



ANSI/EIA-622-B-2015
Approved: September 3, 2015

EIA-622-B

EIA SPECIFICATION

Glossary of Electrical Connector Related Terms

EIA-622-B (Revision of EIA-622-A)

September 2015



Electronic Components Industry Association

NOTICE

EIA Engineering Specifications and Publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such Specifications and Publications shall not in any respect preclude any member or nonmember of ECIA from manufacturing or selling products not conforming to such Specifications and Publications, nor shall the existence of such Specifications and Publications preclude their voluntary use by those other than ECIA members, whether the Specification is to be used either domestically or internationally.

Specifications and Publications are adopted by ECIA in accordance with the American National Standards Institute (ANSI) patent policy. By such action, ECIA does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the Specification or Publication.

This EIA Specification is considered to have International Standardization implications, but the International Electrotechnical Commission activity has not progressed to the point where a valid comparison between the EIA Specification and the IEC document can be made.

This Specification does not purport to address all safety problems associated with its use or all applicable regulatory requirements. It is the responsibility of the user of this Specification to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before its use.

(From Standards Proposal No. 5288, formulated under the cognizance of the CE-2.0 Committee on EIA National Connector and Sockets Standards, and previously published in EIA-622-A)

Published by

©Electronic Components Industry Association 2015
EIA Standards & Technology Department
2214 Rock Hill Road, Suite 265
Herndon, VA 20170

**PLEASE!
DON'T VIOLATE
THE
LAW!**

This document is copyrighted by the EIA and may not be reproduced without permission.

Organizations may obtain permission to reproduce a limited number of copies through entering into a license agreement. For information, contact:

Global Engineering Documents
15 Inverness Way East
Englewood, CO 80112-5704 or call
USA and Canada (1-800-854-7179), International (303-397-7956)

(This page left blank)

GLOSSARY OF ELECTRICAL CONNECTOR RELATED TERMS

ABRASION RESISTANCE

The ability of a material to resist abrading and wear as from sand and dust or one item sliding against another; surface wear. (Erosion)

ACCELERATED AGING

A test in which certain parameters, such as voltage and temperature, are increased above normal operating values to obtain observable deterioration in a relatively short period of time. The plotted results give expected service life under normal conditions. Also called accelerated life test.

ACCEPTANCE TESTS

Those tests deemed necessary to determine acceptability of product and as agreed by purchaser and vendor.

ACCESSIBLE INSULATION DISPLACEMENT CONNECTION

An insulation displacement connection in which it is possible to access test points for carrying out mechanical tests (e.g. transverse extraction force) and electrical measurements (e.g. contact resistance) without deactivation of any design features intended to establish and/or maintain the insulation displacement connection. This accessibility mainly occurs when the insulation displacement connection is enclosed in a component.

ACCESSORY

Mechanical devices, such as jackscrews, cable clamps, added to connector shells and other such hardware that is attached to connectors to make up the total connector configuration.

ACCORDION CONTACT

A type of connector contact where a flat spring is given a Z shape to permit high deflection without overstress.

ACME

A "square" thread which allows for rapid coupling of connectors versus finer pitched threads. A larger cross-section of thread body makes this an extremely strong design versus the usual "v" thread. (Ref: MIL-DTL-38999 series III & Amphenol QWLD)

ADAPTER

An intermediate device to provide for connector attachments such as accessories, special mounting means, or special inter-connection means to an electrical termination.

ADAPTER CONNECTOR

A fixed or free component to permit electrical connection(s) between two or more connectors where direct connection is mechanically impossible.

ADHESION PROMOTION

The chemical process of preparing a surface to enhance its ability to be bonded to another surface or to accept an over plate.

AGING

The change in properties of a material with time under specific conditions.

AIRBORNE

Pertaining to applications peculiar to aircraft and missiles or other systems designed for operation primarily within the earth's atmosphere.

ALIGNMENT TUBE

A tube into which fiber ends are introduced, providing alignment prior to sealing the fiber ends in place to form a splice.

ALLOY

A substance having metallic properties and being composed of two or more chemical elements of which at least one is an elemental metal.

ALTERNATING CURRENT

An electrical current (sinusoidal in nature), which reverses at regular intervals. The repetition rate is expressed as hertz (cycles per second).

ALTERNATIVE INSERT POSITION

Orientation achieved by rotating the insert in circular connectors

AMBIENT

The surrounding environment coming into contact with the system or component in question.

