



IEC/TC or SC TC 47	Secretariat Korea	Date 2008-02
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Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

Title of TC <b>Semiconductor Devices</b>
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**A. Background****TC 47****Scope:**

To prepare international standards for the design, manufacture, use, reuse, and testing of discrete semiconductor devices, integrated circuits, sensors, electronic component assemblies, interface requirements, and micro-electromechanical devices, using environmentally sound practices.

Activities include wafer level reliability, package outlines, terms and definitions, quality issues, physical environmental testing, device specific test methods, device specifications and minimum content, pinouts, interface requirements, and applications.

Excluded from the scope are:

- Passive integrated circuits or networking containing resistors and capacitors or their combination (TC 40).
- Systems of photovoltaic conversion and all the elements in the entire photovoltaic energy system (TC 82).
- Devices covered by the scope of TC 22, TC 86 and JTC1.

P-members (14): AT, CN, FR, DE, IN, IT, JP, KR, NL, RO, RU, SE, GB, US

Liaison D: Electronic Industries Alliance (EIA).

Liaison within IEC : TC 49, TC 56, TC 91, TC101, TC107, TC 110, TC111 and TC113

Working groups :

WG1 : Terminology

WG2 : Climatic and mechanical tests

WG3 : product discontinuance of electronic components notification by suppliers and distributors

WG4 : Microelectromechanical devices

- Disbanded.

- Projects transferred to SC 47F/WG 1, subsequent to the newly-established SC 47F.

WG5 : Temperature stability test –MOSFET and Dielectric breakdown test

PT 62258 : Guidelines for bare die, minimally packaged die and bare wafers

**SC 47A: Integrated Circuits****Scope:**

To prepare international standards for both semiconductor and hybrid integrated circuits, for electronic equipment and systems.

P-members (16): AT, CN, FR, DE, IN, IT, JP, KR, NL, PL, PT, RO, RU, RS, GB, US

Working groups:

WG 2: Logic digital integrated circuits

WG 4: Interface integrated circuits - Dynamic criteria for Analogue-Digital Converters (ADC)

WG 7: Advanced Hybrid ICs

WG 9: Test procedures and measurement methods for EMC in integrated circuits

### **SC 47D: Mechanical Standardisation for Semiconductor Devices**

**Scope:**

To prepare international standards for mechanical outline drawings (including dimensioning and tolerances) and measuring methods for microelectronic packages, assemblies and test and burn-in sockets that ensure mechanical interchangeability of parts. Technical support and design recommendations are also included.

P-members (9): AT, CN, FR, DE, JP, KR, RO, GB, US

Liaison D: JEITA

Liaison within IEC: TC 40

Working groups:

WG 1: Package outlines

WG 2: Terms, definitions, practices and procedures and measuring methods for mechanical standardization

### **SC 47E: Discrete Semiconductor Devices**

**Scope:**

To prepare international standards for environmentally sound practice in the design, manufacture, use and reuse of discrete semiconductor devices.  
This includes terms and definitions, letter symbols, essential ratings and characteristics, measuring methods, and specifications.

P-members (10): AT, CN, FR, DE, IT, JP, KR, NL, GB, US

Liaison: D ISO/TC 172/SC 9

Liaison within IEC: TC 22

Working groups:

WG 1: Semiconductor sensors

WG 2: Microwave devices

WG 3: Power devices

WG 4: Optocouplers, photocouplers and solid state opto-relays

JWG 5: Harmonization of the existing ISO and IEC standards dealing with laser diodes

MT 6: Laser diodes, LEDs, PDs and APDs

### **SC 47F: Micro-electromechanical Systems**

**Scope:**

To prepare international standards for environmentally sound practice in the design, manufacture, use and reuse of micro-electromechanical devices.  
This includes terms and definitions, letter symbols, essential ratings and characteristics, measuring methods, reliability testing methods, and material testing methods.

P-members (9): CN, FR, DE, IT, JP, KR, NL, RU, US

Liaison:

Liaison within IEC:

Working groups:

WG 1: Micro-electromechanical devices (Transferred from TC47/WG4).

