ANALOG DEVICES

AHEAD OF WHAT'S POSSIBLE™

HIGH RELIABILITY COMPONENTS AND SOLUTIONS

Analog Devices, Inc. (ADI), the leader in RF/microwave, microelectromechanical systems (MEMS), and precision signal processing solutions in the aerospace and defense industry, is delivering a wide range of commercially available and customized components that meet or exceed today's most challenging design specifications in applications ranging from high performance aircraft to deep space probes to precision munitions and beyond.

Visit *analog.com*

Enhanced Products (EP) Portfolio

ADI offers a broad catalog of EP qualified components to support the defense and aerospace markets. Visit *analog.com/ADEF/EP* to view our EP components featuring:

- Operating temperature range: –55°C through +125°C
- Leadframes: to mitigate tin whisker concerns, ADI has over 600 nickel-palladium-gold (NiPdAu) lead finished products and is continually adding new components; all EP components have NiPdAu or SnPb leads
- Production: Enhanced products are manufactured via a single processing flow baseline at a non-China facility
- Wire bonding: no copper-based wire bonding is used in EP components

If an existing component or family is not presently qualified as EP, contact your ADI representative to provide a quick assessment of EP feasibility.

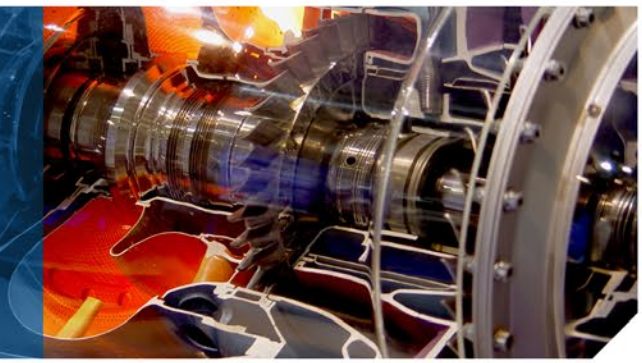
Space Grade Components

ADI creates selection components to address the challenges of electronics in rocket boosters, on-orbit space vehicles, and deep space missions. ADI provides Class S and Class K qualified die as monolithic hermetic devices, connectorized modules, or as fully integrated solutions in the form of a system in a package.

ADI space qualified components meet MIL-PRF-38535 and are on the Qualified Manufacturers List Level V. ADI has the capability to perform radiation testing for total dose and for enhanced low dose rate sensitivity (ELDRS) for ADI components and systems.

High Temperature

When applications require temperatures that exceed the industry standard, ADI provides a limited catalog of components for use in higher heat exposure applications—up to 175°C, with some as high as 210°C. See *analog.com/ADEF/HighTemp* to view components qualified for high temperature designs. ADI also works with partner customers to create suitable packaging and materials for new high temperature designs.



Die (Known Good, Bare, Zero Defect)

ADI can provide die to customers to meet their flexible requirements. Bare die for selected products is available for customers to integrate and package.

When the highest quality is desired either for performance or to reduce cost and risk, ADI ships products in die format that meet exceptionally high quality and reliability standards. The known good die (KGD) zero defect process supplies products that meet full range specifications including at-speed function test, burn-in process, and PPM level defects over the entire temperature range.

MIL-SPEC 883/Single Event Effects

ADI has a number of existing components supporting MIL-STD-883 test methods that include 100% electrical, environmental, and burn-in screening, along with 1000 hour life test and wafer lot acceptance testing. These components have a Defense Logistics Agency (DLA) V62 number.

ADI can test components for single event effects (SEEs) for aerospace applications.

Partnering with ADI to Qualify New High Reliability Components

If an ADI product is available but not qualified as high reliability, a customer can request characterization to meet the higher standards outlined in this brochure. ADI sales, field engineers, and authorized distributors can enter the product into ADI evaluation systems.

ADI has a team dedicated to this process that can rapidly evaluate and characterize the component and communicate the decision as to whether the component can be qualified to the high reliability standards. High reliability and enhanced products have their own data sheets and EP suffix.

