Incon Inc.

At Incon, we take pride in the quality of our product. Our goal is to develop partnerships with our Customers by providing complete satisfaction with product performance, cost, and delivery.

Incon has been a leader in the production of electronic connector systems for over 40 years. Incon's roots are in the design and manufacture of connectors for Boeing. In 1999 we significantly expanded our capability with the acquisition of the MIL-DTL-55302, .100 and .075 inch centerline F-Series Connector line from Texas Instruments.

Designed, and qualified, to meet the requirements of MIL-DTL-55302, Incon's connector line represents the culmination of materials and electronics research in the connector field. The connectors demonstrate high reliability, precision, and exceptional performance in a system that is versatile enough to meet the demands of the most severe environmental conditions.

These connectors are suitable for use in military as well as non-military equipment and are designed to be used in conjunction with printed circuit boards, chassis and cables in virtually any combination. Incon's military connectors have won acceptance in a wide range of applications: civil and military avionics, military weaponry/electronics, both airborne and ground-based communications, data processing, missiles, aerospace electronics, ground support equipment and radar electronics.

Custom designed connectors that can meet the rapidly changing needs of many applications are made possible by the series wide selection of body styles, contact designs and assembly variations.

Qualifications

Incon is qualified to MIL-DTL-55302, ISO 9001:2008 and AS 9100:2009. We also maintain other notable qualifications such as Boeing's D1 9000, UTC Approved Quality Clinic, and Honeywell's Manufacturing Process Control.

Certificate of Registration

nqa global assurance

This is to certify that the Quality Management System of:

Incon
21 Flagstone Drive
Hudson, NH 03051

applicable to:

Assembly of electronic connectors

has been assessed and approved by
National Quality Assurance, U.S.A., against the provisions of:

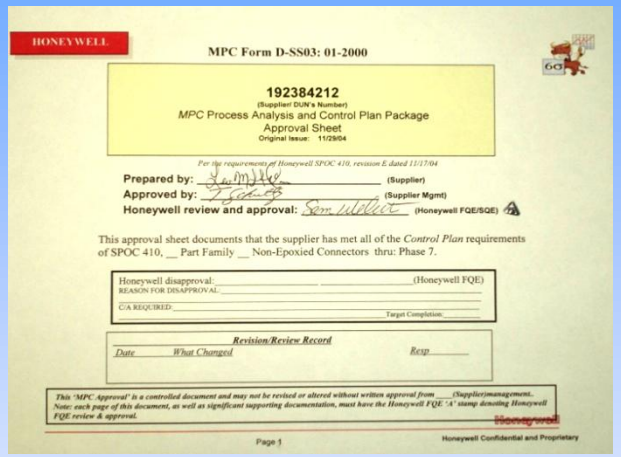
ISO 9001: 2008 and AS9100 Revision B
and in accordance with the requirements of AS9104A.

For and on behalf
of NQA, USA, Acton, MA 01720

ANAB ACCREDITED

Certificate Number:	11181
EAC Code:	19
First Issued:	May 7, 2004
Valid Until:	April 14, 2010
Reissued:	November 16, 2009

This approval is subject to the company maintaining its system to the required standard, which will be monitored by NQA, USA, an accredited organization under the Aerospace Registrar Management Program.



HONEYWELL

MPC Form D-SS03: 01-2000

192384212
(Supplier/ DUN's Number)
MPC Process Analysis and Control Plan Package
Approval Sheet
Original Issue: 11/29/04

Per the requirements of Honeywell SPOC 410, revision E dated 11/17/04

Prepared by: _____ (Supplier)
Approved by: _____ (Supplier Mgmt)
Honeywell review and approval: _____ (Honeywell FQE/SQE)

This approval sheet documents that the supplier has met all of the *Control Plan* requirements of SPOC 410, __ Part Family __ Non-Epoxied Connectors thru: Phase 7.

