Features

- Miniature size
- High self-resonant frequency
- High current
- Low DCR
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

Applications

- Automotive systems
- Noise filters
- DC power lines

CWF1612A Series – 0603 Chip Inductors

Electrical Specifications @ 25 °C

Bourns Part No.	Inductance L (µH)	Q Typ.	L & Q Test Freq. / Voltage	SRF (MHz) Typ.	DCR (Ω) Max.	IDC[2] (mA) Max.
CWF1612A-47NK	0.047	17	7.9 MHz / 0.5 V	1700	0.075	1500
CWF1612A-72NK	0.072			1700	0.12	1500
CWF1612A-R10K	0.10			1500	0.12	1500
CWF1612A-R12K	0.12			1350	0.15	1500
CWF1612A-R15K	0.15			1350	0.15	1450
CWF1612A-R18K	0.18			1150	0.15	1400
CWF1612A-R33K	0.33			850	0.46	900
CWF1612A-R39K	0.39			810	0.51	1100
CWF1612A-R47K	0.47			720	0.62	1050
CWF1612A-R56K	0.56			600	0.44	850
CWF1612A-R68K	0.68			600	0.52	850
CWF1612A-R82K	0.82			480	0.69	750
CWF1612A-R91K	0.91			330	0.76	670
CWF1612A-1R0K	1.00			310	0.81	600
CWF1612A-1R2K	1.20			270	0.87	550
CWF1612A-1R5K	1.50			270	1.06	540
CWF1612A-1R8K	1.80			230	1.1	520
CWF1612A-2R2K	2.20			130	1.2	500
CWF1612A-2R7K	2.70			105	1.5	480
CWF1612A-3R3K	3.30			84	1.5	440
CWF1612A-3R9K	3.90			80	1.6	430
CWF1612A-4R7x[1]	4.70	18		69	2.1	420
CWF1612A-5R6x	5.60			65	2.6	350
CWF1612A-6R8x	6.80	19		55	3.1	330
CWF1612A-7R8x	7.80	17		47	3.5	320
CWF1612A-8R2x	8.20			42	3.8	300
CWF1612A-100x	10.00	19		40	4.8	270

Notes:
1. "x" indicates Inductance Tolerance: J = ±5 %, K = ±10 %.
2. IDC: Applying the current to coils, the inductance change shall be less than 20 % of initial value.

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

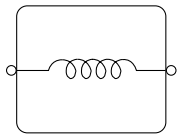
General Specifications

Operating Temperature
..... -55 °C to +125 °C
(Temperature rise included)
Storage Temperature
..... -55 °C to +125 °C
Rated Current
.....Inductance drops ≤20 % at IDC
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

Materials

Core..... Ferrite
Wire .....Enameled copper
Terminal Finish ..... Sn
Packaging..... 3000 pcs. per 7-inch reel

Electrical Schematic



How to Order

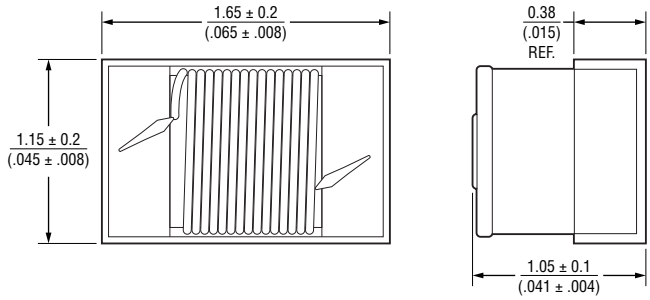
CWF1612A - 47N K

Model
Value Code (see table)
Tolerance
J = ±5 %
K = ±10 %

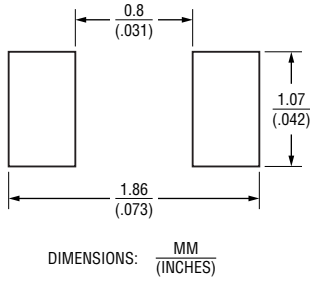
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
Specifications are subject to change without notice.

