

# Payton Planar Magnetics Environmental Testing

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Product quality can be verified through environmental testing such as vibration, thermal cycling, mechanical shock, thermal shock, HALT and HASS. The experience and analysis of an advanced engineering group can minimize or even eliminate any design flaws on a new design.

## **Environmental Testing on Planar Magnetics:**

Payton Planar designs are used in harsh environments like space, aircraft, missiles and automotive. Magnetics in general are tested and qualified per Mil-PRF-27, Transformers and Inductors General Specifications. In addition, Mil-STD-981 comes into play for Design, Manufacturing and Quality Standards for Custom Electromagnetic Devices for Space Applications.

The test methods for Electronic and Electrical Component Parts are per MIL-STD-202. Payton has performed HALT, *Highly Accelerated Life Testing*, per MIL-STD-202. Payton Planars have been tested to 200G mechanical shock in all 3 axis, random vibration to 40Grms up to 8 hours in each plane, moisture resistance at 85C with 85% RH for 1000 hours, thermal shock from -55C to 130C for 100+ cycles, and altitude from -1,300 to 65,000 feet.

Resistance to solvents, solderability and corona discharge are some other tests that Payton has successfully performed on our Planar Magnetics.

Payton also performs HASS, *Highly Accelerated Stress Screening*. HASS, an abbreviated form of HALT, is an ongoing screening test performed on regular production Planar Magnetics. During HASS, we try not to damage the product but rather to verify that actual production units continue to operate as designed when subjected to the environments used during the HASS test.

## **About Payton Planar Magnetics**

Payton America Inc., a Deerfield Beach, Florida company, designs, manufactures and markets Planetics®, a custom line of planar transformers and inductors to Original Equipment Manufacturers and their suppliers of power electronics. Payton's headquarter is in Israel, with manufacturing in Israel and China.

For more information, please visit Payton's web site at [www.paytongroup.com](http://www.paytongroup.com).

Payton is an SQ-1000 Approved Test Laboratory for Automotive.  
Payton has full thermal shock and thermal cycling capabilities.  
Payton has a clean room for space manufacturing.

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