SERIES: FCBA1-0603 | 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	Tolerance	Q	Test Frequency L & Q	SRF	DC Resistance	Rated Current
	[nH]	[±%]	min	[MHz]	min [MHz]	max [Ω]	max [mA]
FCBA1-0603F-1N6K	1.6	10	18	250	12500	0.040	700
FCBA1-0603F-1N8K	1.8	10	16	250	12500	0.045	700
FCBA1-0603F-2N0K	2.0	10	12	250	10000	0.090	700
FCBA1-0603F-2N2K	2.2	10	12	250	10000	0.090	700
FCBA1-0603F-3N3K	3.3	10	20	250	5900	0.075	700
FCBA1-0603F-3N6J	3.6	2, 5, 10	22	250	5900	0.075	700
FCBA1-0603F-3N9J	3.9	2, 5, 10	22	250	5900	0.080	700
FCBA1-0603F-4N7J	4.7	2, 5, 10	20	250	5800	0.116	700
FCBA1-0603F-5N1J	5.1	2, 5, 10	20	250	5700	0.120	700
FCBA1-0603F-6N2J	6.2	2, 5, 10	27	250	5700	0.110	700
FCBA1-0603F-6N8J	6.8	2, 5, 10	27	250	5700	0.110	700
FCBA1-0603F-7N5J	7.5	2, 5, 10	28	250	4800	0.110	700
FCBA1-0603F-8N2J	8.2	2, 5, 10	28	250	4700	0.120	700
FCBA1-0603F-9N1J	9.1	2, 5, 10	26	250	4500	0.150	700
FCBA1-0603F-9N5J	9.5	2, 5, 10	26	250	4500	0.150	700
FCBA1-0603F-10NJ	10	2, 5, 10	31	250	4500	0.130	700
FCBA1-0603F-12NJ	12	2, 5, 10	35	250	4000	0.130	700
FCBA1-0603F-15NJ	15	2, 5, 10	30	250	4000	0.150	700
FCBA1-0603F-18NJ	18	2, 5, 10	34	250	3300	0.160	700
FCBA1-0603F-22NJ	22	2, 5, 10	38	250	3000	0.190	700
FCBA1-0603F-27NJ	27	2, 5, 10	36	250	2800	0.220	600
FCBA1-0603F-30NJ	30	2, 5, 10	37	250	2250	0.220	600
FCBA1-0603F-33NJ	33	2, 5, 10	36	250	2300	0.220	600
FCBA1-0603F-36NJ	36	2, 5, 10	36	250	2080	0.250	600
FCBA1-0603F-39NJ	39	2, 5, 10	40	250	2200	0.250	600
FCBA1-0603F-47NJ	47	2, 5, 10	36	200	2000	0.280	600
FCBA1-0603F-56NJ	56	2, 5, 10	36	200	1900	0.280	600
FCBA1-0603F-68NJ	68	2, 5, 10	36	200	1700	0.340	600
FCBA1-0603F-82NJ	82	2, 5, 10	34	150	1700	0.550	400
FCBA1-0603F-91NJ	91	2, 5, 10	30	150	1400	0.630	400

Please read our datasheet & drawing disclaimer here.

FCBA1-0603F-R10J	100	5, 10	30	150	1400	0.630	400
FCBA1-0603F-R12J	120	2, 5, 10	32	150	1300	0.73	300
FCBA1-0603F-R15J	150	2, 5, 10	28	150	990	0.80	280
FCBA1-0603F-R16J	160	2, 5, 10	25	100	990	1.25	250
FCBA1-0603F-R18J	180	2, 5, 10	25	100	990	1.45	240
FCBA1-0603F-R20J	200	2, 5, 10	25	100	900	1.55	200
FCBA1-0603F-R22J	220	2, 5, 10	25	100	900	2.10	200
FCBA1-0603F-R27J	270	2, 5, 10	24	100	900	2.30	170
FCBA1-0603F-R30J	300	2, 5, 10	24	100	1000	3.00	100
FCBA1-0603F-R33J	330	2, 5, 10	25	100	900	3.89	100
FCBA1-0603F-R39J	390	2, 5, 10	25	100	800	4.35	100
FCBA1-0603F-R47J	470	2, 5, 10	25	100	700	7.00	75

Notes:
1. *Electrical specifications measured at 25°C*
2. *Rated Current - The current when the coil temperature increases up to max. ΔT = 15°C (T_A = 20°C)*
3. *Operating Temperature: -40°C to 125°C*

PART NUMBER KEY

FCBA1 - 0603F - XXX X

Type / Product Series
FCBA1 = Miniature SMD Chip Inductors

Form Factor
0603F

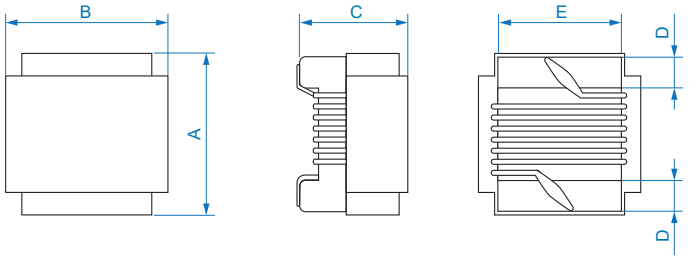
Inductance Tolerance
G = ±2%
J = ±5%
K = ±10%
M = ±20%

