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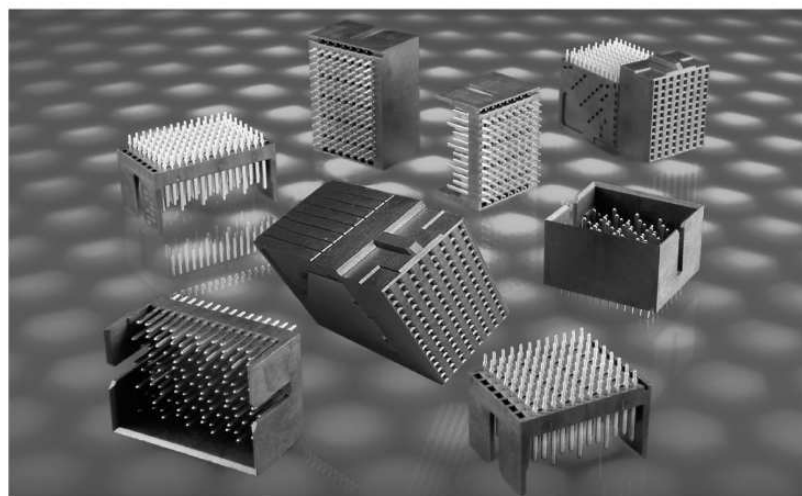
Introduction

Product Facts

- 10+ Gbps performance
- 100 ohm Impedance for Differential Pair configuration
- 5 pair version offers 26 pairs/10mm [66 differential pairs/inch] fitting within a 25.40 [1.00] card slot pitch
- 4 pair version offers 21 pairs/10mm [53 differential pairs/inch] fitting within a 20.30 [.800] card slot pitch
- 3 pair version offering 16 pairs/10mm [40 differential pairs/inch] fitting within a 16.25 [.625] card slot pitch
- Right angle pin headers (coplanar) in 3 pair, 4 pair, and 5 pair versions
- Reliable, redundant contact design on every signal contact
- Modular system offered in various column versions
- Meets Industry reliability requirements of Bellcore/Telcordia
- Sequencing for ground and signal contacts
- RoHS Compliant

Future Product Extensions

- Vertical receptacles
- High speed cable assemblies and hardware



The Z-PACK TinMan backplane connector family is a cost-effective solution for customers searching for a high density, high performance backplane interconnect system.

The Z-PACK TinMan connector design follows proven industry backplane convention by offering a fully protected right-angle receptacle for use on daughter-cards where handling damage can be a concern when mating to a vertical male header. This connector permits field repairability at either the module or single pin levels.

Ground contacts positioned within each column of the connector, combined with unique contact lead frame arrangements, enable the Z-PACK TinMan connector to achieve low crosstalk and high through-put performance levels. Reliability is provided with a dual point of contact mating interface and compliant pin interface to the printed circuit board.

Industry Applications

Ideally designed for cost pressured, high signal density applications requiring interconnection between two printed circuit boards, such as those typically found in server, storage, switch, router, and similar applications. The Z-PACK TinMan connector product family is suited to meet the demands of today's modular system designs by offering a variety of configurations. The product family includes configurations to fit 20.32 [.800] and 25.40 [1.00] card slot spacing.

Technical Documents

- Product Specification 108-2303
- Application Specification 114-13202
- Routing Guide Report #27GC001-1

Material and Finish

- Signal Contact — High Strength Copper Alloy
- Ground Contact — High Strength Copper Alloy
- Housing — Liquid Crystal Polymer, UL 94V-0 Rated
- Platings — Telcordia compliant interface, Nickel underplate
- Compliant Pin Plating — RoHS Compliant

Ratings

- Temperature Range — -65°C to +90°C
- Current Rating — 0.5 A/contact @ < 30°C T-Rise
- Durability — 200 cycles
- Dielectric Withstanding Voltage — 560 VAC
- Operating Voltage — 250 VAC max.

Signal Integrity

- Characteristic Impedance — Differential @ 100 ohms ±10%
- Crosstalk — Multi-pair differential crosstalk: 2.1% @ 50ps
- Insertion Loss — -2 dB @ 10 GHz

TELCORDIA is a trademark of Telcordia Technologies, Inc.

For additional information visit:
<http://www.tycoelectronics.com/zpacktinman>

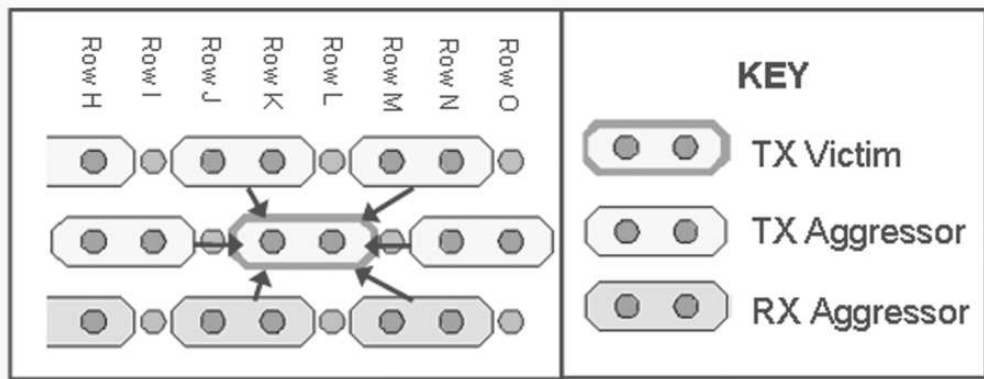
Introduction (Continued)

Noise Table

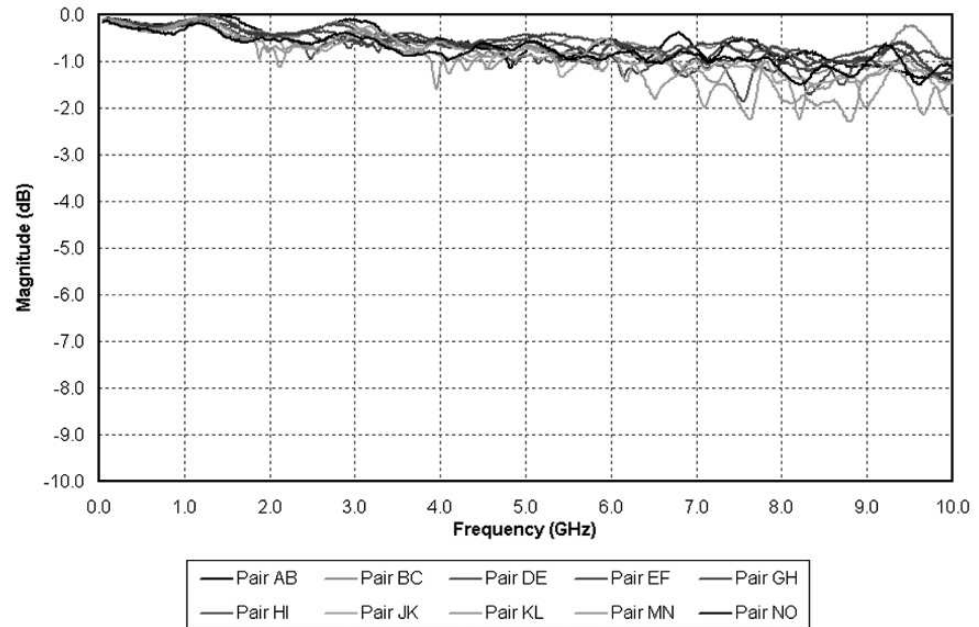
- Maximum, multiple source crosstalk

Victim Pair	Total Peak Receiver Noise for Recommended Pin-Out
AB9	0.8%
BC8	1.6%
DE9	1.9%
EF8	1.9%
GH9	2.0%
HI8	2.0%
JG9	2.0%
KL8	2.1%
MN9	1.7%
NO8	0.8%

Note: Data includes PCB vias of both backplane and daughtercard connectors. Single mated connector pair 50 ps (20-80%) edge rate



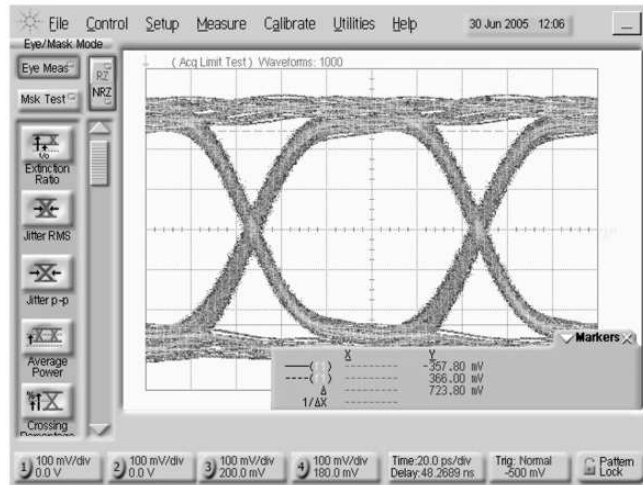
Insertion Loss Plot



Introduction (Continued)

