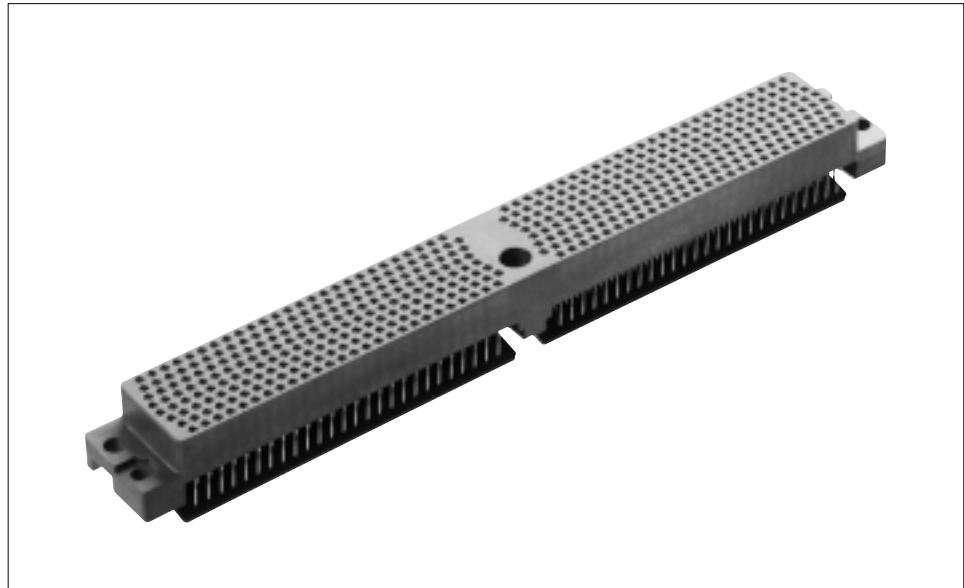


Introduction

Product Facts

- Two-piece high density, high performance connectors for printed circuit board use
- Four-beam box type contact design provides four areas of contact per connection
- Available in 6-Row 306 position and 8-Row 428 position
- Receptacles designed for through-hole soldering
- Pins designed for surface mount card edge applications
- Guide posts provide proper alignment during mating
- Octagonal shape keys ensure proper mating
- Meets DSCC 89065 performance requirements



AMP-HDI 6 and 8 Row LRM (Line Replaceable Module) Connectors

Designed specifically to be the next generation, high density electronic packaging system, the AMP-HDI 6 Row, .075 [1.91] centerlines and 8 Row, .080 [2.03] centerlines, LRM Interconnection System meets all DSCC 89065 LRM specifications. This advanced system features high temperature plastic housings compatible with IR reflow solder techniques. Added advantage of the AMP-HDI LRM Connector System is its capability of accepting MIL SPEC fiber optic contacts per MIL-T29504/5. Six-row configurations available in 306 contact positions. Eight-row configurations feature two 214 position plug halves which mate with one 428-position receptacle. This technological leader is offered with standard tin-lead plated solder tails and for those applications where maintaining a light weight system is a factor. The 8-row configuration is made available with weight saving, flexible film tails.

Equally important are Application Costs. The AMP-HDI LRM Connector interconnection system offers advanced tooling that simplifies contact alignment to the pc board, substantially reducing overall applied labor costs.

Guide posts provide alignment for the connectors when mating. Shell accessories protect the pin assemblies from physical damage. Octagonal shape keys permit eight rotational positions assuring only the proper mating assembly can be inserted.

The connectors offer 6 row and 306 positions with 4 fiber optic ports capability or 8 rows with 428 positions.

Housings are made from Polyphenylene sulfide with duplex plated .000050 [.00127] min. gold beryllium copper contacts. The contact tails are tin-lead coated for easy soldering.

