

10 nH Inductor (Top View)

### ACCU-L<sup>®</sup> TECHNOLOGY

The Accu-L<sup>®</sup> SMD Inductor is based on thin-film multilayer technology. This technology provides a level of control on the electrical and physical characteristics of the component which gives consistent characteristics within a lot and lot-to-lot.

The original design provides small size, excellent high-frequency performance and rugged construction for reliable automatic assembly.

The Accu-L<sup>®</sup> inductor is particularly suited for the telecommunications industry where there is a continuing trend towards miniaturization and increasing frequencies. The Accu-L<sup>®</sup> inductor meets both the performance and tolerance requirements of present cellular frequencies 450MHz and 900MHz and of future frequencies, such as 1700MHz, 1900MHz and 2400MHz.

### FEATURES

- High Q
- RF Power Capability
- High SRF
- Low DC Resistance
- Ultra-Tight Tolerance on Inductance
- Standard 0603 and 0805 Chip Size
- Low Profile
- Rugged Construction
- Taped and Reeled

### APPLICATIONS

- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Locations Systems
- Filters
- Matching Networks

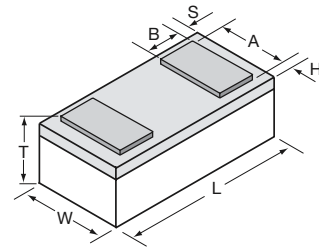
# Accu-L<sup>®</sup> 0402 & 0603 LGA



## LGA High-Q RF Inductor

### ITF TECHNOLOGY

The LGA Inductor is based on thin-film multilayer technology. The technology provides a miniature part with excellent high frequency performance and rugged construction for reliable automatic assembly.



### APPLICATIONS

- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Location Systems
- Wireless LANs
- Filters
- Matching Networks

### FEATURES

- Inherent Low Profile
- Self Alignment During Reflow
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation

	0402	0603
<b>L</b>	1.0±0.10 (0.040±0.004)	1.6±0.10 (0.063±0.004)
<b>W</b>	0.58±0.07 (0.023±0.003)	0.81±0.10 (0.032±0.004)
<b>T</b>	0.35±0.10 (0.014±0.004)	0.61±0.10 (0.024±0.004)
<b>A</b>	0.48±0.05 (0.019±0.002)	0.66±0.05 (0.026±0.002)
<b>B</b>	0.17±0.05 (0.0067±0.002)	0.23±0.05 (0.009±0.002)
<b>S,H</b>	0.064±0.05 (0.0025±0.002)	0.10±0.05 (0.004±0.002)

### HOW TO ORDER

**L**  
Product  
Inductor

**0402**  
Size  
0402  
0603

**4R7**  
Inductance  
Expressed in nH  
(2 significant digits +  
number of zeros)  
for  
values <10nH,  
letter R denotes  
decimal point.  
Example:  
22nH = 220  
4.7nH = 4R7

**D**  
Tolerance  
for  
**L ≤ 4.7nH,**    **L ≥ 10nH,**  
B = ±0.1nH    G = ±2%  
C = ±0.2nH    J = ±5%  
D = ±0.5nH  
**4.7nH < L < 10nH,**  
C = ±0.2nH  
D = ±0.5nH

**H**  
Specification  
Code

**L**  
Termination  
Code

**TR**  
Packaging  
Code

### QUALITY INSPECTION

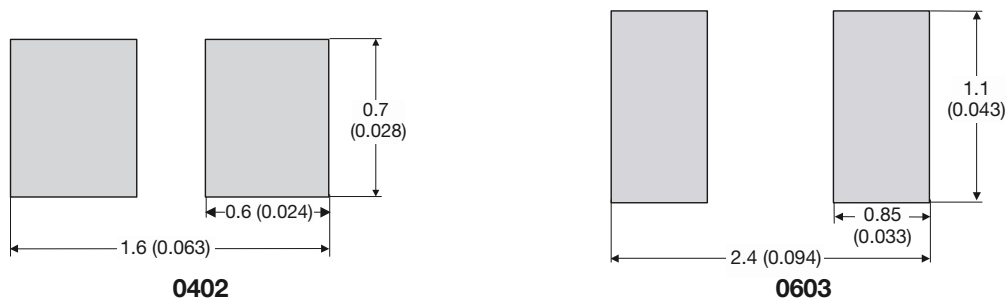
Finished parts are 100% tested for electrical parameters and visual characteristics. Each production lot is evaluated on a sample basis for:

- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C, I<sub>R</sub>, 4 hours

### TERMINATION

Nickel/Solder coating compatible with automatic soldering technologies: reflow, wave soldering, vapor phase and manual.