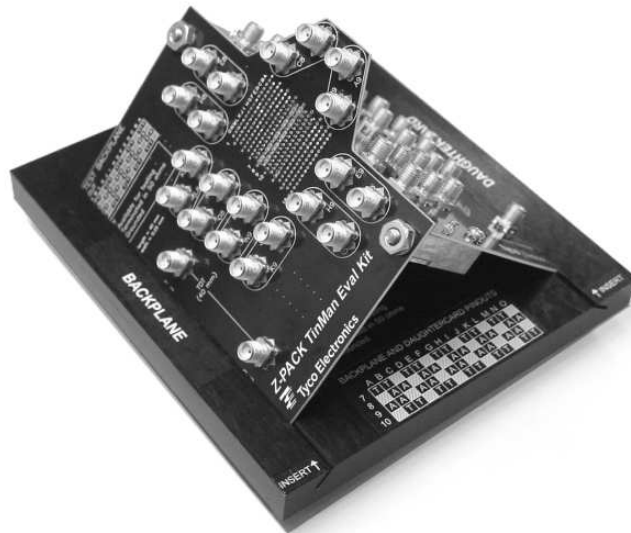
Representative Eye Pattern

- 10.0 Gbps data rate
- 2⁷-1 PRBS
- Unequalized Signal



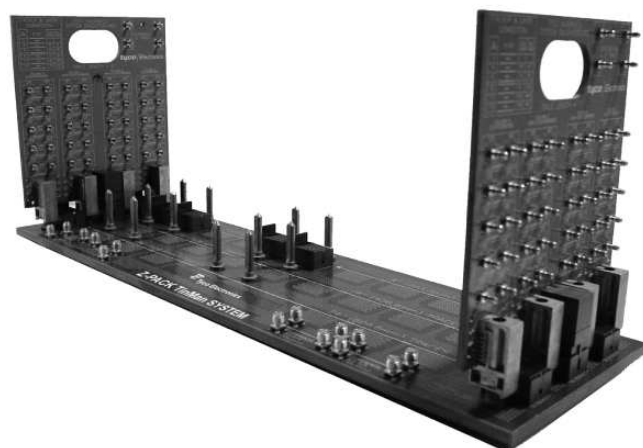
Customer Connector Evaluation Kit

- Connector characterization
- Available for loan — contact your local Tyco Electronics Sales Engineer
- Time and frequency domain testable
- Testable to 18+ GHz (25+ Gb/s)
- Multiple calibration options
- Convenient SMA interface



Customer System Evaluation Kit

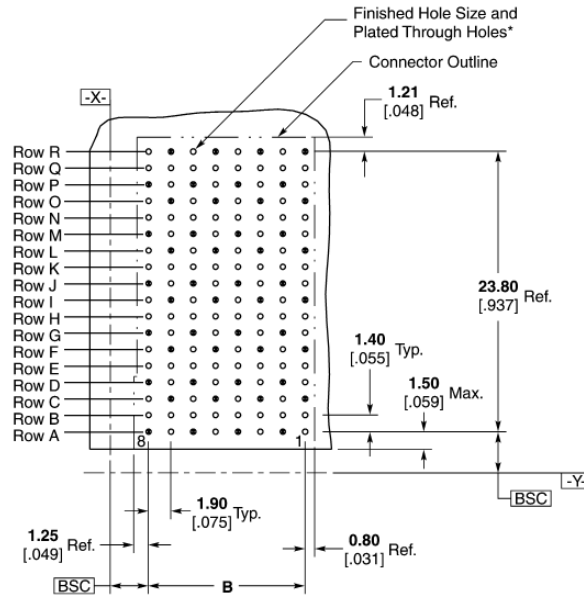
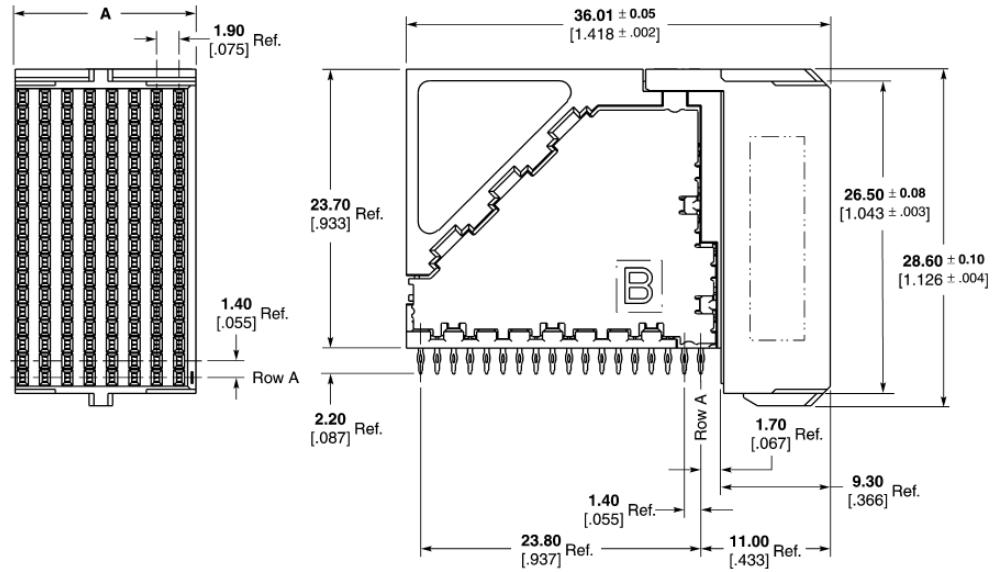
- System characterization
- Available for loan — contact your local Tyco Electronics Sales Engineer
- Time and frequency domain testable
- Testable to 18+ GHz (25+ Gb/s)
- Multiple system lengths
- Convenient SMA interface



6 Pair Right Angle Receptacle Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934504-1	15.35 .604	13.30 .524	*	1934505-1, 1934513-1, 1934514-1, 1934515-1
10	2065021-1	19.15 .754	17.10 .673	*	1934520-1, 1934523-1
16	1934912-1	30.55 1.203	28.50 1.122	*	1934516-1, 1934519-1

* Custom tooling not required. Utilizes flat-rock insertion tooling. Reference Application Specification 114-13202.



**Recommended PC Board Layout
Daughterboard
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

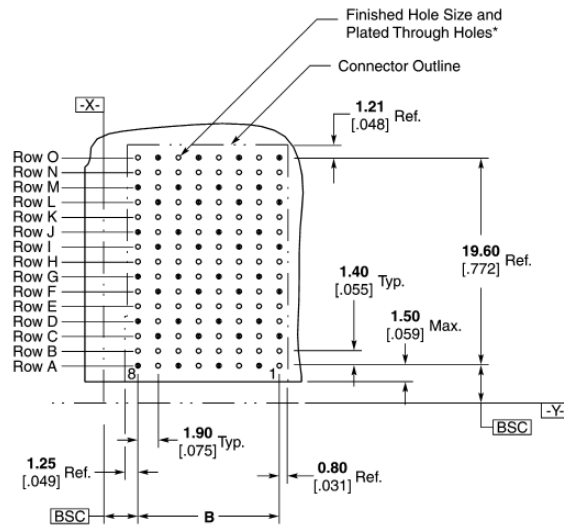
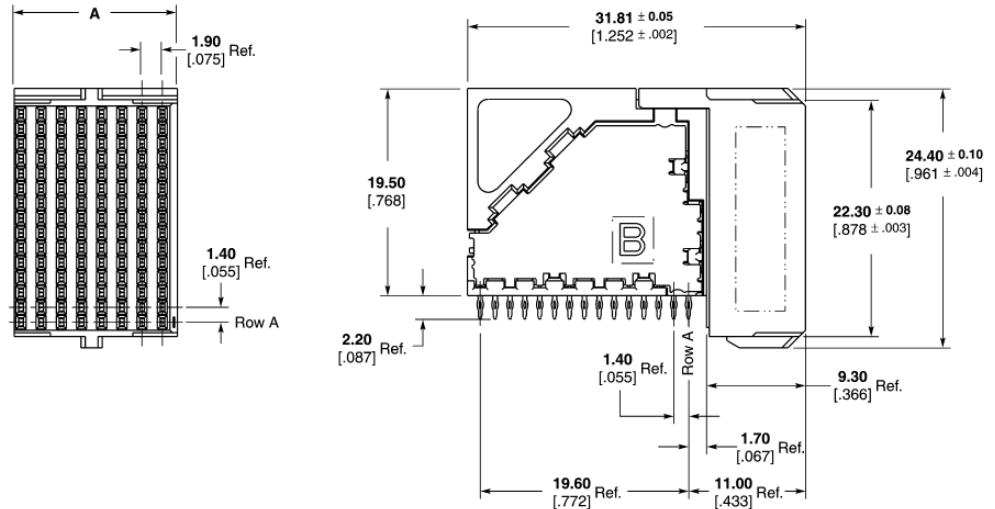
* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [0.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

5 Pair Right Angle Receptacle Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934218-1	15.35 .604	13.30 .524	*	1934269-1,(R) 1934272-1,(L) 1934273-1, 1934271-1, 1934349-1, 1934350-1
10	1934220-1	19.15 .754	17.10 .673	*	1934325-1, 1934326-1
16	1934221-1	30.55 1.203	28.50 1.122	*	1934331-1, 1934334-1, 1934333-1, 1934332-1, 1934347-1, 1934348-1

* Custom tooling not required. Utilizes flat-rock insertion tooling. Reference Application Specification 114-13202.



