



## Features

- High Q value, self-resonant frequency
- Tight tolerance
- Epoxy cover for mechanical stability and pick & place
- Surface mount
- RoHS compliant\*

## Applications

- High frequency TV and radio receivers
- Radio transmitters
- RF amplifiers
- Tuning applications

# AC4842R Series – Air Coil Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance		Q Min.	Test Frequency (MHz)	DC Resistance (mΩ) Max.	SRF (GHz) Min.	Rated Current (A) Max.
	L (nH)	Tol. (%)					
AC4842R-22NK	22	10	100	150	4.2	3.2	3.0
AC4842R-27NK	27				4.0	2.7	3.5
AC4842R-33NK	33				4.8	2.5	3.0
AC4842R-39NK	39				4.4	2.1	3.0
AC4842R-47NK	47				5.6	2.1	3.0
AC4842R-56NK	56				6.2	1.5	3.0
AC4842R-68NK	68				8.2	1.5	2.5
AC4842R-82NK	82				9.4	1.3	2.5
AC4842R-R10K	100				12.3	1.2	1.7
AC4842R-R12K	120				17.3	1.1	1.5
AC4842R-R15K	150	33.0	0.75	1.2			

#### Notes:

2 % tolerance is available. Replace "K" in the part number with "G"  
 5 % tolerance is available. Replace "K" in the part number with "J"

### Additional Information

Click these links for more information:

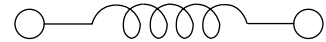


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### General Specifications

Operating Temperature ..... -25 °C to +125 °C  
 Storage Temperature ..... -25 °C to +85 °C  
 Temperature Rise ..... 15 °C  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM)..... N/A

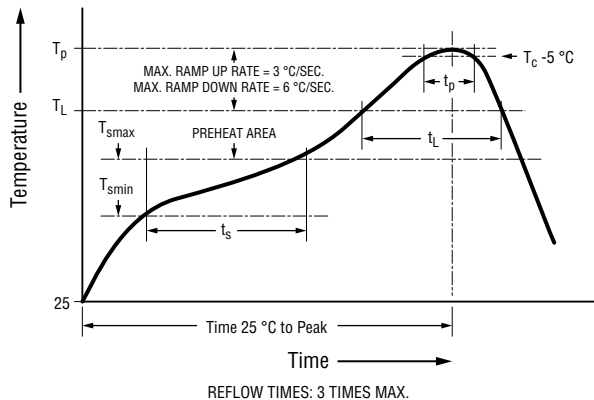
### Electrical Schematic



### Materials

Wire ..... Enameled Copper  
 Cover ..... Epoxy  
 Terminal ..... Sn/Ag/Cu  
 Packaging ..... 1000 pcs. per 13-inch reel

### Soldering Profile



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
Peak package body temperature ( $T_p$ )	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.



**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 Specifications are subject to change without notice.

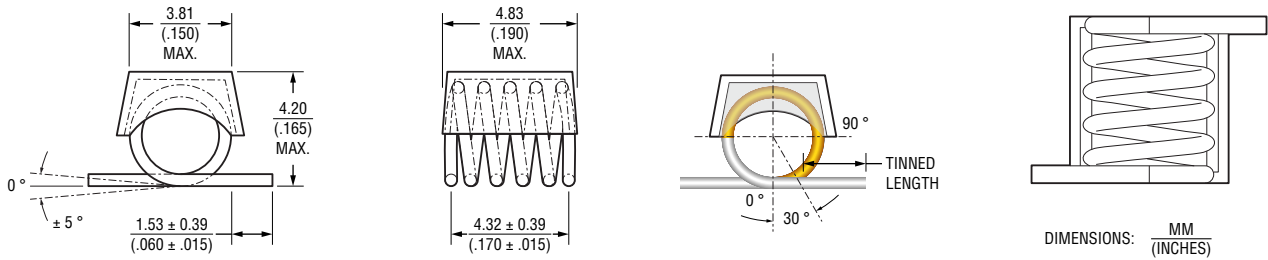
Users should verify actual device performance in their specific applications.

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# AC4842R Series – Air Coil Inductors

