

## Technology Transfer Track Posters

# LTCC Multilayer Ceramic

VIA electronic developed a manufacturing method for a coil for F4E used in the diagnostics module to measure the magnetic field. Therefore, a multilayer ceramic design was done with 38 layers. Conductive tracks of the coil were printed (thick film technology) and connected by electrical vias. After stacking, lamination and sintering a very robust component with very accurate dimensions was the result. All parameters were inside the specified tolerances and a specific interconnection welding method for a silver wire was developed.

Generally, with the LTCC technology real ceramic multilayer designs result as components, boards or packages for bare dies, MEMS Sensors, Microsystems or System in a Package SiP.

Fields of application are: harsh environment, Interposer, HDI-Designs, Image sensors, x-ray sensors, industrial, medical, aerospace, high frequency like radar or special scientific application.

Further special technology features are:

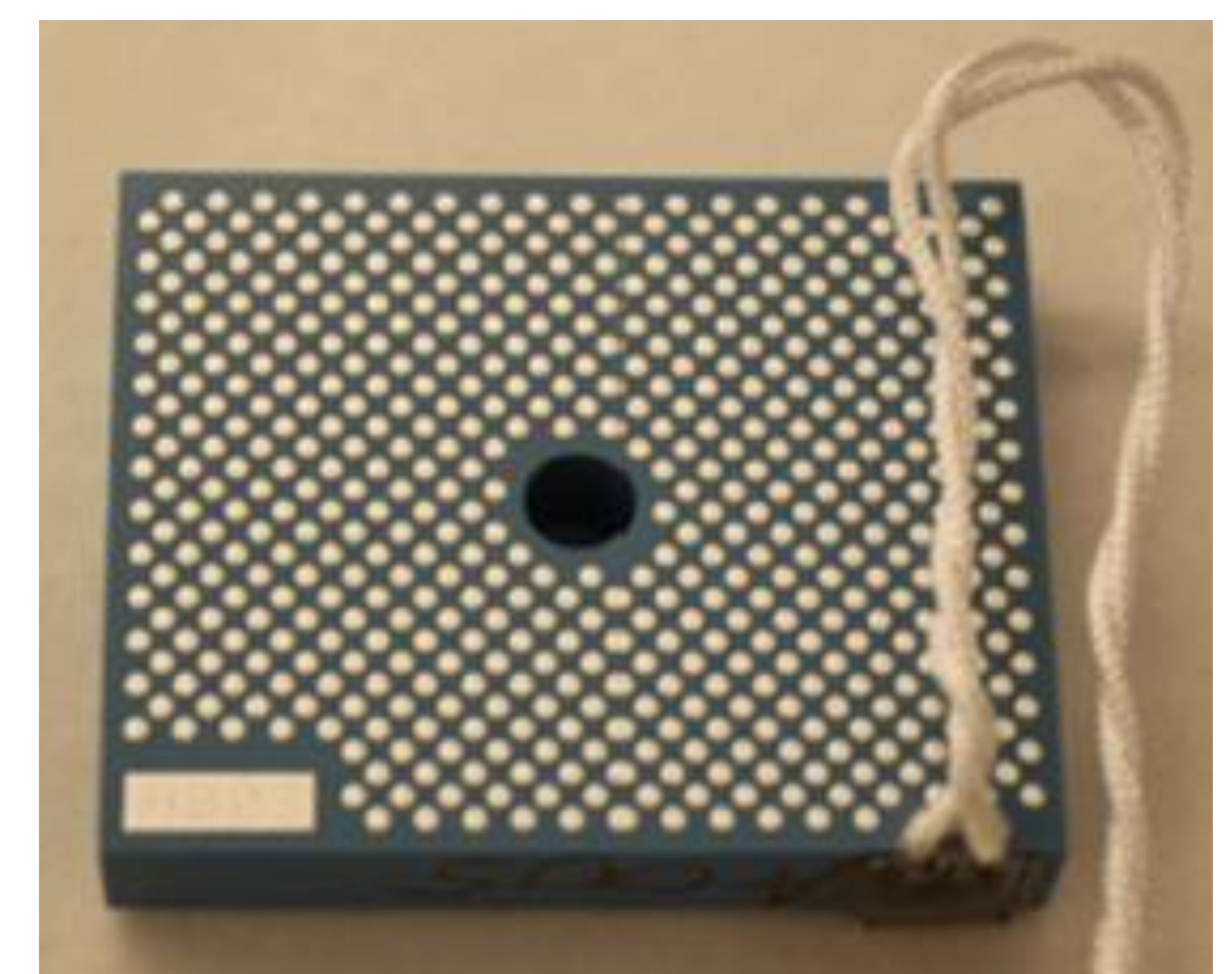
- Ceramic caps with and without metallization
- Side metallization for limited assembly space
- Thermal vias