**Recommended PC Board Layout
Daughterboard
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

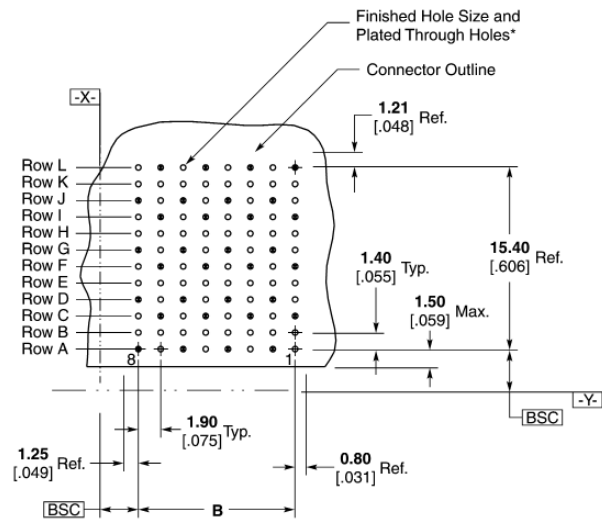
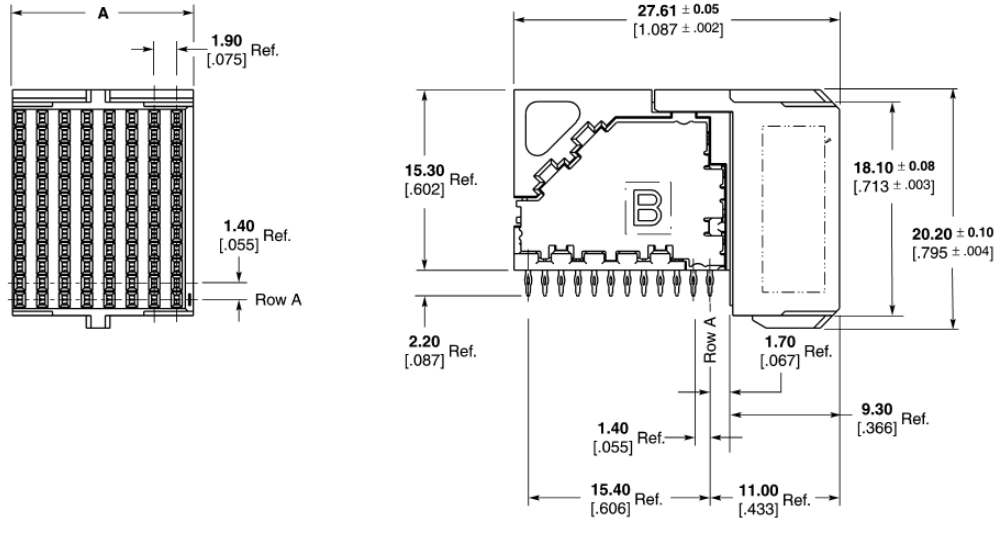
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 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

4 Pair Right Angle Receptacle Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934222-1	15.35 .604	13.30 .524	*	1934304-1, 1934303-1, 1934305-1, 1934306-1, 1934353-1, 1934354-1
10	1934224-1	19.15 .754	17.10 .673	*	1934311-1, 1934312-1, 1934313-1, 1934314-1
16	1934225-1	30.55 1.203	28.50 1.122	*	1934315-1, 1934318-1, 1934317-1, 1934316-1, 1934351-1, 1934352-1

* Custom tooling not required. Utilizes flat-rock insertion tooling. Reference Application Specification 114-13202.



**Recommended PC Board Layout
Daughterboard
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

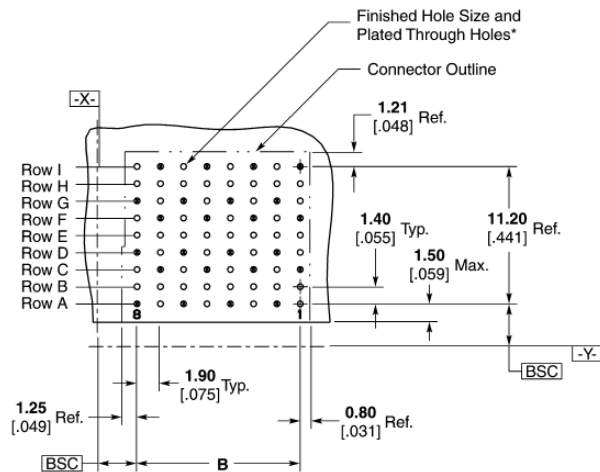
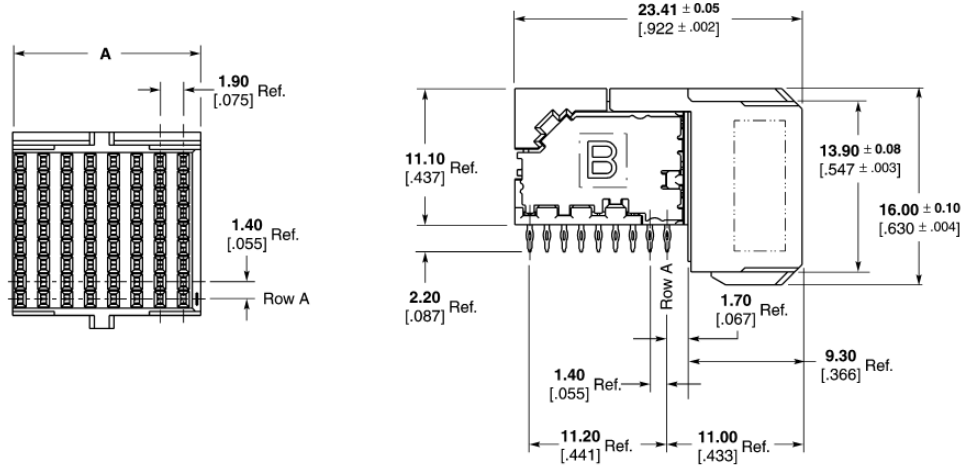
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 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

3 Pair Right Angle Receptacle Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934226-1	15.35 .604	13.30 .524	*	1934299-1, 1934300-1, 1934301-1, 1934302-1, 1934359-1, 1934360-1
10	1934228-1	19.15 .754	17.10 .673	*	1934339-1, 1934341-1, 1934340-1, 1934342-1, 1934357-1, 1934358-1
16	1934229-1	30.55 1.203	28.50 1.122	*	1934343-1, 1934344-1, 1934345-1, 1934346-1, 1934355-1, 1934356-1

* Custom tooling not required. Utilizes flat-rock insertion tooling. Reference Application Specification 114-13202.