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.*

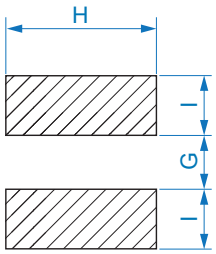
MECHANICAL DRAWING

Units: mm



PAD LAYOUT

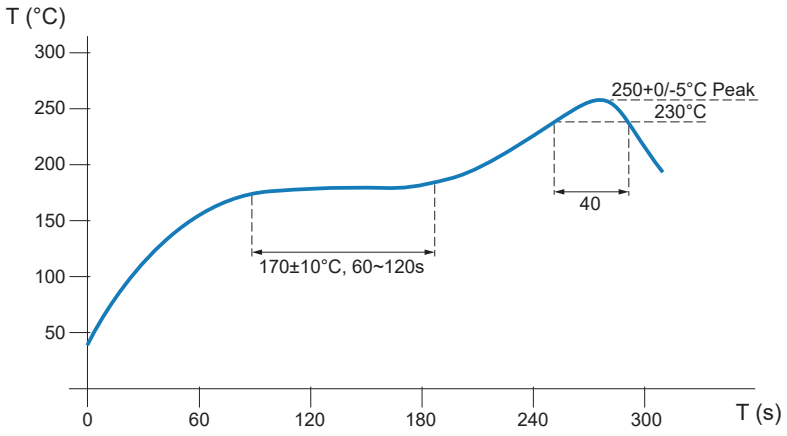
Units: mm



MECHANICAL DIMENSIONS (mm)

Product Series	A max	B max	C max	D	E	G	H	I
FCBA1-0603	1.80	1.12	1.02	0.38	0.76	0.64	1.02	0.64

RECOMMENDED REFLOW SOLDERING CONDITIONS



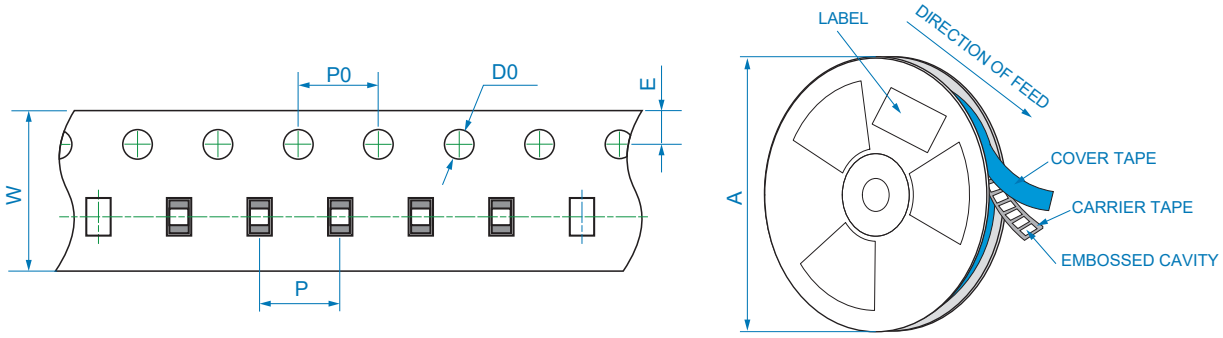
The recommended reflow conditions are set according to the soldering equipment used.
Since various manufactures may have different reflow soldering equipment, products, process conditions, set methods, etc., when setting the reflow conditions, please adjust and confirm according to users' environment/equipment.

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

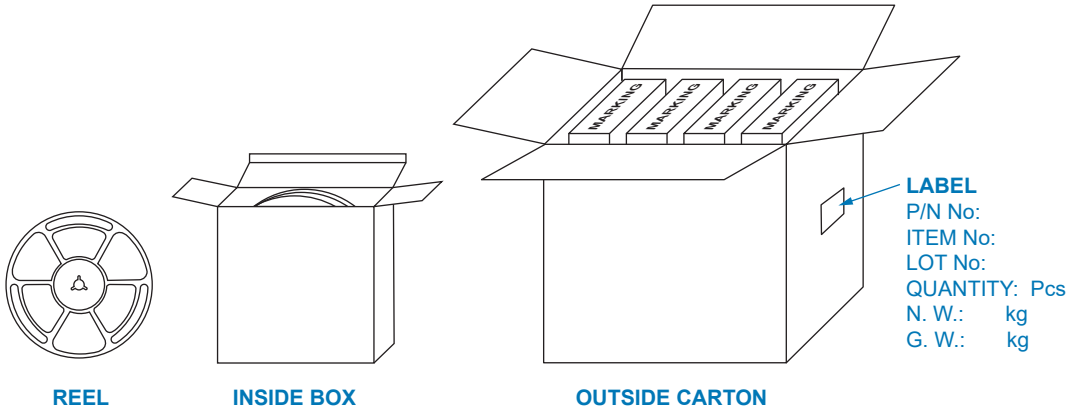
QUANTITY PER REEL & PACKING INFORMATION

Units: mm



TAPE DIMENSIONS (mm)

Product Series	W	P	P0	D0	E	A
FCBA1-0603	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
FCBA1-0603	4000	20000	240000

Storage Conditions

a) Temperature conditions: <35°C.
b) Humidity conditions between 35% - 65%.
c) Moisture Sensitivity Level (MSL): Level 1.
d) 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 disclaimers removed.	Jul/17/2026

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.

Bel Fuse Inc.
300 Executive Drive, Suite 300
West Orange, NJ 07052
United States

Toll Free 866-239-5777
Tel 516-239-5777 | Fax 516-239-7208
sales@signaltransformer.com
techhelp@signaltransformer.com

belfuse.com

© 2026 Bel Fuse Inc.