Technical Features

Available Number of Positions — 306 and 428

Center Spacing — .075 [1.91] and .080 [2.03]

Housing Material — Polyphenylene Sulfide per MIL-G-45204

Contact Material — Beryllium copper

Contact Finish — 50 μ in gold per MIL-G-45204

Contact Dimension — .008 [0.20] wide

Current Rating — 1 ampere

Termination Resistance (Max.) — 20 milliohms

Connector Mating Force — Less than 130 pounds

Performance Characteristics

Dielectric Withstanding Voltage — 600 VRMS

Insulation Resistance — 100 VDC, 1000 Megaohms

Connector Mating/Unmating — Less than 3 oz. per contact

Durability — 500 cycles

Vibration — MIL-STD-1344 per Method 2005 Condition V

Physical Shock — MIL-STD-1344 per Method 2004 Condition H (15G)

Thermal Shock — MIL-STD-1344 method 1003 cond A

Temperature Humidity — MIL-STD-1344 method 1002 Type II

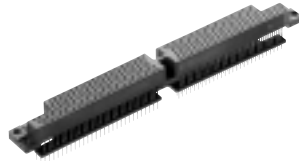
Technical Documents

Instruction Sheet 408-4008

AMP-HDI 6-Row, 306-Position Connector

LRM Receptacle Connectors
with Additional, 4-Position,
Fiber Optic Contact Ports

Part Number 445270-1



Material and Finish:

Housing — Polyphenylene sulfide, (PPS) per MIL-M-24519

Contacts — Beryllium copper, duplex plated .000050 [0.00127] min. gold in the mating area, .000100 [0.00254] min. tin-lead in the termination area per 5N60 or 5N63

Sealant — Epoxy, all 306 positions

Insert Key — Stainless steel, passivated

Fiber Optic Seats — Fluorosilicone rubber compound, blue

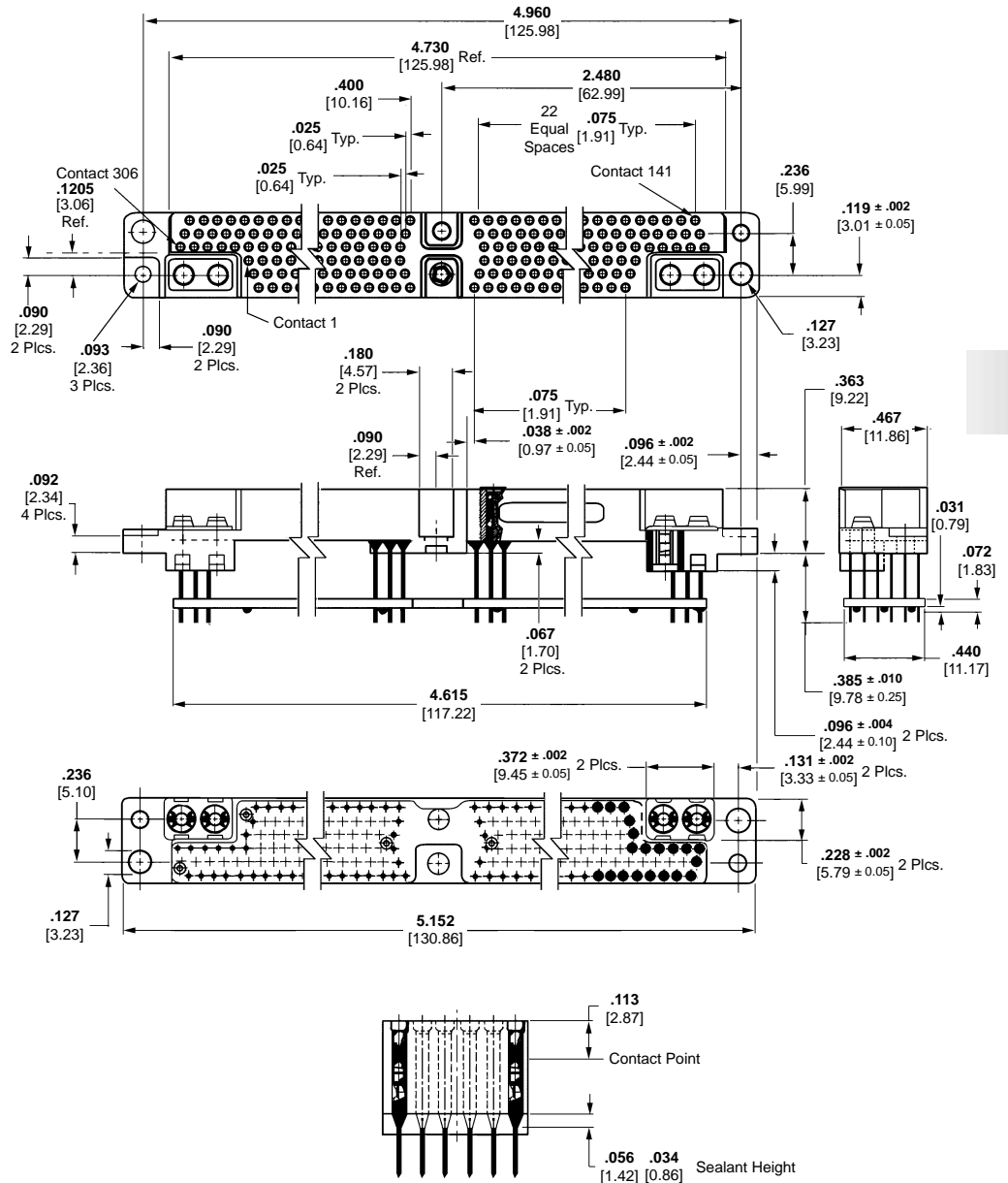
Fiber Optic Clip — Beryllium copper per QQ-C-533