System approach relevance of TC 47 and its subcommittees as follows:-

System Committees (TC/SC 47 as a supplier)	TC 22 TC 40  TC 110	Power electronic systems and equipment Capacitors and resistors for electronic equipment Flat panel display devices
Other Committees	SC 46F TC 77 TC 91 TC 101 TC 111  TC 113	RF and microwave passive components Electromagnetic compatibility Electronic assembly technology Electrostatic Environmental standardization for electrical and electronic products and systems Nanotechnology standardization for electrical and electronic products and systems

**B. Environment**

**B.1 Business environment**

TC47 operates in a fast moving competitive environment characterized by rapid technology changes and fierce competition. The market for semiconductors is rapidly expanding on a global basis with new market applications emerging daily. These new applications and markets may experience total product life cycles of less than one year in length.

**B.2 Market demand**

The market for semiconductors is universal and affects all sectors and aspects of industry. This diversity requires standards for all aspects of semiconductors, their use and applications from toys to satellites.

**B.3 Trends in technology and trade**

Rapid growth, short product life cycles

**B.4 Ecological environment**

Many hazardous or toxic materials are used in the manufacture of semiconductor products. This industry constantly strives to reduce the amount and type of hazardous or toxic materials to protect the environment, the community and comply with government regulations, through the reduction of waste materials. These issues are constantly under review by government agencies with emphasis on reclamation and recycling of materials.

**C. Work programme**

**C.1 Current work**

See separate information.

**C.2 Resources/infrastructure needed**

TC47 and its subcommittees do not have enough resources to comply with the market needs for standardization. TC47 has difficulties in finding locations to hold annual meetings when excluded from the General Meeting venues.

**D. Future work**

Develop standards for emerging technologies to be issued prior to a technology's introduction into the marketplace in production volumes. Devise forward looking processes to accomplish standards development for advanced technologies without compromising intellectual property.

**E. Maintenance cycle**

Publication no.	Date of publication	Review date	Maintenance result date	Responsibility (Maintenance Team)
TC 47				

E. Maintenance cycle				
Publication no.	Date of publication	Review date	Maintenance result date	Responsibility (Maintenance Team)
IEC 60747-1 Ed.2.0	2006-02-21	2008	2009	1
IEC 60749-1 Ed.1.0	2002-08-30	2009	2011	2
IEC 60749-2 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-3 Ed.1.0	2002-04-09	2009	2011	2
IEC 60749-4 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-5 Ed.1.0	2003-01-17	2008	2011	2
IEC 60749-6 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-7 Ed.1.0	2002-04-09	2008	2009	2
IEC 60749-8 Ed.1.0	2002-08-30	2009	2011	2
IEC 60749-9 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-10 Ed.1.0	2002-04-09	2009	2011	2
IEC 60749-11 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-12 Ed.1.0	2002-04-30	2009	2011	2
IEC 60749-13 Ed.1.0	2002-04-12	2009	2011	2
IEC 60749-14 Ed.1.0	2003-08-07	2009	2011	2
IEC 60749-15 Ed.1.0	2003-02-07	2008	2009	2
IEC 60749-16 Ed.1.0	2003-01-17	2009	2011	2
IEC 60749-17 Ed.1.0	2003-02-20	2009	2011	2
IEC 60749-18 Ed.1.0	2002-12-13	2009	2011	2
IEC 60749-19 Ed.1.0	2003-02-13	2008	2009	2
IEC 60749-20 Ed.1.0	2002-09-30	In Progress	2009	2
IEC 60749-20 fC1 Ed.1.0	2003-08-13	In Progress	2009	2
IEC 60749-21 Ed.1.0	2004-03-15	2008	2009	2
IEC 60749-22 Ed.1.0	2002-09-12	2009	2011	2
IEC 60749-23 Ed.1.0	2004-02-23	2008	2009	2
IEC 60749-24 Ed.1.0	2004-03-09	2009	2011	2
IEC 60749-25 Ed.1.0	2003-07-11	2009	2011	2
IEC 60749-26 Ed.2.0	2006-07-18	2008	2009	JWG 47/101
IEC 60749-27 Ed.2.0	2006-07-18	2008	2009	JWG 47/101
IEC 60749-29 Ed.1.0	2003-11-04	2008	2009	2
IEC 60749-30 Ed.1.0	2005-01-20	2008	2009	2
IEC 60749-31 Ed.1.0	2002-08-30	2009	2011	2
IEC 60749-32 Ed.1.0	2002-08-30	2008	2009	2
IEC 60749-33 Ed.1.0	2004-03-09	2009	2011	2
IEC 60749-34 Ed.1.0	2004-03-10	2008	2009	2
IEC 60749-35 Ed.1.0	2006-07-18	2009	2011	2
IEC 60749-36 Ed.1.0	2003-02-13	2009	2011	2
IEC 60749-37 Ed.1.0	2008-01-30	2009	2010	2
IEC 60749-38 Ed.1.0	2008-02-12	2009	2011	2
IEC 60749-39 Ed.1.0	2006-07-24	2008	2011	2
IEC 62258-1 Ed.1.0	2005-08-30	In progress	2009	PT 62258
IEC 62258-2 Ed.1.0	2005-06-13	In progress	2009	PT 62258
IEC 62258-3 TR Ed.1.0	2005-06-13	In progress	2009	PT 62258
IEC 62258-4 TR Ed.1.0	2007-08-20	2009	2010	PT 62258
IEC 62258-5 Ed.1.0	2006-08-29	2009	2010	PT 62258
IEC 62258-6 Ed.1.0	2006-08-28	2009	2010	PT 62258
IEC 62258-7 TR Ed.1.0	2007-08-23	2009	2010	PT 62258