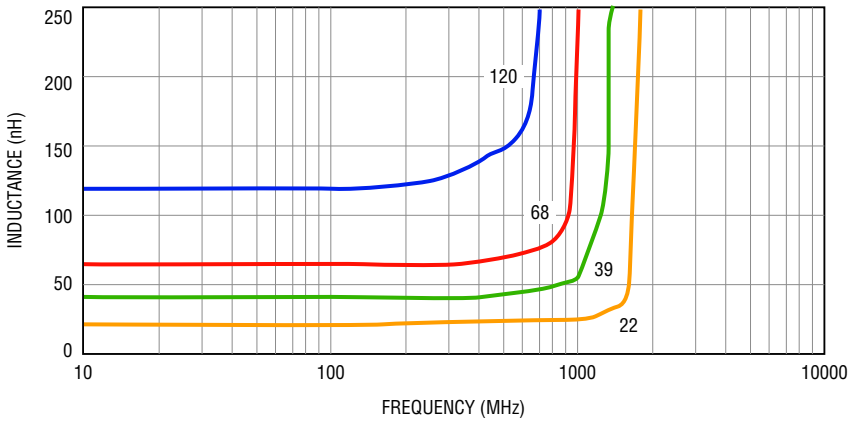
**BOURNS®**

## Product Dimensions

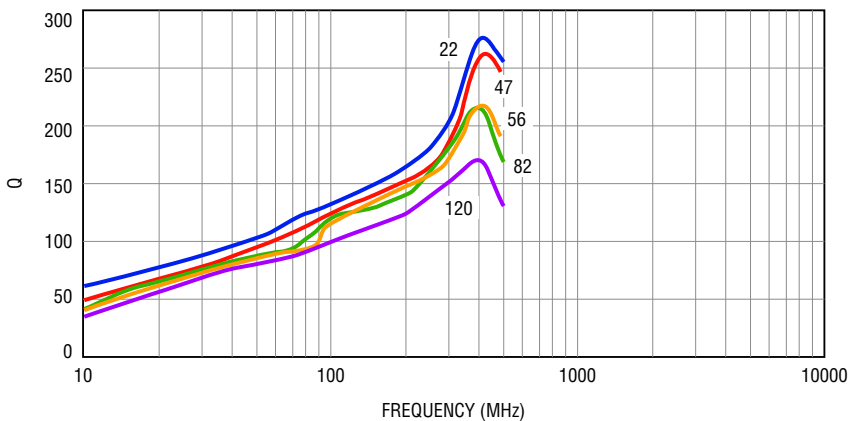


## Electrical Curves

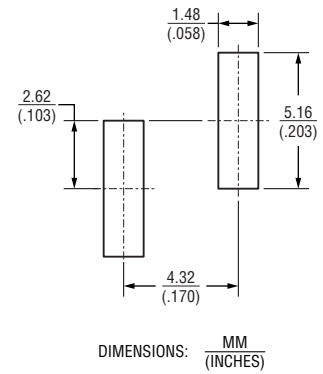
**INDUCTANCE VS. FREQUENCY**



**TYPICAL Q VS. FREQUENCY**



## Recommended Layout



## How to Order

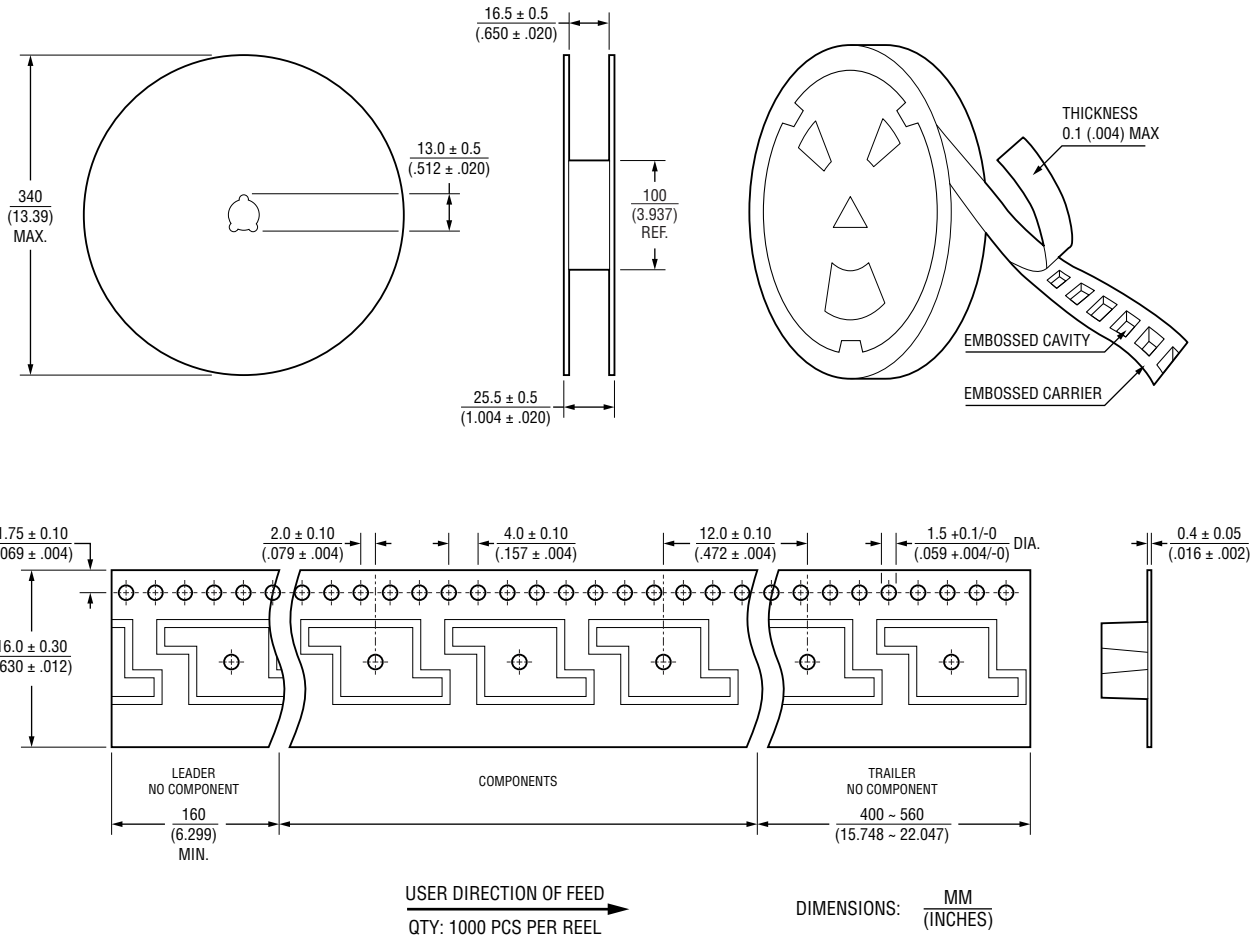
**AC4842R - 22N K**

Model \_\_\_\_\_  
 Value Code \_\_\_\_\_  
 (See Table)  
 Tolerance \_\_\_\_\_  
 K = 10 %  
 G = 2 %  
 J = 5 %

# AC4842R Series – Air Coil Inductors

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## Packaging Specifications



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