

Spiral Chip Inductor



Product may not be to scale

FEATURES

- Wire bondable
- Small chip size: 0.050 inches square
- Alumina substrate
- Inductance up to 150 nH
- Inductor material: Thin film gold

The PSC Chip Inductors offer the best combination of size and value available. Generally custom built to specific value requirements, two versions are offered here.

These chips are manufactured using Vishay Electro-Films (EFI) sophisticated Thin Film equipment and manufacturing technology. The PSCs are 100 % electrically tested for inductance and Q.

APPLICATIONS

Primary application is in microwave circuits as resistant element or as choke in power supplies. High self-resonance is important for choke applications and achieved by reducing capacitance between turns by physically increasing space between spiral lines. Multi tap coils are available for wire bond tuning but since inductors are very sensitive to pattern width/spacing and metallization thickness almost all are custom built to specification desired.

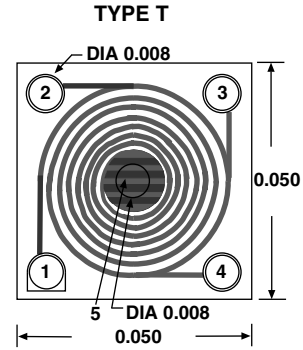
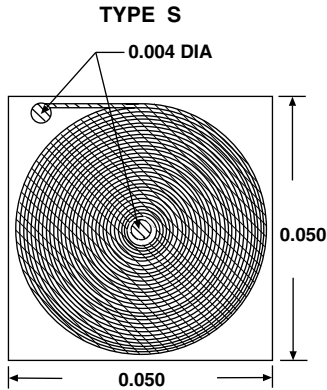
VALUES AND TOLERANCES		
	TYPE S Single Bond	TYPE T Tunable
Q at 1 MHz	0.05	0.08
Tolerances	± 5 % to ± 25 %	± 10 % to ± 25 %
Steps		3 x 9 %

Custom values/sizes available. Quartz substrate available for higher Q.
Consult Application Engineer

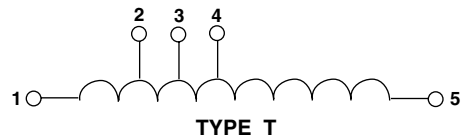
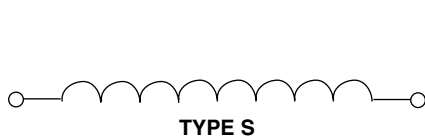
STANDARD ELECTRICAL SPECIFICATIONS	
PARAMETER	
Operating Temperature Range	- 55 °C + 125 °C
Dielectric Constant	9.8 for alumina
Coil Resistance	< 5 Ω
Insulation Resistance	10 ¹² Ω min.

CHIP INDUCTOR

CONFIGURATIONS in inches



SCHEMATIC



MECHANICAL SPECIFICATIONS in inches

PARAMETER	
Chip Size	0.050 x 0.050 ± 0.003 (1.32 x 1.32 ± 0.076 mm)
Chip Thickness	0.015 ± 0.002 (0.38 ± 0.05 mm)
Chip Substrate Material	99.6 alumina, quartz available
Bonding Pad Size	TYPE S 4 mil diameter typ. TYPE T 8 mil diameter typ.
Pad Material	Gold

CHIP
INDUCTOR

ORDERING INFORMATION

Example: PSC TYPE S, 140 nH, ± 10 %

P/N: PSC

**S/T
TYPE**

140
INDUCTANCE
VALUE
3 significant digits

0
MULTIPLIER
CODE

K
TOLERANCE
CODE

B = 0.01
A = 0.1
0 = 1
1 = 10

J = 5.0 %
K = 10 %
M = 20 %
L = 25 %



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