



Filter Inductors – 1812FS Series



- Magnetically shielded chip inductors
- Provides high performance in transmit and receive filters
- 29 inductance values from 1.0 – 1000 μ H

Core material Ceramic/Ferrite

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Weight 0.33 – 0.36 g

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with Irms current, $+85^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with derated current

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

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

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 600/7" reel; 2200/13" reel. Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 3.9 mm pocket depth

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

1. When ordering, please specify **tolerance** and **packaging** codes:

1812FS-105JLC

Tolerance: J = 5% K = 10%

(Table shows stock tolerances in bold.)

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

B = Less than full reel. On tape, but not machine ready.
To have a leader and a trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B impedance analyzer.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured at 1 MHz on an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

5. DCR measured on a micro-ohmmeter and a Coilcraft CCF840 test fixture.

6. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

7. DC current at which the inductance drops 10% (typ) from its value without current.

8. Current that causes a 40°C temperature rise from 25°C ambient.

9. Electrical specifications at 25°C .

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Part number ¹	L ² (μ H)	% ³ tol	Q ⁴ min	DCR ⁵ max (Ohms)	SRF ⁶ typ (MHz)	Isat ⁷ (mA)	Irms ⁸ (mA)
1812FS-102_L_	1.0	10.5	30	0.070	320	3100	2950
1812FS-122_L_	1.2	10.5	35	0.110	280	2800	2600
1812FS-152_L_	1.5	10.5	20	0.105	200	2100	2850
1812FS-222_L_	2.2	10.5	30	0.120	175	1800	2700
1812FS-242_L_	2.4	10.5	25	0.175	160	1900	2050
1812FS-272_L_	2.7	10.5	30	0.200	165	1400	2100
1812FS-332_L_	3.3	10.5	33	0.185	160	1400	1900
1812FS-392_L_	3.9	10.5	32	0.195	145	1300	1700
1812FS-472_L_	4.7	10.5	28	0.15	125	1000	1800
1812FS-562_L_	5.6	10.5	35	0.40	110	1000	1650
1812FS-682_L_	6.8	10.5	35	0.35	110	850	1450
1812FS-103_L_	10	10.5	35	0.55	90	710	1400
1812FS-153_L_	15	10.5	40	0.75	75	680	1150
1812FS-223_L_	22	10.5	45	0.85	15	600	855
1812FS-333_L_	33	10.5	45	1.1	10	540	820
1812FS-393_L_	39	10.5	45	1.1	9.8	500	710
1812FS-473_L_	47	10.5	45	1.2	8.0	390	645
1812FS-683_L_	68	10.5	45	1.8	22.0	260	650
1812FS-104_L_	100	10.5	45	2.5	4.5	260	520
1812FS-154_L_	150	10.5	40	3.8	3.4	220	475
1812FS-224_L_	220	10.5	45	5.4	3.0	180	390
1812FS-274_L_	270	10.5	35	6.5	2.0	150	350
1812FS-334_L_	330	10.5	45	6.8	3.0	150	310
1812FS-394_L_	390	10.5	35	7.6	2.6	140	310
1812FS-474_L_	470	10.5	35	8.7	2.1	130	280
1812FS-564_L_	560	10.5	20	11.2	1.60	110	280
1812FS-684_L_	680	10.5	25	12.7	1.90	100	250
1812FS-824_L_	820	10.5	25	16.8	1.45	90	210
1812FS-105_L_	1000	10.5	30	19.5	1.68	90	160



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Document 254-1 Revised 03/14/12