Interfacial Seal — Fluorosilicone rubber compound, blue

Guide Post and Ground — Stainless steel, passivated

Shell — Aluminum per ASTM B 221-alloy 6061-T6, plated chromate per MIL-C-5541, Class 3 with **Captive**

Screws — MS 246903-C7 modified

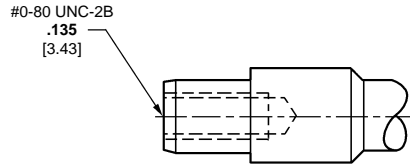


4

Printed Circuit Board Connectors

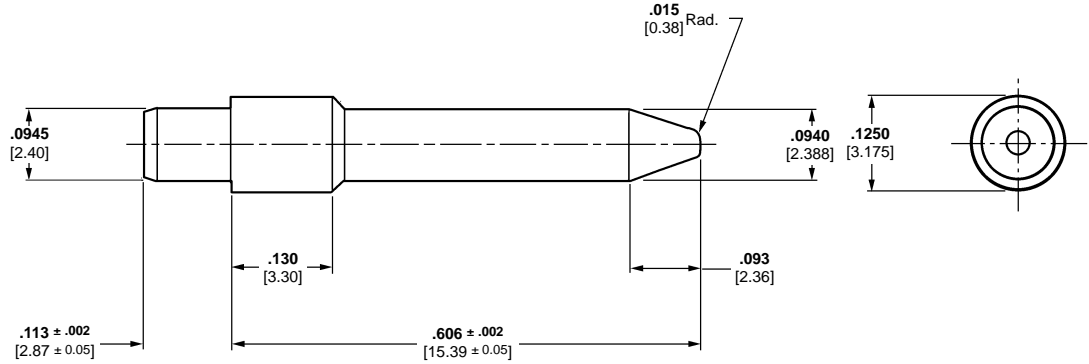
AMP-HDI 6-Row, 306-Position Connector (Continued)

LRM Receptacle Connectors
with Additional, 4-Position,
Fiber Optic Contact Ports
(Continued)



