MULTILAYER CERAMIC CHIP INDUCTORS

AIMC-0402

RoHS Compliant

1.0 x 0.5 x 0.5mm

FEATURES:

- High self-resonant frequency
- Multilayer monolithic construction yields high reliability
- Excellent solderability & heat resistance for reflow soldering

APPLICATIONS:

- Bluetooth
- Mobile phones such as GSM, CDMA, PDC
- High frequency telecommunication circuits
- Other high frequency circuit general use

STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N:	AIMC-0402-xxx Series
Operating temperature:	-55°C to + 125°C

Part No.	L(nH)	Tolerance	L,Q Test Freq. (MHz)	Q (MIN)	SRF(MHz) (min)	DCR(Ω) (max)	Ir(mA) (max)
AIMC-0402-1N0	1.0	C, S	100	9	10000	0.08	400
AIMC-0402-1N2	1.2	C, S	100	9	10000	0.08	400
AIMC-0402-1N5	1.5	C, S	100	9	6000	0.10	400
AIMC-0402-1N8	1.8	C, S	100	9	6000	0.12	400
AIMC-0402-2N2	2.2	C, S	100	9	6000	0.12	400
AIMC-0402-2N7	2.7	C, S	100	9	6000	0.13	400
AIMC-0402-3N3	3.3	C, S	100	9	6000	0.15	400
AIMC-0402-3N9	3.9	C, S	100	9	4500	0.21	400
AIMC-0402-4N7	4.7	C, S	100	9	4500	0.21	300
AIMC-0402-5N6	5.6	C, S	100	9	4000	0.23	300
AIMC-0402-6N8	6.8	C, S	100	9	4000	0.25	300
AIMC-0402-8N2	8.2	C, S	100	9	3600	0.35	300
AIMC-0402-10N	10	J	100	9	3200	0.42	300
AIMC-0402-12N	12	J	100	9	2800	0.50	300
AIMC-0402-15N	15	J	100	9	2500	0.60	300
AIMC-0402-18N	18	J	100	9	2200	0.80	300
AIMC-0402-22N	22	J	100	9	1900	0.85	300
AIMC-0402-27N	27	J	100	9	1600	1.00	300
AIMC-0402-33N	33	J	100	9	1300	1.00	200
AIMC-0402-39N	39	J	100	9	1200	1.30	200
AIMC-0402-47N	47	J	100	9	1000	1.50	200
AIMC-0402-56N	56	J	100	9	800	1.80	200
AIMC-0402-68N	68	J	100	9	800	1.95	180
AIMC-0402-82N	82	J	100	9	600	2.10	150
AIMC-0402-R10	100	J	100	9	600	2.50	150
AIMC-0402-R12	120	J	100	9	600	2.80	150

Test Conditions and equipments
L, Q: HP4291 Impedance Analyzer, 100MHz, 50mV
DCR: HP4263A LCR meter
SRF: HP4291 Impedance analyzer, HP8753 Network analyzer
Ir: DC Power Supplier, Current Meter, Thermometer. ΔL/L (initial) ≥ -5% or ΔT ≤ 20˚C
Unless otherwise specified
Temperature : Ordinary Temperature (5 to 35℃)
Humidity : Ordinary Humidity (25 to 85% RH)
Atmospheric Pressure : 86 to 106 kPa

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

AIMC-0402-[ ][ ]-[ ]

Inductance Code
Please refer to the Electrical Spec Table

Tolerance
C: ±0.2nH*
S: ±0.3nH*
J: ±5%*

Packaging
T: Tape and Reel (10kpcs / reel)

* C, S for L = 1.0~8.2nH
J for L = 10~120nH

ABRACON IS ISO 9001:2008 CERTIFIED

ABRACON LLC
The Power of Linking Together

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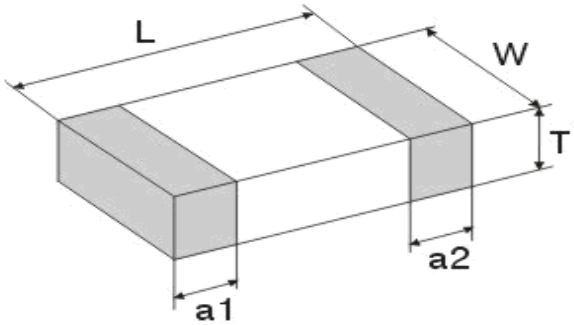
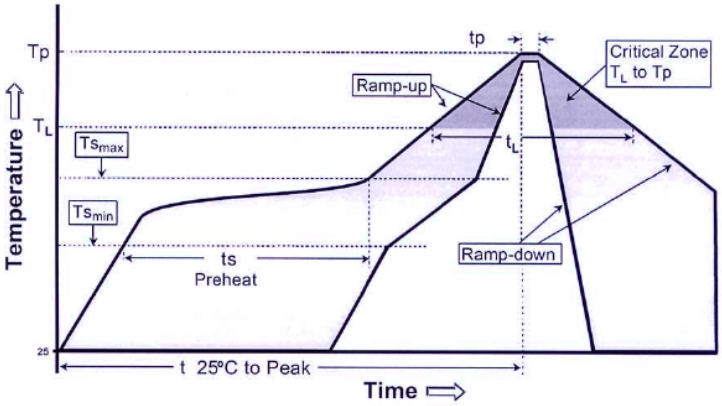
OUTLINE DRAWING:

