G, J, K	45	50/150	0.58	530	510
AISC-1210-R47	470	G, J, K	45	50/150	0.80	490	480
AISC-1210-R56	560	G, J, K	45	35/150	1.10	460	420



SMD CERAMIC WIRE-WOUND INDUCTORS

AISC-1210-xxx



RoHS
Compliant



3.65 x 2.95 x 2.70mm

Key Electrical Specifications (Con'd)

Part Number AISC-0603-	Inductance	Tolerance	Min. Quality Factor	L/Q Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	-	MHz	Ω	mA	MHz
Symbol	L	-	Q	Freq.	DCR	Ir	S.R.F
AISC-1210-R68	680	G, J, K	45	35/150	1.20	430	400
AISC-1210-R82	820	G, J, K	45	35/150	1.82	400	370
AISC-1210-1R0	1000	G, J, K	45	35/150	1.85	320	340
AISC-1210-1R2	1200	G, J, K	35	35/150	1.87	300	220
AISC-1210-1R5	1500	G, J, K	20	7.9/50	1.95	310	160
AISC-1210-1R8	1800	G, J, K	30	7.9/50	2.25	310	160
AISC-1210-2R2	2200	G, J, K	25	7.9/50	2.41	310	130
AISC-1210-2R7	2700	G, J, K	25	7.9/50	2.85	300	110
AISC-1210-3R0	3000	G, J, K	20	7.9/25	3.12	300	110
AISC-1210-3R9	3900	G, J, K	20	7.9/25	3.60	290	60
AISC-1210-4R7	4700	G, J, K	20	7.9/25	4.00	280	60
AISC-1210-5R6	5600	G, J, K	15	7.9/25	5.00	250	50
AISC-1210-6R8	6800	G, J, K	15	7.9/7.9	8.00	230	40
AISC-1210-8R6	8600	G, J, K	15	7.9/7.9	9.00	200	40

Test Conditions and Equipemnt

- Ambient Temperature: $20 \pm 15^{\circ}\text{C}$
- Relative Humidity: $65\% \pm 20\%$
- Air Pressure: 86KPa to 106KPa

Inductance (L): Agilent4287A+Agilent16197A or equivalent, -13dBm or 10mA

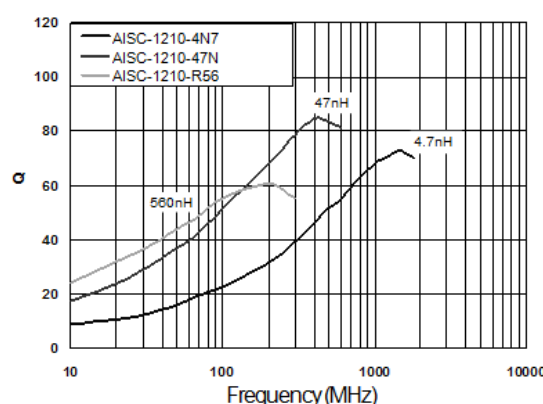
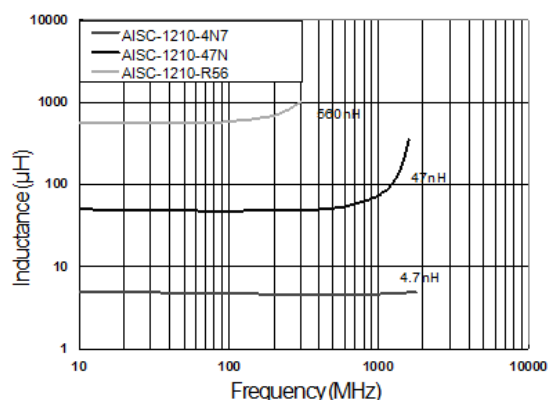
Direct Current Resistance (DCR): HIOKI 3540 or equivalent

Q Factor (Q): Agilent4287A+Agilent16197A or equivalent, -13dBm or 10mA

Self-Resonant Frequency (SRF): Agilent4991B+Agilent16197A and HP 8753E or equivalent, -20dBm or 50mV

