

Thin-Film RF/Microwave Inductor Technology

Accu-L® Series

L0603 AND L0805 SMD High-Q RF Inductor – Accu-L®



HOW TO ORDER

| | | | | | | |
|-------------------------|-----------------------------|---|---|---|---|---|
| L ↓ | 0805 ↓ | 4R7 ↓ | D ↓ | E ↓ | S ↓ | TR ↓ |
| Product Sn100 | Size 0603 0805 | Inductance Expressed in nH (2 significant digits + number of zeros) for values <10nH, letter R denotes decimal point. Example: 22nH = 220 4.7nH = 4R7 | Tolerance for L ≤ 4.7nH, B = ±0.1nH C = ±0.2nH D = ±0.5nH 4.7nH < L < 10nH, C = ±0.2nH D = ±0.5nH L ≥ 10nH, G = ±2% J = ±5% | Specification Code E = Accu-L® 0805 technology G = Accu-L® 0603 technology | Termination Code W = Nickel/ solder coated (Sn 63, Pb 37) **S= Nickel/Lead Free Solder coated (Sn100) | Packaging Code TR = Tape and Reel (3,000/reel) |

Not RoHS Compliant

LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT

RoHS
COMPLIANT

*For RoHS compliant products,
please select correct termination style.*

**Engineering Kits Available see
pages 118-119**

ELECTRICAL SPECIFICATIONS TABLE FOR ACCU-L® 0603

| Inductance L (nH) | 450 MHz Test Frequency | | 900 MHz Test Frequency | | 1900 MHz Test Frequency | | 2400 MHz Test Frequency | | SRF min. (MHz) | R _{DC} max. (Ω) | I _{DC} max. (mA) (1) |
|-------------------|--------------------------------|-----------|------------------------|-----------|-------------------------|-----------|-------------------------|-----------|----------------|--------------------------|-------------------------------|
| | Available Inductance Tolerance | Q Typical | L (nH) | Q Typical | L (nH) | Q Typical | L (nH) | Q Typical | | | |
| 1.2 | ±0.1, ±0.2nH | 49 | 1.2 | 70 | 1.2 | 134 | 1.2 | 170 | 10000 | 0.04 | 1000 |
| 1.5 | ±0.1, ±0.2nH | 26 | 1.54 | 39 | 1.52 | 63 | 1.52 | 76 | 10000 | 0.06 | 1000 |
| 1.8 | ±0.1, ±0.2nH | 20 | 1.74 | 30 | 1.73 | 50 | 1.72 | 59 | 10000 | 0.07 | 1000 |
| 2.2 | ±0.1, ±0.2nH | 20 | 2.2 | 30 | 2.24 | 49 | 2.24 | 56 | 10000 | 0.08 | 1000 |
| 2.7 | ±0.1, ±0.2nH | 21 | 2.7 | 30 | 2.75 | 48 | 2.79 | 54 | 9000 | 0.08 | 750 |
| 3.3 | ±0.1, ±0.2, ±0.5nH | 24 | 3.33 | 35 | 3.39 | 56 | 3.47 | 64 | 8400 | 0.08 | 750 |
| 3.9 | ±0.1, ±0.2, ±0.5nH | 25 | 3.9 | 57 | 4.06 | 60 | 4.21 | 69 | 6500 | 0.12 | 500 |
| 4.7 | ±0.1, ±0.2, ±0.5nH | 23 | 4.68 | 32 | 4.92 | 46 | 5.2 | 49 | 5500 | 0.15 | 500 |
| 5.6 | ±0.2, ±0.5nH | 26 | 5.65 | 36 | 5.94 | 54 | 6.23 | 60 | 5000 | 0.25 | 300 |
| 6.8 | ±0.2, ±0.5nH | 23 | 6.9 | 33 | 7.3 | 47 | 8.1 | 39 | 4500 | 0.30 | 300 |
| 8.2 | ±0.2, ±0.5nH | 23 | 8.4 | 31 | 10 | 35 | 12.1 | 31 | 3800 | 0.35 | 300 |
| 10.0 | ±2%, ±5% | 28 | 10 | 39 | 11.8 | 47 | 14.1 | 41 | 3500 | 0.45 | 300 |
| 12.0 | ±2%, ±5% | 28 | 13.2 | 38 | 14.1 | 30 | 17.2 | 20 | 3000 | 0.50 | 300 |
| 15.0 | ±2%, ±5% | 28 | 16.2 | 38 | 25.9 | 30 | 49.8 | 15 | 2500 | 0.60 | 300 |

(1) IDC measured for 15°C rise at 25°C ambient temperature when soldered to FR-4 board. Inductance and Q measured on Agilent 4291B / 4287 using the 16196A test fixture.