Dimensions: mm [inch]



Series	L	W	T	a1,a2
AIMC-0402	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10
	[0.04±0.006]	[0.02±0.006]	[0.02±0.006]	[0.01±0.004]

REFLOW PROFILE:



Profile Feature	Lead-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3℃ C/second max.
Preheat – Temperature Min (Tsmin) – Temperature Max (Tsmax) – Time (tsmin to tsmax) min to tsmax)	150 ℃ 200 ℃ 60-180 seconds
Time maintained above: – Temperature (TL) – Time (tL)	217 ℃ 60-150 seconds
Peak/Classification Temperature (Tp) Peak/Classification Time (Tp)	260 ℃ 3-4 seconds
Time within 5 °C of actual Peak Temperature (tp)	20-40 seconds
Ramp-Down Rate	6°C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

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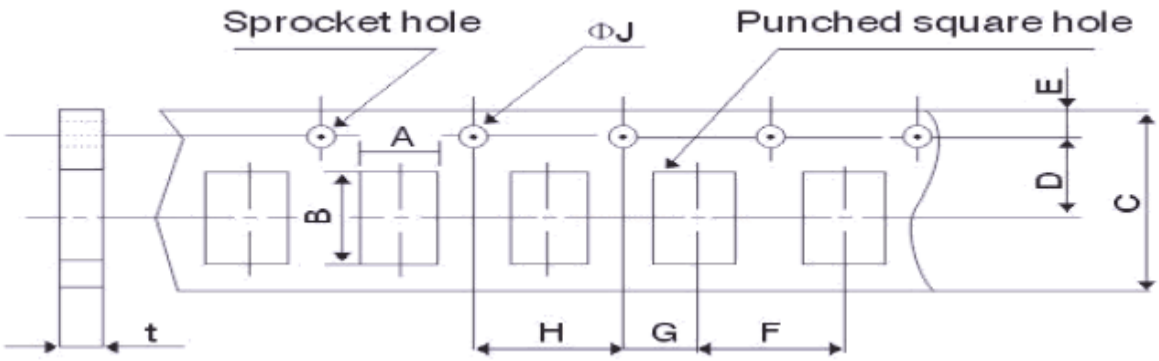
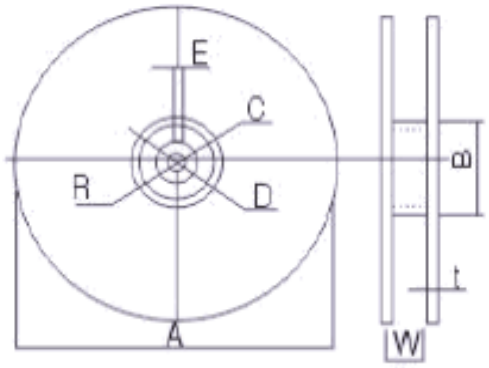
TAPE & REEL:

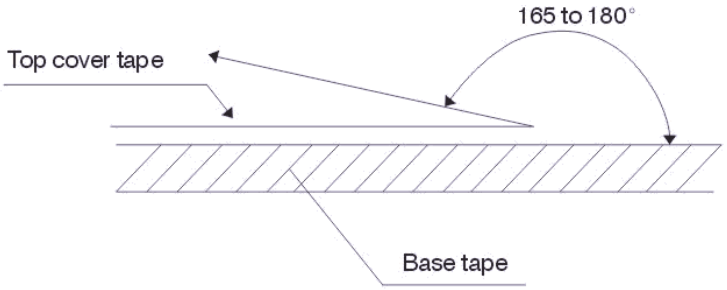
T = Tape and reel 10,000pcs/reel



Codes	A	B	C	D	E	F	G	H	ΦJ	t(max)
AIMC-0402	0.65±0.10	1.15±0.10	8.0±0.3	3.5±0.05	1.75±0.1	2.0±0.05	2.0±0.05	4.0±0.1	1.5+0.1/-0	0.8±0.05



A	178±2
B	60±2
C	13.0±0.5
D	21.0±0.8
E	2.0±0.5
W	10.0±1.15
t	1.2±0.2
R	1.0±0.25



Test condition:
1) peel angle: 165°~180° vs. carrier tape.
2) peel speed: 300 mm/min±10%.

Dimension: mm

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