



General Incorporated Association

KEC Electronic Industry Development Center



Mission

We will promote the electronics industry and contribute to the Japanese economy through our activities in improving technology, productivity, and quality.

Message

In 1961, Kansai Electronic Industry Development Center (KEC) was established by 24 companies mainly in the Kansai region as promoters with the support of the Ministry of Economy, Trade and Industry (former Ministry of International Trade and Industry) and the Osaka prefectural government.

Our core business consists of Committee activities supporting the growth of engineers through seminars, technical courses, certification exams, and EMC Testing and Product Safety Testing services to ensure safe and reliable products.

Our committee business organizes various technical seminars providing leading technologies, and training courses for engineers, and also administrating international certification exams for EMC engineers and product safety engineers in business alliance with iNARTE (currently known as Exemplar Global, Inc.) in the U.S.

For the EMC Testing and Product Safety Testing services, we have obtained a laboratory certification based on ISO/IEC17025 and have about 20 fully equipped test facilities, such as large and small anechoic chambers and shielded rooms, including the E3 lab in Seika-cho, Soraku-gun, Kyoto Prefecture, which began operation in 2024. We will provide EMC Testing and Product Safety Testing based on international and domestic standards to support your product development.

We will contribute to the growth of the electronic industry together with thoughts of foundation and missions.

We appreciate your continued support, encouragement, and use of our services.



Chairman
Tatsuo Ogawa



Senior managing Director
Yoshifumi Yanagawa

Overview

Name	General Incorporated Association KEC Electronic Industry Development Center
Establishment	January 31, 1961 It was established as Kansai Electronic Industry Development Center as an incorporated association. October 1, 2010 Transferred to a general incorporated association.
Address	Head office and Keihanna Test Center (E1 Building /E2 Building) 3-2-2,Hikari-dai,Seika-cho,Soraku-gun,Kyoto,619-0237 Japan Keihanna Test Center(E3 Labo) 2-2-6,Hikari-dai,Seika-cho,Soraku-gun,Kyoto,619-0237 Japan Ikoma 1st Test Site 12128 Takayama-cho,Ikoma-city,Nara 630-0101 Japan Ikoma 2nd Test Site 10632 Takayama-cho,Ikoma-city,Nara 630-0101 Japan
Business Line	Committee Business Research on advanced electronic technologies with the cooperation of industry, academia, and government, and support human resource development by holding seminars and technical courses management international certification exams for EMC engineers and Product safety engineers.



E1 Building



E2 Building



E3 Labo

EMC Testing and Product Safety Testing Services

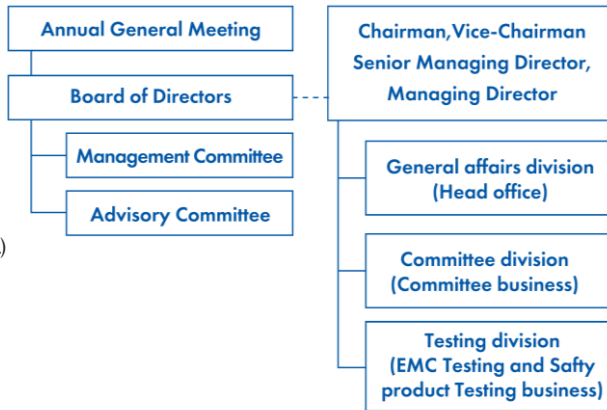
EMC testing and Product Safety testing services using various large and small anechoic chambers and shielded rooms as an accredited test laboratory according to ISO/IEC 17025.