ELECTRICAL SPECIFICATIONS TABLE FOR ACCU-L® 0805

| Inductance L (nH) | 450 MHz Test Frequency | | 900 MHz Test Frequency | | 1900 MHz Test Frequency | | 2400 MHz Test Frequency | | SRF min. (MHz) | R _{DC} max. (Ω) | I _{DC} max. (mA) | |
|-------------------|--------------------------------|-----------|------------------------|-----------|-------------------------|-----------|-------------------------|-----------|----------------|--------------------------|---------------------------|--------------|
| | Available Inductance Tolerance | Q Typical | L (nH) | Q Typical | L (nH) | Q Typical | L (nH) | Q Typical | | | T = 15°C (1) | T = 70°C (2) |
| 1.2 | ±0.1nH, ±0.2nH, ±0.5nH | 60 | 1.2 | 92 | 1.2 | 122 | 1.2 | 92 | 10000 | 0.05 | 1000 | 2000 |
| 1.5 | ±0.1nH, ±0.2nH, ±0.5nH | 50 | 1.5 | 74 | 1.5 | 102 | 1.5 | 84 | 10000 | 0.05 | 1000 | 2000 |
| 1.8 | ±0.1nH, ±0.2nH, ±0.5nH | 50 | 1.8 | 72 | 1.8 | 88 | 1.9 | 73 | 10000 | 0.06 | 1000 | 2000 |
| 2.2 | ±0.1nH, ±0.2nH, ±0.5nH | 42 | 2.2 | 62 | 2.2 | 82 | 2.3 | 72 | 10000 | 0.07 | 1000 | 2000 |
| 2.7 | ±0.1nH, ±0.2nH, ±0.5nH | 42 | 2.7 | 62 | 2.8 | 80 | 2.9 | 70 | 10000 | 0.08 | 1000 | 2000 |
| 3.3 | ±0.1nH, ±0.2nH, ±0.5nH | 38 | 3.3 | 46 | 3.4 | 48 | 3.5 | 57 | 10000 | 0.11 | 750 | 1500 |
| 3.9 | ±0.1nH, ±0.2nH, ±0.5nH | 27 | 3.9 | 36 | 4.0 | 38 | 4.1 | 42 | 10000 | 0.20 | 750 | 1500 |
| 4.7 | ±0.1nH, ±0.2nH, ±0.5nH | 43 | 4.8 | 62 | 5.3 | 76 | 5.8 | 60 | 5500 | 0.10 | 750 | 1500 |
| 5.6 | ±0.5nH | 50 | 5.7 | 68 | 6.3 | 73 | 7.6 | 62 | 4600 | 0.10 | 750 | 1500 |
| 6.8 | ±0.5nH | 43 | 7.0 | 62 | 7.7 | 71 | 9.4 | 50 | 4500 | 0.11 | 750 | 1500 |
| 8.2 | ±0.5nH | 43 | 8.5 | 56 | 10.0 | 55 | 15.2 | 32 | 3500 | 0.12 | 750 | 1500 |
| 10 | ±2%, ±5% | 46 | 10.6 | 60 | 13.4 | 52 | - | - | 2500 | 0.13 | 750 | 1500 |
| 12 | ±2%, ±5% | 40 | 12.9 | 50 | 17.3 | 40 | - | - | 2400 | 0.20 | 750 | 1500 |
| 15 | ±2%, ±5% | 36 | 16.7 | 46 | 27 | 23 | - | - | 2200 | 0.20 | 750 | 1000 |
| 18 | ±2%, ±5% | 30 | 21.9 | 27 | - | - | - | - | 1700 | 0.35 | 500 | 1000 |
| 22 | ±2%, ±5% | 36 | 27.5 | 33 | - | - | - | - | 1400 | 0.40 | 500 | 1000 |

(1) I_{DC} measured for 15°C rise at 25°C ambient temperature
 (2) I_{DC} measured for 70°C rise at 25°C ambient temperature

L, Q, SRF measured on HP 4291A, Boonton 34A and Wiltron 360 Vector Analyzer, RDC measured on Keithley 580 micro-ohmmeter.



