

Shielded Power Inductors – RFS1412



- Low cost, high current power inductors
- 10 μ H to 10 mH inductance range; most at 10% tolerance

Core material Ferrite

Terminations Tin-silver (96.5/3.5) over tin over copper over steel. Other terminations available at additional cost.

Weight 6.0 – 7.0 g

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with I_{rms} current

Maximum part temperature $+125^{\circ}\text{C}$ (ambient + temp rise)

Storage temperature Component: -40°C to $+125^{\circ}\text{C}$.
Tray packaging: -40°C to $+80^{\circ}\text{C}$

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Packaging 169 parts per tray

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

| Part number ¹ | Inductance ² (μ H) | DCR (Ohms) | | SRF typ ³ (MHz) | Isat (A) ⁴ | | | Irms (A) ⁵ | |
|--------------------------|---------------------------------------|------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
| | | typ | max | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| RFS1412-103ME | 10 \pm 20% | 0.016 | 0.018 | 36 | 6.2 | 7.4 | 8.1 | 5.80 | 7.90 |
| RFS1412-153LE | 15 \pm 15% | 0.019 | 0.022 | 21 | 5.0 | 6.1 | 6.8 | 5.05 | 6.90 |
| RFS1412-223KE | 22 \pm 10% | 0.029 | 0.032 | 13 | 4.4 | 5.2 | 5.7 | 4.05 | 5.60 |
| RFS1412-333KE | 33 \pm 10% | 0.043 | 0.047 | 8.7 | 3.4 | 4.1 | 4.6 | 3.25 | 4.50 |
| RFS1412-393KE | 39 \pm 10% | 0.060 | 0.066 | 7.7 | 3.1 | 3.9 | 4.3 | 2.85 | 3.90 |
| RFS1412-473KE | 47 \pm 10% | 0.066 | 0.072 | 6.7 | 3.0 | 3.5 | 3.9 | 2.65 | 3.65 |
| RFS1412-104KE | 100 \pm 10% | 0.083 | 0.091 | 5.1 | 2.0 | 2.4 | 2.6 | 2.35 | 3.25 |
| RFS1412-224KE | 220 \pm 10% | 0.190 | 0.200 | 3.3 | 1.3 | 1.6 | 1.8 | 1.55 | 2.35 |
| RFS1412-564KE | 560 \pm 10% | 0.484 | 0.508 | 1.8 | 0.82 | 1.0 | 1.1 | 0.92 | 1.28 |
| RFS1412-105KE | 1000 \pm 10% | 1.01 | 1.06 | 1.3 | 0.63 | 0.76 | 0.84 | 0.64 | 0.86 |
| RFS1412-106KE | 10000 \pm 10% | 9.58 | 9.87 | 0.36 | 0.20 | 0.25 | 0.27 | 0.20 | 0.28 |

1. When ordering, please specify **termination** code:

RFS1412-105KE

Termination: E = Tin-silver over tin over copper over steel.

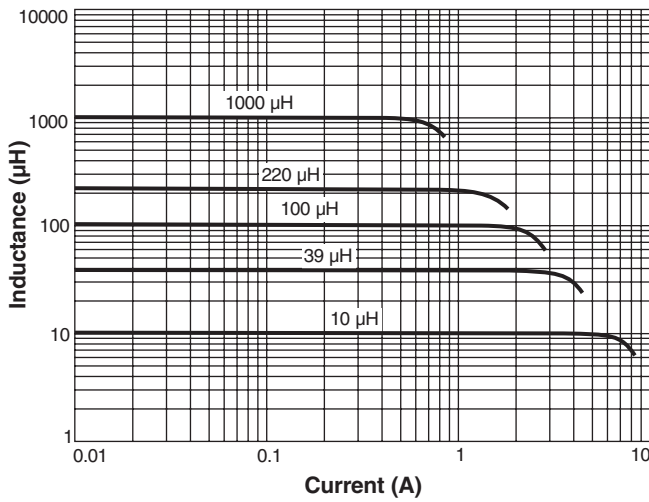
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
- SRF measured using Agilent/HP 4191A or equivalent.
- DC current that causes the specified inductance drop from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

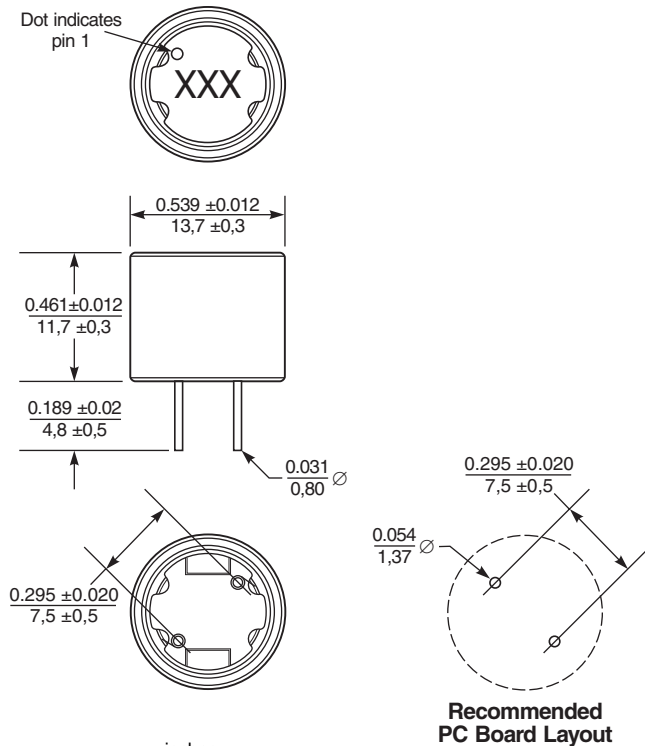
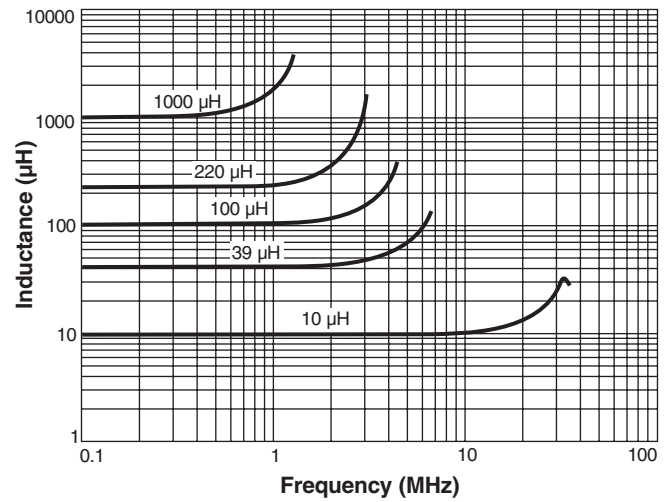


Shielded Power Inductors – RFS1412 Series

Typical L vs Current



Typical L vs Frequency



Dimensions are in $\frac{\text{inches}}{\text{mm}}$



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