Administrative structure (As of June 12, 2025)

Chairman	Tatsuo Ogawa (Panasonic Holdings Co., Ltd.)
Vice-Chairman	Katsuaki Kaito (Shimadzu Corporation) Kenji Furuhashi (Hosiden Corporation) Hiroshi Iwatsubo (Murata Manufacturing Co., Ltd.)
Senior Managing Director	Yoshifumi Yanagawa (KEC Electronic Industry Development Center)
Managing Director	Naotoshi Maeda (KEC Electronic Industry Development Center)
Director	Hajimu Yoshimura (SANSHAELECTRICMANUFACTURINGCO.,LTD.) Yoshinori Takahashi (NEW COSMOS ELECTRIC CO., LTD.) Yasuo Miyagi (Diamond Electric Holdings Co., Ltd.) Masahiro Taniguchi (TOA Corporation) Nobuyuki Takamori (NICHICON CORPORATION) Eiji Tanaka (Nihon Denon Co., Ltd.) Shinji Ishihara (FURUNO ELECTRIC CO., LTD.) Akira Ishihara (Mitsubishi Electric Corporation) Minoru Okubo (YANMAR HOLDINGS CO., LTD.)
Auditor	Kenichi Kojiyama (ICOM INCORPORATED) Kenji Fuchita (ESPEC CORP.)

Company names are in Japanese syllabary order.

Organisation



Consists of Members

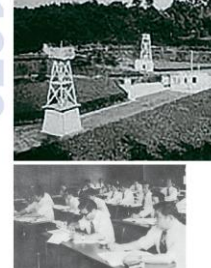
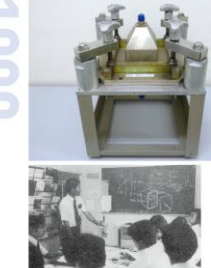
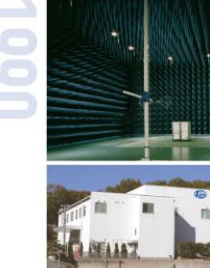
KEC is composed of members related to the electronics industry. Members are corporations or organizations that assent to our objectives and activities.

Members: 252 companies

Regular Members (169 companies)	Support Members (42 companies)	Affiliate Members (41 companies)
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(As of May 15, 2025)

History

1961	KEC was founded by 24 companies with the support of the Ministry of International Trade and Industry (currently the Ministry of Economy, Trade and Industry) and Osaka Prefecture. Chairman Konosuke Matsushita Vice Chairmen Toshio Iue Shintaro Okagami Tokuji Hayakawa Akira Murata	1969	The Ikoma radio frequency measurement site, 30m OATS, was established. (OATS: Open Area Test Site)	1970	Measurement services of spurious emissions from electronic apparatuses were started.	1980	The services were extended into immunity tests for electronic apparatuses. Technical Working Groups were organized.	1983	Shielding material evaluation devices were developed. (the KEC method)	1993	The EMC Test Center (Ikoma 1st Test Site) was established.	1996	The first EMC Kansai Seminar was held.	1997	The site was accredited as a testing laboratory based on ISO/IEC17025.	1998	The NARTE certification test program started.	2002	The first electronic-related seminar (Currently KEC seminar) was held.	2005	The Keihanna Test Center (E1 Building) started operations.	2008	The EMC Testing and Product Safety Testing division was relocated from Ikoma to the Keihanna area.	2010	Shifting to the general incorporated association was approved and the legal name was changed.	2011	The head office was relocated to the Keihanna area to consolidate the business functions.	2014	A patent for shielding material evaluation devices using the GHz KEC method was approved.	2017	The Keihanna Test Center (E2 Building) started operations.	2020	ISO/IEC 17043 certification was acquired as an EMC proficiency testing provider. The reverberation chamber was installed in the E2 Building.	2024	The Keihanna Test Center (E3 Labo) started operations.
1960		1970		1980		1990		2000		2010		2020																							

Activities of Committee

KEC organizes five expert/promotion committees, and more than 20 subcommittees/working groups with the cooperation of industry, academia and government. We also support improving technical capabilities and the growth of human resources in the electronics industry through activities such as research and surveys on advanced electronics-related technologies, holding various seminars and technical courses, and publishing standards handbooks and guidebooks.