**Recommended PC Board Layout
Daughterboard
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

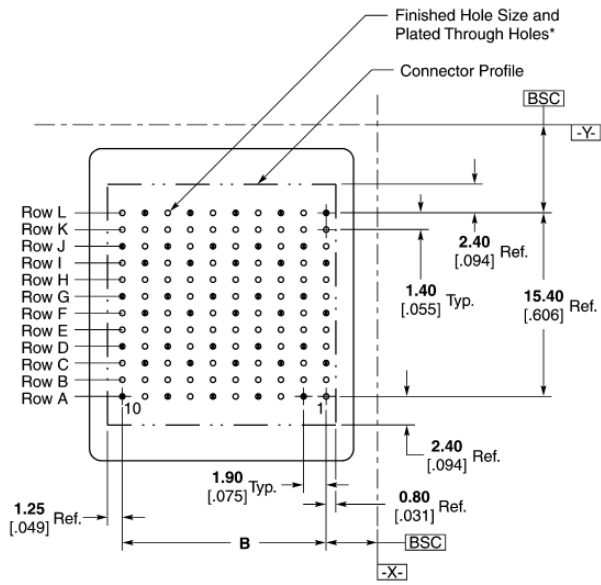
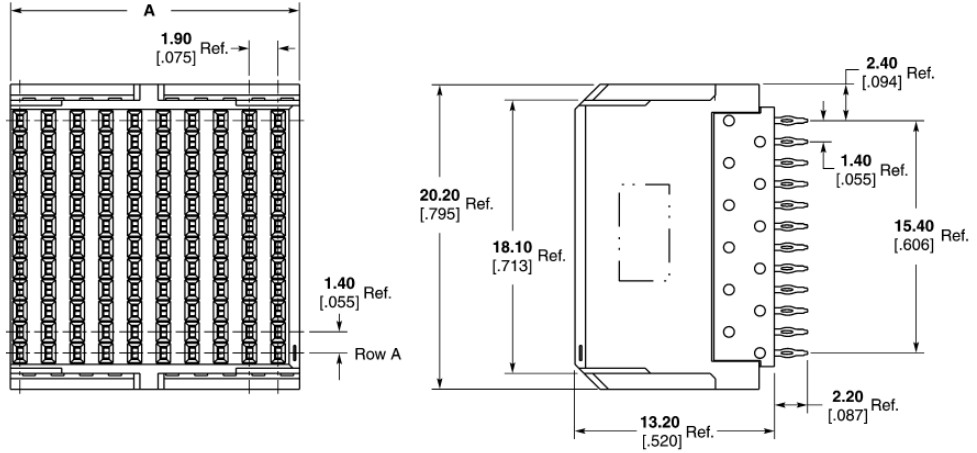
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 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

4 Pair Vertical Receptacle Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934593-1	15.35 .605	13.30 .524	*	1934305-1, 1934303-1, 1934304-1, 1934306-1, 1934353-1, 1934354-1
10	1934544-1	19.15 .754	17.10 .673	*	1934311-1, 1934313-1, 1934314-1, 1934312-1
16	1934594-1	30.70 1.210	28.50 1.122	*	1934315-1, 1934317-1, 1934318-1, 1934316-1, 1934351-1, 1934352-1

* Custom tooling not required. Utilizes flat-rock insertion tooling. Reference Application Specification 114-13202.



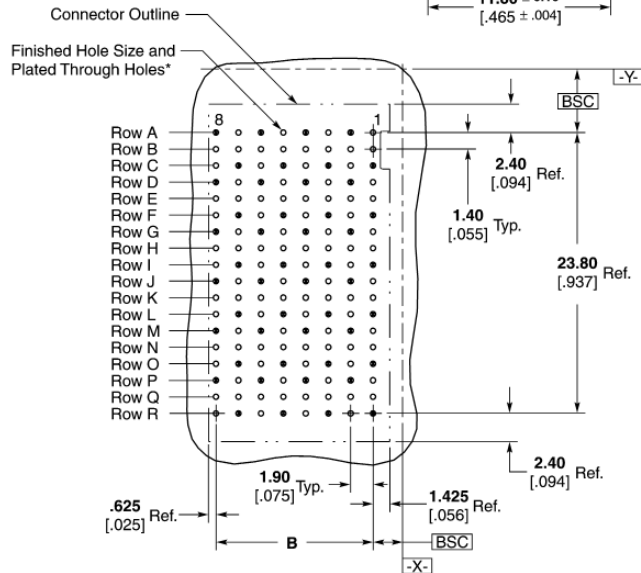
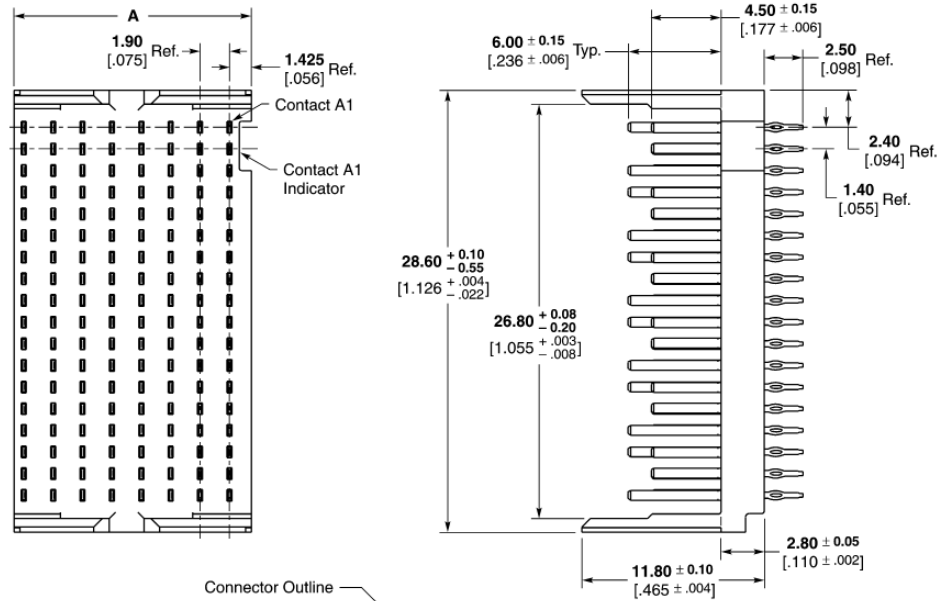
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 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

6 Pair Vertical Header Assemblies

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934505-1	15.35 .604	13.30 .524	2063383-1	1934504-1
10	1934520-1	19.15 .754	17.10 .673	2063383-2	2065021-1
16	1934516-1	30.55 1.203	28.50 1.122	2063383-3	1934912-1



Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

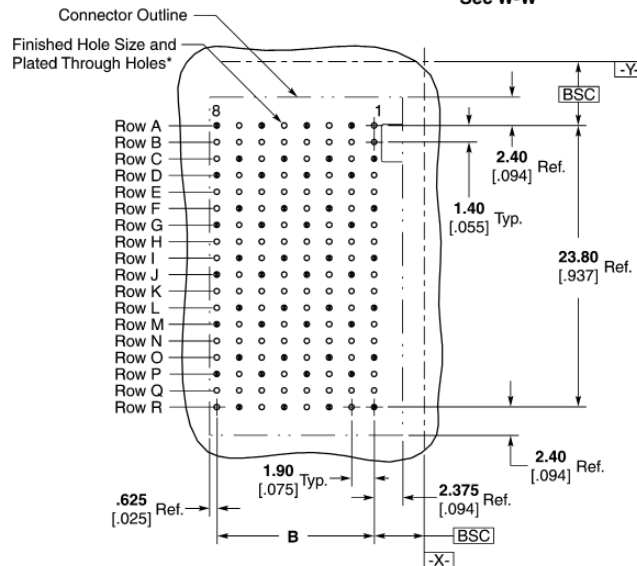
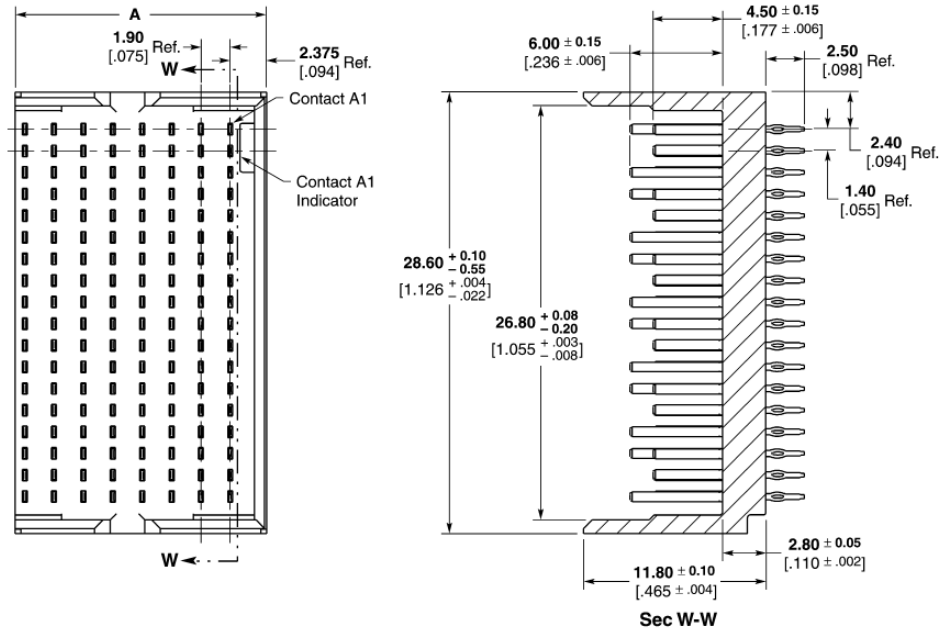
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 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± 0.001]
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 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

