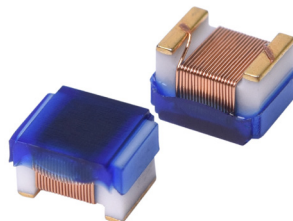




## SERIES: FCBA1-1210 | DESCRIPTION: MINIATURE SMD CHIP INDUCTORS

### 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]	Test Frequency L [MHz]	Tolerance [±%]	Q min	Test Frequency Q [MHz]	SRF min [MHz]	DC Resistance max [Ω]	Rated Current max [mA]
FCBA1-1210F-3N9K	3.9	100	10	30	300	6000	0.05	1000
FCBA1-1210F-4N7K	4.7	100	10	30	300	5800	0.065	1000
FCBA1-1210F-8N2K	8.2	100	10	30	300	5500	0.07	1000
FCBA1-1210F-10NJ	10	100	2, 5, 10	40	300	4000	0.08	1000
FCBA1-1210F-12NJ	12	100	2, 5, 10	40	300	3200	0.08	1000
FCBA1-1210F-15NJ	15	100	2, 5, 10	40	300	3200	0.10	1000
FCBA1-1210F-18NJ	18	100	2, 5, 10	50	300	2800	0.10	1000
FCBA1-1210F-22NJ	22	100	2, 5, 10	50	300	2000	0.10	1000
FCBA1-1210F-27NJ	27	100	2, 5, 10	50	300	1800	0.11	1000
FCBA1-1210F-33NJ	33	100	2, 5, 10	55	300	1800	0.11	1000
FCBA1-1210F-39NJ	39	100	2, 5, 10	55	300	1800	0.12	1000
FCBA1-1210F-47NJ	47	100	2, 5, 10	55	300	1500	0.13	1000
FCBA1-1210F-56NJ	56	100	2, 5, 10	55	300	1450	0.14	1000
FCBA1-1210F-68NJ	68	100	2, 5, 10	55	300	1200	0.15	900
FCBA1-1210F-82NJ	82	100	2, 5, 10	55	300	1000	0.20	900
FCBA1-1210F-R10J	100	100	2, 5, 10	55	300	900	0.21	850
FCBA1-1210F-R12J	120	100	2, 5, 10	60	300	800	0.21	800
FCBA1-1210F-R15J	150	100	2, 5, 10	60	300	780	0.25	750
FCBA1-1210F-R18J	180	50	2, 5, 10	60	300	760	0.30	700
FCBA1-1210F-R22J	220	50	2, 5, 10	60	300	650	0.32	670
FCBA1-1210F-R27J	270	50	2, 5, 10	55	300	620	0.34	630
FCBA1-1210F-R33J	330	50	2, 5, 10	45	150	600	0.38	590
FCBA1-1210F-R39J	390	50	2, 5, 10	45	150	510	0.58	530
FCBA1-1210F-R47J	470	50	2, 5, 10	45	150	500	0.80	490
FCBA1-1210F-R56J	560	35	2, 5, 10	45	150	420	1.10	460
FCBA1-1210F-R68J	680	35	2, 5, 10	45	150	400	1.20	500
FCBA1-1210F-R82J	820	35	2, 5, 10	45	150	370	1.82	400
FCBA1-1210F-1R0J	1000	35	2, 5, 10	45	150	340	1.85	320
FCBA1-1210F-1R2J	1200	35	2, 5, 10	35	150	220	1.87	300
FCBA1-1210F-1R5J	1500	7.9	2, 5, 10	30	50	160	1.95	310

FCBA1-1210F-1R8J	1800	7.9	2, 5, 10	30	50	160	2.25	310
FCBA1-1210F-2R2J	2200	7.9	2, 5, 10	30	50	110	2.41	310
FCBA1-1210F-2R7J	2700	7.9	2, 5, 10	25	25	100	2.85	300
FCBA1-1210F-3R3J	3300	7.9	2, 5, 10	20	25	85	3.12	300
FCBA1-1210F-3R9J	3900	7.9	2, 5, 10	20	25	80	3.60	290
FCBA1-1210F-4R7J	4700	7.9	5, 10	16	25	60	4.00	280
FCBA1-1210F-5R6J	5600	7.9	5, 10	20	7.9	60	5.00	250
FCBA1-1210F-6R8J	6800	7.9	5, 10	20	7.9	55	8.00	230
FCBA1-1210F-8R2J	8200	7.9	5, 10	20	7.9	50	8.60	170
FCBA1-1210F-100J	10000	7.9	5, 10	20	7.9	20	6.00	200

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 - 1210F - XXX X**

Type / Product Series

FCBA1 = Miniature SMD Chip Inductors

Form Factor

1210F

Inductance Tolerance

G = ±2%

J = ±5%

K = ±10%

M = ±20%

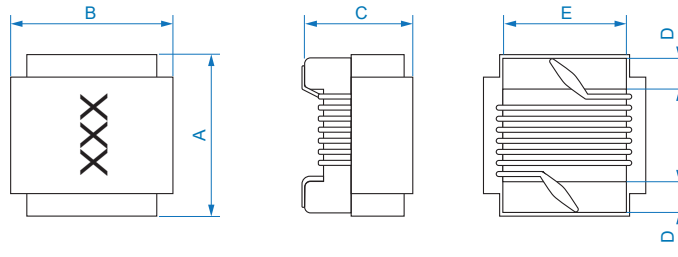
Inductance \*

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.