AMBIENT TEMPERATURE

The temperature of the surrounding environment.

AMPACITY

See current carrying capacity.

ANGULAR MISALIGNMENT

Angular departure of one fiber from the axis defined by the other when two fibers are connected or spliced.

ANNEAL

To heat a metal and cool slowly to relieve hardness or brittleness that may have occurred naturally or may have been induced.

ANODIZE

To form a protective insulating oxide layer on a metal (e.g. aluminum) by electrolytic action. Anodized finishes can be natural or a decorative color.

ANTI-BIND ROLL OFF

Feature that prevents shell binding caused by side loads during mating/demating.

ANTI-ROTATION CONNECTOR

A connector designed to provide keying or locking provisions to maintain positive orientation for accessory hardware.

ANVIL

The part of a crimping die, normally stationary, that positions and supports the terminal during crimping; sometimes called the Nest.

APPARENT DIAMETER (of a stranded conductor)

The diameter of the circumscribing circle of the bundle of strands.

ARC

A discharge of electricity caused by a breakdown in dielectric; either an increase in voltage or a loss of dielectric capability, or a combination of both.

ARC RESISTANCE

The resistance of a material to the effects of a high voltage, low current arc (under prescribed conditions) passing across the surface of the material. The arc resistance is stated as a measure of total elapsed time at that voltage required to form a conductive path on the surface (material carbonized by the arc).

ASPECT RATIO

A ratio of length or depth of a hole to its preplated diameter.

ASPERITY

On a conducting material, the microscopic-level surface roughness. These surface imperfections affect the effective contact area when two contact surfaces are mated with one another.

ATTENUATION

The reduction of average power during the transmission of a signal from the input to the output of the device under test, usually measured in decibels (dB).

AVALANCHE PHOTODIODE (APD)

A photodetector used in high speed, broad bandwidth fiber optic systems. The avalanche feature results from the rush of electrons across a junction under a very high bias. The APD requires a much higher reverse bias and has a higher cutoff frequency than a PIN-photodiode, and therefore, at higher frequencies is a more sensitive device.

AWG

An abbreviation for American Wire Gauge.

AXIAL DISPLACEMENT

The incremental difference between an initial position and a final position resulting from a force applied along the axis of a component.

AXIAL LEAD

A lead wire extending from a component or module body along its longitudinal axis.

AXIS

The center line about which parts of a body may be referred.

BACK MOUNTED

Installed such that the connectors mounting flange is positioned behind the connector mounting surface when viewed from the mating face or front side of the connector.

BACKPLANE

An interconnection device having terminations, such as for wire wrap, on one side and usually having connector receptacles on the other side, used to provide point-to-point electrical interconnections between connector termination elements. The point-to-point electrical interconnections may be printed wiring.

BACKPLANE PANEL

An interconnection panel into which PC cards or other panels can be plugged. These panels come in a variety of designs ranging from a PC motherboard (backplane) to individual connectors mounted in a metal frame. Backplane panels lend themselves to automatic wiring.

BACKSHELL

A connector accessory or component, that may or may not be supplied with the connector, attaches to the back of the connector, can facilitate wiring harness strain relief, tighter harness routing in restricted space, and wiring shield termination, and can provide for shielding from electrical interference and/or moisture protection.

BAIL

A loop of wire used to prevent permanent separation of two or more parts assembled together. Example: the bail holding dustcaps on round connectors.

BAIL LATCH

A loop of wire formed into a bail that is used to prevent the inadvertent disassembly of two halves of a connector pair.

BALANCED LINE (WAVEGUIDE) (two conductor)

A transmission line consisting of two conductors in the presence of ground capable of being operated in such a way that the voltages on the two conductors at all transverse planes are equal in magnitude and opposite in direction. The ground may be a conducting sheath, forming a shielded transmission line.

BALANCED WIRE CIRCUIT (DATA TRANSMISSION)

One whose two sides are electrically alike and symmetrical with respect to ground and other conductors. The term is commonly used to indicate a circuit whose two sides differ only by chance.

BALANCED VOLTAGES

Voltages relative to ground on the two conductors of a balanced line that, at every point along the line, is equal in magnitude and opposite in polarity.

BANDWIDTH

The frequency range of electrical signals transmitted.