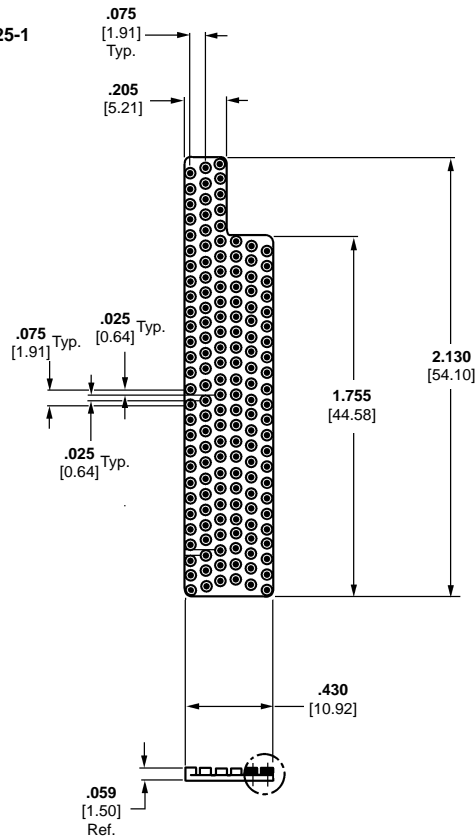
Part Number 445287-2

Part Number 445287-1

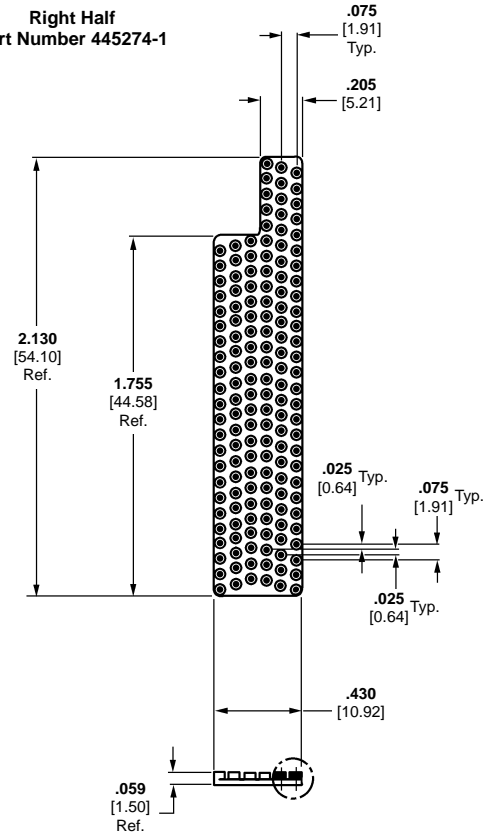


Guide Post

Left Half
Part Number 445525-1



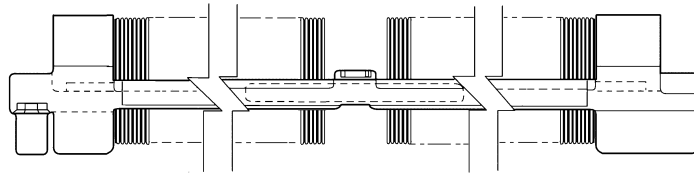
Right Half
Part Number 445274-1



Interfacial Sealing Gaskets

AMP-HDI 6-Row, 306-Position Connector (Continued)

LRM Plug Assembly with
Additional, 4-Position,
Fiber Optic Contacts
Part Number 445269-1

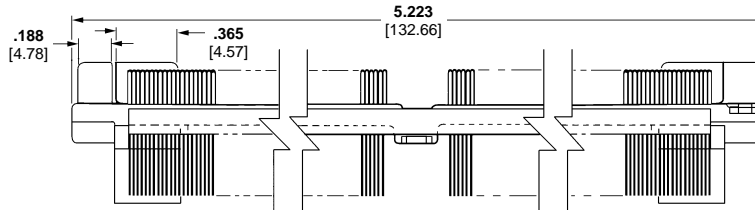
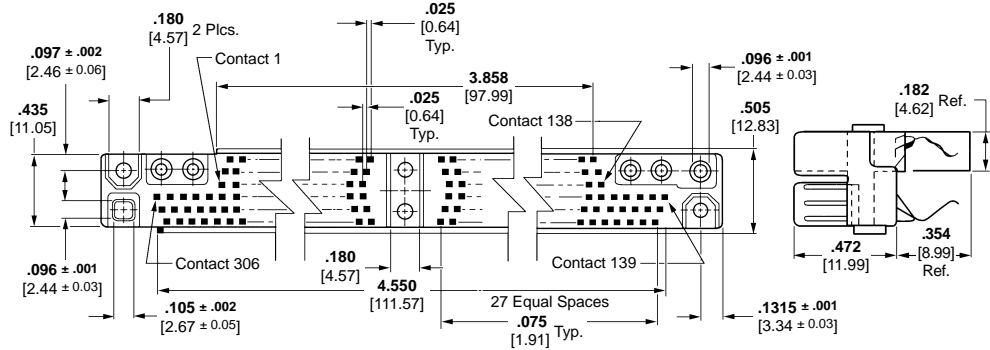