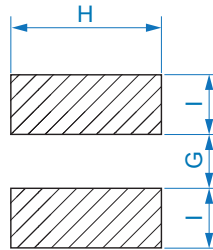
## MECHANICAL DRAWING

Units: mm



## PAD LAYOUT

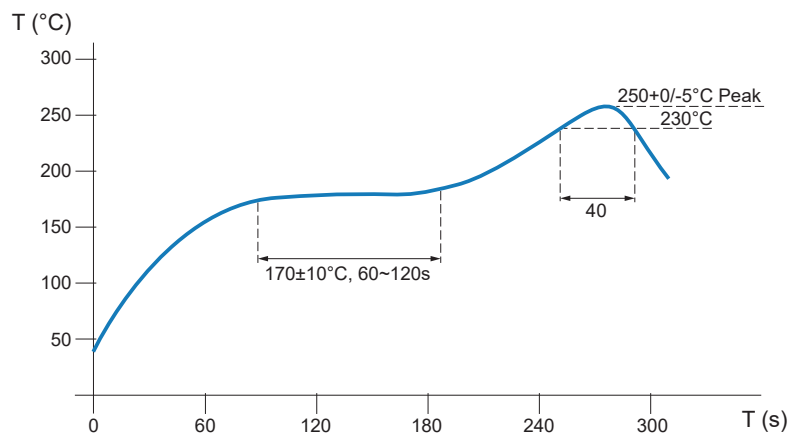
Units: mm



### MECHANICAL DIMENSIONS (mm)

Product Series	A max	B max	C max	D	E	G	H	I
FCBA1-1210	3.56	2.92	2.25	0.51	2.10	1.78	2.54	1.02

## RECOMMENDED REFLOW SOLDERING CONDITIONS



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

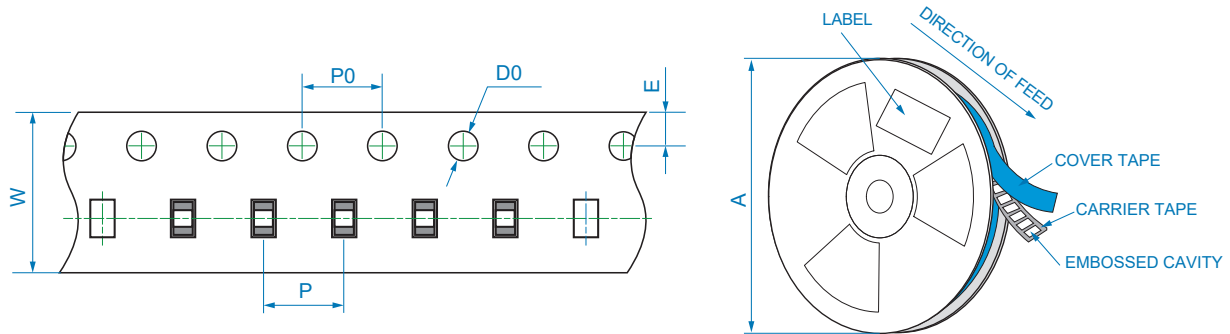
Since various manufactures may have different reflow soldering equipment, products, process conditions, set methods, etc., when setting the reflow contions, please adjust and confirm according to users' environment/equipment.

**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

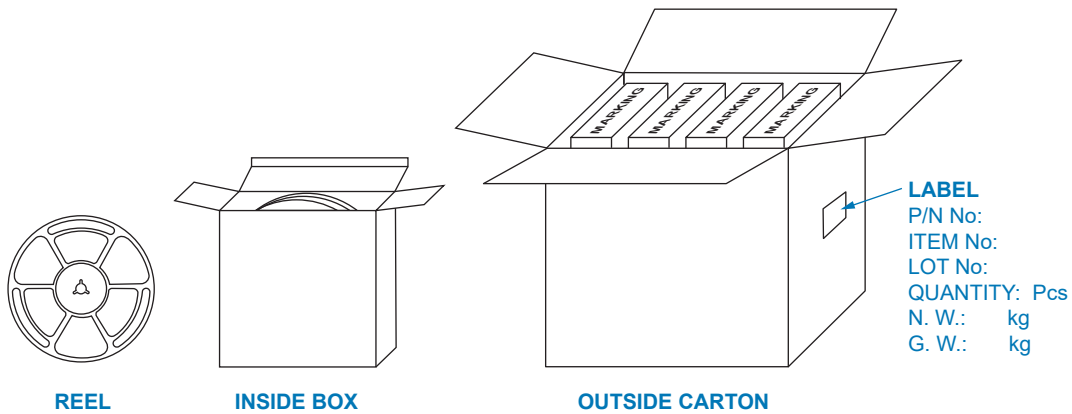
## QUANTITY PER REEL & PACKING INFORMATION

Units: mm



### TAPE DIMENSIONS (mm)

Product Series	W	P	P0	D0	E	A
FCBA1-1210	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
FCBA1-1210	2000	10000	120000

### Storage Conditions

- Temperature conditions: <math><35^{\circ}\text{C}</math>.
- 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

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

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**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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