Honeywell disapproval: _____ (Honeywell FQE)
REASON FOR DISAPPROVAL: _____
C/A REQUIRED: _____ Target Completion: _____

Revision/Review Record
Date *What Changed* *Resp*

This 'MPC Approval' is a controlled document and may not be revised or altered without written approval from (Supplier)management.. Note: each page of this document, as well as significant supporting documentation, must have the Honeywell FQE 'A' stamp denoting Honeywell FQE review & approval.

Page 1

Honeywell Confidential and Proprietary

D1-9000
ADVANCED QUALITY SYSTEM
MANUFACTURING CERTIFICATE

This certificate is issued to:

INCON, INC.

5 Flagstone Drive Hudson, NH 03051

An evaluation of your quality procedures and methods indicates that your quality system is capable of meeting the requirements of D1-9000 when s d on the contract.

DURATION: This certificate shall continue in effect indefinitely, provided the supplier continuously complies with the requirements of the original issuance of this certificate or until the certificate is canceled, suspended or revoked.

Manager, Materiel

Manager, Quality Assurance

Date issued: December 15, 1994

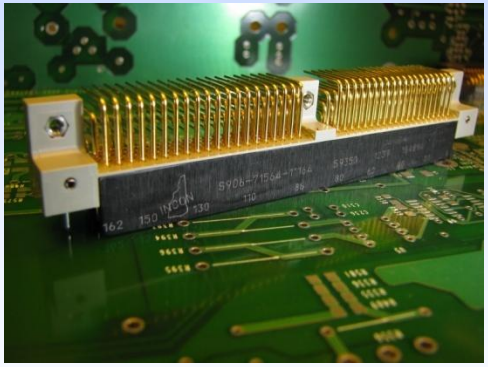
CERTIFICATE IS NOT TRANSFERABLE, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE MATERIEL BUYER OF BOEING DEFENSE & SPACE GROUP.

ayment of this approval does not in itself constitute a waiver of the requirements for inspection, tests or other provisions of the contract, nor does it guarantee acceptance of articles produced. This approval may not be reproduced for advertising or sales purposes and if so used is subject to cancellation, nor may the authority be used for the manufacture, sale or shipment of any article to anyone other than Boeing, without Boeing's prior written permission.

BOEING

We have vast experience crossing part numbers from other manufacturers and maintain a database of these crosses so that, in most cases, we can quote competing product in the same day. Please quote Incon to baseline your connector costs. We have been able to provide several customers with both immediate and substantial cost savings.

Incon does “specials”. Many of our customers perform additional operations to connectors after they receive them. In most cases, we can perform these operations at a substantial cost savings. These variations range from operations as simple as tin dipping, to drilling holes, to altering the connector to specific dimensions.



Our customers enjoy design advantages with an Incon connector. Specifically, every contact in our .075 centerline connector line and all right angle contacts in our .100 centerline connectors are retained with epoxy as standard procedure. This design characteristic provides sealing properties and is ultimately a stronger retention system as compared to our competitor’s press-fit retention. All of our contacts meet the Mil Spec low force guidelines without the use any lubricants or special coatings.

Incon is approved to MIL-DTL-55302 in the following slash sheets:

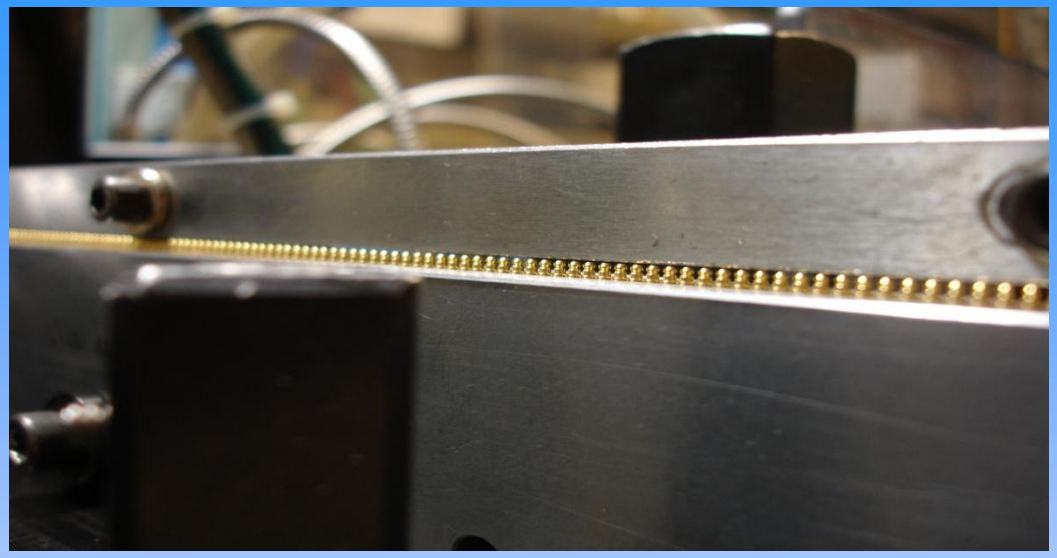
.100 Centerline: M55302/21, 22, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 138, 139

.075 Centerline: M55302/190, 191, 192, 193

.100 Centerline Connectors

This series offers 10-70 position, 2 row designs in 15 sizes with straight plugs, right angle plugs, straight receptacles, and right angle receptacles; 50-208 position, three row designs in 7 sizes with straight receptacles and right angle plugs; 90,100,120 position, 2 row designs with straight receptacles, and right angle plugs; and specialty connectors: single row (3-22 positions), crimp pin and socket (10-70 position), 114 pin platform, quarter round series, and extender board/test series.

- All connectors produced to MIL-DTL-55302 slash sheet requirements.
- A variety of gold plated contacts, all meeting low force requirements.
- Polyphenylene Sulfide molded and/or machined body insulators.
- Hardware in either stainless steel or beryllium copper or a mil-approved alloy alternative.
- Tape and Plate variation available to reduce repair costs by allowing single pin replacement capability.
- All connectors may be selectively loaded.
- All connectors are available with and without mounting ears.
- Combinations of various styles, materials and sizes total in the millions.



.075 Centerline Connectors

As military electronics increase in complexity and density, connector manufacturers are driven to increases in I/O and I/O density. Incon has responded to these needs with a family of .075 centerline, two piece PWB, military connectors. This series of military connectors offers a wide variety of body styles, contact styles, and hardware styles satisfying a wide range of application requirements. Custom designed connectors can also be manufactured to meet exacting customer specifications. Two row-100 position connectors, 3-row-80, 122, 152, and 206 position connectors and 4 row- 210 position connectors.

- All connectors are designed and produced to MIL-DTL-55302 slash sheet requirements.
- A variety of low insertion force, gold plated contacts.
- High performance polyphenylene sulfide molded body insulators.
- Hardware of either stainless steel or nickel plated beryllium copper.
- All connectors are potted with epoxy to prevent contact contamination. The potting, or sealback operation provides sealing characteristics, and is a stronger retention system than that of our competitors.
- All connectors can be selectively loaded.

Connector Specs

- **Molded Insulator**
  - Glass Filled Polyphenylene Sulfide, 40% Glass Filled, per MIL-DTL-55302
- **Pin Contacts**
  - Copper Alloy per MIL-DTL-55302
- **Socket Contacts**
  - Contacts: BeCu per MIL-DTL-55302
  - Terminal: Copper Alloy per MIL-DTL-55302
- **Contact Finish**
  - Gold Plate per MIL-DTL-45204/ASTM B488 Localized finish per MIL-DTL-55302
- **Hardware**
  - Stainless Steel per ASTM-A581 or A582. Passivated per SAE AMS-2700
- **Guide Sockets, Polarized**
  - BeCu per ASTM-B196 or B197. Nickel Plated per MIL-DTL-38999, Appendix A
- **Gasket**
  - Silicone Rubber per A-A-59588
- **Tolerance**
  - Decimals ± .010, Angles ± 5º unless otherwise specified
- **Connector Marking**
  - Marking shall meet the requirements of MIL-STD-1285 and MIL-STD-202 method 215 for permanency. Pin numbers indicating every fourth position are marked on the side of the connector.