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<b>Publication no.</b>	<b>Date of publication</b>	<b>Review date</b>	<b>Maintenance result date</b>	<b>Responsibility (Maintenance Team)</b>
IEC 62258-8 TR Ed.1.0	2008-05-14	2009	2010	PT 62258
IEC 62373 Ed.1.0	2006-07-18	2008	2010	5
IEC 62374 Ed.1.0	2007-03-29	2008	2010	5
IEC/PAS 62162 Ed.1.0	2000-08-22	2008	2010	2
IEC/PAS 62168 Ed.1.0	2000-08-22	2008	2008	2
IEC/PAS 62169 Ed.1.0	2000-08-22	2008	2008	2
IEC/PAS 62435 Ed.1.0	2005-09-26	2008	2011	3
IEC/PAS 62483 Ed.1.0	2006-09-12	2008	2009	2
<b>SC 47A</b>				
IEC 60748-1 Ed.2.0	2002-05-08	2009	2010	7
IEC 60748-2 Ed.2.0	1997-12-22	2009	2010	2
IEC 60748-2-1 Ed.1.0	1991-11-01	2008	2012	13(47)
IEC 60748-2-2 + Amd 1 Ed.1.0	1992-02-29	2008	2012	13
IEC 60748-2-3 Ed.1.0	1992-02-20	2008	2012	13(47)
IEC 60748-2-4 Ed.1.0	1992-01-30	2008	2012	13(47)
IEC 60748-2-5 Ed.1.0	1992-01-31	2008	2012	13(47)
IEC 60748-2-6 Ed.1.0	1991-11-15	2008	2012	13(47)
IEC 60748-2-7 Ed.1.0	1992-10-23	2008	2012	2
IEC 60748-2-8 Ed.1.0	1993-07-29	2008	2012	
IEC 60748-2-9 Ed.1.0	1994-12-21	2008	2012	2
IEC 60748-2-10 Ed.1.0	1994-12-21	2008	2013	2
IEC 60748-2-11 Ed.1.0	1999-04-12	2008	2013	2
IEC 60748-2-12 Ed.1.0	2001-01-30	2008	2013	2
IEC 60748-2-20 Ed.2.0	2008-02-27	In Progress	2012	2
IEC 60748-3 + Amd 1&2 Ed.1.0	1986-01-01	2008	2011	
IEC 60748-3-1 Ed.1.0	1991-08-02	2008	2012	13(47)
IEC 60748-4 Ed.2.0	1997-04-23	2009	2010	
IEC 60748-4-1 Ed.1.0	1993-11-11	2009	2010	
IEC 60748-4-2 Ed.1.0	1993-11-11	2009	2010	
IEC 60748-4-3 Ed.1.0	2006-08-29	2011	2012	4
IEC 60748-5 Ed.1.0	1997-05-30	2009	2010	2
IEC 60748-11+Amd 1&2 Ed.1.0	1990-12-20	2008	2011	13
IEC 60748-11-1 Ed.1.0	1992-05-15	2008	2011	13(47)
IEC 60748-20 + Amd 1 Ed.1.0	1988-06-30	2008	2011	
IEC 60748-20-1 Ed.1.0	1994-03-01	2008	2012	1
IEC 60748-21 Ed.2.0	1997-04-10	2009	2010	1
IEC 60748-21-1 Ed.2.0	1997-04-10	2009	2010	1
IEC 60748-22 Ed.2.0	1997-04-10	2009	2010	1
IEC 60748-22-1 Ed.2.0	1997-04-10	2009	2010	1
IEC 60748-23-1 Ed.1.0	2002-05-15	2008	2012	7
IEC 60748-23-2 Ed.1.0	2002-05-23	2008	2012	7
IEC 60748-23-3 Ed.1.0	2002-05-17	2008	2012	7
IEC 60748-23-4 Ed.1.0	2002-05-17	2008	2012	7
IEC 60748-23-5 Ed.1.0	2003-10-03	2008	2012	7
IEC 61739 Ed.1.0	1996-10-30	2009	2010	6
IEC 61943 Ed.1.0	1999-03-19	2009	2010	6
IEC/TS 61944 Ed.1.0	2000-01-31	2008	2013	6

