



## 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

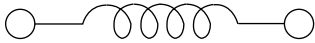
# AC4013R Series – Air Coil Inductors

### 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.
	L (nH)	ToI. (%)					
AC4013R-5N6_	5.6	±2, ±5	100	800	6.5	9	1.6
AC4013R-7N1_	7.15	±2, ±5			6	10	
AC4013R-8N8_	8.8	±2, ±5			6	12	
AC4013R-9N8_	9.85	±2, ±5			5.2	13	
AC4013R-12N_	12.55	±2, ±5			4.6	14	

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

### Electrical Schematic



### Materials

Wire ..... Enameled Copper  
Cover ..... Epoxy  
Terminal ..... Sn/Ag/Cu  
Packaging ..... 2000 pcs. per 7-inch reel

### Additional Information

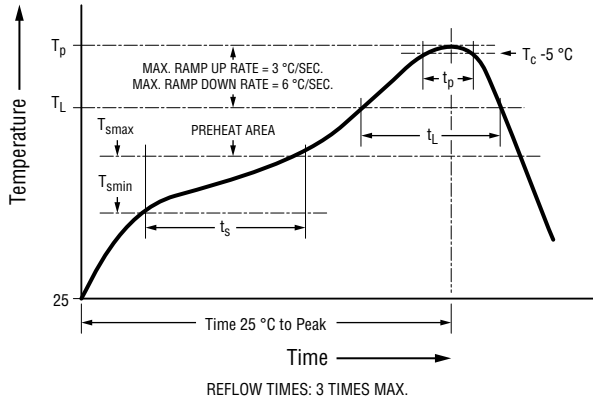
Click these links for more information:



### 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. ( $T_{smin}$ ) - Temperature Max. ( $T_{smax}$ ) - Time( $t_p$ ) 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.

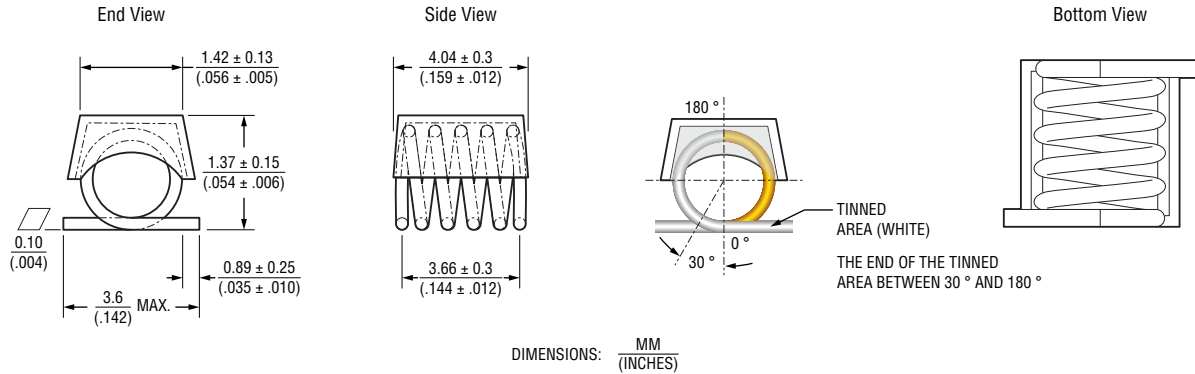
Users should verify actual device performance in their specific applications.

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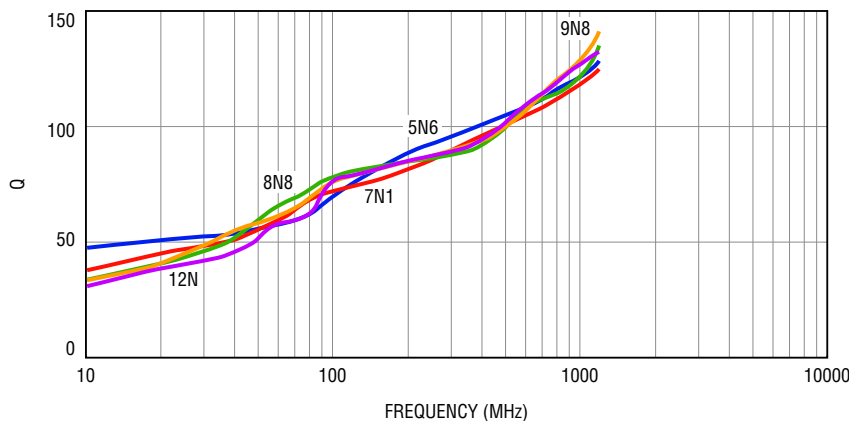
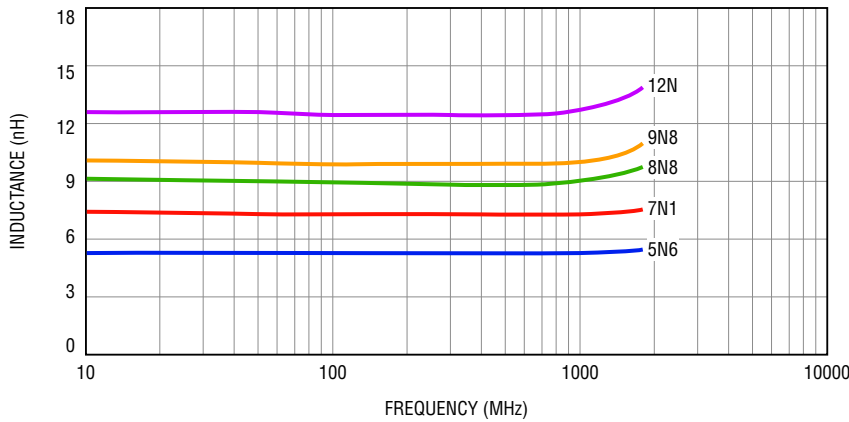
# AC4013R Series – Air Coil Inductors