Connector Performance

Wire Size: #24 AWG Stranded

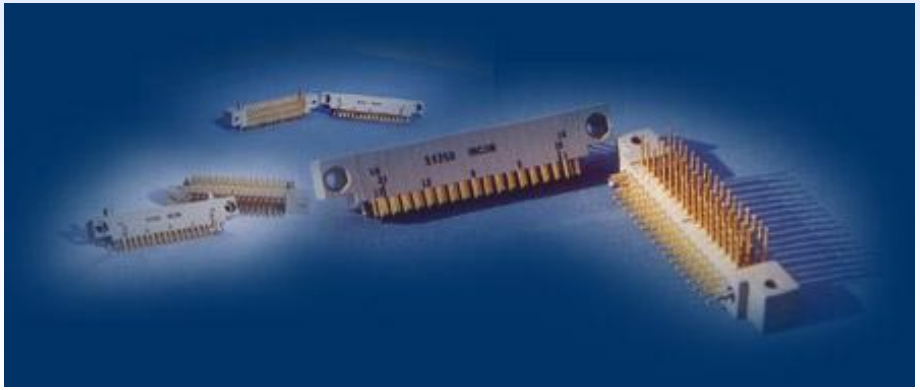
Contact Rating: 3 ampere maximum per contact

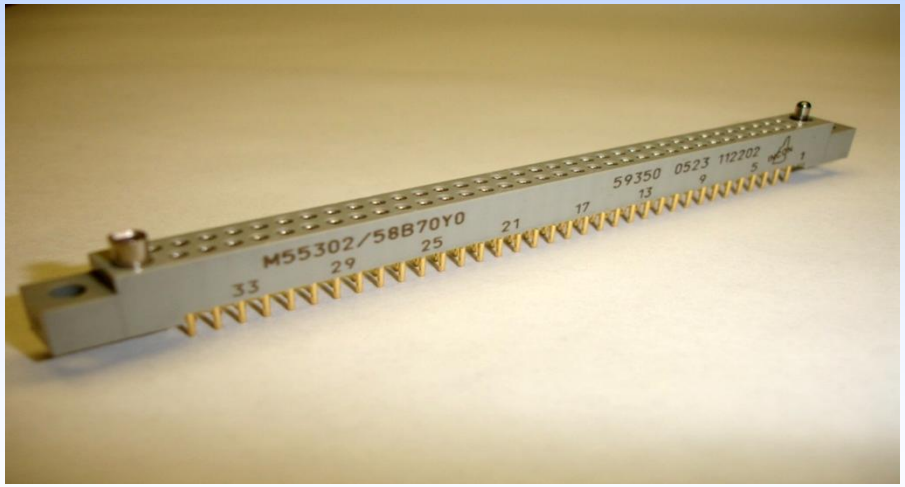
Solderability: Pretinning meets the requirements of MIL-STD-202, Method 208

