

# Shielded Power Inductors – RFS1317



- Low cost, high current power inductors
- 27  $\mu$ H to 10 mH inductance range

**Core material** Ferrite

**Terminations** Tin-silver over tin over copper over steel. Other terminations available at additional cost.

**Weight** 9.1 – 9.4 g

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with Irms current

**Maximum parts 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** 144 parts per tray

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> $\pm 10\%$	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
RFS1317-273KL	27 $\mu$ H	0.033	20.95	5.2	6.4	7.2	4.10	5.70
RFS1317-333KL	33 $\mu$ H	0.050	18.18	4.5	5.7	6.4	3.55	4.85
RFS1317-473KL	47 $\mu$ H	0.055	12.93	3.9	4.7	5.4	3.20	4.50
RFS1317-683KL	68 $\mu$ H	0.068	6.49	3.1	3.8	4.3	3.00	4.05
RFS1317-823KL	82 $\mu$ H	0.071	5.03	2.8	3.6	4.0	2.75	3.90
RFS1317-104KL	100 $\mu$ H	0.079	3.45	2.6	3.2	3.6	2.65	3.65
RFS1317-124KL	120 $\mu$ H	0.110	3.18	2.4	2.9	3.2	2.20	3.15
RFS1317-154KL	150 $\mu$ H	0.144	2.92	2.2	2.6	2.9	2.05	2.90
RFS1317-184KL	180 $\mu$ H	0.172	2.27	1.9	2.4	2.7	1.85	2.65
RFS1317-224KL	220 $\mu$ H	0.239	2.03	1.7	2.1	2.4	1.50	2.05
RFS1317-274KL	270 $\mu$ H	0.263	1.66	1.7	1.9	2.2	1.50	2.05
RFS1317-334KL	330 $\mu$ H	0.286	1.55	1.5	1.7	2.0	1.40	1.90
RFS1317-394KL	390 $\mu$ H	0.317	1.39	1.3	1.6	1.8	1.35	1.85
RFS1317-474KL	470 $\mu$ H	0.409	1.20	1.3	1.4	1.6	1.10	1.60
RFS1317-564KL	560 $\mu$ H	0.524	1.12	1.1	1.3	1.5	0.95	1.35
RFS1317-684KL	680 $\mu$ H	0.617	0.955	1.0	1.2	1.4	0.86	1.20
RFS1317-824KL	820 $\mu$ H	0.834	0.827	0.89	1.0	1.2	0.75	1.04
RFS1317-105KL	1.0 mH	1.02	0.725	0.83	1.0	1.1	0.68	0.97
RFS1317-125KL	1.2 mH	1.19	0.647	0.72	0.94	1.0	0.60	0.81
RFS1317-155KL	1.5 mH	1.36	0.599	0.66	0.82	0.91	0.59	0.78
RFS1317-185KL	1.8 mH	1.49	0.566	0.60	0.78	0.87	0.54	0.74
RFS1317-225KL	2.2 mH	2.01	0.496	0.56	0.69	0.77	0.45	0.62
RFS1317-275KL	2.7 mH	2.22	0.439	0.51	0.62	0.70	0.43	0.61
RFS1317-335KL	3.3 mH	2.38	0.435	0.46	0.61	0.68	0.41	0.57
RFS1317-395KL	3.9 mH	3.38	0.373	0.41	0.51	0.57	0.34	0.49
RFS1317-475KL	4.7 mH	3.68	0.352	0.38	0.48	0.54	0.33	0.46
RFS1317-565KL	5.6 mH	4.03	0.320	0.34	0.44	0.49	0.32	0.46
RFS1317-685KL	6.8 mH	5.43	0.288	0.32	0.40	0.45	0.26	0.38
RFS1317-825KL	8.2 mH	5.88	0.274	0.31	0.39	0.44	0.25	0.35
RFS1317-106KL	10 mH	6.55	0.254	0.28	0.33	0.37	0.24	0.35

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

RFS1317-106L

**Termination:** L = 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  $25^{\circ}\text{C}$  ambient.
6. Electrical specifications at  $25^{\circ}\text{C}$ .



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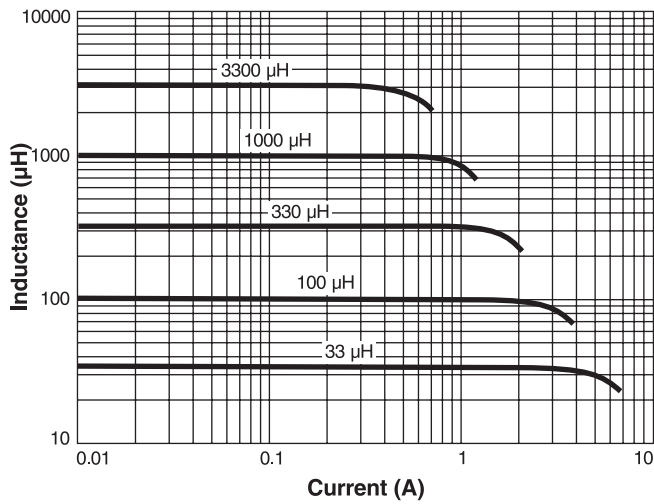
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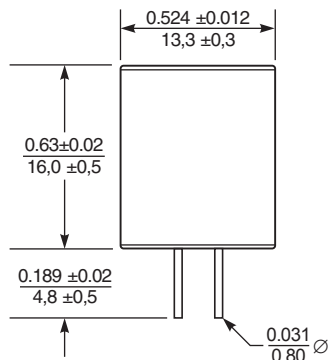
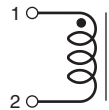
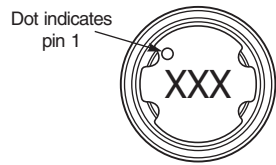
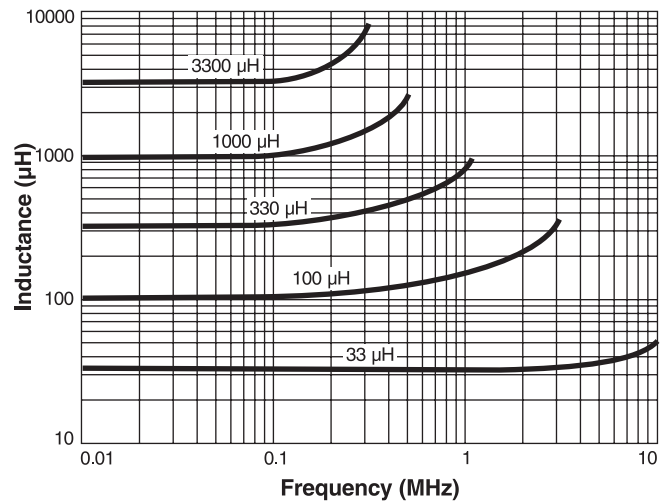


# Shielded Power Inductors – RFS1317 Series

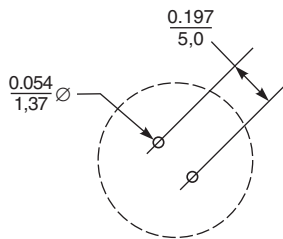
## Typical L vs Current



## Typical L vs Frequency



### Recommended PC Board Layout



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



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