BANDWIDTH (3-dB)

The bandwidth between half-power points. The frequency of half-power transfers in the case of baseband signals.

BARREL CHAMFER

The flared entrance or internal bevel at the wire entry of the contact termination element, that is intended to facilitate entry of the conductor.

BARREL, CONDUCTOR

That section of the terminal, splice, or contact that accommodates the conductor, without insulation.

BARREL, INSULATION

The section of the terminal, splice or contact that accommodates the wire with insulation.

BARREL SIZE

An assigned number denoting the size of the contact barrel that accommodates the conductor.

BARREL, WIRE

(See BARREL, CONDUCTOR)

BARRIER

A section of dielectric material that insulates contacts or terminals from each other and from ground.

BARRIER SEAL

A seal provided through the connector between housing, insert, and contacts to inhibit the ingress of contaminants.

BARRIER STRIP

A continuous section of dielectric material that insulates electrical circuits from each other or from ground.

BASE MATERIAL

A material from which the connector or contact components are made and on which one or more metals or coatings may be deposited.

BASIS METAL

Metal from which the connector, contact, or metal accessory is made and on which one or more metals or coating may be deposited.

BASE METAL

(See BASIS METAL).

BASIC IDENTIFICATION NUMBER (BIN)

The number used to identify contacts for use in military specification type connectors, whose performance is governed by the requirements set forth in SAE AS39029.

BASIS MATERIAL

Material upon which coatings are deposited.

BASIS METAL

The metal from which a connector, contact, terminal, or splice is made.

BAYONET COUPLING

A quick coupling mechanism utilizing pins or keys on one connector half and ramps on the corresponding connector half. (Ref: MIL-DTL-38999 Series I and II and ITT Cannon's CIR.)

BEAM (IDC)

The specially shaped metallic parts of an insulation displacement termination positioned on each side of the slot.

BELLIED MOUTH

(See BARREL CHAMFER)

BELLMOUTH

A flared or widened entrance of a contact or connector that allows easier insertion. Normally used on test connectors; also used to facilitate blind mating.

BELLOWS CONTACT

A connector contact, that is a flat spring, folded to provide a uniform spring rate over the full tolerance range of the mating unit.

BENIGN ENVIRONMENT

A term referring to kind and/or favorable conditions that cause little or no effect or degradation on an item; a controlled environment.

BERYLLIUM COPPER

The alloying and hardening of copper with the addition of the metal beryllium. This alloy is used extensively for electrical contact base metal because of its hardness and ability to withstand numerous flexures without relaxation or loss of its spring constant.

BIFILAR CONTACT (TWINAX)

Assembly of three contacts consisting of two inner contacts arranged parallel to one another with the third contact peripheral to, and encircling the two inner contacts, enabling termination of screened/shielded twisted pair cables.

BIFURCATED

Pertaining to lengthwise slotting of a flat spring contact used in printed circuit card edge connectors.

BIFURCATE CONNECTOR

A hermaphroditic connector containing fork-shaped mating contacts.

BIFURCATED CONTACT

A flat contact with a lengthwise slot, the two arms of which apply contact force in the same direction.

BINDING POST

A fixed terminal of the type to which conductors are connected by means of mechanical compression.

BIRDCAGE

A defect in stranded wire where the strands in the stripped portion between the insulated covering wire and a soldered connection (or an end tinned lead) have separated from the normal lay of the strands.

BIT PERIOD

The time interval between the successive like edges of the clock signal (rise to rise or fall to fall). This is the reciprocal of the clock frequency.

BLADE CONTACT

A solid contact with a rectangular cross-section, usually with a chamfered mating edge.

BLANK (PRINTED CIRCUIT)

An unprocessed or partially processed piece of base material or metal-clad base material, cut from a sheet or panel and having the rough dimensions of a printed board.

BLIND MATE

Allows both connector halves to be joined in a normal engaging mode when either one or both connectors are concealed.

BLISTER

A localized swelling and separation between any of the layers of a laminate base material, or between base material and conductive foil or protective coating. (It is a form of delamination.)

BOARD MOUNTED CONNECTOR

A connector suitable for being permanently attached to a printed wiring board.

BOARD THICKNESS

The overall thickness of the base material and all conductive materials deposited thereon.

BODY, CONNECTOR

The main portion of a connector consisting of the housing and insulator/insert assembly to which contacts and accessories are attached.