Operating Temp: -65º to +125º C, -85º to +257º F

Test	Requirements	Test Method per EIA364
Contact Resistance	Will not exceed .020 ohms on individual contact pair with average not to exceed .010 ohms	EIA364.6
Dialectric Withstanding	750vrms, 60 Hz @ sea level 250 vrms, 60 Hz @ 70,000 feet **250 vrms, 60 Hz @ 100,000 feet**	EIA364.20
Insulation Resistance	5000 megohms @ 500 VDC	EIA364.21
Durability	500 connector mating cycles	MIL-DTL-55302 para. 4.5.9
Temperature Cycling	5 (1) hr cycles; -65º to +125ºC	EIA364.32
Vibration	10-2000 Hz, 15G Peak	EIA364.28
Salt Spray	5% salt spray @ 95º F for 48 hours	EIA364.26
Shock	100G sawtooth, 6ms	EIA364.27
Humidity	10 days @ 25º to 65º C, 80-98% RH	EIA364.31
Contact Engagement Low Force	4 oz. Maximum with a .0255 dia pin per SAE-AS31971	EIA364.37 & MIL-DTL-55302
Contact Seperation Low Force	.5 oz. Minimum with a .0245 dia pin per SAE-AS31971	EIA364.37 & MIL-DTL-55302

- Incon Inc. is located in Hudson, New Hampshire- approximately 45 miles north of Boston.
- Incon is privately held.
- Incon posted sales of $5,900,000 in 2015.
- Incon’s Average On-Time Delivery is 99%.
- Incon employs 48 people and currently runs one shift. Customer Survey responses consistently show that our customers find our small size an advantage. From Technical Support, to Quoting, Order Entry/Acknowledgement and finally Accounts Receivable- our customers are extremely satisfied with the Quality and Speed of response.

