Standex EDGE Electronics

INNOVATE / CONSULT / ENGINEER / DELIVER

LTCC Transformers

Maximum Transformer Performance and Durability at a Minimum Weight and Footprint





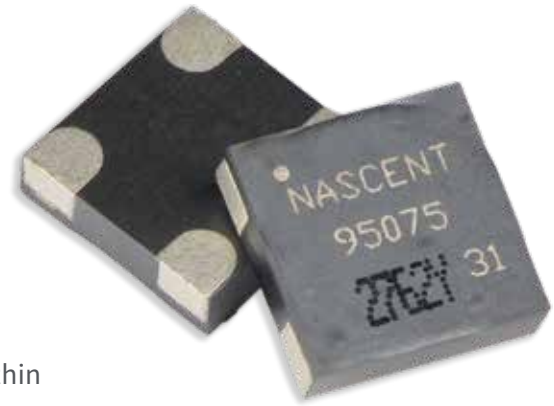
NASCENTechnology's LTCC Transformers

An LTCC Transformer is a Low Temperature Co-Fired Ceramic Transformer. The low firing temperature is below the melting point of silver (900° C), it is "co-fired" because the entire transformer structure is fired in a kiln at once, and the ceramic material is a ferrite tape (the windings are silver).

The Transformer is made by screen printing silver winding patterns on magnetic tape. Special non-magnetic insulation materials are also printed. The tape layers are stacked and laminated into structures up to 40 or more layers before being fired in a kiln.

The finished product is a very rugged ceramic core with the windings embedded in the ferrite. It offers multiple advantages:

- **Maximum Performance:** The LTCC Transformer provides millions of charge/discharge fail safe cycles and complete test data is available with each component.
- **Extremely Robust Structure:** LTTC Transformers are self-shielding, can handle temperatures from -45° C to 250° C, can handle high shock, and can handle high vibration.
- **Minimum Footprint:** LTCC transformers and inductors are flat, thin, lightweight, and approximately one third the volumetric size of wire-wound transformers. There simply is nothing smaller than these LTCC transformer components which embed the coil windings within the magnetic core body.



- **Multiple Form Factors Available:** Round or odd form factors, alternate co-fired termination styles and positions, and the integration of traditional thick film or LTCC circuits are all possible with LTCC Transformers.

Manufacturing at NASCENTechnology

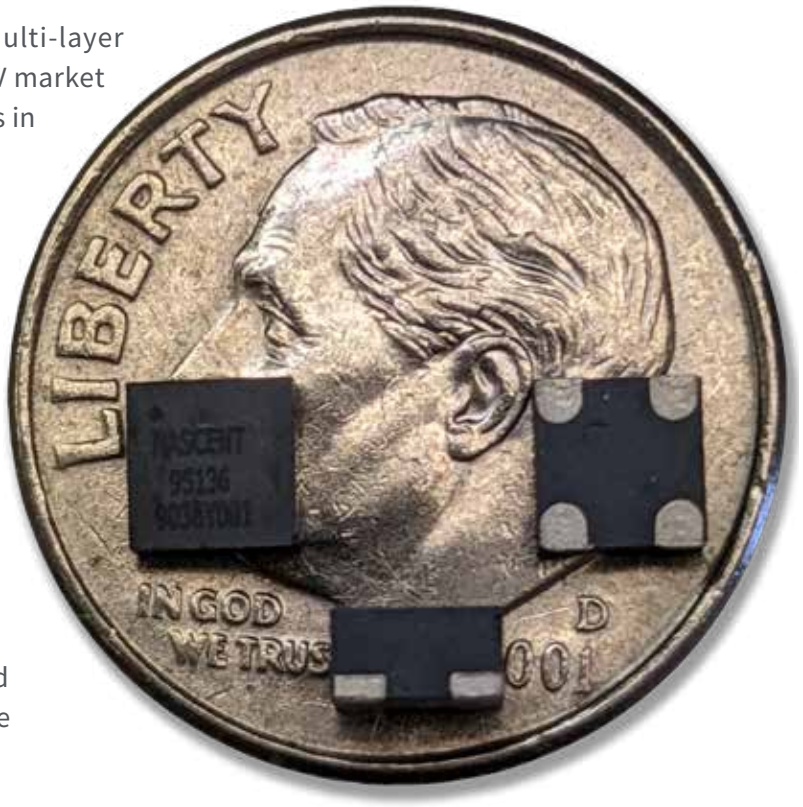
NASCENTechnology manufactures within a class 10,000 clean room and our Quality System is compliant with ISO9000:2015 and AS9100D. Our design, manufacturing, and supply base are all located within the United States. We maintain permanent, full traceability of all our manufactured parts by serial number to materials, processing, and testing data.