= Features of KEC Committee =

Surveys and research on cutting-edge electronics technology

Seminars and forums for advanced technology and information exchange

Technical courses and training for the development of engineers

Administration of international certification for EMC engineers and Product Safety engineers

Expert Committee on Research

The committee contributes to the improvement of the technological capabilities of the industry and the creation of new businesses in companies by conducting surveys of advanced and applied technologies, and providing information through seminars, forums, and technical courses.



KEC Seminar Planning WG

Plans and hosts KEC seminars focused on current topics, covering foundational, practical and cutting-edge technology to support technical planning and development in your company.

Convergence of Optical and Radio-wave Technologies Planning WG

Plans and hosts an Optical and Radio-wave forum, contributing to new technological fields through the convergence of optical and radio waves.

Expert Committee on Product Safety

The committee conducts research, gathers and interprets technical information, and strives to improve the industry's Product Safety technologies and reliability, contributing to the delivery of safe and reliable products.



Safety Standard Subcommittee

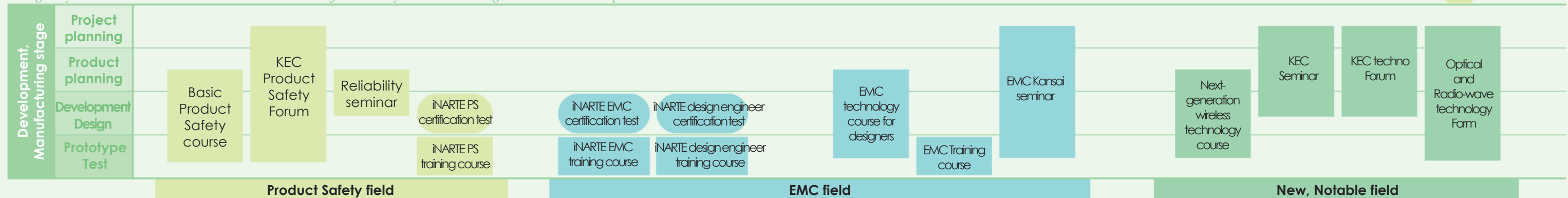
Researches and analyzes trends and content of domestic and foreign Product Safety standards, and publishes translated foreign standards as necessary.

Reliability Subcommittee
Researches and studies reliability and safety assurance, focusing on end-of-life failure mechanisms. Plans and hosts Reliability Seminars every two years.

Safety Technology Subcommittee
Researches and studies new technologies for Product Safety, such as functional safety, hazard-based safety engineering, and risk assessment.

Fields and stages of seminars, courses, training courses and certification test

We regularly hold various seminars and courses tailored to objectives. Anyone can attend regardless of membership status.



Expert Committee on EMC

The committee researches, provides, and translates EMC-related standards and technical information, contributing to the industry by improving EMC testing technology and fostering engineer development.

Study Group

WG activities include validation testing of new proposed standards, technology development to improve measurement accuracy, standard research for products with new technologies, and round-robin evaluation.

EMC Round-Robin WG

Verifies measurement inconsistencies between EMC sites and identifies causes and countermeasures.

EMC Latest Standards WG

Verifies the latest CISPR and IEC standards and identifies issues. Reflects these in standards development.

Automotive Measurement Technology Development WG

Validates EMC standards for automotive equipment, identify issues, and incorporates them into the standard formulation.

Power Electronics EMC Latest Standards WG

Validates the latest power electronics standards, identifies issues, and considers countermeasures.



Research and Publication Group

Researches and translates foreign EMC standard trends, standard interpretations, and measurement techniques, by country and theme, and provides the results as publications.



EMC Western Standards Research and Publication WG

EMC Asian Area Standards Research and Publication WG



Lecture and Seminar Group

EMC Kansai Planning WG

Plans and hosts EMC Kansai seminars, introducing leading technologies, trends, and common issues on EMC, and exchanging technical information.