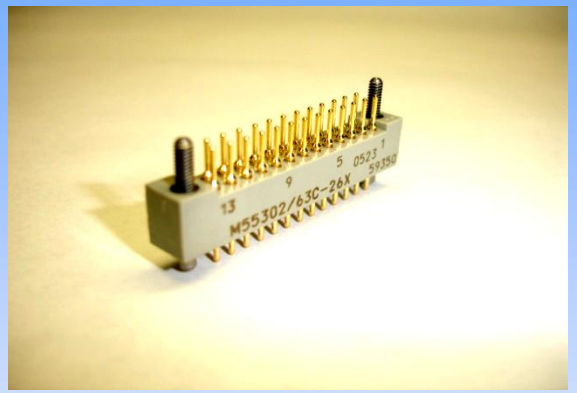




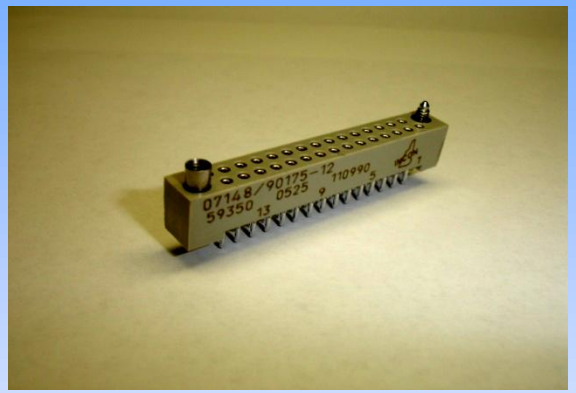
Connector Pictures

.100 Centerline

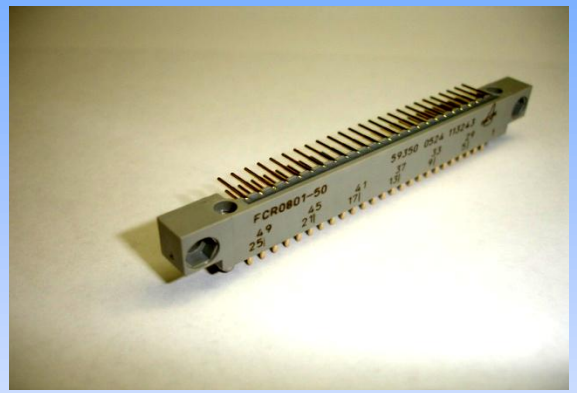
M55302/55, /63, /64



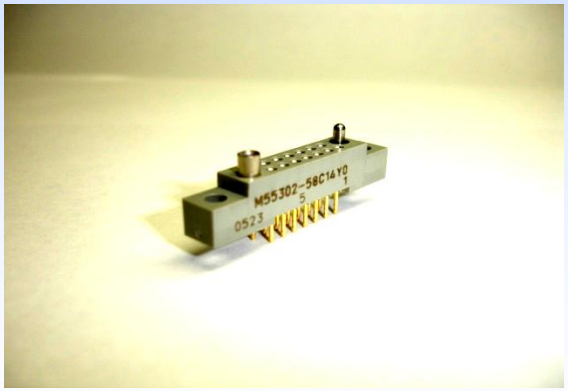
M55302/56, /62



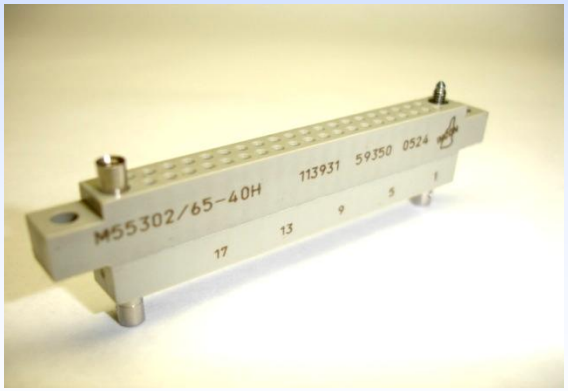
M55302/57, /59, /61



M55302/58, /60



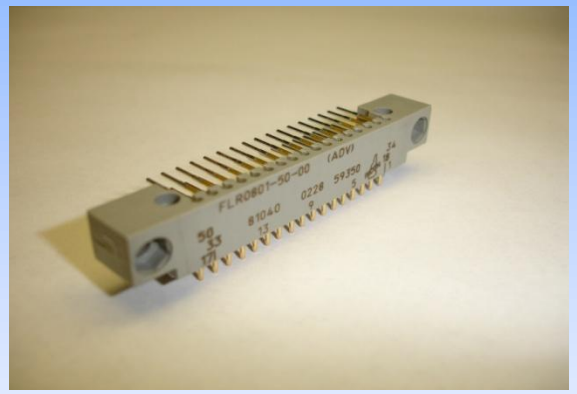
M55302/65, /66



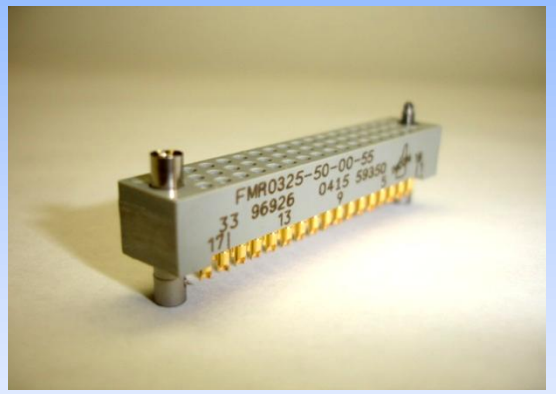
Connector Pictures