Material and Finish

Housing — Polyphenylene sulfide (PPS) per MIL-M-24519

Contacts — Beryllium copper, duplex .000050 [0.00127] min. gold in the mating area, .000100 [0.00254] min. tin-lead in the termination area per 5N60 or 5N63

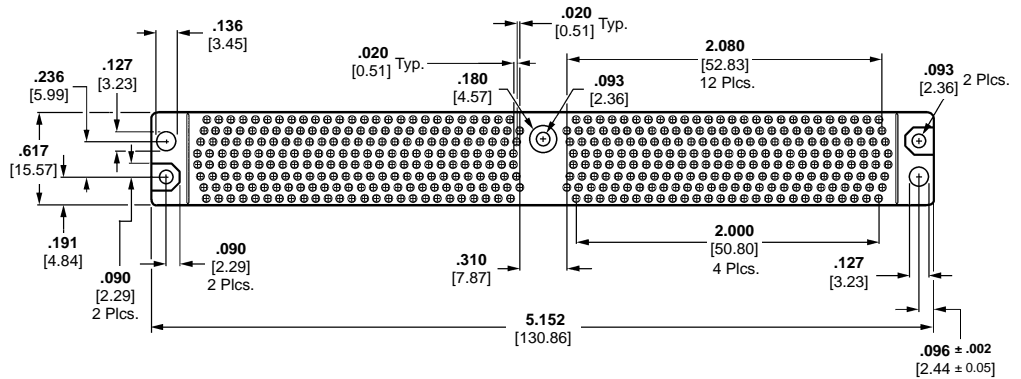
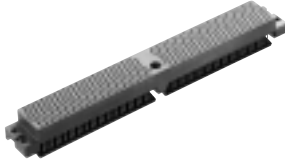
Fiber Optic Contacts — Per MIL-T-29504/5 (are customer supplied)



4
Printed Circuit Board Connectors

AMP-HDI 8-Row, 428-Position Connector

LRM Motherboard
Connector
Part Number 447447-1



Material and Finish:

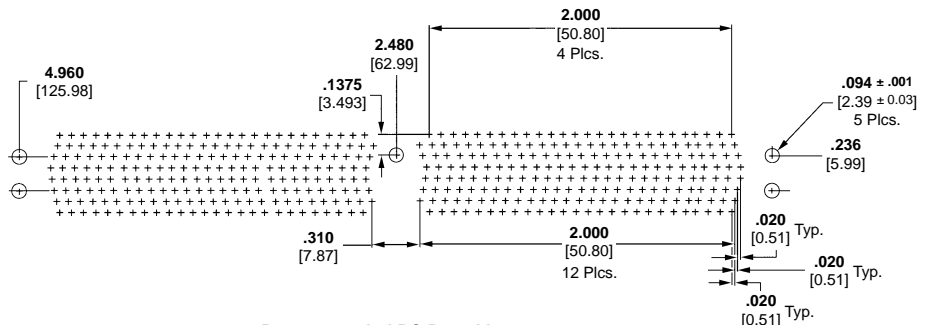
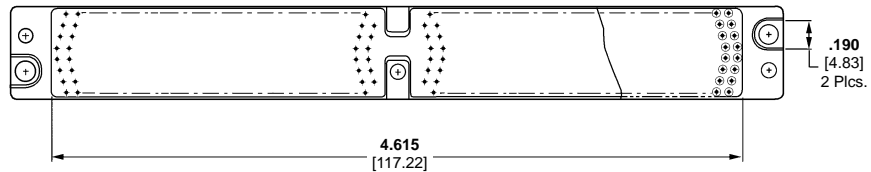
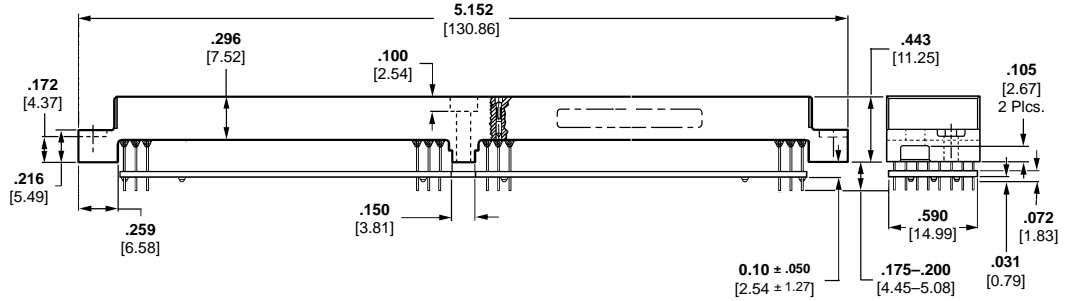
Housing — Polyphenylene sulfide per MIL-M-24519

Contacts — Beryllium copper, plated .000050 [0.00127] min. gold per MIL-G-45204 in the contact area, over .000050 [0.00127] min. on the entire contact per QQ-N-290

Related Product Data:

Mates with — Pin headers, page 335

Available Hardware — External Keys, Guide Pins



Recommended PC Board Layout

AMP-HDI 8-Row, 428-Position Connector (Continued)

LRM Daughterboard Connector
Part Number 447444

Material and Finish:

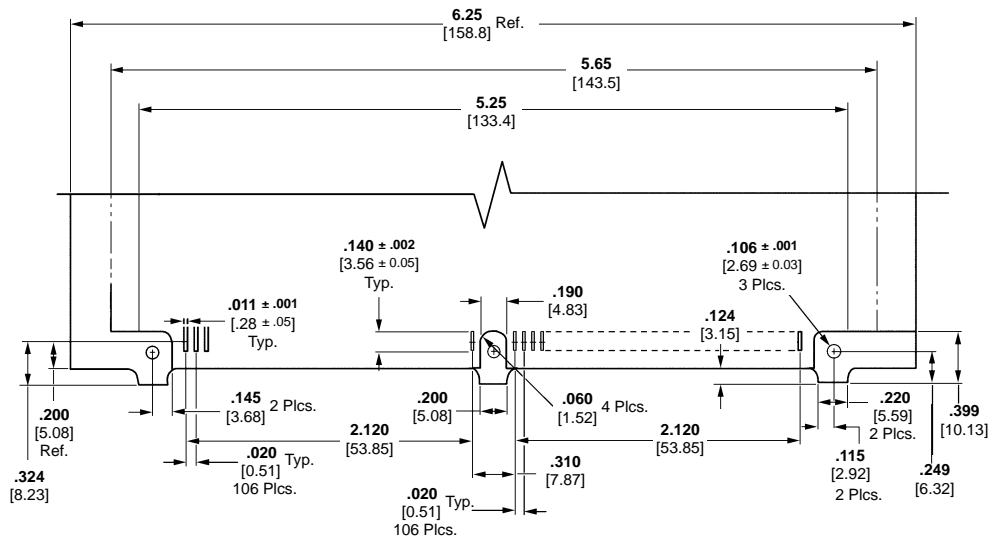
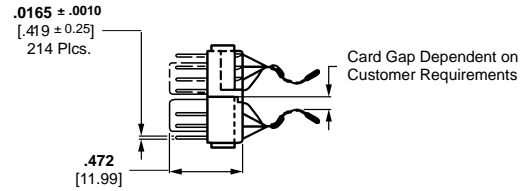
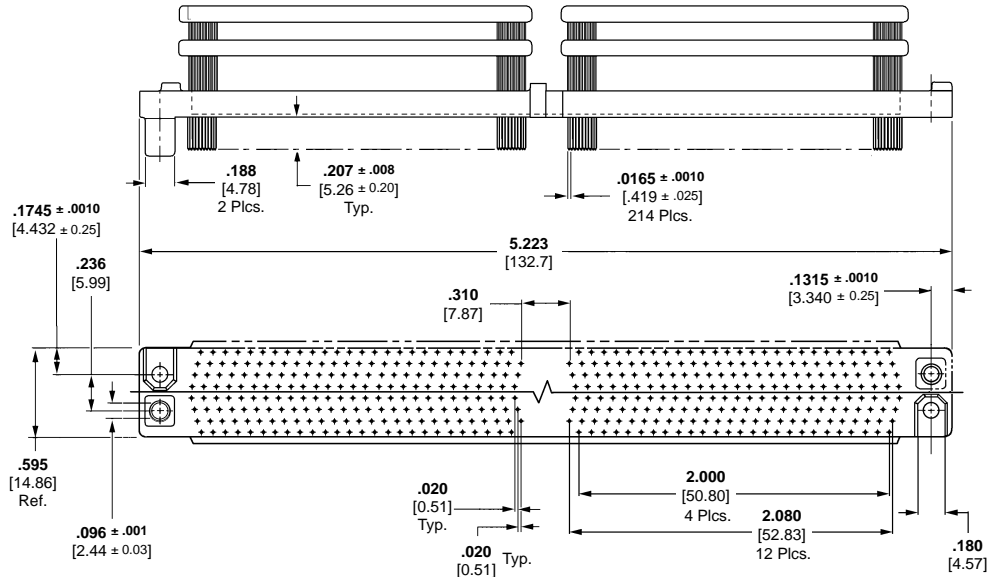
Housing — Polyphenylene sulfide per MIL-M-24519