BOND STRENGTH

The force per unit area required to separate two adjacent layers of a printed circuit board by a force applied perpendicular to the board surface.

BONDED ASSEMBLY

A connector assembly in which the components are bonded together using an electrically appropriate adhesive in a sandwich like structure to provide sealing against moisture and other environment, which weaken electrical insulating properties.

BONDING CONDUCTOR

A cable or strap that provides an electrical path for the purposes of providing a current path for safety and/or shielding grounds, to prevent shock or spark hazards, and to provide a low impedance path for EMI/RFI.

BONDING CONNECTOR

A device used to connect exposed metal to ground. It normally carries no current, but is used as a current path to eliminate shock or spark hazards and insure the operation of circuit protective devices in the case of breakdown.

BOOT

A protective covering or connector accessory, usually made of a flexible or semi-rigid insulation material, designed to house wire/cable terminations as a protective device, facilitate harness direction, and provide a moisture seal when bonded or used as a potting form.

BOUND CONNECTION

An electrical connection between a wire and a sharp-cornered post in which the wire is laid parallel to the length of the post and adjacent to its wider face. The wire is secured to the post by tightly wrapping several turns of a separate solid wire around the post and the wire to be secured. Each turn of the wrapping wire contacts the bound wire producing deformation in it and also locks on at least two corners of the post.

BOW

The deviation from flatness of a board characterized by a roughly cylindrical or spherical curvature such that, if the board is rectangular, its four corners are in the same plane.

BOX MOUNT

A connector designed to be mounted in a panel or box where no accessories will be mounted on the rear of the connector. This type of connector will not have rear accessory threads.

BRAID

A woven or braided sheath made from conductive or nonconductive material, used as a covering for an insulated conductor or group of insulated conductors. When flattened it may be used as a grounding strap.

BRANCH CONNECTOR

A connector that joins a branch conductor to the main conductor at a specified angle.

BRASS

An alloy of 50 to 90 percent copper and 5 to 50 percent zinc. Used to manufacture electrical contact elements. This material has a hardness, which is greater than copper but less than beryllium copper.

BREAKAWAY CONNECTOR

A connector designed to separate when a specified force is applied to the cable, without damage to the cable or the connector.

BREAKDOWN VOLTAGE

The electrical potential necessary to cause the passage of a specific electric current through an insulator or insulating material.

BREECH-LOCK COUPLING

A quick coupling mechanism utilizing rifle breech style machined valleys and plateaus on each half of the connector pair to facilitate and maintain coupling. (Ref: MIL-DTL-38999 Series IV.)

BRIDGING, ELECTRICAL

The formation of a conductive path between conductors.

BUFFER, FIBER

A layer of material, which is used to provide mechanical protection for the optical fiber.

BUNDLE

A group of wires fastened or held together by auxiliary means such as straps, ties, clamps, lacing tape/twine or flexible wrappings (jackets) or sheaths, also called "cable."

BUSING

The joining of two or more circuits to provide a common electrical connection.

BUTT

To join two conductors together end-to-end without overlap, with their axes being collinear.

BUTT CONTACT

A mating contact configuration in which the mating surfaces engage end to end but do not overlap, with their axis in line.

BUTT SPLICE

A device for joining conductors end-to-end with their axis in line and not overlapping. (See SPLICE)

BUTTING CONNECTOR

A connector that is basically cylindrical and has a mating face with a basically circular periphery.

BUTTING DIES

Crimping dies so designed that the opposing die faces touch at the closed condition of the crimping cycle. Also called "bottoming dies."

BUTTON BOARD CONNECTOR

A set of compressed, randomly crumpled, springy, highly conductive wire elements shaped in the form of a thick buttons, housed in a connector body to form a multiple of pressure butt-type contacts.

BUTTON HOOK CONTACT

A contact with a curved, hook-like termination often located at the rear of hermetic headers to facilitate soldering or desoldering of leads.

BUTTON-HOOK TERMINAL

(See TERMINAL, HOOK)

CABLE

Two or more insulated conductors, solid or stranded, contained in a common covering, or two or more insulated connectors twisted or molded together without a common covering, such as a shield and/or jacket.

CABLE ADAPTER

A part of a connector or an accessory consisting of a rigid housing for attachment of the connector body. It may incorporate provisions for a cable clamp or seal for terminating cable shields and provide shielding to electrical interference. It may be straight or angled.

