

Spotlight on: Anaren Ceramics, Inc.

Location: Salem, NH



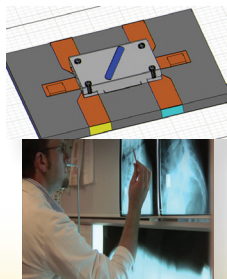
Added to the Anaren team in 2001 and now a critical part of our Space & Defense Group, Anaren Ceramics operates out of a state-of-the-art, 65,000 sq. ft. facility (including Class 10,000 clean rooms) and has long been a leading manufacturer and innovator of quality ceramic technology to space, defense, commercial wireless, and medical device customers.

Anaren Ceramics offers high-tolerance, high-performance, and high-complexity custom circuits leveraging LTCC and thick film processing — as well as a wide selection of new and legacy “catalog” resistive components (resistors, terminations, attenuators and others available in chip, SMT, and flanged formats). In all cases, robust engineering support, deep investments in the latest manufacturing infrastructure, experience with extremely sophisticated and innovative packaging requirements, and adherence to strict quality and customer service standards differentiate Anaren Ceramics from ordinary “build to print” suppliers.

Core competencies

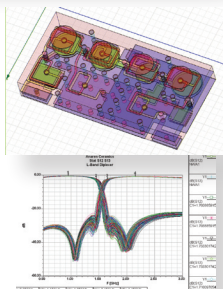
Our Salem, NH facility:

> specializes in turnkey development and manufacturing of LTCC and thick film circuits/packaging in support of

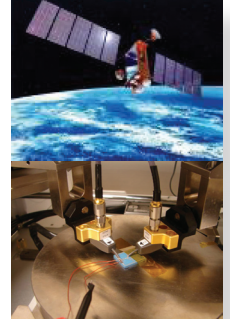


a wide variety of exacting customers. On site, vertically integrated functions include:

- engineering/design-to-spec



- modeling, simulation, beta development
- test development & test (including RF testing)
- full-scale automated/semi-automated production (including automatic printing and diamond sawing, laser trimming, CO2 laser



- machining)
 - QC
 - tape & reel packaging
 - project management
 - more
- > supplies standard resistive components, with a wide array of format and materials choices – including RoHS compliant options

Capabilities

LTCC

> turnkey LTCC solutions — from DC-44+GHz — developed by industry experts using best-in-class equipment (compatible with DuPont, Ferro, and Heraeus materials). Our solutions offer extremely tight tolerances and tremendous design flexibility (e.g.: up to 30 layers, numerous via placements options, multiple wrap options, plating, etc.). Applications for our LTCC solutions include:

- frequency generation/sources
- packaging for next-gen receiver and exciter modules (BGA, flip chip, etc.)
- high-performance filtering:
- custom circuit boards (including multilayer)
- hybrid integrated circuits
- RF/microwave distribution (including Integrated Microwave Assemblies/IMAs) among others circuit and packaging solutions

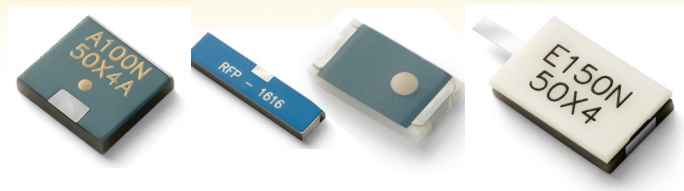
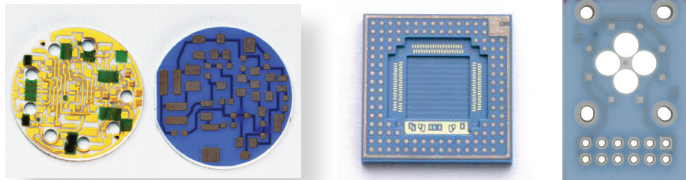
LTCC design guide and equipment list available on request.

Thick Film

> turnkey thick film solutions (cost competitive alternative to LTCC) — up to 80GHz — employing a wide range of material choices, design options, processes, and manufacturing techniques. Applications experience includes:

- multi-chip assemblies
- patch antennas
- spiral inductors
- filters
- feed throughs
- distribution boards
- couplers
- multilayer circuit boards
- circuit boards with integrated passives

> thick Film design assistance and equipment list available on request.



Standard Components

> Anaren Ceramics offers a wide selection of standard components suitable for military or instrumentation applications:

- products include: resistors, terminations, attenuators
- formats include: chip, SMT, flanged, and flangeless
- materials options include: RoHS-compliant AIE, BeO, Alumina (with a wide variety of finishes), among others

Certifications & qualifications

- > ISO-9001:2008 registered
- > Quality requirements MIL-Q-9858
- > Test capabilities MIL-PRF-38534
- > Test methods MIL-STD-883
- > Other testing available upon request

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