Contacts — Beryllium copper, plated .000050 [0.00127] min. gold per MIL-G-45204 in the contact area, over .000050 [0.00127] min. on the entire contact per QQ-N-290

Related Product Data:

Mates with — Receptacle, page 334

Available Hardware — Shell Assembly, Polarizing Keys



Recommended PC Board Layout

Plug Housing Assembly	Part Number
B Side	447444-4
Plug Half (214 Pos.)	447444-2
A Side	447444-3
	447444-1

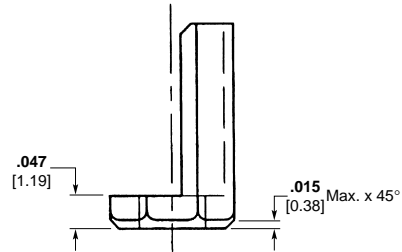
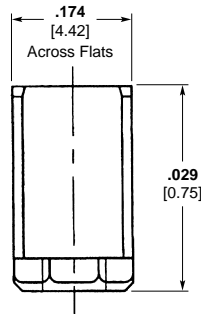
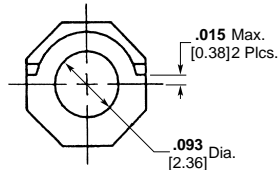
Note: 8-Row Housing Dim. (Typ.) — Plug, 5.223 [132.66] L x .585 [14.86] W x .472 [11.99] H.

4 Printed Circuit Board Connectors

AMP-HDI Connector Accessories

External Key for
Part Number 445270 and
Part Number 447447

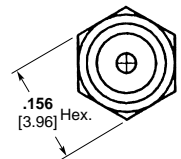
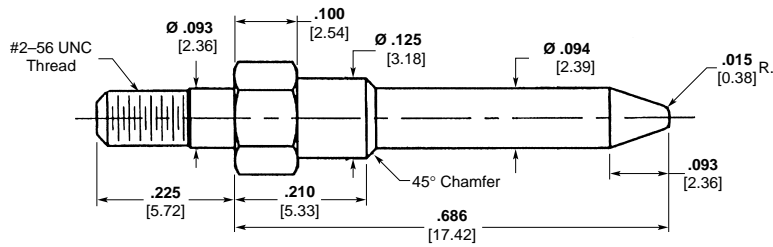
Material — Passivated stainless steel.
Fasten with 2-56 cap screw x .50" long
not included.