6 Pair Vertical Header Assemblies — Left End Wall

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934513-1	16.30 .642	13.30 .524	2063383-1	1934504-1

1
Z-PACK TinMan High Speed, High Density Backplane Connector



**Recommended PC Board Layout
Backplane
Component Side Shown**

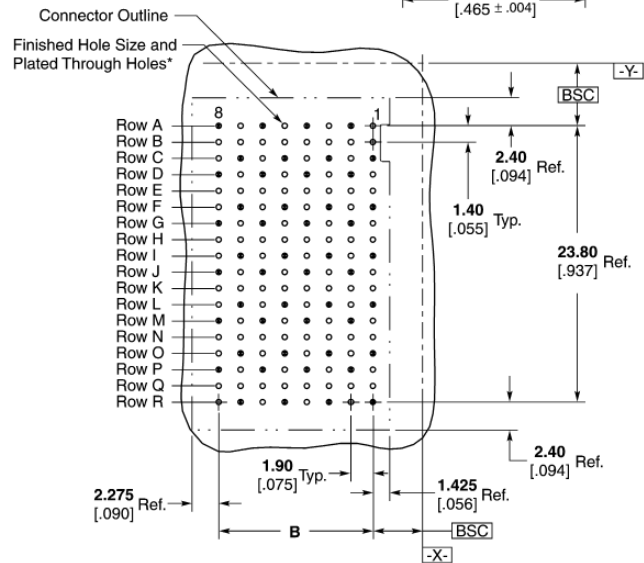
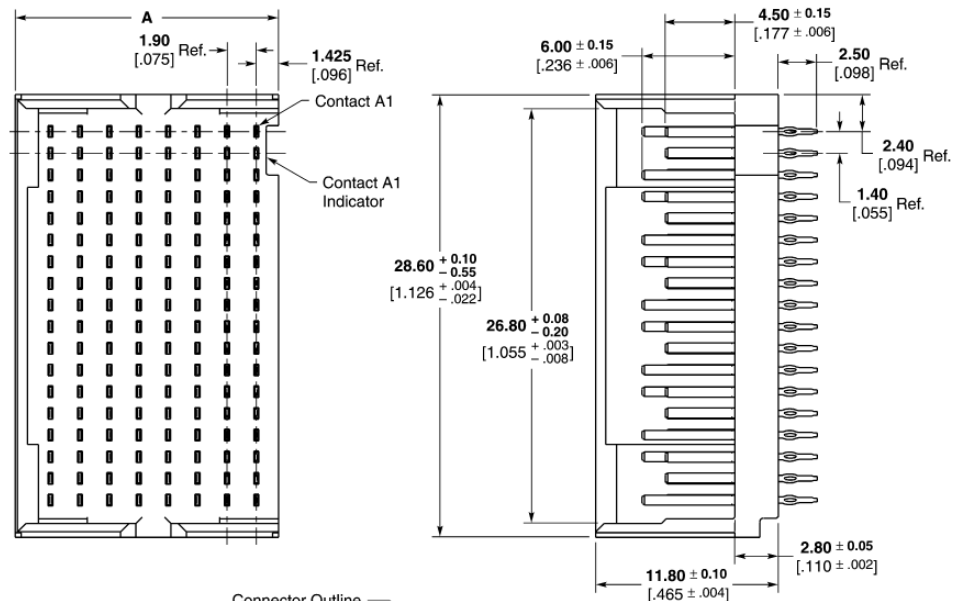
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 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

6 Pair Vertical Header Assemblies — Right End Wall

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934514-1	17.60 .693	13.30 .524	2063383-1	1934504-1



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

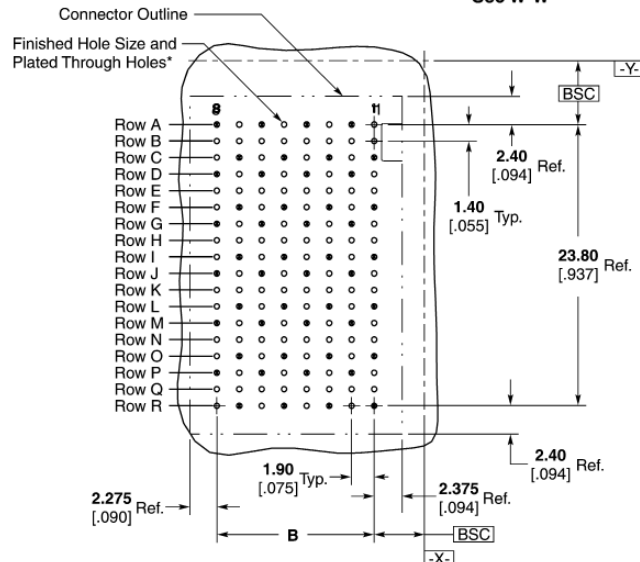
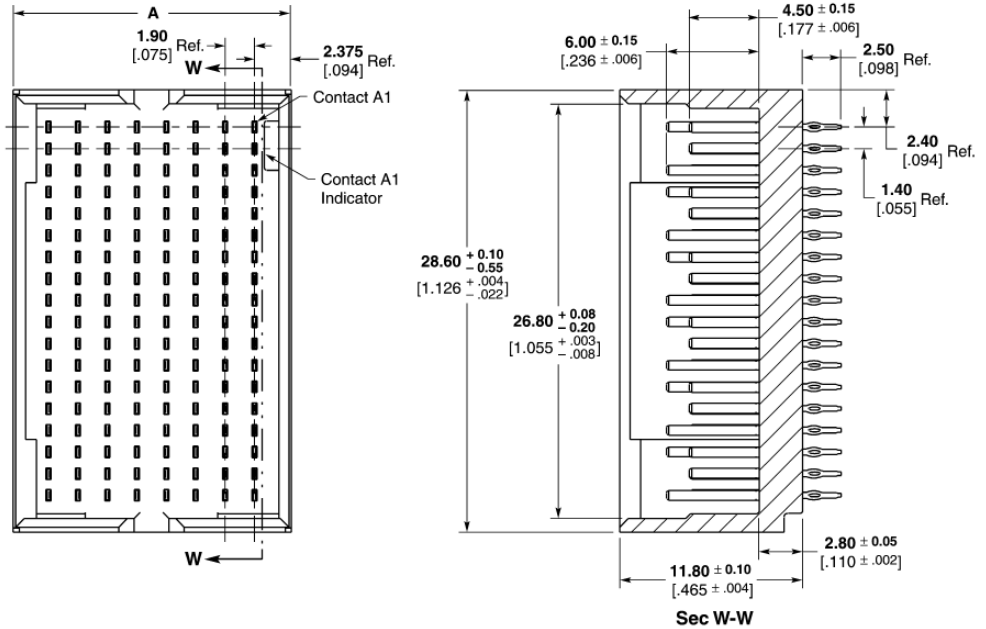
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 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

6 Pair Vertical Header Assemblies — Double End Walls

1 Z-PACK TinMan High Speed, High Density Backplane Connector

Column	Part Number	Dimension		Application Tooling	Mates With
		A	B		
8	1934515-1	17.95 .707	13.30 .524	2063383-1	1934504-1
10	1934523-1	21.75 .856	17.10 .673	2063383-2	2065021-1
16	1934519-1	33.15 1.305	28.50 1.122	2063383-3	1934912-1



Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

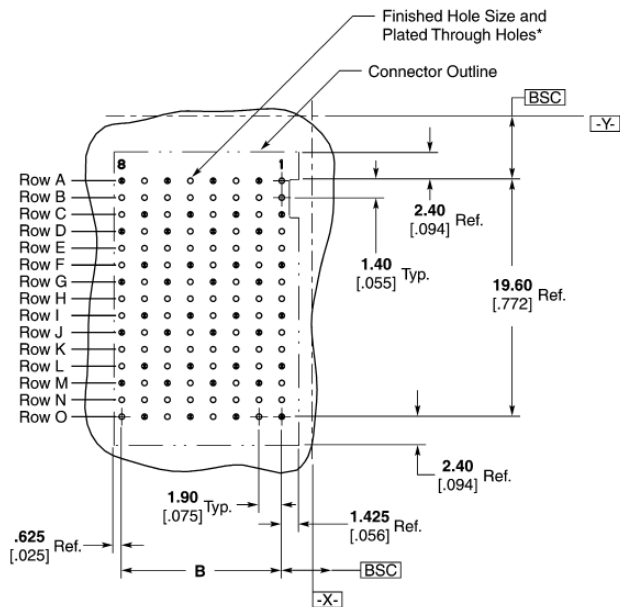
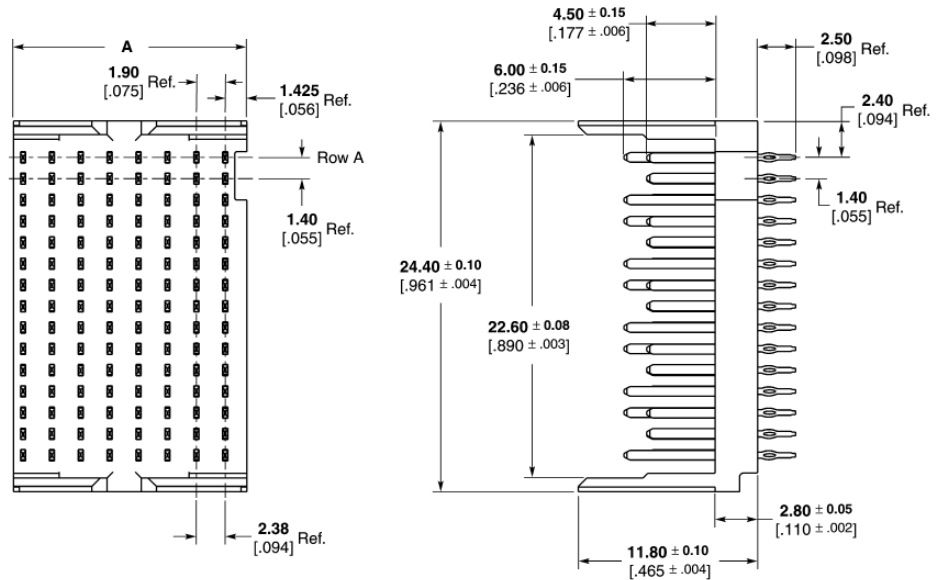
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 Copper Thickness = 0.038 ± 0.013 [0.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

5 Pair Vertical Header Assemblies

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934269-1	15.35 .604	13.30 .524	1-1804791-1	1934218-1
10	1934325-1	19.15 .754	17.10 .673	1-1804791-7	1934220-1
16	1934331-1	30.55 1.203	28.50 1.122	1-1804791-3	1934221-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

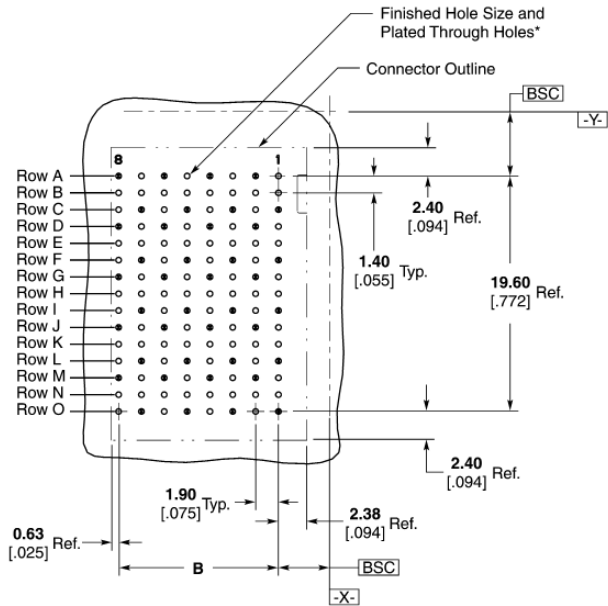
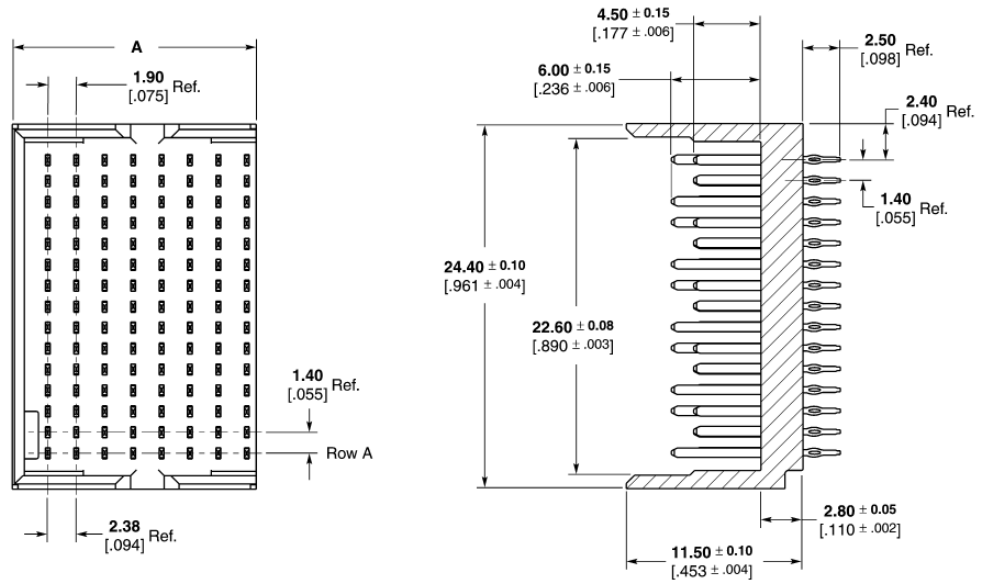
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Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
Finishes other than Tin-Lead, See Appl. Spec. 114-13202

5 Pair Vertical Header Assemblies — Left End Wall

1 Z-PACK TinMan High Speed, High Density Backplane Connector

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934272-1	16.30 .642	13.30 .524	1-1804791-1	1934218-1
16	1934333-1	31.50 1.240	28.50 1.122	1-1804791-3	1934221-1

* Reference Application Specification 114-13202.



Recommended PC Board Layout Backplane Component Side Shown

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

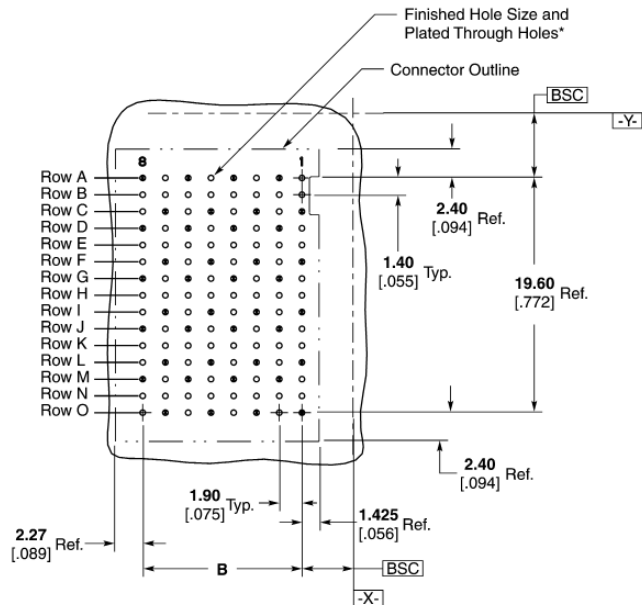
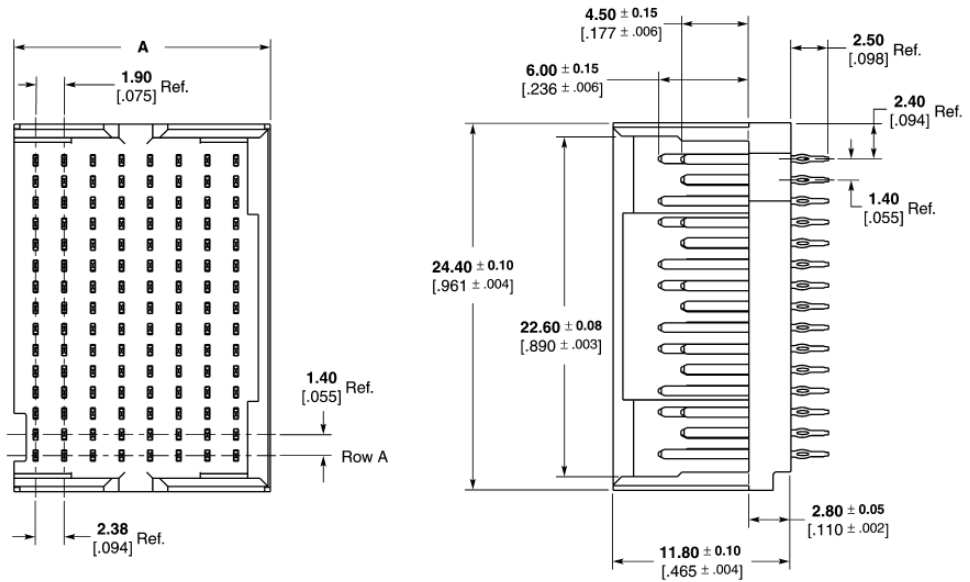
* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [0.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

