

# Shielded Power Inductors – RFS1113



- Low cost, high current power inductors
- 6.8  $\mu\text{H}$  to 2.7 mH inductance range

**Core material** Ferrite

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

**Weight** 4.1 – 4.7 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> $\pm 20\%$ ( $\mu\text{H}$ )	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
RFS1113-682ME	6.8	0.014	0.016	45.0	6.6	8.0	9.1	5.65	7.80
RFS1113-103ME	10	0.017	0.020	30.2	5.4	6.6	7.4	5.20	7.20
RFS1113-153ME	15	0.020	0.023	19.8	4.0	5.0	5.8	4.80	6.60
RFS1113-223ME	22	0.023	0.026	11.8	3.5	4.2	4.8	4.40	6.10
RFS1113-273ME	27	0.032	0.036	9.6	3.0	3.6	4.2	3.60	5.05
RFS1113-333ME	33	0.045	0.052	8.8	2.8	3.5	4.0	3.20	4.40
RFS1113-393ME	39	0.058	0.064	8.4	2.4	3.1	3.6	2.75	3.75
RFS1113-473ME	47	0.081	0.089	7.9	2.2	2.9	3.3	2.30	3.20
RFS1113-104ME	100	0.184	0.200	4.0	1.5	1.9	2.2	1.55	2.10
RFS1113-224ME	220	0.281	0.295	2.8	1.0	1.3	1.5	1.25	1.65
RFS1113-564ME	560	0.709	0.744	1.8	0.68	0.86	0.98	0.73	1.00
RFS1113-105ME	1000	1.80	1.89	1.3	0.51	0.63	0.73	0.46	0.60
RFS1113-275ME	2700	3.76	3.95	0.72	0.33	0.40	0.45	0.30	0.40

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

**RFS1113-105ME**

**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  $25^{\circ}\text{C}$  ambient.
- Electrical specifications at  $25^{\circ}\text{C}$ .



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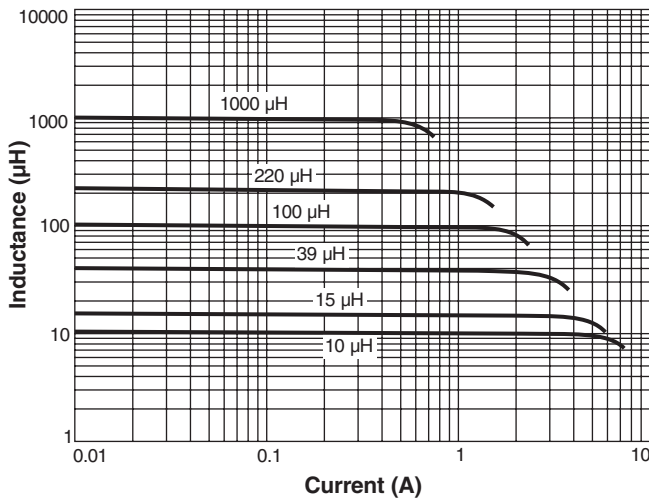
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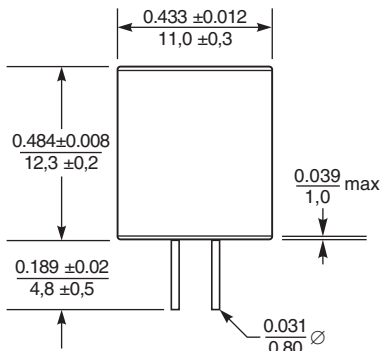
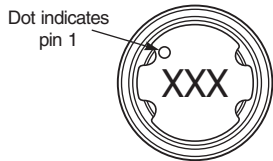
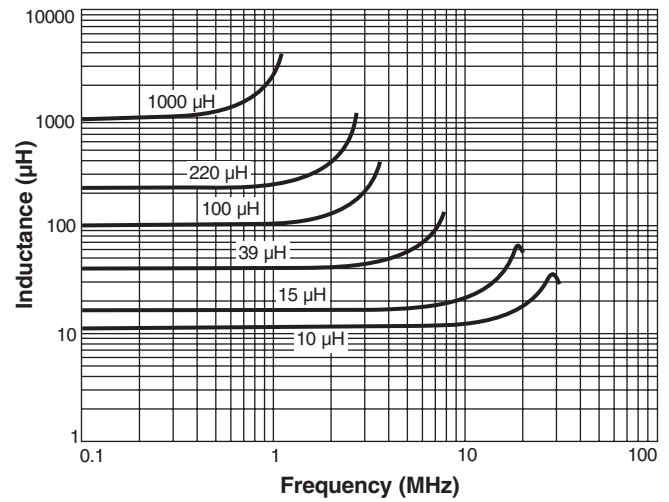


# Shielded Power Inductors – RFS1113 Series

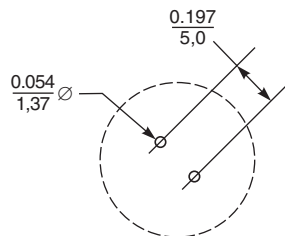
## Typical L vs Current



## Typical L vs Frequency



### Recommended PC Board Layout



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



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