

3DC09AOI

SMD 3D Coil AOI 10.5x9.5x3 mm

3-Axes Transponder Inductor (3DCoils)

Features

Small 3D coil version designed to achieve a very good electrical performance in the smallest dimensions.

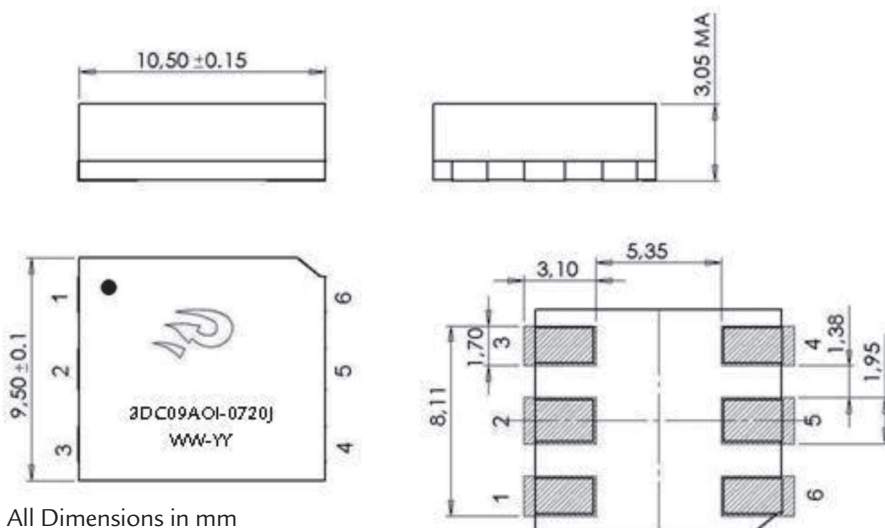
Keyless entry systems is a typical application for this coil, the isotropy is often sought in RF antenna. In transponder applications, this feature has been achieved by the combination of 3 single coils oriented in the 3 space axis with the aim of covering the maximum space orientation. This small size 3D coil offers the possibility of assembly in single component 3 coils with full functionality, thus reducing cost, saving PCB space and increasing the circuit reliability.



Characteristics

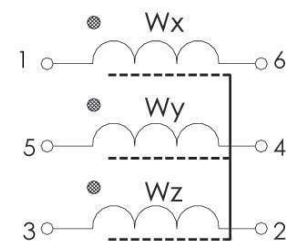
- Smallest size 10.5x9.5x3mm.
- Very good electrical performance.
- High stability in temperature (-40 °C to +85 °C).
- The inductivity in each axis can be customized to achieve customer requirements.
- Designs at lower frequencies like 125kHz show a very good electrical performance as well.
- High sensitivity values.

Dimensions and pad layout



All Dimensions in mm
 Pins Coplanarity 0.10mm
 General Tolerances unless indicated ±0.1mm

Schematic Diagram



Electrical specifications

Code	L x,y,z (mH)	Q x,y, Min	Oz Min	F (kHz)	SRF x,y (kHz) Min	SRF z (kHz) Min	DCR x,y (Ω) Max	DCR z (Ω) Max	Sensi x,y (Ω) Min	Sensitivity z (mVpp/App/m) Min	Length (mm)	Width (mm)	Height (mm) MAX
3DC09AOI-0720J	7.20	15	10	125	400	750	165	522	36	25	10.5	9.5	3.25
3DC09AOI-DR-0720J	7.20	15	40	125	400	900	165	132	34	19	10.5	9.5	3.05
3DC09ALC-0720J	7.20	27	40	125	500	900	137	107	27	19	10.5	9.5	3.05