Product Dimensions

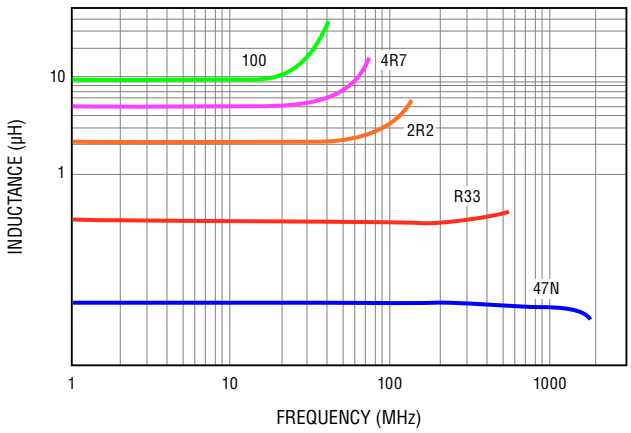


Recommended Layout

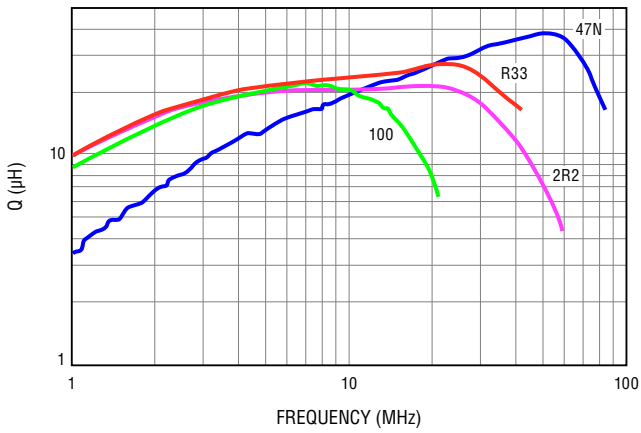


Typical Curves

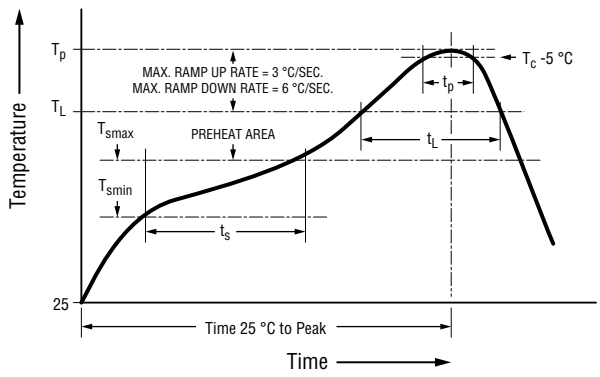
Inductance vs. Frequency



Q vs. Frequency



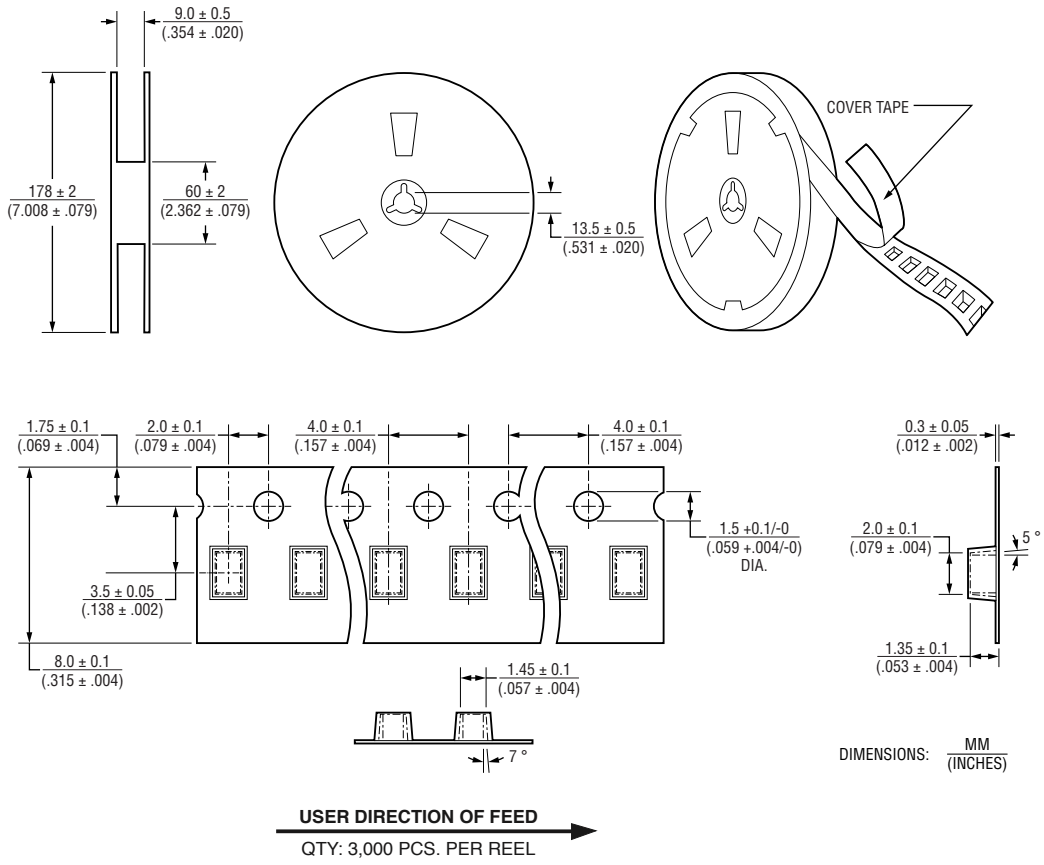
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Reflow temperature	260 °C
Time (t_p) at T_c - 5 °C (T_p should be equal to or less than T_c)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

Packaging Specifications



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REV. 02/25

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