CABLE CLAMP

A connector accessory or portion of a component that is designed to grip the wire or cable to provide strain relief and absorb mechanical stress that would otherwise be transmitted to the termination.

CABLE CLAMP ADAPTER

A mechanical adapter that attaches to the rear of a plug or receptacle to allow the attachment of a cable clamp.

CABLE SEAL

A device designed to seal a jacketed cable to a component.

CABLE SEALING CLAMP

A device consisting of a gland nut and sealing member designed to seal around a single jacketed cable, providing an environmental seal.

CABLE SHIELDING CLAMP

A connector accessory device consisting of a sealing member and cable support designed to terminate the shield of the electrical cable at the connector.

CABLE SUPPORT SLEEVE

A flexible accessory or a part of a component placed around the cable to minimize flexing of the cable at the point of entry into the component.

CANTILEVERED CONTACT

A spring contact in which the contact force is provided by one or more cantilevered springs.

CAPACITANCE

That property of a system of conductors and dielectrics, that permits the storage of electricity when potential differences exist between the conductors. Its value is expressed as the ratio of the electrostatic charge on a conductor to the potential difference between the conductors required to maintain that charge.

CAPACITIVE COUPLING

The electrical interaction between two conductors caused by the capacitance between them.

CAPACITIVE REACTANCE

The opposition of capacitance to alternating current, equal to the reciprocal of the product of the angular frequency of the current times the capacitance. Symbol: X_c
The imaginary part of impedance due to capacitance.

$$X_c = \left(\frac{1}{\omega C} \right) = \left(\frac{1}{2\pi f C} \right)$$

CAPTIVE DEVICE

A multi-part fastener, usually screw-type, whose components are retained without separation when loosened from its base assembly.

CAPTIVE DEVICE-FASTENERS

A fastener, usually screw-type, whose components are retained without separation when loosened from its base assembly.

CAPTIVE HARDWARE

Hardware, that is held in place by some mechanical means

CARD EDGE CONNECTOR

A connector designed to have a printed wiring board inserted into the connector, to make contact with the printed wiring on the board.

CAVITY

The lengthwise opening in a printed circuit edge connector that receives the printed circuit board. (also see CONTACT CAVITY)

CENTER-TO-CENTER SPACING

The nominal distance between the centers of adjacent features on any single layer of a printed board.

CERTIFICATION

Verification that specified training or testing has been performed, and required proficiencies or parameter values have been attained.

CHAMFER

The angle on the inside edge of barrel entrance of a connector that permits easier insertion of the cable into the barrel.

CHARACTERISTIC IMPEDANCE

The ratio of voltage to current in a propagating wave, i.e., the impedance that is offered to this wave at any point of the line. (In printed boards its value depends on the width of the conductor, the distance from the conductor to ground planes, and the dielectric constant of the media between them.)

CIRCULAR CONNECTOR

A connector that is basically circular and has a mating face with a basically circular periphery.

CIRCUMFERENTIAL CRIMP

A type of crimp where the crimping dies completely surround a barrel resulting in a symmetrical reshaping of the barrel. Some circumferential crimps are oval, hexagonal, circular, etc.

CIRCUIT

The interconnection of a number of electrical elements and/or devices performing a desired electrical function.

CIRCUIT LAYER

A layer of a printed board containing conductors, including ground and voltage planes.

CIRCUMFERENTIAL SEPARATION

A crack or void in the plating extending around the entire circumference of a plated-through hole, in the solder fillet around the lead wire, in the solder fillet around an eyelet, or at the interface between a solder fillet and a land.

CLAD

A condition of the base material to which a relatively thin layer or sheet of metal has been bonded to one or both sides, i.e., "a metal clad base material."

CLADDING, FIBER

That part of a fiber, that concentrically surrounds the core of the fiber and has a lower refractive index than the core.

CLADDING, METAL

A method of applying a layer of metal over another metal whereby the junction of the two metals is continuously welded.

CLEARANCE HOLE

A hole in the conductive pattern larger than, but coaxial with, a hole in the printed board base material.

CLIP

A resilient device, that deflects on mating to produce a connection.

CLIP CONNECTION

A connection made by a clip.

CLIP POST

A termination to accept a clip connection.

CLOCKING

The arrangement of connector inserts, jack-screws, polarizing pins/sockets, keys/keyways, or housing configurations to prevent the mismating or cross mating of connectors.