5 Pair Vertical Header Assemblies — Right End Wall

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934273-1	17.00 .669	13.30 .524	1-1804791-1	1934218-1
16	1934334-1	32.20 1.268	28.50 1.122	1-1804791-3	1934221-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

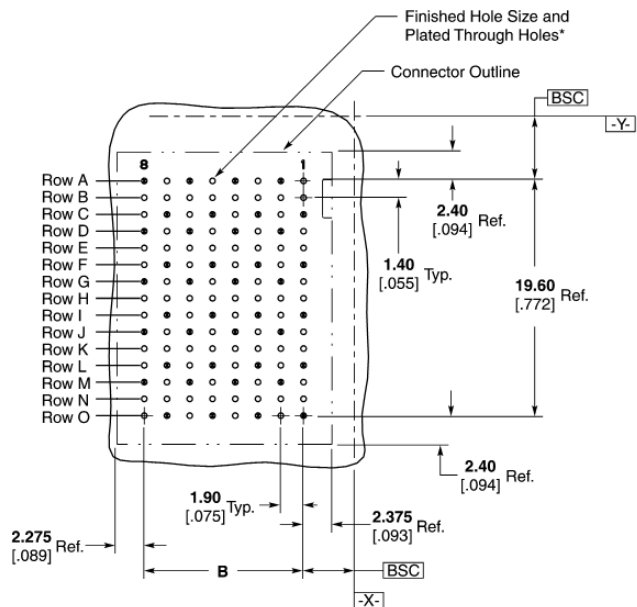
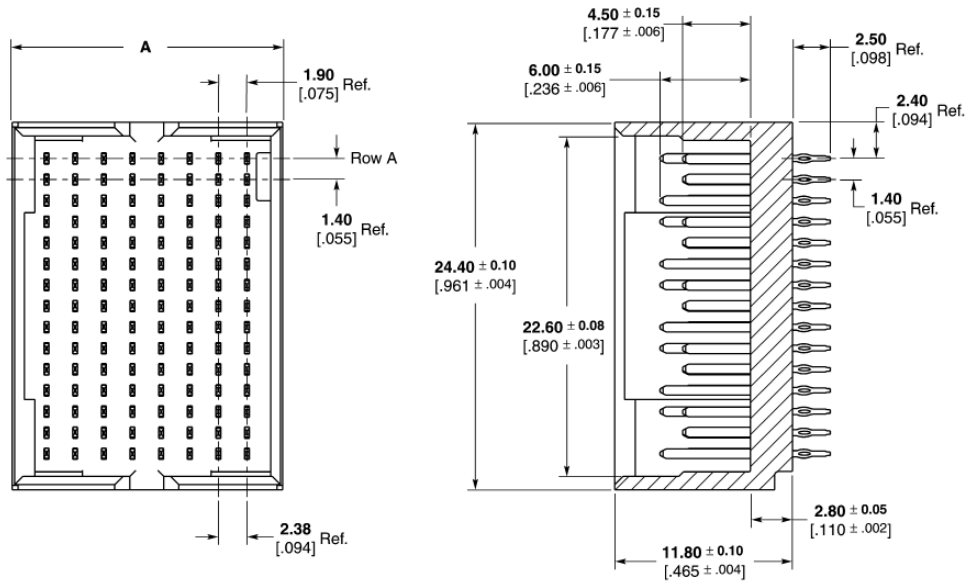
* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± 0.002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± 0.001]
 Copper Thickness = 0.038 ± 0.013 [0.0015 ± 0.0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

5 Pair Vertical Header Assemblies — Double End Walls

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934271-1	17.95 .707	13.30 .524	1-1804791-1	1934218-1
10	1934326-1	21.75 .856	17.10 .673	1-1804791-7	1934220-1
16	1934332-1	33.15 1.305	28.50 1.122	1-1804791-3	1934221-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

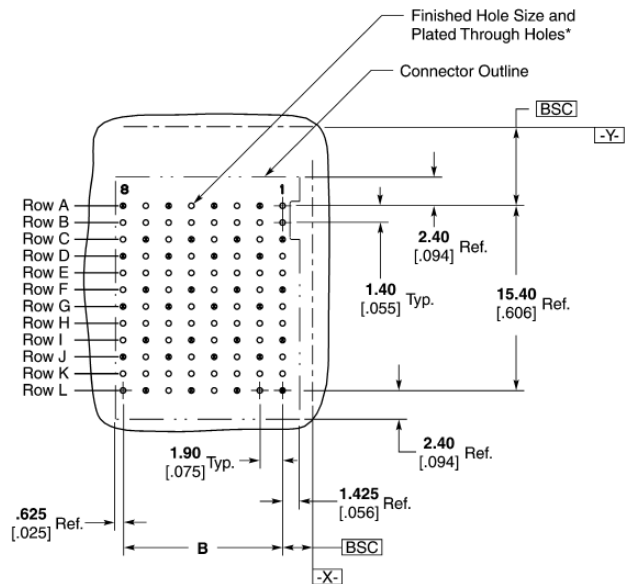
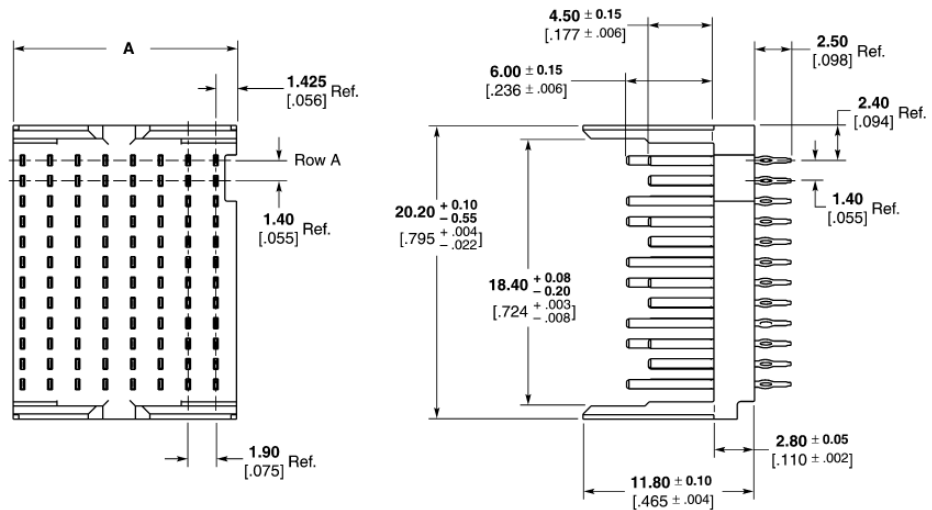
Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± 0.002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± 0.001]
 Copper Thickness = 0.038 ± 0.013 [0.015 ± 0.0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

4 Pair Vertical Header Assemblies

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934305-1	15.35 .604	13.30 .524	1-1804790-1	1934222-1
10	1934311-1	19.15 .754	17.10 .673	1804790-5	1934224-1
16	1934315-1	30.55 1.202	28.50 1.122	1-1804790-3	1934225-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

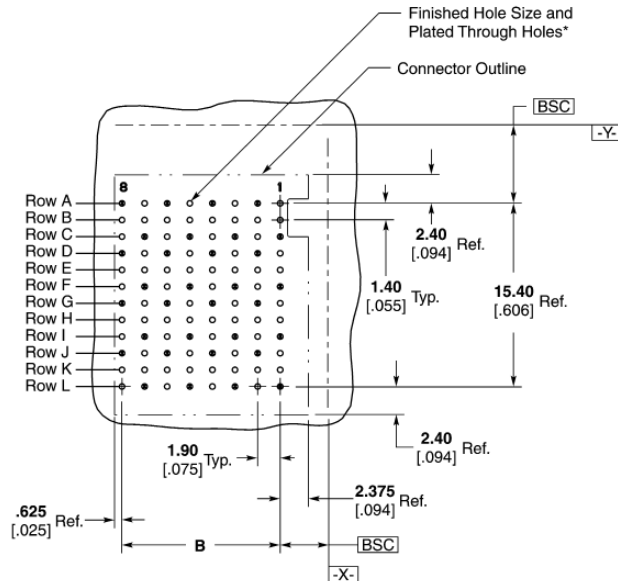
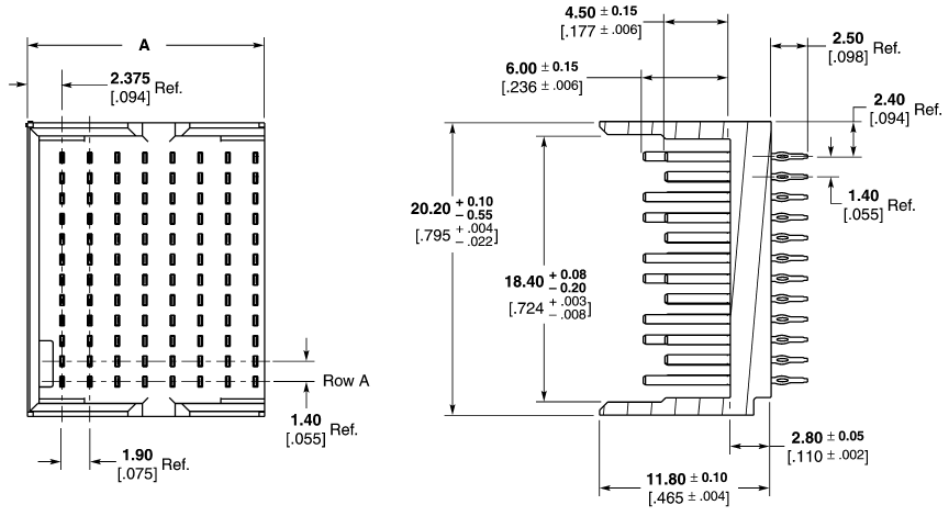
Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