Expert Committee on iNARTE Japan

The iNARTE certification is an internationally recognized credential of expertise in EMC and product safety. As iNARTE certification is helpful for objective proof of knowledge and ability, KEC partnered with iNARTE in 1998 to introduce the certification program to Japan. KEC offers the exams in Japanese and provides support for certification.

Expert Committee on Promoting EMC Design Engineer Certification

The technical level of EMC design at the product development stage is certified as an EMC Design Engineer certification. KEC has established and operates this certification in cooperation with iNARTE.



KEC/iNARTE EMC Design Engineer Certification

iNARTE/J EMC subcommittee

Promotes EMC engineer and technician certification, education, and certification exams.



iNARTE EMC Certification

iNARTE/J PS subcommittee

Promotes PS engineer and technician certification, education, and certification exams.



iNARTE PS Certification



※iNARTE: International Association for Radio, Telecommunications and Electromagnetics.

EMC Testing and Product Safety Testing Services

KEC has been accredited under ISO/IEC 17025, allowing us to issue globally recognized test reports. We possess extensive test facilities and provide high-quality EMC tests and Product Safety tests across a wide range of product fields. In addition to EMC tests and Product Safety tests, our experienced engineers offer EMC proficiency tests through interlaboratory comparison, and provide an EMC consulting service, including technical support (for members only).

= Features of KEC Testing Service =

Official test reports according to ISO/IEC 17025

KEC is a testing laboratory accredited by certification bodies*. We issue globally recognized test reports that meet customer needs.
*JAB, VLAC

Extensive test facilities for diverse product fields

We have 20 test facilities, including anechoic chambers and shielded rooms compliant with the latest standards for various EMC tests and Product Safety tests.

Testing and Technical Support by Specialized Engineers

Internationally qualified engineers conduct EMC tests and Product Safety tests, as well as proficiency tests under ISO/IEC 17043.

Type of Test

The following four types of tests can be selected according to the customer's needs.

Compliance Test

Our engineers conduct conformity evaluation tests and issue test reports, including pass or fail results.

Pre-EMC Test

Customers can measure their test samples themselves using KEC's facilities.

*Outside the scope of ISO/IEC 17025 certification.

Commissioned Pre-Test

Our engineers carry out EMC tests on behalf of the customer. (Only a report of test results without pass or fail)

*For members only. Remote testing is available.

On-site Measurement

Our engineers travel to conduct on-site measurements of large equipment, evaluate electromagnetic environments, and characterize EMC test facilities.

EMC Test

Compliance Test

Pre-EMC Test

Commissioned Pre-Test

On-site Measurement

EMC test verifies that the equipment does not cause electromagnetic interference and operates normally even when exposed to electromagnetic disturbances. We can issue test reports based on ISO/IEC 17025 for equipment in various product fields, such as automotive, military, industrial equipment, power electronics, medical, marine, rail-related equipment and IT equipment.

Main test items

- Radiated disturbance
- Radiated electromagnetic field immunity
- Conducted disturbance
- Conducted disturbance immunity
- Power frequency magnetic field immunity
- Antenna characterization
- Noise power measurement
- Anechoic chamber characterization etc.

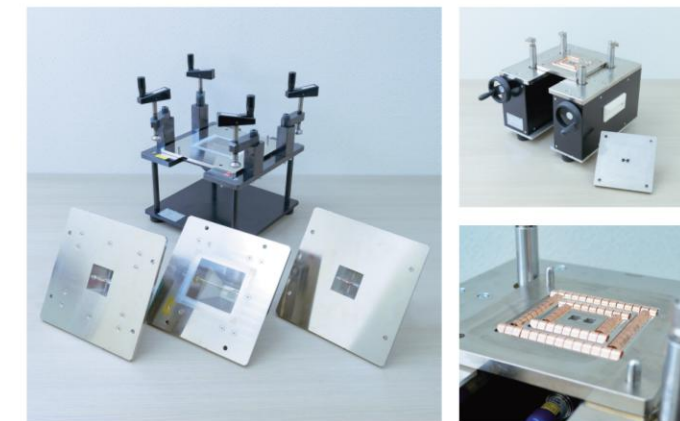


Shielding Effectiveness Test

Compliance Test

Type of test

- KEC method (500Hz to 1GHz)
- GHz KEC method (1GHz to 6GHz)
- Expanded GHz KEC method (5GHz to 18GHz)