Thin-Film RF/Microwave Inductor Technology

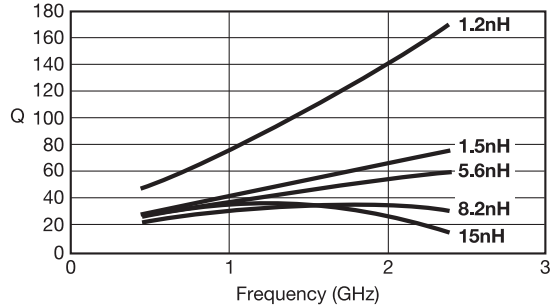
Accu-L® Series

L0603 AND L0805 SMD High-Q RF Inductor – Accu-L®



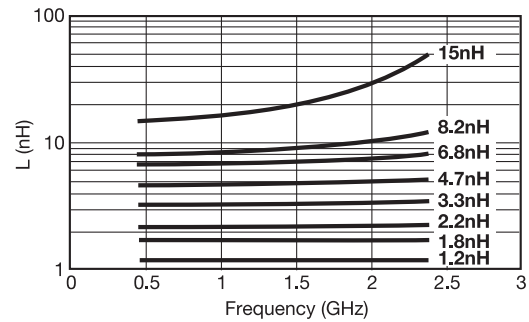
L0603

Typical Q vs. Frequency
L0603



Measured on AGILENT 4291B/4287
using the 16196A test fixture

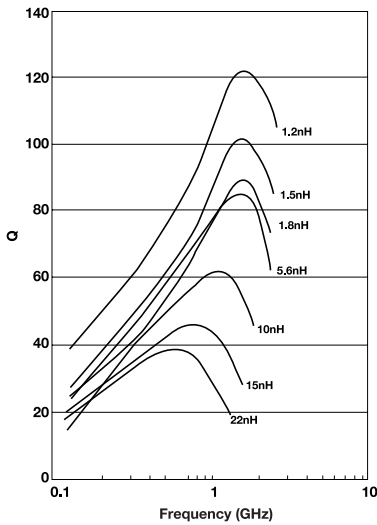
Typical Inductance vs. Frequency
L0603



Measured on AGILENT 4291B/4287
using the 16196A test fixture

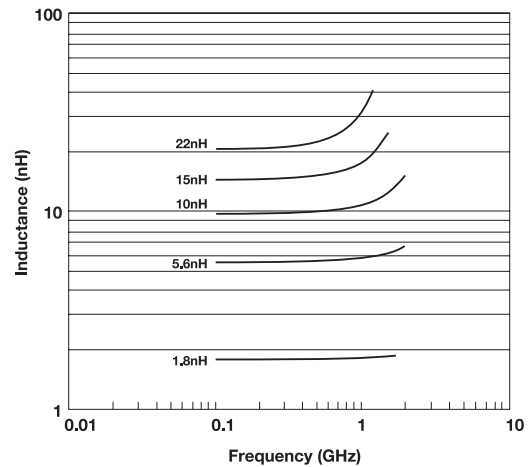
L0805

Typical Q vs. Frequency
L0805



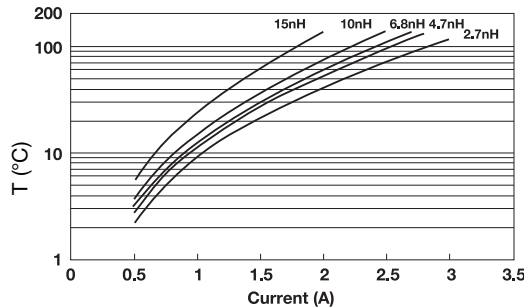
Measured on HP4291A and
Boonton 34A Coaxial Line

Typical Inductance vs. Frequency
L0805



Measured on HP4291A and
Wiltron 360 Vector Analyzer

Maximum Temperature Rise
at 25°C ambient temperature (on FR-4)
L0805



Temperature rise will typically be no higher than shown by the graph



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Mouser Electronics

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[L06034R7DGWTR](#) [L06035R6BGWTR](#) [L06036R8BGWTR](#) [L06038R2BGWTR](#) [L0805100GEWTR](#) [L0805100JEWTR](#)
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[L08058R2DEWTR](#) [L08052R2DEWTR](#) [L08056R8CEWTR\O](#) [L0805100GEWTR\O](#) [L0805220JESTR](#)
[L08052R7CESTR](#) [L06036R8BGSTR](#) [L06036R8CGWTR](#) [L08056R8DESTR](#) [L06033R9BGSTR](#) [L08055R6DESTR](#)
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[L06035R6CGWTR](#) [L06035R6DGWTR](#) [L06036R8DGWTR](#) [L06038R2DGWTR](#) [L08051R6CEWTR](#) [L08051R8BEWTR](#)
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[L08053R3BEWTR](#)