CLOSED CRIMP BARREL

A crimp barrel with a closed shape before crimping.

CLOSED END SPLICE

A splice, open at one end only, designed to terminate two or more conductors. (See SPLICE)

CLOSED ENTRY

A design that limits the size of mating parts to a specified dimension. Usually used in reference to pin and socket contacts.

CLOSED ENTRY CONTACT

A socket or contact cavity design in which the insert or body of the connector limits the size or position of the mating contact or printed wiring board to a predetermined maximum dimension.

COATING, FIBER

That part of the fiber that surrounds the cladding and provides physical protection from exposure to the atmosphere.

COAXIAL CONSTRUCTION

The construction of a connector, contact, or cable with an inner conductor surrounded by a dielectric that in turn, is enclosed in an outer conductor that also acts as a shield. A protective jacket usually covers the outer conductor of a cable and also acts as an insulator. Compare to Triaxial.

COEFFICIENT OF THERMAL EXPANSION

The incremental linear dimensional change of a material per unit change in temperature, usually expressed as parts per million or in inches per inch per degree.

COINED

The pressure forming into a particular shape of a conducting material or conducting metal alloy.

COLD FLOW

Permanent deformation of material due to mechanical force or pressure (not due to heat softening).

COLD WELD

A weld achieved by pressure only, without electrical current or elevated temperature.

COLD WORK

Hardening and embrittlement of metal due to repeated stress action.

CODING

A system for the identification of components, wires, contacts, materials, tools and related devices by means of color.

COMPATIBLE CONNECTORS

A feature set that results in connectors being intermountable, intermatable and of identical performance.

COMPLIANT PRESS-IN TERMINATION

A press-in termination having a compliant press-in section.

COMPRESSION RING

A separate ring, within the backshell assembly, that is chamfered to provide an environmental seal by compressing the rear grommet.

COMPONENT

An individual part or combination of parts that, when interconnected, perform a design function(s).

COMPONENT ELEMENT

An identifiable part of a component, that is an assembly of individual elements. In the case of a connector the component elements are the individual parts of the connector assembly, such as the contacts, insulator body, shell, etc.

COMPONENT HOLE

A hole used for attachment and electrical connection of component terminations, including pins and wires, to the printed board.

COMPONENT MOUNTING

The act of attaching a component to a printed board, or the manner in which it is attached, or both.

COMPONENT MOUNTING ORIENTATION

The direction in which the components on a printed board or other assembly are lined up electrically with respect to the polarity of polarized components, or with respect to one another.

COMPONENT PIN

A component lead that is not readily formable without damage.

COMPONENT SIDE

The primary side of a single-sided assembly.

COMPOSITE CONNECTOR

A connector, that has its structural shell, constructed of either reinforced-polymeric materials, metal matrix composite materials, or combinations of polymeric resins and non-polymeric materials used in lieu of what would ordinarily require an all-metal shell. The connector may or may not have a conductive element, component and/or finish.

COMPRESSION CONNECTOR

A connector crimped by an externally applied force; the conductor is also crimped by such force inside the tube-like connector body. Compression connectors are in very intimate contact with the two ends of the conductors being spliced.

COMPRESSIVE STRENGTH

The maximum compressive stress a material is capable of sustaining. For materials that do not fail by a shattering fracture, the value is arbitrary, depending on the distortion allowed.

CONCENTRICITY

In a wire or cable, the degree to which the location of the geometric center of the conductor coincides with the geometric center of the surrounding insulation.

CONCENTRIC CONTACT

A set of coaxial contacts providing independent circuits through a single mechanical assembly.

CONDITIONING

Time-limited exposure of a test specimen to a specified environment(s) prior to testing.

CONDUCTANCE (G)

The reciprocal of resistance. It is the ratio of current (I) passing through a material to the potential difference (V) at its ends.

The measure of a materials ability to conduct electric charge. The real part of the complex representation of admittance.

CONDUCTIVE FOIL

A thin sheet of metal that may cover one or both sides of a base material and is intended for forming the conductive pattern.

CONDUCTIVE PATTERN

The configuration or design of the conductive material on the base material. (This includes conductors, lands, vias, heatsinks, and passive components when these are an integral part of the printed board manufacturing process.)

CONDUCTIVITY

The ability of a material to conduct electric current. It is expressed in terms of the current density (J) per unit of applied electric field (E). It is the reciprocal of resistivity.

