

# L0402 Tight Tolerance

## RF Inductor



### GENERAL DESCRIPTION ITF TECHNOLOGY

The L0402 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

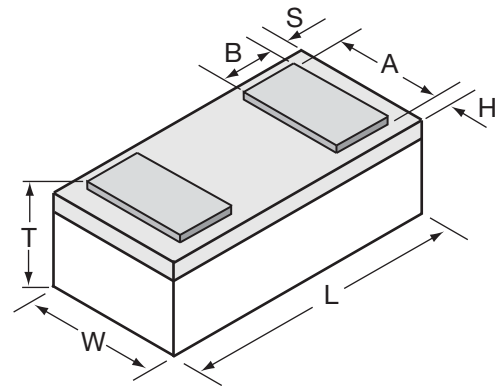
- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Location Systems
- Wireless LAN's
- Filters
- Matching Networks

### LAND GRID ARRAY ADVANTAGES

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

### DIMENSIONS: (Bottom View)

millimeters (inches)



|   |                            |
|---|----------------------------|
| L | 1.00±0.10<br>(0.039±0.004) |
| W | 0.58±0.07<br>(0.023±0.003) |
| T | 0.35±0.10<br>(0.014±0.004) |

|   |                             |
|---|-----------------------------|
| A | 0.48±0.05<br>(0.019±0.002)  |
| B | 0.17±0.05<br>(0.007±0.002)  |
| S | 0.064±0.05<br>(0.003±0.002) |

### HOW TO ORDER

|              |                    |           |          |                             |                   |
|--------------|--------------------|-----------|----------|-----------------------------|-------------------|
| <b>L0402</b> | <b>XXX</b>         | <b>X</b>  | <b>H</b> | <b>N</b>                    | <b>TR</b>         |
|              | Inductance<br>(nH) | Tolerance | Series   | LGA<br>Termination<br>Sn100 | Taped &<br>Reeled |

P/N Example: **L04023R3BHNT**



### QUALITY INSPECTION

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

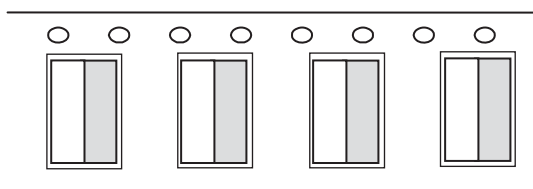
- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C,  $I_R$ , 4 hours

### TERMINATION

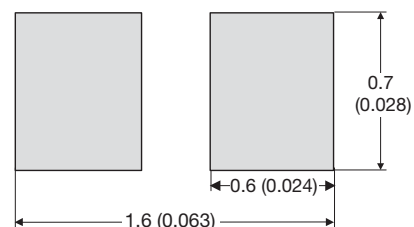
Nickel/Lead Free solder coating compatible with automatic soldering technologies: reflow, wave soldering, vapor phase and manual.

### MAKING AND ORIENTATION IN TAPE

(Top View)



### Recommended Pad Layout Dimensions mm (inches)



# L0402 Tight Tolerance

## RF Inductor



### ELECTRICAL SPECIFICATIONS

| 450MHz |                                                          |            |            | 900MHz     | 1900MHz    | 2400MHz    | SRF<br>min.<br>(MHz) | R <sub>dc</sub><br>max.<br>(Ω) | I <sub>dc</sub><br>max.<br>(mA) |
|--------|----------------------------------------------------------|------------|------------|------------|------------|------------|----------------------|--------------------------------|---------------------------------|
| L(nH)  | Tolerance<br>A=±0.05nH , B=±0.1nH,<br>C=±0.2nH, D=±0.5nH | Q<br>(min) | Q<br>(Typ) | Q<br>(Typ) | Q<br>(Typ) | Q<br>(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                             |

Please contact factory for intermediate inductance values within the indicated range.

2