

# 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> ( $\mu$ H)	DCR (Ohms)		SRF typ <sup>3</sup> (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.

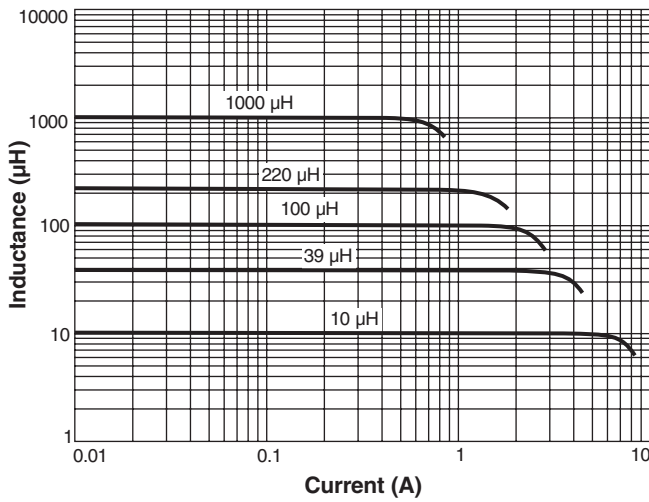
**Special order: T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

- 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.

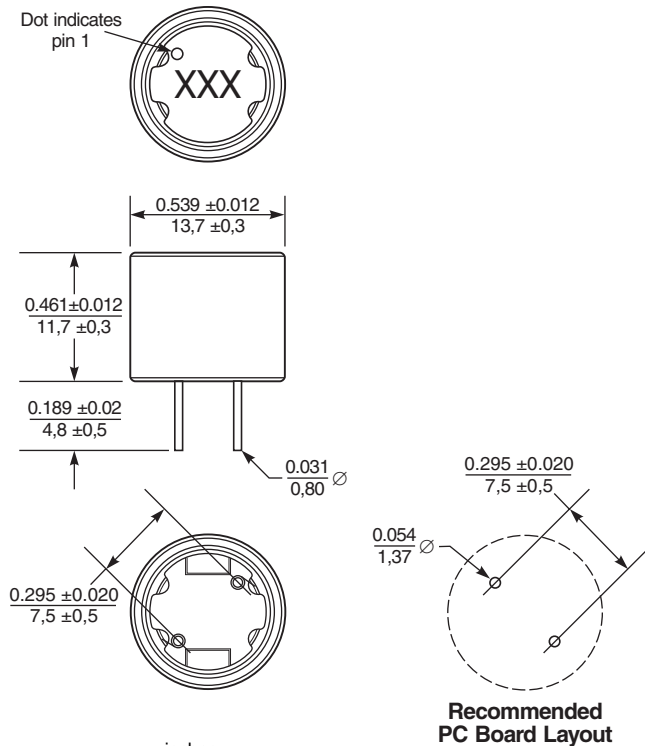
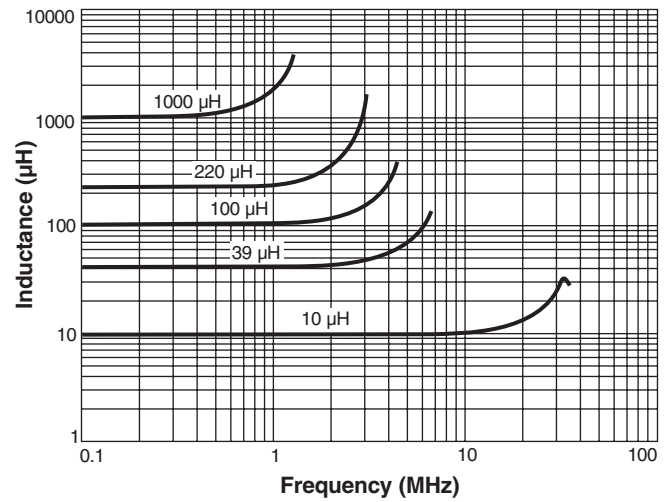


# Shielded Power Inductors – RFS1412 Series

## Typical L vs Current



## Typical L vs Frequency



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



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