

SERIES: FCBA1-0402 | DESCRIPTION: MINIATURE SMD CHIP INDUCTORS

FEATURES

- Ceramic construction with high SRF & Q values
- Non-magnetic coil form assures thermal stability & predictability
- Ferrite core construction provides lower DCR & higher current values
- Suitable for high frequency electronic applications



MODEL	Inductance L [nH]	Tolerance [±%]	Q min	Test Frequency L & Q [MHz]	SRF min [MHz]	DC Resistance max [Ω]	Rated Current max [mA]
FCBA1-0402F-1N0K	1.0	10	13	250	10000	0.045	1360
FCBA1-0402F-1N2K	1.2	10	8	250	10000	0.135	640
FCBA1-0402F-1N8K	1.8	10	16	250	6000	0.070	1040
FCBA1-0402F-1N9K	1.9	10	16	250	6000	0.070	1040
FCBA1-0402F-2N0K	2.0	10	18	250	6000	0.070	1040
FCBA1-0402F-2N2K	2.2	10	18	250	6000	0.070	960
FCBA1-0402F-2N4K	2.4	10	16	250	6000	0.080	790
FCBA1-0402F-2N5K	2.5	10	15	250	6000	0.120	640
FCBA1-0402F-2N7K	2.7	10	15	250	6000	0.120	640
FCBA1-0402F-2N9K	2.9	10	8	250	6000	0.300	640
FCBA1-0402F-3N3J	3.3	5, 10	20	250	6000	0.066	840
FCBA1-0402F-3N6J	3.6	5, 10	20	250	6000	0.066	840
FCBA1-0402F-3N9J	3.9	5, 10	20	250	6000	0.066	840
FCBA1-0402F-4N3J	4.3	5, 10	20	250	6000	0.091	700
FCBA1-0402F-4N7J	4.7	5, 10	18	250	4500	0.200	640
FCBA1-0402F-5N1J	5.1	5, 10	18	250	4800	0.083	800
FCBA1-0402F-5N6J	5.6	5, 10	20	250	4800	0.083	760
FCBA1-0402F-6N2J	6.2	5, 10	23	250	4800	0.083	760
FCBA1-0402F-6N8J	6.8	5, 10	23	250	4800	0.260	680
FCBA1-0402F-7N5J	7.5	5, 10	23	250	4800	0.100	680
FCBA1-0402F-8N2J	8.2	5, 10	25	250	4400	0.100	630
FCBA1-0402F-8N7J	8.7	5, 10	25	250	4100	0.200	480
FCBA1-0402F-9N0J	9.0	5, 10	25	250	4100	0.100	680
FCBA1-0402F-9N5J	9.5	5, 10	25	250	4000	0.200	480
FCBA1-0402F-10NJ	10	5, 10	25	250	3900	0.200	480
FCBA1-0402F-11NJ	11	5, 10	25	250	3680	0.120	640
FCBA1-0402F-12NJ	12	5, 10	25	250	3600	0.120	640
FCBA1-0402F-13NJ	13	5, 10	25	250	3450	0.210	640
FCBA1-0402F-15NJ	15	5, 10	25	250	3280	0.300	560
FCBA1-0402F-16NJ	16	5, 10	25	250	3100	0.220	560
FCBA1-0402F-18NJ	18	5, 10	25	250	3100	0.230	420