### Recommended Pad Layout Dimensions mm (inches)

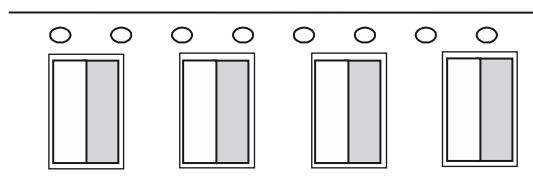


# Accu-L<sup>®</sup> 0402 & 0603 LGA

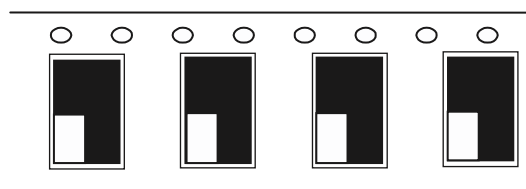


## LGA High-Q RF Inductor

### MARKING AND ORIENTATION IN TAPE (Top View)



0402



0603

### 0402 ELECTRICAL SPECIFICATIONS TABLE

L(nH)	450MHz			900MHz	1900MHz	2400MHz	SRF min. (MHz)	R <sub>dc</sub> max. (Ω)	I <sub>dc</sub> max. (mA)
	Tolerance A=±0.05nH, B=±0.1nH C=±0.2nH, D=±0.5nH	Q (min.)	Q (Typ)	Q (Typ)	Q (Typ)	Q (Typ)			
0.82	± 0.05nH, ± 0.1nH	25	40	50	60	70	20000	0.06	500
1.0	± 0.05nH, ± 0.1nH	20	30	35	40	50	20000	0.15	500
1.2	± 0.05nH, ± 0.1nH, ±0.2nH	20	30	30	40	45	20000	0.20	400
1.5	± 0.05nH, ± 0.1nH, ±0.2nH	20	25	30	40	40	18000	0.20	400
1.8	± 0.05nH, ± 0.1nH, ±0.2nH	18	20	30	35	40	16000	0.20	400
2.2	± 0.05nH, ± 0.1nH, ±0.2nH	15	20	25	35	40	15000	0.20	400
2.7	± 0.05nH, ± 0.1nH, ±0.2nH	15	20	25	35	40	9500	0.25	250
3.3	± 0.1nH, ± 0.2nH, ±0.5nH	15	20	25	35	40	8500	0.40	250
3.9	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	30	8000	0.45	250
4.7	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	30	7500	0.45	250
5.6	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	30	7000	0.65	200
6.8	± 0.1nH, ± 0.2nH, ±0.5nH	12	15	20	25	30	6500	0.90	200

### 0603 ELECTRICAL SPECIFICATIONS TABLE

L(nH)	450MHz			900MHz	1900MHz	2400MHz	SRF min. (MHz)	R <sub>dc</sub> max. (Ω)	I <sub>dc</sub> max. (mA)
	Tolerance A=±0.05nH, B=±0.1nH C=±0.2nH, D=±0.5nH F=±1%, G=±2%, J=±5%	Q (min.)	Q (Typ)	Q (Typ)	Q (Typ)	Q (Typ)			
0.56	± 0.05nH, ± 0.1nH	30	40	40	50	60	20000	0.02	700
0.68	± 0.05nH, ± 0.1nH	30	40	40	50	60	20000	0.02	700
0.82	± 0.05nH, ± 0.1nH	30	40	40	50	60	20000	0.05	700
1.0	± 0.05nH, ± 0.1nH	25	40	40	40	60	20000	0.06	700
1.2	± 0.05nH, ± 0.1nH, ±0.2nH	25	40	40	40	60	20000	0.08	700
1.5	± 0.05nH, ± 0.1nH, ±0.2nH	20	35	35	40	60	20000	0.08	500
1.8	± 0.05nH, ± 0.1nH, ±0.2nH	20	35	35	40	60	20000	0.11	500
2.2	± 0.05nH, ± 0.1nH, ±0.2nH	20	35	35	40	60	15000	0.12	500
2.7	± 0.05nH, ± 0.1nH, ±0.2nH	20	30	30	40	50	12000	0.13	500
3.3	± 0.1nH, ± 0.2nH, ±0.5nH	15	25	25	30	35	12000	0.25	300
3.9	± 0.1nH, ± 0.2nH, ±0.5nH	15	25	25	30	35	10000	0.26	300
4.7	± 0.1nH, ± 0.2nH, ±0.5nH	15	25	25	30	35	9000	0.26	300
5.6	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	35	7000	0.35	200
6.8	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	30	5700	0.40	200
8.2	± 0.1nH, ± 0.2nH, ±0.5nH	13	20	20	30	30	4000	0.50	200
10.0	± 1%, ± 2%, ± 5%	13	20	20	30	30	3800	0.60	200
12.0	± 1%, ± 2%, ± 5%	13	20	20	30	30	3500	0.65	200
15.0	± 1%, ± 2%, ± 5%	13	20	20	30	30	3500	1.00	200
18.0	± 1%, ± 2%, ± 5%	13	20	20	20	20	3300	1.20	200
22.0	± 1%, ± 2%, ± 5%	13	20	20	20	20	3200	2.20	200

All intermediate Inductance values within the indicated range are available.