Rated Current (Ir): Ir is direct electric current as chip surface temperature rose just 20°C against chip initial surface temperature (T_a)

ELECTRICAL CHARACTERISTICS CURVES



SMD CERAMIC WIRE-WOUND INDUCTORS

AISC-1210-xxx



RoHS
Compliant



3.65 x 2.95 x 2.70mm

PART IDENTIFICATIONS:

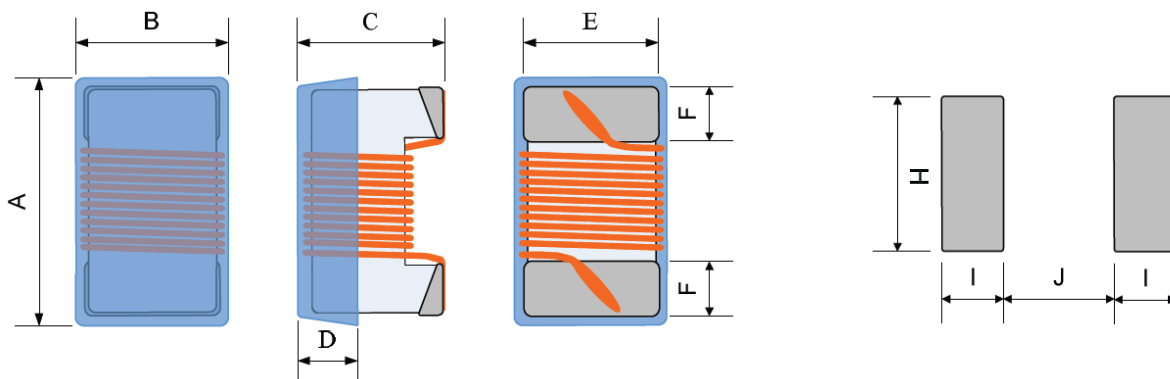
AISC-1210- -

Inductance Code
Please refer to the Table

Tolerance Code
G: $\pm 2\%$
J: $\pm 5\%$
K: $\pm 10\%$

Packaging
T: 1kpcs/reel

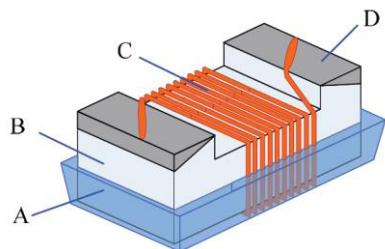
OUTLINE DIMENSIONS:



A MAX.	B MAX.	C MAX.	D REF.	E REF.	F REF.	H REF.	I REF.	J REF.
3.65	2.95	2.70	0.51	2.1 $\pm$ 0.2	0.5 $\pm$ 0.2	3.02	1.02	1.78

Materials

Dimension: mm



No.	Components	Material
A	Coating	Ultraviolet epoxy resin
B	Core	Ceramic
C	Wire	Polyurethane system enameled copper wire
D	Electrodes	Mo-Mn with Ni and Au plating



