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11

International Packaging Specifications

CHAPTER 11 INTERNATIONAL PACKAGING SPECIFICATIONS

11.1. ELECTRONIC INDUSTRIES ASSOCIATION OF JAPAN (EIAJ)

EIAJ publishes the following general rules and standards as they apply to preparation of outline drawings on integrated circuits:

Number	Nomenclature
SD-74-1	General rules for the preparation of outline drawings of semiconductor devices
ED-7400	Standards for the dimensions of semiconductor devices
ED-7400-1	Standards for the dimensions of semiconductor devices
ED-7400-2	Standards for the dimensions of semiconductor devices
ED-7401A	Recommended practice for the preparation of outline drawings of semiconductor devices
ED-7402-1	General rules for the preparation of outline drawings of integrated circuits; Small Outline Packages(SOP)
ED-7402-3	General rules for the preparation of outline drawings of integrated circuits; Thin Small Outline Packages (type 1)(TSOP1)
ED-7402-4A	General rules for the preparation of outline drawings of integrated circuits; Thin Small Outline Packages (type 2)(TSOP2)
ED-7403-1	General rules for the preparation of outline drawings of integrated circuits; Plastic Dual In-line Packages
ED-7404A	General rules for the preparation of outline drawings of integrated circuits; Quad Flat Packages(ZIP)
ED-7405	General rules for the preparation of outline drawings of integrated circuits; Zig-zag In-line Packages
ED-7406A	General rules for the preparation of outline drawings of integrated circuits; Small Outline J-lead packages(SOJ)
ED-7407	General rules for the preparation of outline drawings of integrated circuits; Quad Flat J-lead Packages (QFJ/PLCC)
ED-7408A	General rules for the preparation of outline drawings of integrated circuits; Pin Grid Array packages(PGA)
ED-7413	General rules for the preparation of outline drawings of integrated circuits; Small Inline Packages(SIP)
ED-7431A	General rules for the preparation of outline drawings of integrated circuits; Quad Tape Carrier Packages(QTP)

11.2. JOINT ELECTRON DEVICE ENGINEERING COUNCIL (JEDEC)

JEDEC Publiciation 95 lists all package outlines.

11.3. MIL STANDARDS

The following military standards include specifications required to meet U. S. Military requirements:

- **MIL-M-38510** General Specifications for Microcircuits
- **MIL-STD-883** Test Methods/Procedures for Microelectronics

11.4. SEMICONDUCTOR EQUIPMENT AND MATERIALS INSTITUTE, INC.

For a list of SEMI standards, reference the *Book of SEMI Standards*, 1990, Vol.4, Packaging Division, 605 E. Middlefield Road, Mountain View, CA 94043, U.S.A. Phone:(415) 964-5111. FAX: (415) 967-5375. TELEX: 856-777 SEMI-MNTV

11.5. INTERCONNECTING AND PACKAGING ELECTRONIC CIRCUITS (IPC) STANDARDS

Number	**Nomenclature**
ANSI/IPC-S-815B	General requirements for soldering electronic connections
ANSI/IPC-SM-780	Component packaging and inter-connecting, with emphasis on surface mounting
ANSI/IPC-SM-782	Surface mount land patterns
ANSI/IPC-SM-786	Impact of moisture on plastic I/C package cracking

For a list of additional IPC standards, contact: IPC, 7380 N. Lincoln Ave., Lincolnwood, Illinois, 60646. Phone: (708) 677-2850.