<b>E. Maintenance cycle</b>				
<b>Publication no.</b>	<b>Date of publication</b>	<b>Review date</b>	<b>Maintenance result date</b>	<b>Responsibility (Maintenance Team)</b>
IEC/TS 61945 Ed.1.0	2000-03-10	2008	2013	6
IEC 61964 Ed.1.0	1999-04-30	2009	2010	3
IEC 61967-1 Ed.1.0	2002-03-12	2011	2012	9
IEC 61967-2 Ed.1.0	2005-09-29	2011	2012	9
IEC/TS 61967-3 Ed.1.0	2005-06-10	2009	2010	9
IEC 61967-4 Ed.1.1	2006-07-27	2009	2010	9
IEC/TR 61967-4-1 Ed.1.0	2005-02-07	2008	2012	9
IEC 61967-5 Ed.1.0	2003-02-13	2008	2012	9
IEC 61967-6 Ed.1.1	2008-06-24	2011	2013	9
IEC 62132-1 Ed.1.0	2006-01-19	2008	2013	9
IEC 62132-3 Ed.1.0	2007-09-26	2008	2010	9
IEC 62132-4 Ed.1.0	2006-02-21	2008	2010	9
IEC 62132-5 Ed.1.0	2005-10-10	2008	2012	9
IEC/TS 62215-2 Ed.1.0	2007-09-10	2010	2012	9
IEC/TS 62228 Ed.1.0	2007-02-16	2009	2010	9
IEC 62404 TS Ed.1.0	2007-02-20	2010	2012	9
<b>SC 47D</b>				
IEC 60191-1 Ed.2.0	2007-04-24	2009	2010	2
IEC 60191-2 Ed.1 with amendments	1966-01-01	In Progress	2009	1
IEC 60191-3 Ed.2.0	1999-10-29	2009	2010	2
IEC 60191-4 Ed.2.0 with amendments	1999-10-08	2008	2009	2
IEC 60191-5 Ed.2.0	1997-04-23	2008	2009	2
IEC 60191-6 Ed.2.0	2004-09-29	In Progress	2009	2
IEC 60191-6-1 Ed.1.0	2001-10-30	2009	2010	2
IEC 60191-6-2 fC1 Ed.1.0	2002-10-18	2009	2010	2
IEC 60191-6-2 Ed.1.0	2001-12-11	2009	2010	2
IEC 60191-6-3 Ed.1.0	2000-09-29	2009	2010	2
IEC 60191-6-4 Ed.1.0	2003-06-11	2009	2010	2
IEC 60191-6-5 Ed.1.0	2001-08-27	2009	2010	2
IEC 60191-6-6 Ed.1.0	2001-03-22	2009	2010	2
IEC 60191-6-8 Ed.1.0	2001-08-27	2009	2010	2
IEC 60191-6-10 Ed.1.0	2003-11-19	2009	2010	2
IEC 60191-6-12 Ed.1.0	2002-06-14	2009	2010	2
IEC 60191-6-13 Ed.1.0	2007-06-27	2009	2010	2
IEC 60191-6-16 Ed.1.0	2007-04-26	2009	2010	2
<b>SC 47E</b>				
IEC 60747-2 Ed.2.0	2000-03-21	2011	2013	3
IEC 60747-2-2 Ed.1.0	1993-10-08	2011	2013	3
IEC 60747-3 Ed.1.0 + Amd 1&2	1985-07-30	2011	2013	3
IEC 60747-4 Ed.2.0	2007-08-23	2010	2012	2
IEC 60747-5-1 Ed.1.2	2002-05-14	2008	2011	MT 6
IEC 60747-5-2 Ed.1.0 + Amd 1	1997-09-10	2008	2011	MT 6
IEC 60747-5-3 Ed.1.0 + Amd 1	1997-09-05	2008	2011	MT 6
IEC 60747-5-4 Ed.1.0	2006-02-23	2008	2011	MT 6
IEC 60747-5-5 Ed.1.0	2007-09-26	2008	2009	4

