



## 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

# AC6830R Series – Air Coil Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance		Q Min.	Test Frequency (MHz)	SRF (GHz) Min.	DCR (mΩ) Max.	I <sub>rms</sub> (A) Max.	Turns
	L (nH)	ToI. (%)						
AC6830R-17N_	17.5	±2, ±5	100	150	2.2	4.5	4	6
AC6830R-22N_	22.0	±2, ±5	102		2.1	5.2		7
AC6830R-28N_	28.0	±2, ±5	105		1.8	6.0		8
AC6830R-35N_	35.5	±2, ±5	112		1.5	6.8		9
AC6830R-43N_	43.0	±2, ±5	106		1.2	7.9		10

Note:  
Underscore indicates Inductance Tolerance Code:  
G = ±2 %, J = ±5 %

### Electrical Schematic



### Materials

Wire ..... Enameled Copper  
Cover ..... Epoxy  
Terminal ..... Sn/Ag/Cu  
Packaging ..... 500 pcs. per 7-inch reel

### Additional Information

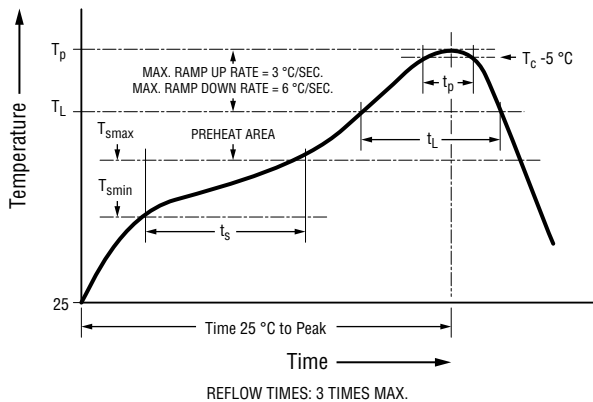
Click these links for more information:



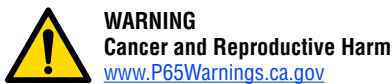
### General Specifications

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

### Soldering Profile



Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T <sub>smin</sub> ) - Temperature Max. (T <sub>smax</sub> ) - Time (t <sub>s</sub> ) from T <sub>smin</sub> to T <sub>smax</sub>	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>p</sub> )	3 °C/second max.
Liquidous temperature (T <sub>L</sub> ) Time (t <sub>L</sub> ) maintained above T <sub>L</sub>	217 °C 60-150 seconds
Peak package body temperature (T <sub>p</sub> )	260 °C
Time (t <sub>p</sub> ) at T <sub>c</sub> - 5 °C (T <sub>p</sub> should be equal to or less than T <sub>c</sub> )	< 30 seconds
Ramp-Down Rate (T <sub>p</sub> to T <sub>L</sub> )	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.



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

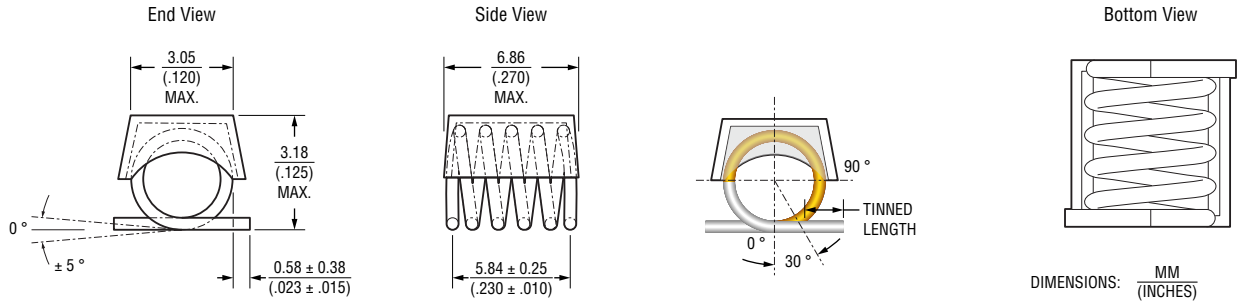
Users should verify actual device performance in their specific applications.

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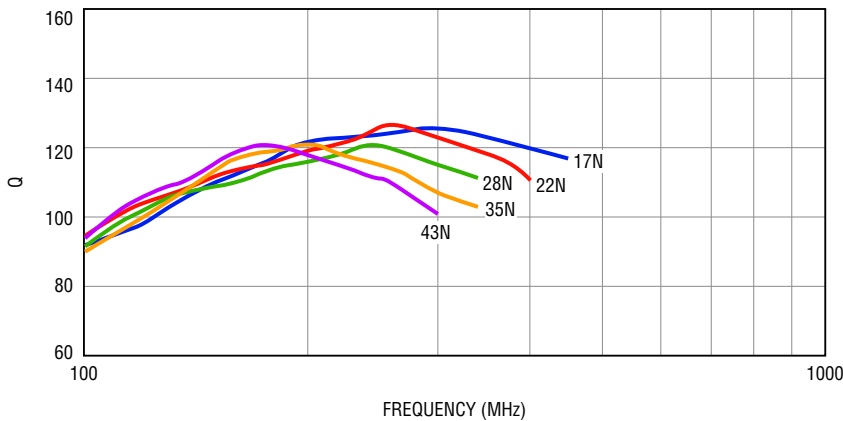
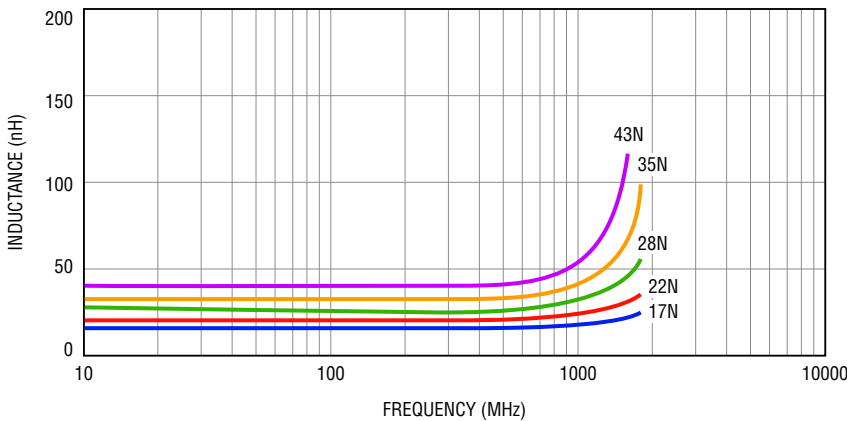
# AC6830R Series – Air Coil Inductors