Product Safety Test

Compliance Test

Pre-EMC Test



Evaluation tests based on domestic and international safety standards are conducted for electronic devices. Compliance tests, pre-tests for product safety, and services for obtaining the S-JQA mark (application assistance) are also provided.

Reliability Test

(Environmental Test)

Compliance Test

Pre-EMC Test

The durability of electrical products against environmental changes, such as temperature fluctuations, can be verified.



Consulting Services

(Technical Support)

Member Only

KEC offers technical support, including addressing the lack of information on EMC standards and regulatory trends for product development, the shortage of engineers, human resource development, and support for the introduction of EMC testing facilities.

Example of Support menu

- **Training of engineers**
Seminars and hands-on practice through individual visits (Trends in EMC standards and regulations, hands-on training using EMC test facilities owned by member companies, etc.)
- **Introduction and Management of Test Facility**
Supporting everything from planning the introduction to conducting performance evaluations (NSA, SVSWR).
- **Quality System (management)**
Advice on quality system, and conducting internal audits (staff dispatch).



EMC Proficiency Test

(by Interlaboratory Comparison)

EMC proficiency tests are conducted by statistically processing the test results of participating laboratories on the same sample according to a predetermined evaluation method, and comparing the results among participants.

The main objective is to confirm the validity of the test facilities, measurement methods, and test results of the participants. Proficiency testing operation team, which is an independent organization from EMC Testing Division provides EMC proficiency tests based on the general requirements of ISO/IEC 17043:2023.



Test Facility

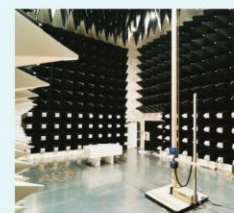
10m method anechoic chamber

Anechoic chamber No.10 [E1 Bldg.]
No.15 [E3 Labo.]
No.16 [E3 Labo.]



3m method anechoic chamber

Anechoic chamber No.11 [E1 Bldg.]
No.14 [E2 Bldg.]



Small anechoic chamber

Anechoic chamber No.7, 8, 9, 12 [E1 Bldg.]
No.13 [E2 Bldg.]



Shielded room

Shielded room No.7, 8, 9, 10 [E1 Bldg.]



Reverberation chamber

Reverberation chamber No.1 [E2 Bldg.]



Safety testing room

Safety testing room [E1 Bldg.]



●Other test facilities/ Harmonic Current Meas. Room [E1 Bldg.] ,Evaluation testing room [E1 Bldg.]
Shielding effectiveness testing room [E1 Bldg.]

Applicable standards for major EMC Test

Visit our website
for other applicable
standards.



Consumer, Industrial, Medical device etc.

Consumer, Industrial standards

CISPR CISPR 11 etc.

AS/NZS CISPR AS/NZS CISPR 11 etc.

IEC Basic Standard : IEC 61000-4-3 etc.
Generic Standard : IEC 61000-6-1 etc.
Other : IEC 61326-2-1 etc.

JAPAN Basic Standard : JIS C 61000-4-3 etc.
Generic Standard : JIS C 61000-6-1 etc.
Other : JISC-4411-2 etc.

USA FCC Part 15,18 etc.

CANADA ICES-001 etc.

EU Product family standard : EN 55011 etc.
Basic Standard : EN IEC 61000-4-2 etc.
Generic Standard : EN IEC 61000-6-1 etc.
Other : EN 61326-1 etc.

