A Success Story.

Knowles Space Heritage

ISO 9001

Approved to ISO 9001. An integrated management system in the Suzhou facility is supported by art manufacturing and test equipment components. Knowles’ state-of-the-art design, manufacturing and control of ceramic capacitors (MLCC) and multilayer assemblies for military and commercial space programs, utilizing state-of-the-art technology, art design, manufacturing and control, art manufacturing and test equipment to remain a leading supplier of multilayer ceramic capacitors (MLCC) and multilayer assemblies for military and commercial space programs, utilizing state-of-the-art technology, art design, manufacturing and control. Today, we draw on the experience and expertise gained on numerous platforms to meet and exceed customer requirements for reliability, performance and value.

Products

EMI filters for High Rel and value.

Space Heritage

Applications

Different applications require corresponding reliability grade components. Knowles offers a wide range of ceramic capacitors and multilayer assemblies for military and commercial applications across all types of space and ground-based systems, including, but not limited to, military, aerospace, space and industrial. Knowles’ high-reliability grade components are qualified to all appropriate US military specifications and are approved to ISO 9001.

Space programs

Our heritage spans many decades of successful space programs, utilizing state-of-the-art technology, art design, manufacturing and control. Today, we draw on the experience and expertise gained on numerous platforms to meet and exceed customer requirements for reliability, performance and value.

Space heritage - a success story.

Flexible epoxy polymer termination

Components

Flexible epoxy polymer termination: EMI filters for High Rel and value.

Applications

Different applications require corresponding reliability grade components. Knowles offers a wide range of ceramic capacitors and multilayer assemblies for military and commercial applications across all types of space and ground-based systems, including, but not limited to, military, aerospace, space and industrial.
IECQ-CECC ranges

Specially high reliability and approved parts A range of Kemet Hi-Rel and approved parts for high reliability requirements and applications. Knowles manufactures a range of Hi-Rel capacitors and EMI filters. Knowles offers products for a wide variety of high reliability applications. This includes aerospace, defense, avionics, military, and other high reliability applications.

DSCC Approved Capacitor Assemblies

ICCS04B and EBM - 10V to 56V

High Reliability Chip Capacitors

A range of MLCCs is available for high reliability applications in Class II. MLCCs are available in a range of sizes and terminations. Knowles offers a range of MLCCs for high reliability applications. This includes aerospace, defense, avionics, military, and other high reliability applications.

S02A Space ranges

High Reliability Chip Capacitors

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High Temperature Capacitors - HiT range

ICCS04B and EBM - 10V to 56V

EMI Filters

Typical Applications

- Outdoor Base Stations
- GPRS Base Stations
- Satellite and Radio Communications
- Power Handling (up to 125Watts)
- Temperature Stable (-55°C to +125°C, -55°C to +150°C)
- Lower Cost of Manufacturing Assembly
- Surface Mount Assembly up to 42 GHz
- EMI Filters - Panel Mount Filters - Discoidals - Special Filters

High Reliability & DSCC Approved Radial Leaded Caps

COG/NP0 and X7R - 16V to 1kV

Thin Film Technology and Single Layer Caps

Range of Diplexers, Cavity Filters, Power Dividers and other passive devices such as Directional Couplers, Over 40 years of designing custom solutions for very demanding applications.

Typical Products

- Cavity Filters
- Power Dividers
- Directional Couplers
- Frequency Selective Devices
- Special test requirements can be accommodated e.g. 100%

High Reliability EMI Filters

Surface Mount Filters are available as C filters (E range) and X filters (Y range) Integrated Passive Components (E range) and Y Integrated Passive Component (E range) and are available with a range of suitable termination options, including tin/lead plating and Knowles FlexiCap™. High Reliability Chip Capacitors - HiT range

A range of MLCCs is available for high reliability applications in Class II. MLCCs are available in a range of sizes and terminations. Knowles offers a range of MLCCs for high reliability applications. This includes aerospace, defense, avionics, military, and other high reliability applications.

High Temperature 200ºC

The following are qualified to AEC-Q200E:

- Resistor
- TRIMMER
- REDTOP
- MIL-PRF-23777
- MIL-PRF-55681
- MIL-PRF-19500

Products

- 100% surface mount
- 100% burn in
- 100% burn in at elevated voltage
- Nickel barrier plating
- Lead Style J
- Lead Style L
- Surface Mount Filters
- EMI Filters - Panel Mount Filters - Discoidals - Special Filters

S02A Space

Knowles manufactures a range of C0G/NP0 and X7R multilayer ceramic capacitors which are used as decoupling, bypass, filtering and transient suppression elements and exhibit +/- temperature and voltage coefficient and predictable variation of electrical properties with time, voltage and frequency. Class C0G/NP0 and X7R chips are used as decoupling, bypass, filtering and transient suppression elements and exhibit +/- temperature and voltage coefficient and predictable variation of electrical properties with time, voltage and frequency. Class C0G/NP0 and X7R - 16V to 10kVdc and temperature and designed for optimum reliability; burned in at elevated voltage dielectrics with special testing for long term reliability. They are available for hybrid use with conductive epoxy.

Ranges include:

- High Reliability Chip Capacitors
- High Temperature Capacitors
- High Reliability EMI Filters
- EMI Filters - Panel Mount Filters - Discoidals - Special Filters

Typical Applications

- Military applications including deep space missions
- Military - Handheld
- Industrial
- Automotive
- Medical
- Oil exploration, geothermal, military, automotive under-hood applications including ESA and NASA Space projects.

Knowles is experienced at providing products for the most demanding applications. This range is manufactured to exacting standards using our high repeatability – precision thin film fabrication and conform to Knowles Space specification S02A Space.

Dielectric MLCCs which conform to Knowles Space specification S02A Space are tested and approved in accordance with IECQ-CECC QC A-0100 and ESCC 3009. Ranges tested and approved in accordance with IECQ-CECC QC A-0100 and ESCC 3009.

High Temperature 200ºC

The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC.

- Knowles FlexiCap™ flexible epoxy polymer termination material.
- Desirable for surface mount application with nickel barrier plating and Knowles FlexiCap™.
- High Reliability Chip Capacitors
- High Temperature Capacitors
- High Reliability EMI Filters
- EMI Filters - Panel Mount Filters - Discoidals - Special Filters

Typical Applications

- Military applications including deep space missions
- Military - Handheld
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High Temperature 200ºC

The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC.

- Knowles FlexiCap™ flexible epoxy polymer termination material.
- Desirable for surface mount application with nickel barrier plating and Knowles FlexiCap™.
- High Reliability Chip Capacitors
- High Temperature Capacitors
- High Reliability EMI Filters
- EMI Filters - Panel Mount Filters - Discoidals - Special Filters

Typical Applications

- Military applications including deep space missions
- Military - Handheld
- Industrial
- Automotive
- Medical
- Oil exploration, geothermal, military, automotive under-hood applications including ESA and NASA Space projects.

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High Temperature 200ºC

The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC. The HiT range of multilayer ceramic capacitors is suitable for a variety of high temperature applications up to 200ºC.