



Global Standards for the Microelectronics Industry

JEDEC: a complete solution to supporting standards development for a broad range of technologies

- Efficient, streamlined structure and process
- Members-only website with dedicated workspaces
- Engineer-oriented with broad industry representation

***For more information contact Emily Desjardins
emilyd@jedec.org or 703-907-7560***



JEDEC standards

In today's global electronics industry, standards are key to success in markets around the world. Technology companies can rely on JEDEC, which has both a rich history that provides a big picture perspective and the agility to move fast when market growth requires a standard. The organization helps the engineering community set standards for the building blocks of 21st century technology: from mobile memory standards for the phones and tablets in our increasingly connected society to the high density, high speed DRAM memory for the servers that enable cloud computing, and the sensors and other components that are paving the way for the emerging Internet of Things. JEDEC is also working towards establishing standards for emerging technologies such as wide bandgap semiconductors.

Standards when you need them

In fast-developing markets where there is broad consensus, JEDEC has protocols in place to allow committees to organize quickly to forge agreement on specifications and fast-track them through the standards process between formal committee meetings to reduce time to market for a standard. For the Universal Flash Storage (UFS) Card, for example, a standard was established in just nine months.

Setting the bar

JEDEC standards establish product types, basic features, form factors and minimum levels of quality and reliability, enabling companies to develop products with confidence.

More efficient use of R&D expenditures

Because basics have been defined, companies can focus precious R&D dollars on technical innovation. This stimulates market growth and gives buyers more variety and a broader selection of product. The result is a larger market than proprietary products could foster, which translates to more sales and revenue.

Early exposure to technology

As companies participate in developing standards, they deepen their understanding of the technology, which increases the likelihood that their products will meet the standard **while also offering their own differentiating features when a particular market takes off.**

Global opportunities

International standards are the lingua franca in world markets. Thus, they encourage international business and simplify contract negotiations and language among buyers and sellers. Because everyone uses the same terms and definitions, buyers can be confident and sellers can have a larger potential market.

JEDEC Strengths Lay a Foundation for Success

Respected

Founded in the early 20th century, JEDEC has evolved in tandem with the microelectronics industry. It developed a dictionary of semiconductor terms, some of the first mechanical package outlines as well as initial quality and reliability specifications for semiconductors. Many JEDEC standards have become de facto industry standards, including the electrostatic discharge (ESD) symbol, single inline memory modules (SIMMs), various versions of DDR synchronous DRAM (SDRAM), the joint JEDEC/IPC Standard for Moisture/Reflow Sensitivity Classification for Nonhermetic Surface-Mount Devices, and the embedded multimedia card (eMMC) standard. In addition, JEDEC staff are often called upon to advise government agencies. In 2013, for example, JEDEC provided counsel on the topic of standard essential patents to the U.S. Department of Justice, the U.S. Federal Trade Commission and the U.S. Senate Judiciary Committee.

Efficient

JEDEC has developed a dependable infrastructure—in terms of both people and process—that uses time and resources productively. A knowledgeable, yet lean, headquarters staff cuts out bureaucracy. There is an established, familiar process that provides a useful structure for committees, subcommittees and task groups. Under JEDEC's streamlined structure, most of the work is done in small, productive task groups. JEDEC provides tools and templates, including a style guide that describes the format in which standards are published. JEDEC also has a strong legal infrastructure, including defined procedures for dealing with intellectual property during standards development.

Connected

As a worldwide community, JEDEC members are all over the globe and represent a large proportion of the microelectronics industry. JEDEC partners with government, academia and other standards groups like the International Electrotechnical Commission (IEC) and the American National Standards Institute

(ANSI). It also has partnerships with more targeted groups, including a collaboration with the MIPI Alliance on standards for mobile devices and with the Electrostatic Discharge Association (ESDA) on electrostatic discharge testing. JEDEC has working partnerships with the China Semiconductor Industry Association (CSIA) and the China Electronics Standardization Institute (CESI). In 2016, the first JEDEC task groups in China were formed.

The organization's IT infrastructure helps individual JEDEC members stay connected. Its website has members-only dedicated workspaces for each committee, subcommittee and task group. Members can vote for standards using a proprietary online system.

Forward looking

JEDEC has developed a strategic roadmap, identifying areas in emerging technologies where standardization may be needed. These include automotive, wide bandgap semiconductors, photonics and energy harvesting.

The organization provides educational opportunities, including workshops, conferences and forums worldwide. It helps members stay up to date with the JEDEC SmartBrief, a daily email highlighting the most important microelectronics news.

Engineer-oriented

JEDEC is run by and for engineers, but is not limited to device engineers. Because committee members include a broad swath of the industry—including semiconductor makers, test houses, OEMs, distributors and government agencies—the resulting standards are practical and realistic. An engineer from a test company might point out that, no matter how desirable a particular feature might be, there's no reliable way to test for it. Committees build a standard incrementally, based on real-world results and input from various industry segments, resulting in an increasingly useful standard. What's more, JEDEC's reasonable dues ensure that companies of all sizes, from garage startups to established companies with billions in revenue, can participate.

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