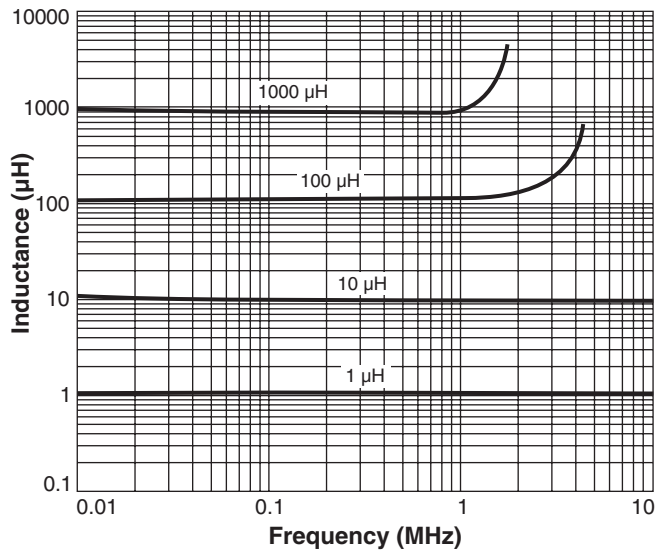
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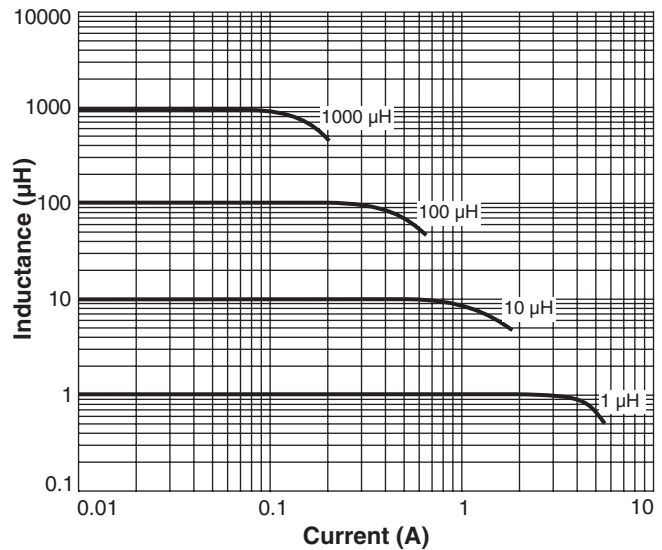


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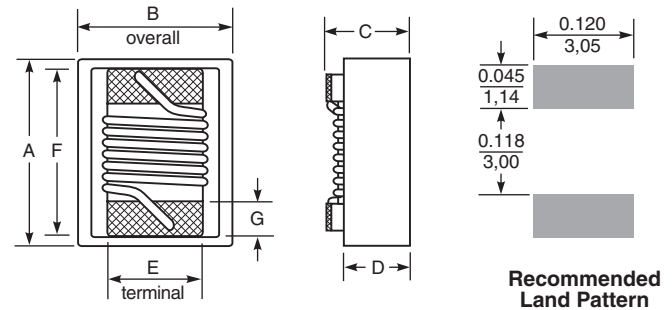
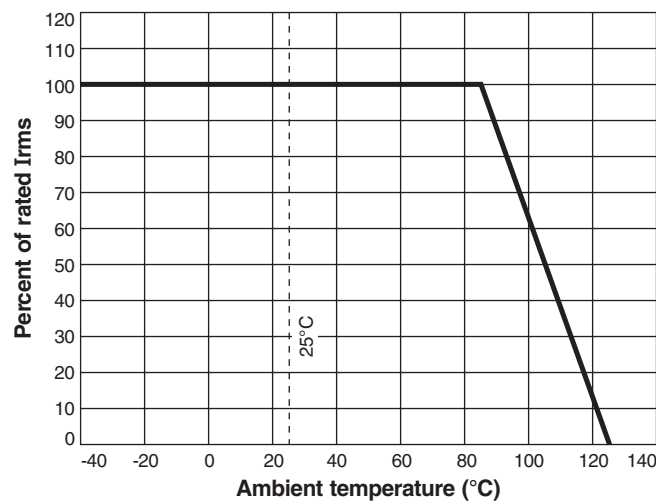
Typical L vs Frequency



Typical L vs Current



Irms Derating



A max	B max	C max	D ref	E ref	F ref	G
0.231	0.196	0.150	0.107	0.100	0.178	0.025 inches
5,87	4,98	3,81	2,72	2,54	4,52	0,64 mm