SMD CERAMIC WIRE-WOUND INDUCTORS

AISC-1210-xxx

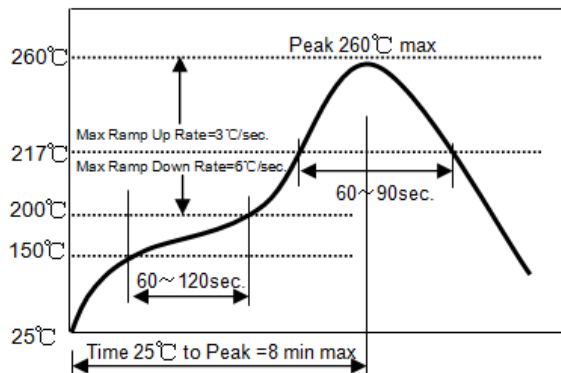


RoHS
Compliant



3.65 x 2.95 x 2.70mm

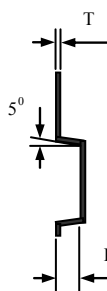
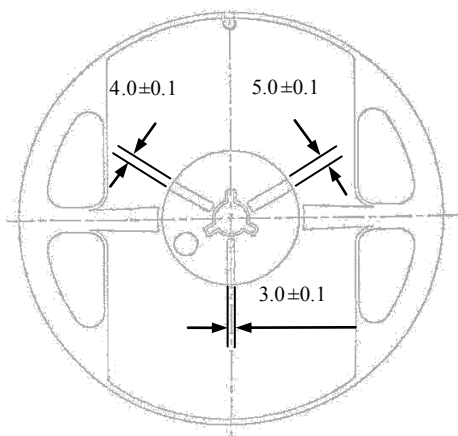
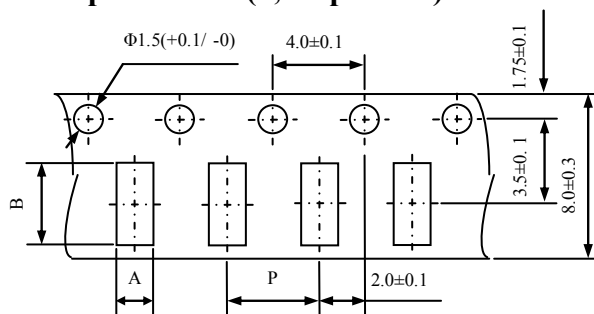
REFLOW PROFILE:



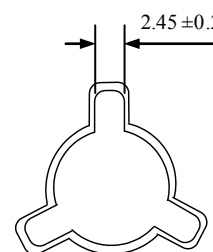
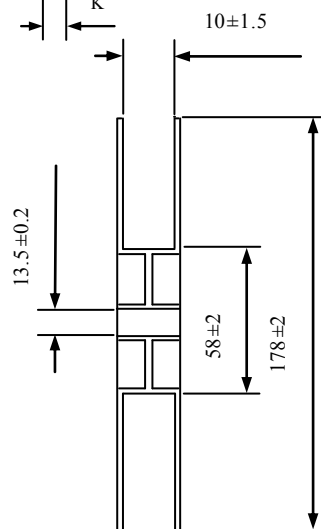
- Preheat condition: 150 ~200°C/60~120sec.
- Allowed time above 217°C: 60~90sec.
- Max temp: 260°C
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

TAPE & REEL:

T= tape and reel (1,000pcs/reel)



A	B	P	K Max	T
2.96±0.2	3.60±0.2	4.0±0.1	2.50±0.3	0.3±0.1



Dimension: mm

ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ABRACON:

[AISC-1210-4R7J-T](#) [AISC-1210-22NJ-T](#) [AISC-1210-R18J-T](#) [AISC-1210-15NJ-T](#) [AISC-1210-R15J-T](#) [AISC-1210-3N9J-T](#) [AISC-1210-4N7J-T](#) [AISC-1210-43NJ-T](#) [AISC-1210-33NJ-T](#) [AISC-1210-R68J-T](#) [AISC-1210-3R0J-T](#) [AISC-1210-82NJ-T](#) [AISC-1210-56NJ-T](#) [AISC-1210-R12J-T](#) [AISC-1210-R10J-T](#) [AISC-1210-1R8J-T](#) [AISC-1210-3R9J-T](#) [AISC-1210-2R2J-T](#) [AISC-1210-R47J-T](#) [AISC-1210-R33J-T](#) [AISC-1210-6R8J-T](#) [AISC-1210-1R5J-T](#) [AISC-1210-R27J-T](#) [AISC-1210-68NJ-T](#) [AISC-1210-18NJ-T](#) [AISC-1210-5R6J-T](#) [AISC-1210-27NJ-T](#) [AISC-1210-10NJ-T](#) [AISC-1210-R82J-T](#) [AISC-1210-R39J-T](#) [AISC-1210-R56J-T](#) [AISC-1210-8N2J-T](#) [AISC-1210-1R2J-T](#) [AISC-1210-2R7J-T](#) [AISC-1210-12NJ-T](#) [AISC-1210-47NJ-T](#) [AISC-1210-8R6J-T](#) [AISC-1210-39NJ-T](#) [AISC-1210-1R0J-T](#) [AISC-1210-R22J-T](#)