DO-178B/DO-178C and DO-254 Support

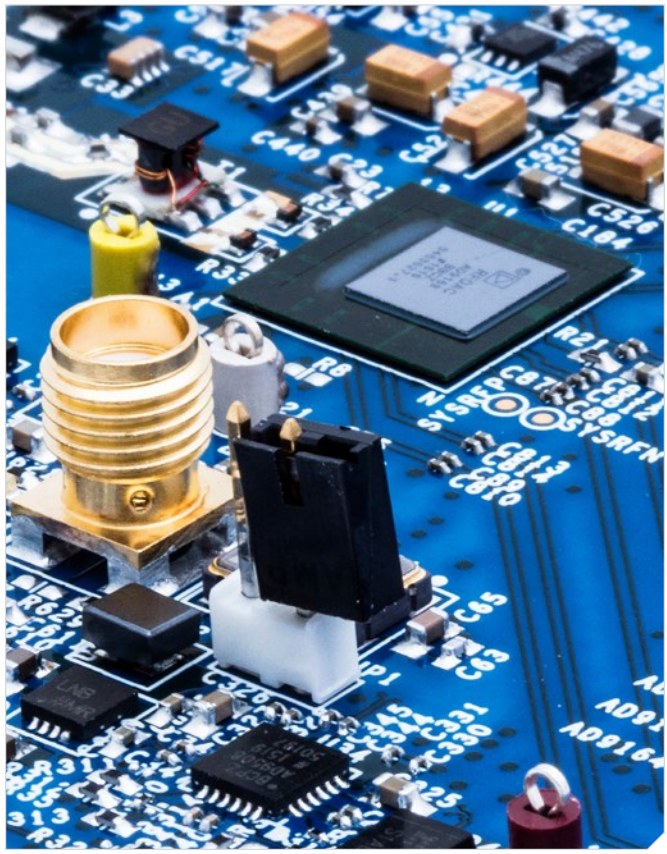
Analog Devices recognizes the need to support RTCA DO-178 B/DO-178 C and DO-254 for aviation customers. ADI has worked with customers to provide certifiable components, with artifact packages, to support complex components and embedded software.

Integrated Solution

ADI can provide customers with integrated solutions in the form of hermetically sealed modules, monolithic microwave integrated circuits (MMIC), package on package (PoP), and system in package (SiP) products. These solutions drive significant benefits in controlling performance, schedule, screening, qualification, packaging, and design optimization.

Questions

Contact your local ADI representative or email:
EP_Sales_Support@analog.com.



EngineerZone® Online Support Community

Engage with the Analog Devices technology experts in our online support community. Ask your tough design questions, browse FAQs, or join a conversation.

Visit *ez.analog.com*

EngineerZone™
SUPPORT COMMUNITY

Circuits from the Lab Reference Designs

Circuits from the Lab® reference designs are built and tested by ADI engineers with comprehensive documentation and factory-tested evaluation hardware.

Visit *www.analog.com/cftl*

Circuits from the Lab®
Reference Designs

Analog Devices, Inc.
Worldwide Headquarters

Analog Devices, Inc.
One Technology Way
P.O. Box 9106
Norwood, MA 02062-9106
U.S.A.
Tel: 781.329.4700
(800.262.5643, U.S.A. only)
Fax: 781.461.3113

Analog Devices, Inc.
Europe Headquarters

Analog Devices GmbH
Otl-Aicher-Str. 60-64
80807 München
Germany
Tel: 49.89.76903.0
Fax: 49.89.76903.157

Analog Devices, Inc.
Japan Headquarters

Analog Devices, KK
New Pier Takeshiba
South Tower Building
1-16-1 Kaigan, Minato-ku,
Tokyo, 105-6891
Japan
Tel: 813.5402.8200
Fax: 813.5402.1064

Analog Devices, Inc.
Asia Pacific Headquarters

Analog Devices
5F, Sandhill Plaza
2290 Zuchongzhi Road
Zhangjiang Hi-Tech Park
Pudong New District
Shanghai, China 201203
Tel: 86.21.2320.8000
Fax: 86.21.2320.8222

Printed in the U.S.A. BR15019-.1-10/16

analog.com

ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™