FCBA1-0402F-19NJ	19	5, 10	25	250	3040	0.200	480
FCBA1-0402F-20NJ	20	5, 10	25	250	3000	0.250	420
FCBA1-0402F-24NJ	24	5, 10	25	250	2700	0.300	400
FCBA1-0402F-27NJ	27	5, 10	24	250	2480	0.520	280
FCBA1-0402F-30NJ	30	5, 10	25	250	2350	0.500	400
FCBA1-0402F-33NJ	33	5, 10	24	250	2350	0.650	350
FCBA1-0402F-39NJ	39	5, 10	25	250	2100	0.750	200
FCBA1-0402F-43NJ	43	5, 10	25	250	2030	0.810	100
FCBA1-0402F-51NJ	51	5, 10	25	250	1750	0.820	100
FCBA1-0402F-56NJ	56	5, 10	25	250	1750	0.970	100
FCBA1-0402F-68NJ	68	5, 10	25	250	1620	1.120	100
FCBA1-0402F-82NJ	82	5, 10	25	250	1260	1.700	50
FCBA1-0402F-R10J	100	5, 10	25	250	1160	2.000	30
FCBA1-0402F-R12J	120	5, 10	25	250	1100	2.200	30

Notes:

1. Electrical specifications measured at 25°C
2. Rated Current - The current when the coil temperature increases up to max. $\Delta T = 15^\circ C$ ($T_A = 20^\circ C$)
3. Operating Temperature: $-40^\circ C$ to $125^\circ C$

PART NUMBER KEY

FCBA1 - 0402F - XXX X

Type / Product Series

FCBA1 = Miniature SMD Chip Inductors

Form Factor

0402F

Inductance Tolerance

G = ±2%

J = ±5%

K = ±10%

M = ±20%

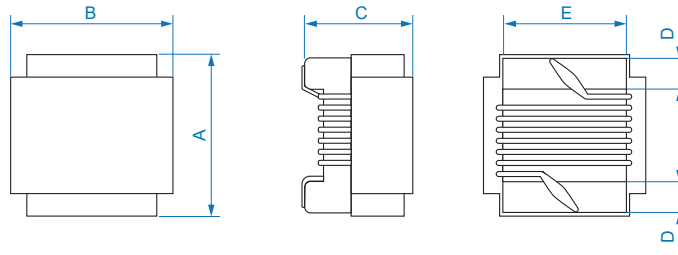
Inductance *

47N = 47 nH

* Note: Inductance expressed by three figures. The unit is micro henry (nH). The first and second figures are significant digits, the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "N" (3N9 = 3.9 nH). In that case, all figures are significant digits.

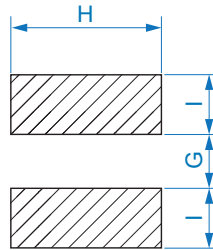
MECHANICAL DRAWING

Units: mm



PAD LAYOUT

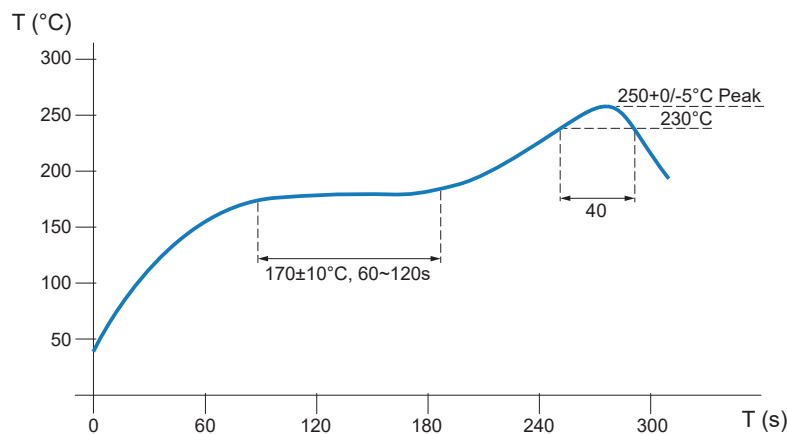
Units: mm



MECHANICAL DIMENSIONS (mm)

Product Series	A max	B max	C max	D	E	G	H	I
FCBA1-0402	1.19	0.70	0.66	0.25	0.51	0.46	0.66	0.36

RECOMMENDED REFLOW SOLDERING CONDITIONS



The recommended reflow conditions are set according to the soldering equipment used.

