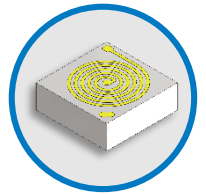




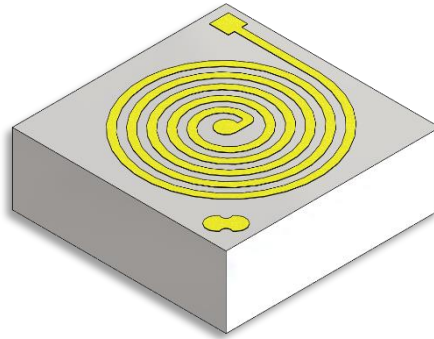
Spiral Chip Inductors



Piconics SP Series is a thin film gold spiral inductor deposited on a ceramic or quartz chip. This style inductor can be used where low inductance values and gold wire bond is the interconnection method.

Applications:

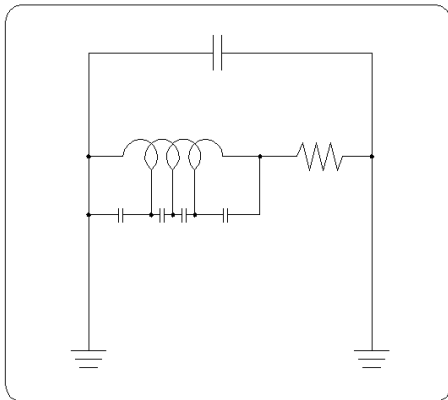
- Tuned Microwave Circuits
- Power Supply Choke
- Hybrid Modules
- C, X & Ku Band Filters
- Space Qualified Products



Features:

- High Frequency Performance
- 2.1 – 219 nH Inductance Values
- Wire Bond Contacts
- Mil-PRF-38534 Up-Screen Capable
- Quartz & Alumina Options

Equivalent Circuit:



Environmental & Packaging:

Operating Temp.	-55°C to +125°C
Storage Temp.	-55°C to +125°C
RoHS Compliant	Yes
Outgas	Meets ASTM E595 (Special Epoxy Required)
Substrate Material	Alumina or Quartz
Terminations	Wire Bondable Au
Packaging	Waffle Pack

Notes:

1. Inductance values are measured in free air.
2. Mounting the part on a ground plane will reduce the inductance and SRF. Higher values change more.
3. If part must be mounted on a ground plane it is best to purchase part on a thicker material. Piconics can supply up to 25 mil thick on special order.
4. Attachment is best made with non-conductive epoxy. Using a conductive epoxy will yield the same results as mounting on a ground plane.
5. Only thermosonic wire bonding using 1 mil gold wire is recommended.
6. Bonding pads are .004" diameter min.
7. SRF values are measurements made on 10 mil substrates.



www.piconics.com

ISO 9001:2015

Established 1963

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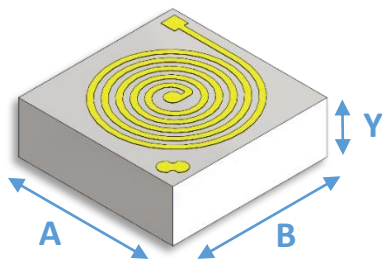


Rev A-2021

Spiral Chip Inductor									
Piconics part #	Part Size (Mils) (A x B)	Turns	L (nH)	Tol. %	Q @ 200 MHz	DCR Ohms	Series SRF on Quartz GHz min.	Series SRF on Alumina GHz min.	Parallel SRF GHz min.
SP2P5-20-xyz	20 x 20	2.5	2.1		2	0.8	18	18	11
SP4P5-20-xyz	20 x 20	4.5	6.9	10	4	2	14	14	9
SP5-20-xyz	20 x 20	5	7.3	10	3.5	2.5	13	13	7
SP6-20-xyz	20 x 20	6	10	10	3.5	3.5	12	12	6
SP6P5-20-xyz	20 x 20	6.5	12	10	3.5	4	12	12	6
SP2P5-26-xyz	26 x 26	2.5	2.3	18	5	0.5	17	17	11
SP3P5-30-xyz	30 x 30	3.5	4.3	20	5	1	13	13	7
SP4P5-30-xyz	30 x 30	4.5	7.5	20	5	1.5	12	12	7
SP2P5-45-xyz	45 x 45	2.5	4	18	11	0.5	17	17	11
SP3-45-xyz	45 x 45	3	5.5	15	11	0.6	14	14	9
SP3P25-45-xyz	45 x 45	3.25	5.8	20	10	0.5	13	13	8
SP3P5-45-xyz	45 x 45	3.5	7	15	11	0.8	13	13	8
SP4-45-xyz	45 x 45	4	9.6	15	10	1	12.5	12.5	7.6
SP4P5-45-xyz	45 x 45	4.5	11.3	10	10	1	12	12	7
SP5-45-xyz	45 x 45	5	14.6	10	10	1.5	12	12	7
SP5P5-45-xyz	45 x 45	5.5	17	10	10	1.5	12	12	6
SP6-45-xyz	45 x 45	6	21	10	10	2	9	9	6
SP6P5-45-xyz	45 x 45	6.5	25	10	10	2	7	6	5
SP7-45-xyz	45 x 45	7	28	10	10	3	5	3	4
SP7P5-45-xyz	45 x 45	7.5	34	10	10	3	5	3	3.5
SP8-45-xyz	45 x 45	8	38.5	10	10	3	5	4	3.5
SP8P5-45-xyz	45 x 45	8.5	45	10	10	4	5	4	3.5
SP11P5-60-xyz	60 x 60	11.5	80	10	10	9	4	3	3
SP12P5-61-xyz	61 x 61	12.5	100	10	12	8.5	2	2	TBD
SP16-80-xyz	80 x 80	16	219	10	20	12	0.2	0.5	TBD

Values in Bold, Italics & Red are Approximations for Reference Only - Contact Piconics for more Info

Mechanicals:



Piconics Part Number Suffix XYZ:

X	Y	Z
A = Alumina	A = .005"	W = GOLD ONE SIDE
Q = Quartz	B = .010"	M = GOLD TWO SIDES
	C = .015"	
	E = .025"	

Add "P" to the end of the Suffix if Polyimide is required.

