



# Shielded Power Inductors – RFS1412



- Low cost, high current power inductors
- 10  $\mu$ 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**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with Irms current

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

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

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

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**  
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 169 parts per tray

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf.

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>( $\mu$ H) | DCR (Ohms) |       | SRF typ <sup>3</sup><br>(MHz) | Isat (A) <sup>4</sup> |          |          | Irms (A) <sup>5</sup> |           |
|--------------------------|---------------------------------------|------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                       | 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).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.

3. SRF measured using Agilent/HP 4191A or equivalent.

4. DC current that causes the specified inductance drop from its value without current..

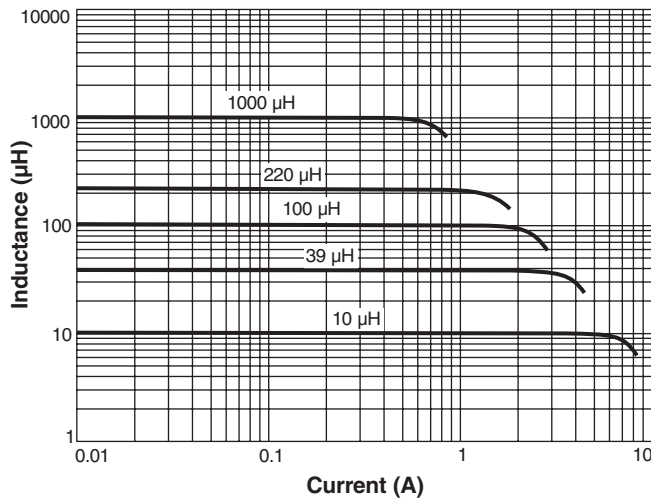
5. Current that causes the specified temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

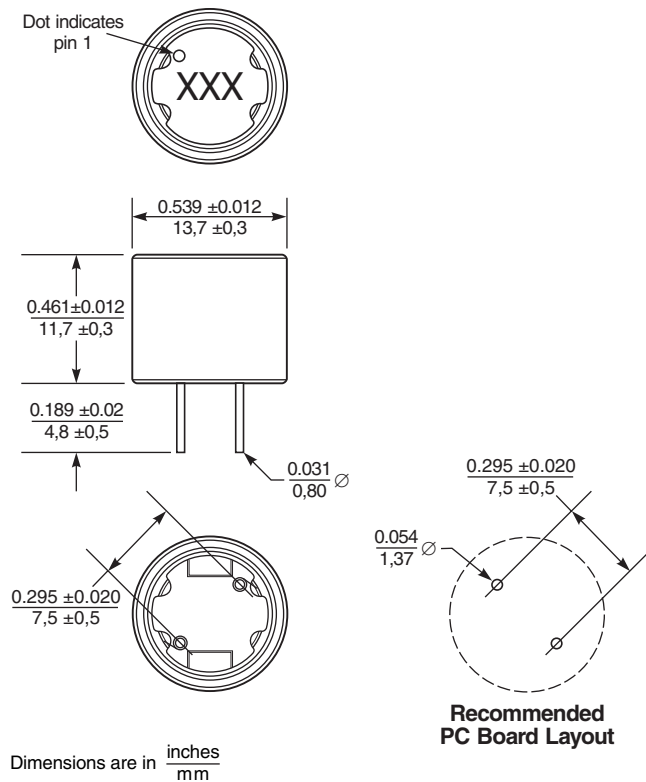
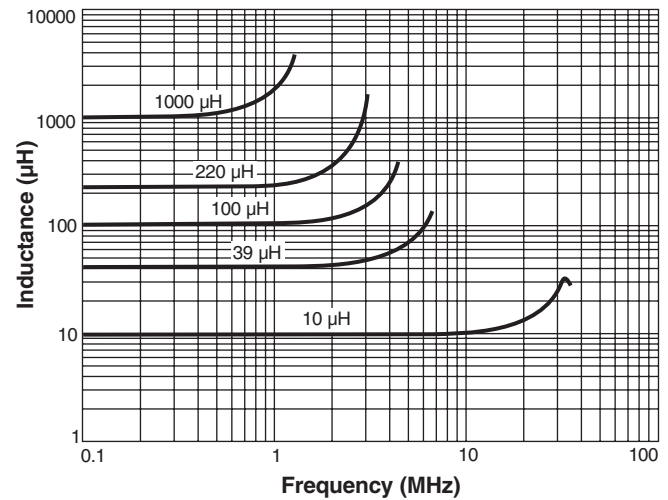


# Shielded Power Inductors – RFS1412 Series

## Typical L vs Current



## Typical L vs Frequency



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Coilcraft:

[RFS1412-333KE](#) [RFS1412-103ME](#) [RFS1412-106KE](#) [RFS1412-105KE](#) [RFS1412-224KE](#) [RFS1412-393KE](#)  
[RFS1412-153LE](#) [RFS1412-564KE](#) [RFS1412-223KE](#) [RFS1412-473KE](#) [RFS1412-104KE](#)