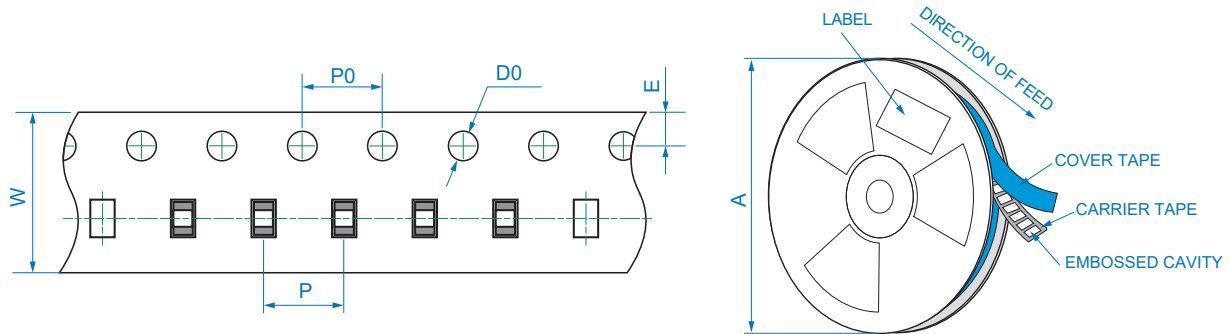
Since various manufactures may have different reflow soldering equipment, products, process conditions, set methods, etc., when setting the reflow contions, please adjust and confirm according to users' environment/equipment.

Notes:

- a) Solder reflow temperature: +250°C max. for maximum 10 seconds
- b) It is not recommended to solder inductors by soldering iron
- c) Please contact us for details

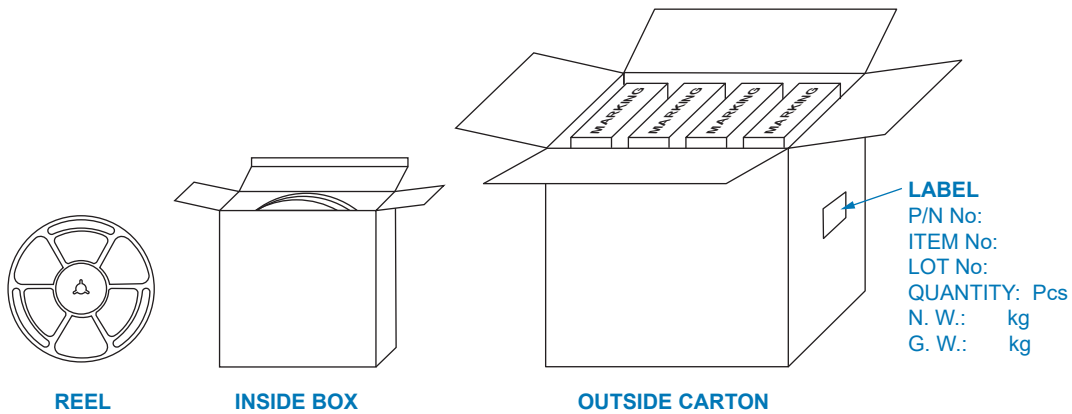
QUANTITY PER REEL & PACKING INFORMATION

Units: mm



TAPE DIMENSIONS (mm)

Product Series	W	P	P0	D0	E	A
FCBA1-0402	8.0	2.0	4.0	1.5	1.75	178



QUANTITY PER PACKAGE

Product Series	Pcs per Reel	Pcs per Inside Box	Pcs per Outside Carton
FCBA1-0402	5000	25000	300000

Storage Conditions

- Temperature conditions: <35°C.
- Humidity conditions between 35% - 65%.
- Moisture Sensitivity Level (MSL): Level 1.
- Storage of material to be in a sulfur and chlorine free environment.

REVISION HISTORY

Rev.	Description	Date
1	initial release	May/24/2024
A		

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



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