We have standard component designs and demo boards available to facilitate rapid design into new prototype systems and emerging applications. We have both ITAR and COTS EAR99 standard transformer designs available. We will also customize when necessary.

About NASCENTechnology

NASCENTechnology Manufacturing, a Standex Edge division, produces High-Reliability transformers and inductors for military and other markets where field deployed failure is not an option.

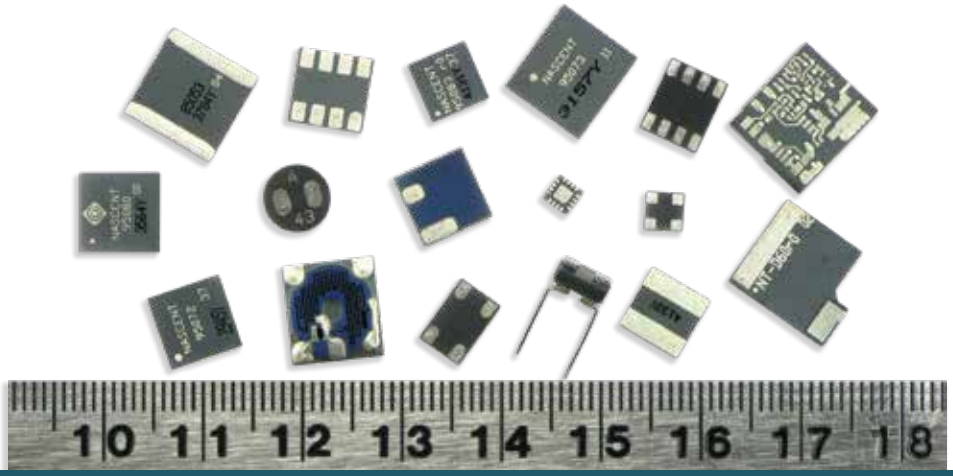
NASCENTechnology has been manufacturing multi-layer ceramic flyback transformers for the military UAV market more than a decade. Customers choose our parts in the electronic safe and arm circuitry and DC-DC converters in UAV applications because our transformers are smaller, lighter, and can handle extreme shock and vibration over a wide temperature range enabling systems to fly farther, faster, and loiter longer. NASCENTechnology parts are included in the U.S. military's very first Replicator program UAVs and are in full rate production for that application today.



If LTCC package options are not feasible electromagnetically, NASCENTechnology will also design and manufacture custom wire-wound products with a focus on producing parts that are small yet highly reliable in extreme conditions.

To discuss your program requirements or request a quote, contact:

Steve Upchurch
NASCENTechnology
+1.605.882.8513
sales@nascentechnology.com



A Standex **Electronics** Business

The new brand name for the Standex Electronics Magnetics division exemplifies the position occupied by Standex Magnetics engineers in relation to magnetic component innovation.

Standex Edge expertise spans transformers, inductors, current sensors, chokes and other advanced magnetic components used across multiple industries.

Combining decades of engineering innovation with global manufacturing capabilities, Standex Magnetics Engineers are leaders in component miniaturization, thermal management, robust design, and efficient production. They have firmly established their position at the **Edge** of innovation, where energy meets possibility.

Welcome to **Standex Edge**.

standexedge.com

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