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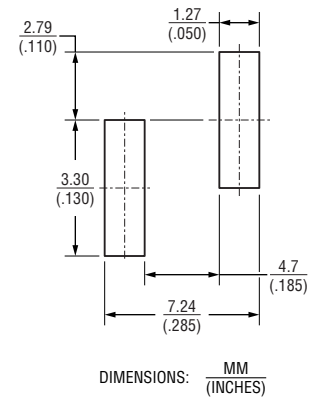
## Product Dimensions



## Inductance vs. IDC



## Recommended Layout



## How to Order

**AC6830R - 17N**

Model \_\_\_\_\_

Value Code \_\_\_\_\_  
(See Table)

Tolerance \_\_\_\_\_  
G = ±2 %  
J = ±5 %

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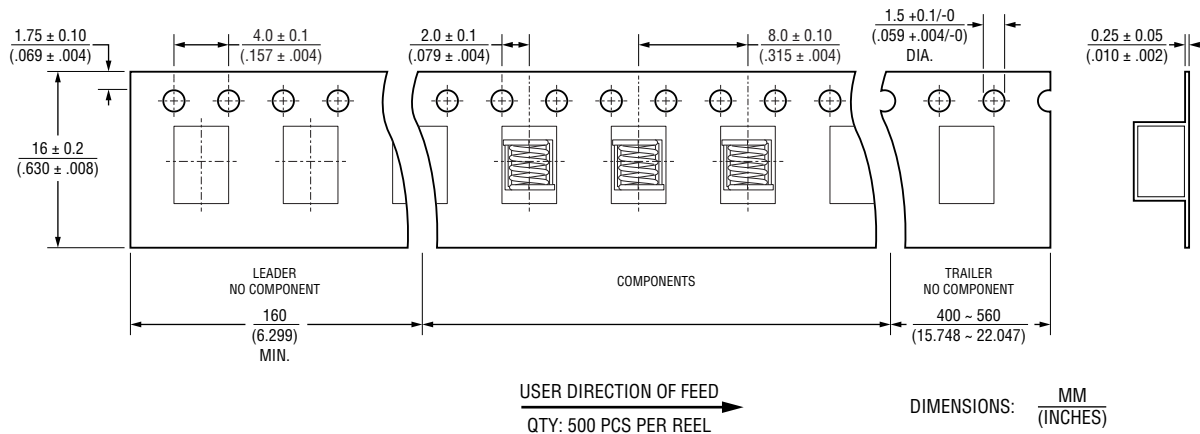
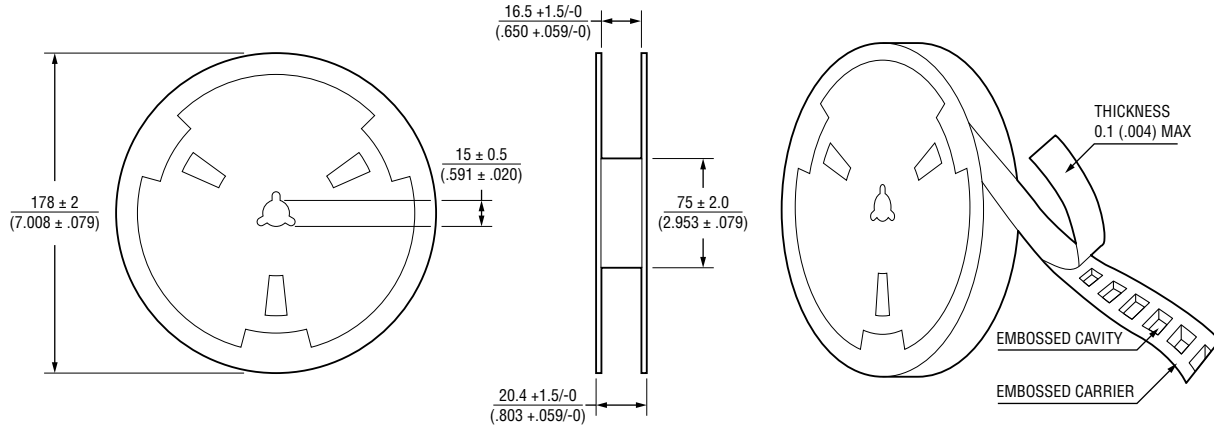
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# AC6830R Series – Air Coil Inductors

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## Packaging Specifications



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