.100 Centerline

M55302/138



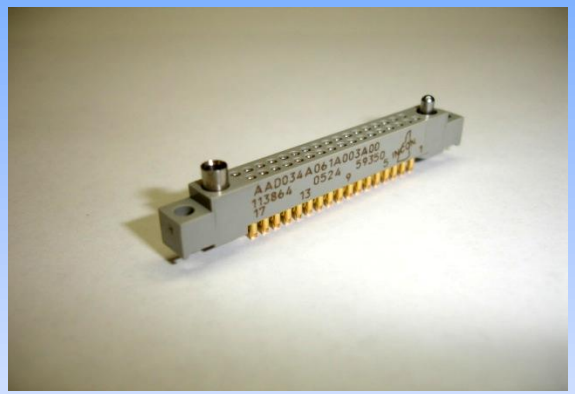
M55302/139



Connector Pictures

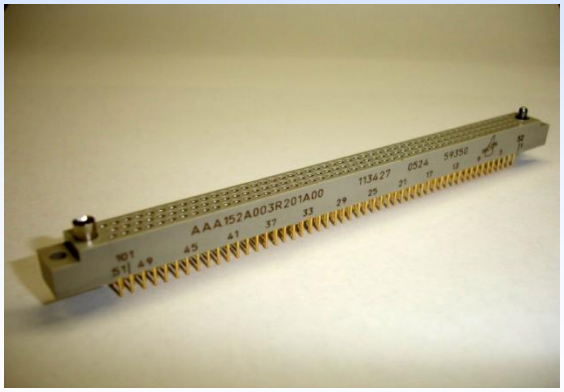
.075 Centerline

M55302/190

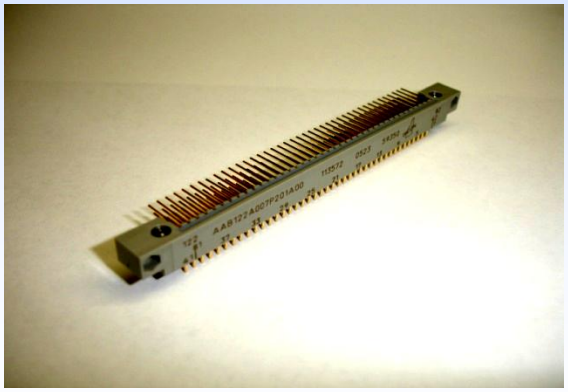


M55302/191

M55302/192



M55302/193

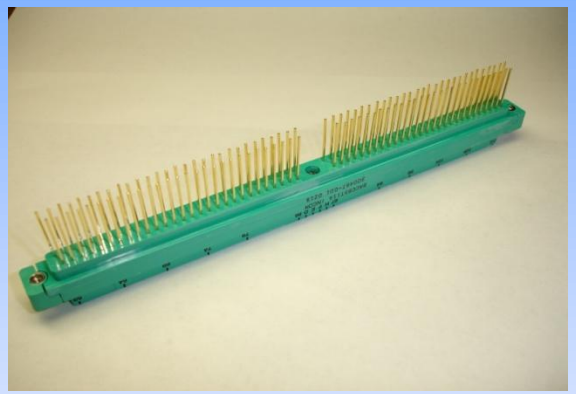


Connector Pictures

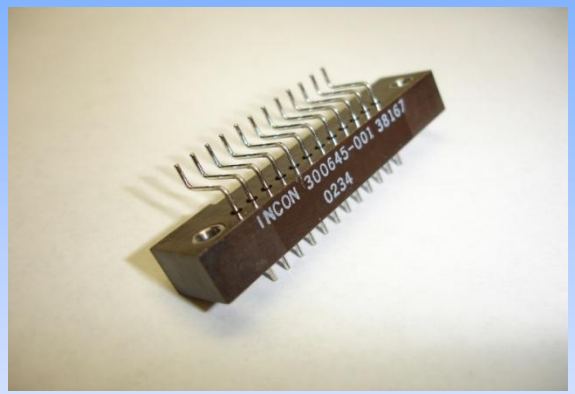
Specials

Circulars

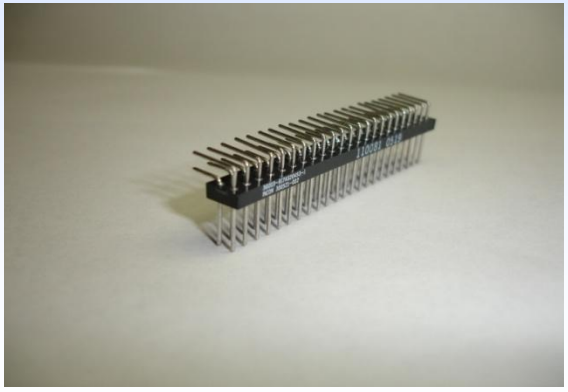
Boeing



BAT



AMRAAM



Honeywell