**BOURNS®**

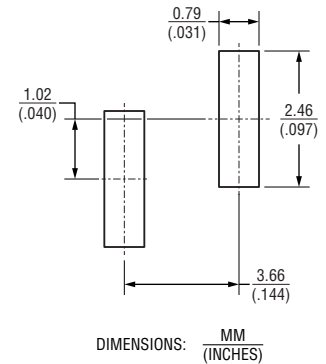
## Product Dimensions



## Inductance vs. IDC



## Recommended Layout



## How to Order

**AC4013R - 5N6**

Model \_\_\_\_\_

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

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

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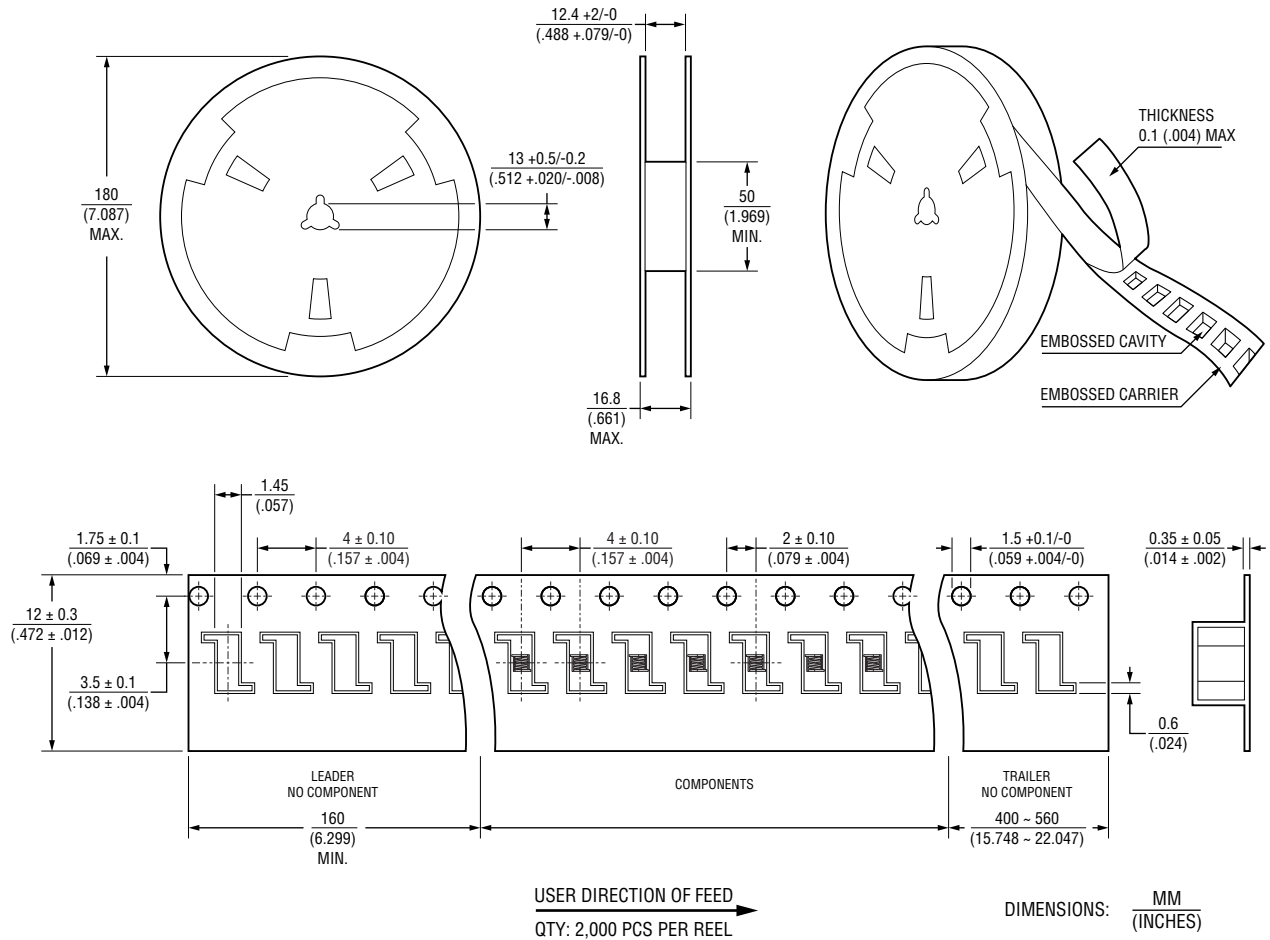
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# AC4013R Series – Air Coil Inductors

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## Packaging Specifications



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