CONDUCTOR

An electrical current-carrying material; the conductive element in an electrical wire.

CONDUCTOR STOP

A device or design feature on a terminal, splice, contact, or tool, which correctly positions the conductor on the conductor barrel.

CONDUCTOR PULL-OUT FORCE

Same as CONDUCTOR TENSILE FORCE

CONDUCTOR TENSILE FORCE

The force required to destroy a termination by separating a conductor from its terminal end by exerting an axial pull.

CONDUIT ADAPTER

An accessory to secure a connector to a conduit.

CONFIGURATION

Specific configuration and arrangement of contacts in a multiple-contact connector.

CONFINED CRESCENT CRIMP

A crimp that remains within the OD of the original barrel. It is usually identified by two crescent-shaped forms on the top and bottom of the wire barrel crimp.

CONFORMAL COATING

An insulating protective coating that conforms to the configuration of the object coated, usually applied to the complete PC board assembly.

CONNECTION

A physical interface between conductors and/or contacts to provide an electrical path.

CONNECTION SLOT (IDC)

The specially shaped opening in an insulation displacement termination suitable to displace the insulation of a wire and to insure a gas-tight connection between the termination and the conductor(s) of the wire.

CONNECTOR

A component used to provide rapid connect/disconnect service between electrical wire, cable, fiber, and printed wiring boards, and configured to properly terminate to these elements.

CONNECTOR AREA

That portion of printed wiring used for the purpose of providing external electrical connections.

CONNECTOR ASSEMBLY

A connector with attached accessories as it exists in the final assembly on a system; e.g., connector with backshell, cable clamp, contacts, and dust cover.

CONNECTOR BLOCK

A connector housing.

CONNECTOR BODY

A connector, less its contacts, termination elements, and accessories required to make a complete connector assembly.

CONNECTOR, EDGE CARD

A connector into which the edge of a printed wiring card is inserted so as to make electrical contact with conductive traces located on the circuit board.

CONNECTOR, ELECTRICAL

A device, either a plug or a receptacle, that is used to terminate individual electrical conductors, and provides a means to continue the conductors to a mating connection device.

CONNECTOR FRONT

The side of a connector that is the mating face.

CONNECTOR, HERMAPHRODITIC

A connector that has features enabling it to be mated with an identical connector.

CONNECTOR HOUSING

The part of a connector into which the insert and contacts are loaded.

CONNECTOR INSERT

An insulating element designed to support and position contacts in a connector housing.

CONNECTOR INSERTION LOSS

The loss of power due to insertion of a mated connector into a cable.

CONNECTOR INTERFACE

The two surfaces of mating connectors that face each other when mated.

CONNECTOR MATED SET

A particular combination of mating connectors.

CONNECTOR MODULE

A family of connector inserts that are uniform in external dimensions, but have the ability of each accepting different types of contacts or having different contact densities or configurations.

CONNECTOR, PLUG

An electrical connector, intended to be attached to the free end of a conductor, wire, cable bundle, or a printed circuit board that couples or mates to a receptacle connector.

CONNECTOR REAR

The wiring side of a connector.

CONNECTOR, RECEPTACLE

An electrical connector, generally mounted or installed onto a fixed structure such as a panel, electrical case or chassis, that couples or mates to a plug connector.

CONNECTOR, RIGHT ANGLE

A connector that is generally mounted onto a printed wiring board and whose contacts are inserted into a matching pattern of plated through holes in the circuit board and soldered in place.

CONNECTOR SET, ELECTRICAL

Two or more separate plug and receptacle connectors designed to be mated together. The set may include mixed connectors mated together, such as one plug connector and one dummy receptacle connector, or one receptacle connector and one dummy plug connector.

CONNECTOR SHELL

The case that encloses the connector insert and contact assembly. Shells of mating connectors can protect projecting contacts and provide proper alignment.

CONNECTOR SHIELD

A cable outlet specifically designed to terminate the cable braid and provide shielding to electromagnetic interference.

CONNECTOR STYLE

A particular connector within a type, e.g., rectangular, circular, trapezoidal.

CONNECTOR TERMINATION ELEMENT

The component element (part) that connects the individual contacts to the conductors being terminated in the connector. Usually an integral part of the contact elements.

