

Inductor Coils Engineering Kit

ATP introduces a new line of printed spiral inductor coils in a wide range of values from 2.2 nH to 112.7 nH. These coils have been modeled and optimized using advanced computer automated design tools to produce data and graphs to help you utilize these devices in your own thin-film or hybrid designs. These printed inductors can be used in a wide variety of applications, from DC and RF filtering to gain shaping and equalization circuits. Use them in a new design approach or to enhance or modify a current design for a specific performance you desire!

These spiral inductors are designed with thick Au conductors on fused silica quartz to minimize series resistance and promote high Q values. The coils are offered with or without backside metallization to offer you the ability to mount in various applications utilizing isolated or grounded configurations. Supporting graphs and data are also available for these two configurations. They also have additional pads located around the coil to help you customize and fine tune your final desired values, and are protected with a polyimide coating to help resist in scratching, bridging or shorting during assembly and tuning.

Each kit contains the part numbers and quantities listed below. Die size ranges from 0.022" x 0.022" (0.559 mm x 0.559 mm) to 0.052" x 0.052" (1.321 mm x 1.321 mm).

Material: 0.010 Thick quartz/fused Silica (SiO₂)

Metalization A Side:

- TiW = 400 to 800 Å • Au = 250 μ" minimum

No Metalization on B Side

Critical Dimensions:

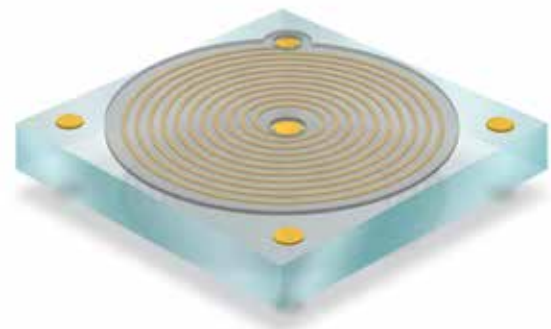
- Line = 0.0006 ±0.0001 • Gap = 0.001 ±0.0001

Polyimide = 3–6 Microns

Kit part number: ATP-I-010-Q-ENGTKIT

Part Number	Inductor Turns	Inductance (L)	Q	Quantity
ATP-I-010-Q-022	2.5	2.2 nH	4.5	10
ATP-I-010-Q-350	3.0	3.5 nH	4.5	10
ATP-I-010-Q-390	3.5	3.9 nH	5.2	10
ATP-I-010-Q-730	4.0	7.3 nH	5.9	10
ATP-I-010-Q-120	4.5	12.0 nH	7.0	10
ATP-I-010-Q-158	5.0	15.8 nH	8.1	10
ATP-I-010-Q-196	5.5	19.6 nH	8.6	10
ATP-I-010-Q-219	6.5	21.9 nH	9.6	10
ATP-I-010-Q-264	7.0	26.4 nH	9.4	10
ATP-I-010-Q-282	7.5	28.2 nH	8.9	10
ATP-I-010-Q-406	8.25	40.6 nH	10.9	10
ATP-I-010-Q-783	9.5	78.3 nH	18.1	10
ATP-I-010-Q-877	10.5	87.7 nH	14.7	10
ATP-I-010-Q-1127	12.0	112.7 nH	16.9	10

Visit www.thinfilm.com/coils.html for each part's dimensions.



ATP offers build-to-print service for a wide range of materials and metalization schemes. ATP fabricates circuits on substrates from As-Fired Alumina to Beryllium Oxide to Fused Silica, even Silicon. Metalizations range from the standard TaN/TiW/Au to films including Nickel, Palladium, or Titanium.

At ATP, we constantly evolve our processing and material capabilities to reflect our customer's changing needs. If you have a circuit requirement that is out of the "normal" thin-film type, please contact ATP at 510.661.4287 or visit our web site at www.thinfilm.com. ATP would enjoy discussing your application with you and working to develop a solution.