Part Number 445282-1

Threaded Post Guide for
Part Number 445270 and
Part Number 447447

Material — Passivated stainless steel.
Fasten with 2-56 nut not included.



Part Number 447448-1

AMP-HDI Connector Shell Accessories

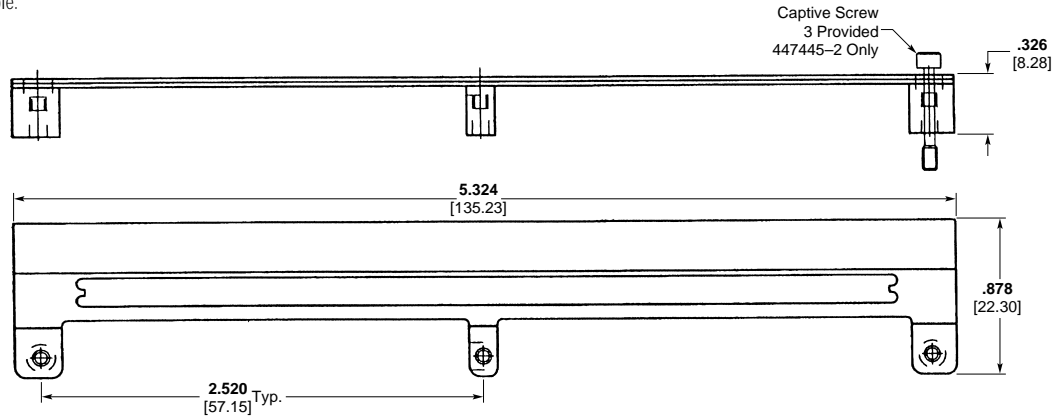
**Protective Shell for Part
Number 447444**

Part Number 447445-2
Side "A" Shell With Captive
Screws

Part Number 447446-2
Side "B" Shell Without
Captive Screws

Material — Aluminum

Finish — Chromate conversion.
Special shell markings available.



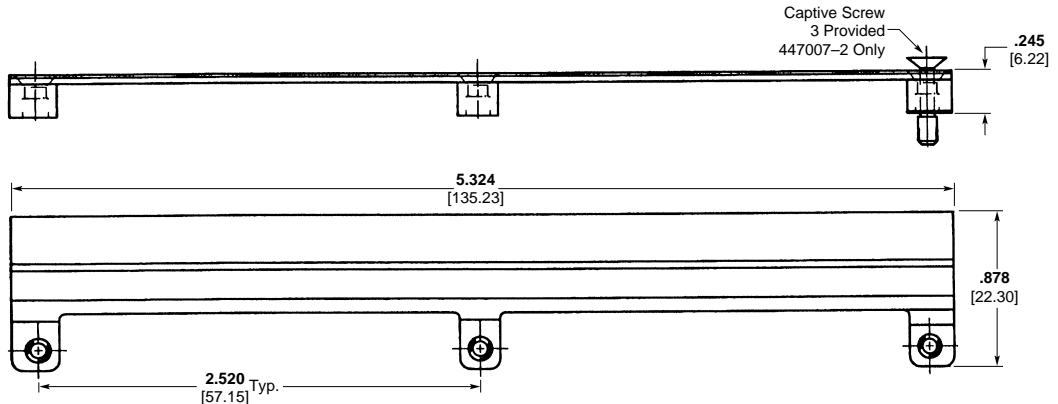
**Protective Shell for
Part Number 445269**

Part Number 447007-2
Side "A" Shell With Captive
Screws

Part Number 447006-2
Side "B" Shell Without
Captive Screws

Material — Aluminum

Finish — Chromate conversion.
Special shell markings available.



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Printed Circuit Board Connectors