



# Filter Inductors – 1812FS Series



- Magnetically shielded chip inductors
- Provides high performance in transmit and receive filters
- 29 inductance values from 1.0 – 1000  $\mu\text{H}$

**Core material** Ceramic/Ferrite

**Terminations** RoHS compliant matte tin over nickel over silver platinum-glass frit. Other terminations available at additional cost.

**Weight** 0.33 – 0.36 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). [Derating](#).

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

Tape and reel packaging:  $-40^{\circ}\text{C}$  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)

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

Part number <sup>1</sup>	L <sup>2</sup> ( $\mu\text{H}$ )	% <sup>3</sup> tol	Q <sup>4</sup> min	DCR <sup>5</sup> max (Ohms)	SRF <sup>6</sup> typ (MHz)	Isat <sup>7</sup> (mA)	Irms <sup>8</sup> (mA)
1812FS-102_R_	1.0	<b>10.5</b>	30	0.070	320	3100	2950
1812FS-122_R_	1.2	<b>10.5</b>	35	0.110	280	2800	2600
1812FS-152_R_	1.5	<b>10.5</b>	20	0.105	200	2100	2850
1812FS-222_R_	2.2	<b>10.5</b>	30	0.120	175	1800	2700
1812FS-242_R_	2.4	<b>10.5</b>	25	0.175	160	1900	2050
1812FS-272_R_	2.7	<b>10.5</b>	30	0.200	165	1400	2100
1812FS-332_R_	3.3	<b>10.5</b>	33	0.185	160	1400	1900
1812FS-392_R_	3.9	<b>10.5</b>	32	0.195	145	1300	1700
1812FS-472_R_	4.7	<b>10.5</b>	28	0.15	125	1000	1800
1812FS-562_R_	5.6	<b>10.5</b>	35	0.40	110	1000	1650
1812FS-682_R_	6.8	<b>10.5</b>	35	0.35	110	850	1450
1812FS-103_R_	10	<b>10.5</b>	35	0.55	90	710	1400
1812FS-153_R_	15	<b>10.5</b>	40	0.75	75	680	1150
1812FS-223_R_	22	<b>10.5</b>	45	0.85	15	600	855
1812FS-333_R_	33	<b>10.5</b>	45	1.1	10	540	820
1812FS-393_R_	39	<b>10.5</b>	45	1.1	9.8	500	710
1812FS-473_R_	47	<b>10.5</b>	45	1.2	8.0	390	645
1812FS-683_R_	68	<b>10.5</b>	45	1.8	14.2	260	650
1812FS-104_R_	100	<b>10.5</b>	45	2.5	4.5	260	520
1812FS-154_R_	150	<b>10.5</b>	40	3.8	3.4	220	475
1812FS-224_R_	220	<b>10.5</b>	45	5.4	3.0	180	390
1812FS-274_R_	270	<b>10.5</b>	35	6.5	2.0	150	350
1812FS-334_R_	330	<b>10.5</b>	45	6.8	3.0	150	310
1812FS-394_R_	390	<b>10.5</b>	35	7.6	2.6	140	310
1812FS-474_R_	470	<b>10.5</b>	35	8.7	2.1	130	280
1812FS-564_R_	560	<b>10.5</b>	20	11.2	1.60	110	280
1812FS-684_R_	680	<b>10.5</b>	25	12.7	1.90	100	250
1812FS-824_R_	820	<b>10.5</b>	25	16.8	1.45	90	210
1812FS-105_R_	1000	<b>10.5</b>	30	19.5	1.68	90	160

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

1812FS-105JRC

**Tolerance:** J = 5% K = 10%

(Table shows stock tolerances in bold.)

**Termination:** R = RoHS compliant matte tin over nickel over silver-platinum-glass frit.

L = RoHS compliant silver-palladium-platinum-glass frit.

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2200 parts per full reel).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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  $25^{\circ}\text{C}$  that causes an inductance drop of 10% (typ) from its value without current. [Click for temperature derating information](#).
  8. Current that causes a  $40^{\circ}\text{C}$  temperature rise from  $25^{\circ}\text{C}$  ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).
  9. Electrical specifications at  $25^{\circ}\text{C}$ .
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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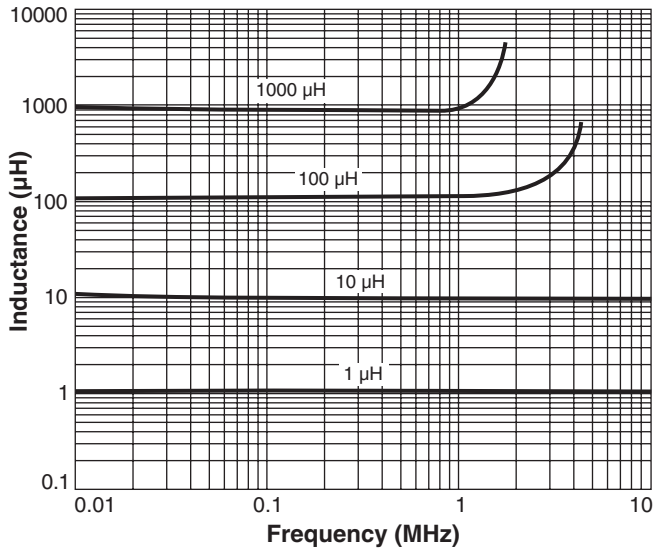
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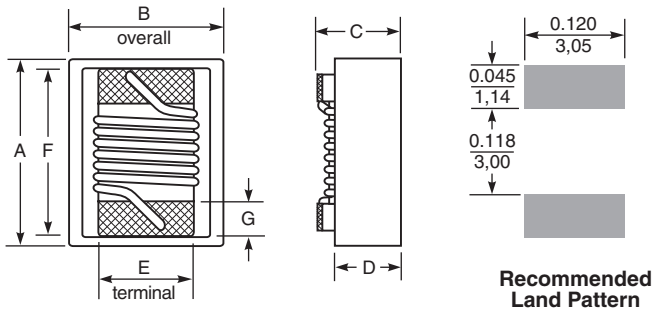
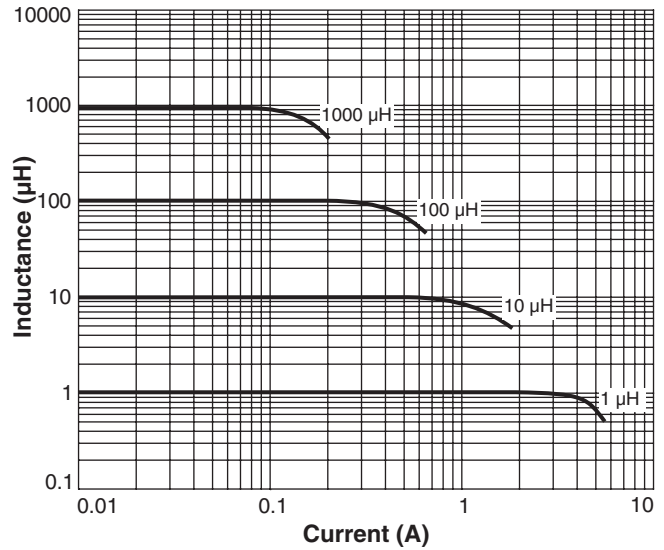


# Filter Inductors – 1812FS Series

## Typical L vs Frequency



## Typical L vs Current



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



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