### Benefits of the technology:

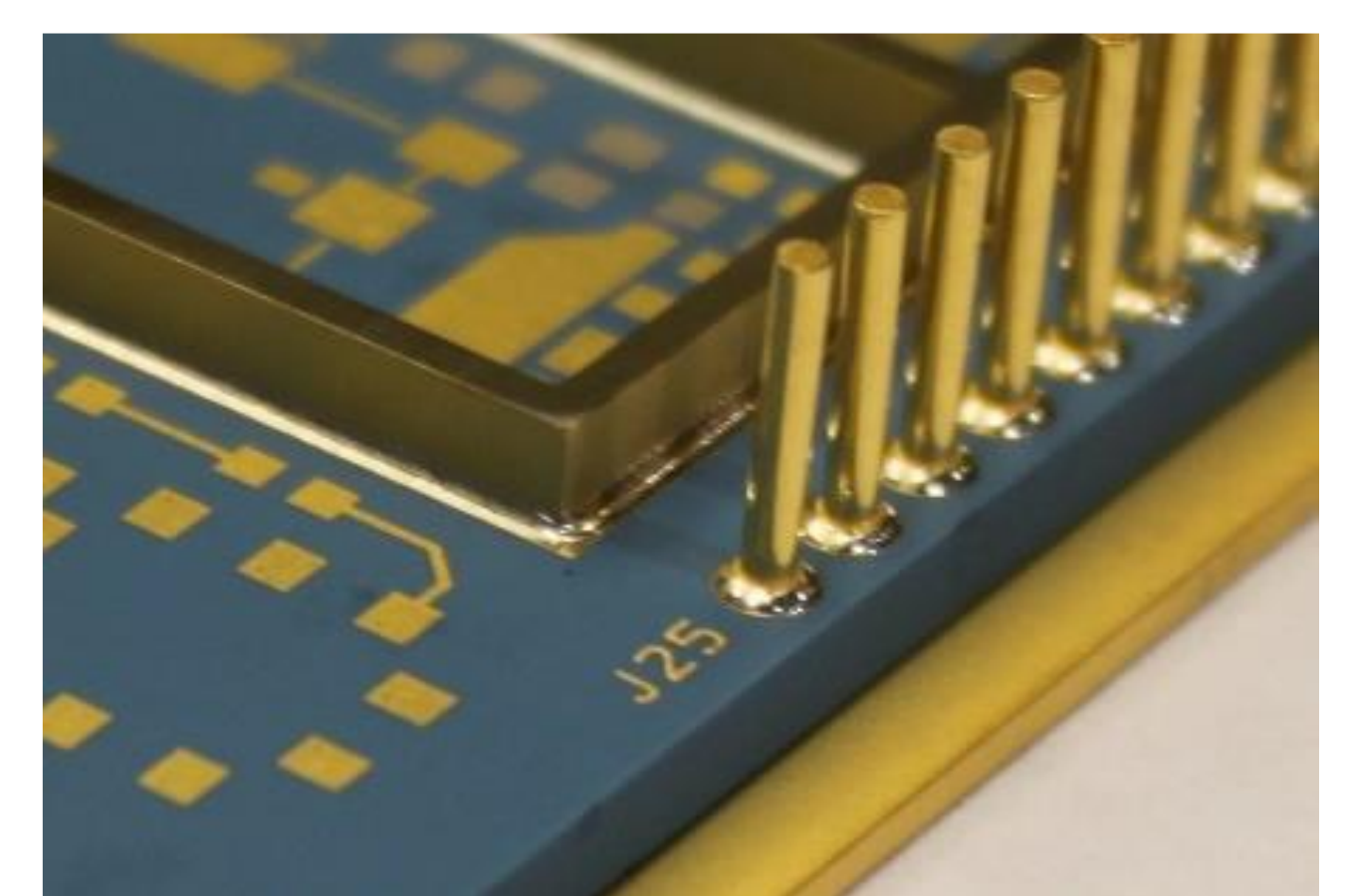
- Complex multilayer 3D forms can be achieved.
- Minimises the size and creates compact modules with embedded passive elements such as resistors, inductors, capacitors into the ceramic substrate.

### Application Areas:

- Ideal for use cases in harsh environment, low or high temperature, vacuum.
- Application in industrial, medical, defense, aerospace, telecommunications or automotive, among others.



Component



Multilayerboard



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