CONNECTOR TYPE

Connector with a particular sub-family, e.g. edgeboard connector, a mated set comprising a board mounted connector and its counterpart, etc.

CONNECTOR, UMBILICAL

An electrical connector, used to connect a cable to a vehicle such as an aircraft or rocket, that is mated prior to or during initial movement or launching of the vehicle, and unmates during launch.

CONNECTOR VARIANT

Variation within a connector type and style or within a group of related connectors, e.g. number of contacts, polarization, terminations, etc.

CONTACT

The conductive or transmissive element in a connector that makes actual contact with a similar conductive or transmissive element in a mating connector for the purpose of transferring energy.

CONTACT ALIGNMENT

A requirement for overall side play that contacts shall have within the insert cavity so as to permit self alignment of mated contacts. Sometimes referred to as amount of contact float.

CONTACT ACTIVE AREA

See "Contact Area".

CONTACT AREA

The area in contact between two conductive elements through which electrical current flow can take place.

CONTACT ARRANGEMENT

The number, spacing and arrangement of contacts in a connector.

CONTACT BACK WIPE

An actuated contact surface where a contact travels on the surface of its mating contact during the actuation cycle then moves back to a clean wiped surface at the completion of the actuation or engagement cycle.

CONTACT, BLADE

A contact that is a flat broad contact whose width is significantly larger than its thickness with a lead in chamfer. It is designed to mate with a socket and receptacle contact.

CONTACT CAVITY

A defined hole in the connector body itself into which the contact must fit.

CONTACT CHATTER

Connector ohmic discontinuities.

CONTACT DURABILITY

Endurance measured by the number of mating insertions and withdrawal cycles that a connector withstands while remaining within its specified performance levels.

CONTACT ENGAGING AND SEPARATING FORCES

Forces resulting from engaging or separating individual contacts with either the mating contact or gauge pins, also referred to as individual insertion and withdrawal forces.

CONTACT, ELECTRICAL

The electrically conductive element in a connector or other device that mates with a corresponding element to provide an electrical path or circuit.

CONTACT EXTRACTION FORCE

The axial force required to extract a removal contact from a component.

CONTACT FLOAT

The overall side-to-side play, axial movement, and/or angular displacement of contacts within the insert cavity.

CONTACT FORCE

The normal force (90 degrees) that exists between engaged contact surfaces. Frequently mis-identified as contact pressure.

CONTACT, HERMAPHRODITIC

An electrical contact that has features that enable it to be mated with an identical contact.

CONTACT INSERTION and REMOVAL FORCES

The force required to insert or remove a contact from its housing with or without the aid of insertion or removal tools.

CONTACT INSPECTION HOLE

A hole in the cylindrical rear portion of a contact used to check the depth to which a wire has been inserted.

CONTACT LEAD-IN

A chamfered or flared portion of a socket or receptacle contact to facilitate insertion of a pin contact.

CONTACT LENGTH

Length of travel made by one contact in contact with another during assembly or disassembly of a connector. Sometimes called Contact Mating Length. Also see Wiping Action

CONTACT, PIN

A diametrical contact designed to mate with a socket or receptacle contact. May be hollow or solid, rigid contact.

CONTACT PLATING

The deposit of metal applied to the basic contact metal surface to provide the required contact-resistance and/or wear resistance.

CONTACT POSITIONS

In most connectors the maximum number of contacts that can be actively engaged. In edge connectors the number of contact positions along the length of the connector, as opposed to the total number of contacts. Also see Readout.

CONTACT, POST

A square contact designed to mate with a socket or receptacle contact. It is a solid structure.

CONTACT RESISTANCE

The electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or as a voltage drop at a specified current through the engaged contacts.

CONTACT RETAINER (CLIP)

A device either on the contact or in the housing that retains the contact in an insert or body.

CONTACT RETENTION

The provision or means in an electrical connector by which the contacts are retained. The ability of a connector to retain contacts.

CONTACT RETENTION FORCE

The axial load in either direction that a contact can withstand without being dislodged from its normal position within an insert or body.

CONTACT SHOULDER

The flanged portion of the contact that limits its travel into the insert.

CONTACT SIZE

Either a single number designator based on the AWG size number most closely corresponding in Circular Mil Area (CMA) to the CMA of the pin contact set, or a double number designator, similarly based whereby the first number corresponds to the CMA of the pin contact, and the second number corresponds to the max wire size accommodated by the contacts termination barrel