<b>E. Maintenance cycle</b>				
<b>Publication no.</b>	<b>Date of publication</b>	<b>Review date</b>	<b>Maintenance result date</b>	<b>Responsibility (Maintenance Team)</b>
IEC 60747-6 Ed.2.0	2000-12-21	2011	2013	3
IEC 60747-6-3 Ed.1.0	1993-11-19	2011	2013	3
IEC 60747-7 Ed.2.0	2000-12-21	In Progress	2009	3
IEC 60747-7-5 Ed.1.0	2005-08-10	2008	2009	3
IEC 60747-8 Ed.2.0	2000-12-21	In Progress	2009	3
IEC 60747-8-2 Ed.1.0	1993-02-15	2008	2009	3
IEC 60747-8-3 Ed.1.0	1995-04-20	2008	2009	3
IEC 60747-8-4 Ed.1.0	2004-09-24	2008	2009	3
IEC 60747-9 Ed.2.0	2007-09-26	2008	2012	3
IEC 60747-10 Ed.2.0	1991-05-21	2008	2012	
IEC 60747-10 Amd.3 Ed.2.0	1996-08-23	2008	2012	
IEC 60747-11 Ed.1.0+Amd 1&2	1985-01-01	2008	2012	
IEC 60747-14-1 Ed.1.0	2000-10-27	In Progress	2009	1
IEC 60747-14-2 Ed.1.0	2000-11-09	2008	2010	1
IEC 60747-14-3 Ed.1.0	2001-06-27	In Progress	2009	1
IEC 60747-15 Ed.1.0	2003-06-11	In Progress	2009	3
IEC 60747-16-1 Ed.1.1	2007-03-13	2010	2012	2
IEC 60747-16-2 Ed.1.1	2008-01-22	2010	2012	2
IEC 60747-16-3 Ed.1.0	2002-05-07	In Progress	2009	2
IEC 60747-16-4 Ed.1.0	2004-07-28	In Progress	2009	2
IEC 60747-16-10 Ed.1.0	2004-07-15	2012	2014	2
<b>SC 47F</b>				
IEC 62047-1 Ed. 1.0	2005-09-27	2008	2010	1
IEC 62047-2 Ed. 1.0	2006-08-15	2009	2011	1
IEC 62047-3 Ed. 1.0	2006-08-15	2009	2011	1
IEC 62047-4 Ed. 1.0	2008-08-21	2009	2011	1

Name or signature of the secretary  
Cheolung CHA