RUSSIA GOST 30805.22 etc.

Medical device

IEC IEC 60601-1-2 etc.

JAPAN JIS T 0601-1-2 etc.

EU EN 60601-1-2 etc.

Industrial, Power electronics

IEC/ISO IEC 61851-21-2 etc.

EU EN 12015 etc.

Railway applications

IEC IEC 62236-3-2 etc.

EU EN 50121-3-2

Marine equipment

IEC IEC 60945

JAPAN JIS F 0808

EU etc. EN 60945 etc.

Automotive Components

EMI for automotive electronic components

CISPR 25, ISO 7637-2 etc.

EMS for automotive electronic components

ISO 11452, ISO 10605, ISO 16750-2, ISO 7637,
SAE J1113-25, JASO D001-94 etc.

Each automobile manufacturer specification

GM, Ford, MAZDA

MIL and Airborne Equipment

MIL standard

MIL-STD-461A/B/C, MIL-STD-461D/E/F/G etc.

Airborne standard

RTCA DO160-D/E/F/G etc.

Ministry of Defense

NDS C0011B, NDS C0011C etc.

Radio Equipment characteristics Test

Radio equipment

EU ETSI EN 300 328 etc.

FCC FCC 15C etc.

JAPAN Extremely Low-Power Devices, High-Frequency use facilities, etc.

Information of Accreditation and Registration

Visit our website
for more information
about accreditation and
registration.



Accreditation

JAB (Japan Accreditation Board)

Accreditation No.
RTL02810

Field

Airborne Equipment
Department of Defense Interface
Automotive EMC Tests



VLAC (Voluntary EMC Laboratory Accreditation Center)

Accreditation No.
VLAC-005-1, -2, -3

Field

Consumer Products
Industrial Devices
Medical Equipment
Wireless Devices



Registration

VCCI (VCCI Council)

Registered facilities through VLAC
Accreditation.

S-JQA

Registration No.
JQLAB-1003

Products Category

Cat.7 Electric Motor-operated
Cat.8 Electric Heating Appliances
Cat.11 Electronic Appliances



MAZDA (Mazda Motor Corporation)

Registered as Mazda Motor Corporation's
EMC Testing Laboratory.

Certification

TÜV Rheinland

Certificate Number
50054524



GM (General Motors Corporation)

Approved EMC testing laboratory by
General Motors (GM).

GM (General Motors Corporation)

Approved EMC testing laboratory by
Ford.



General Incorporated Association

KEC Electronic Industry Development Center

Head office

Keihanna Test Center
(E1 Building / E2 Building)

3-2-2, Hikari-dai, Seika-cho,
Soraku-gun, Kyoto, 619-0237
Japan TEL: +81-774-93-4563
(main number)

Ikoma 1st Test Site

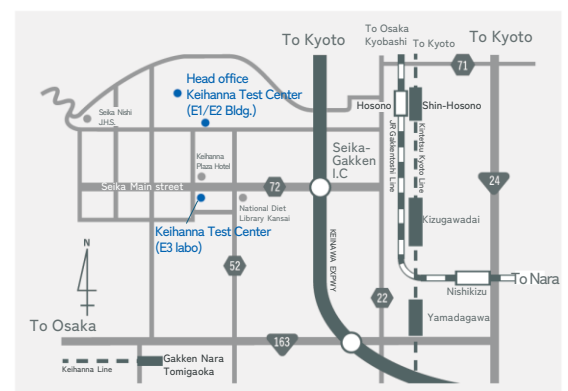
12128 Takayama-cho,
Ikoma-city, Nara 630-0101
Japan

Keihanna Test Center
(E3 Labo)

2-2-6, Hikari-dai, Seika-cho,
Soraku-gun, Kyoto, 619-0237
Japan

Ikoma 2nd Test Site

10632 Takayama-cho,
Ikoma-city, Nara 630-0101
Japan



<https://www.kec.jp/>