4 Pair Vertical Header Assemblies — Left End Wall

1 Z-PACK TinMan High Speed, High Density Backplane Connector

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934303-1	17.00 .669	13.30 .524	1-1804790-1	1934222-1
16	1934317-1	31.50 1.240	28.50 1.122	1-1804790-3	1934225-1

* Reference Application Specification 114-13202.



Recommended PC Board Layout Backplane Component Side Shown

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

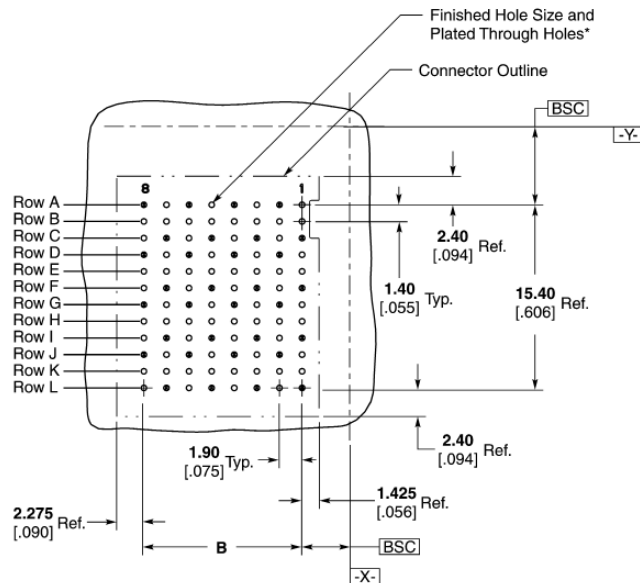
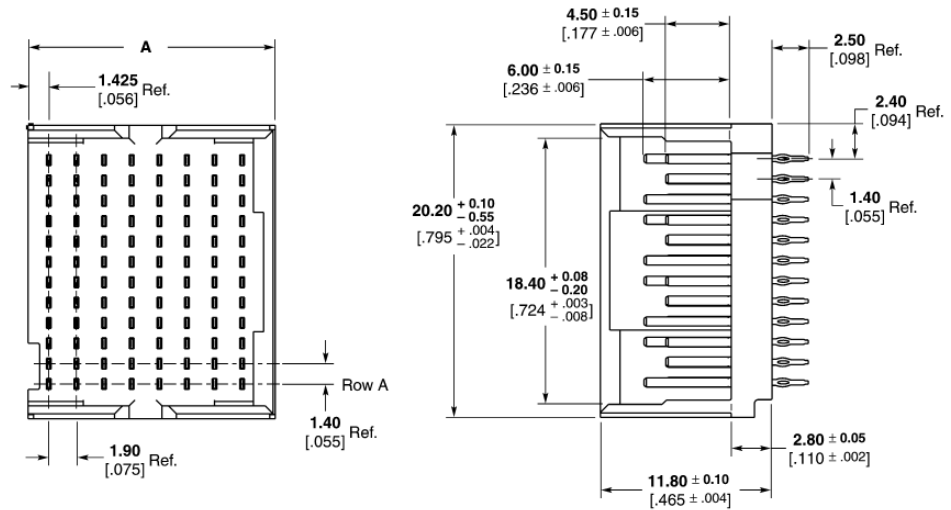
* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

4 Pair Vertical Header Assemblies — Right End Wall

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934304-1	16.30 .642	13.30 .524	1-1804790-1	1934222-1
16	1934318-1	32.20 1.268	28.50 1.122	1-1804790-3	1934225-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Backplane
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

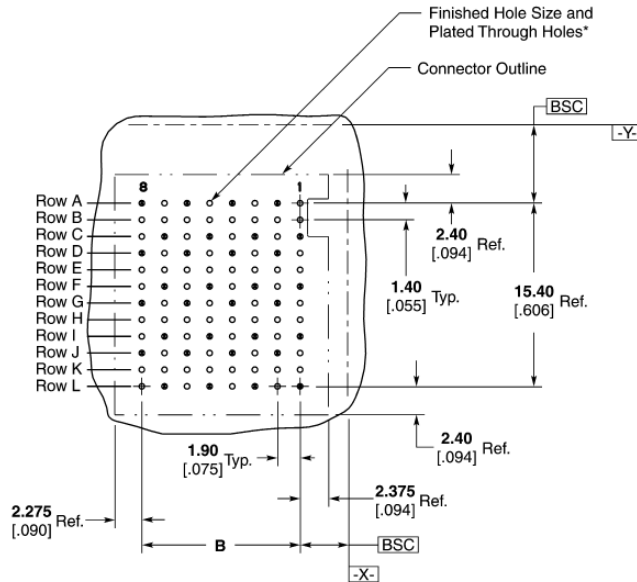
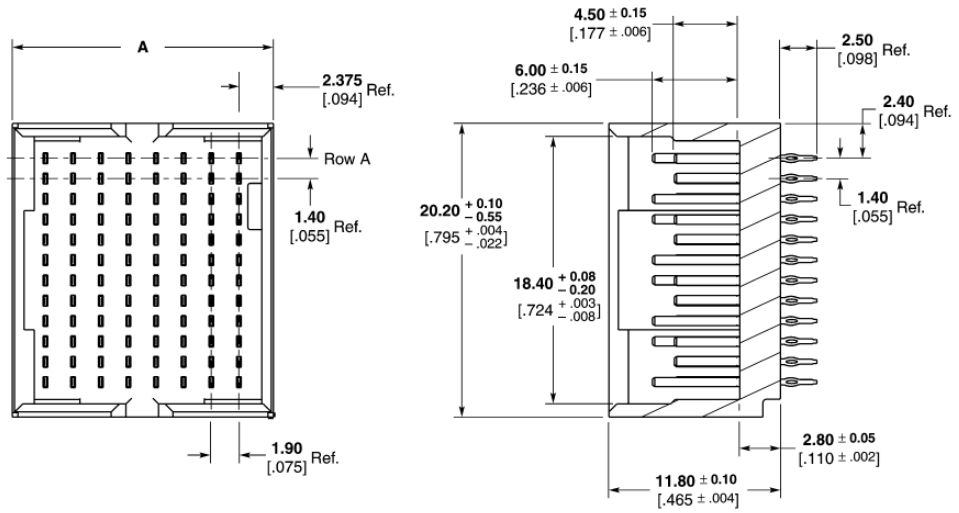
* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

4 Pair Vertical Header Assemblies — Double End Walls

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934306-1	17.95 .707	13.30 .524	1-1804790-1	1934222-1
10	1934312-1	21.75 .856	17.10 .673	1804790-5	1934224-1
16	1934316-1	33.15 1.305	28.50 1.122	1-1804790-3	1934225-1

* Reference Application Specification 114-13202.



Recommended PC Board Layout Backplane Component Side Shown

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

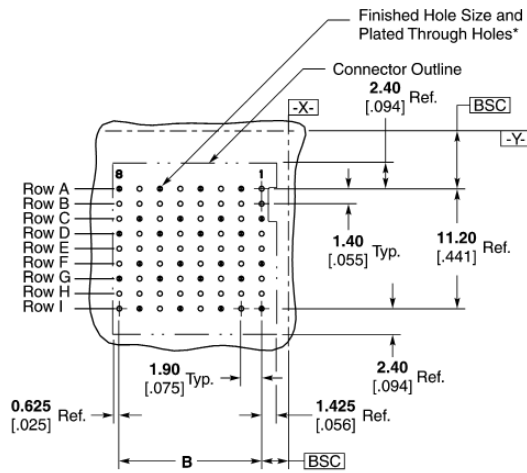
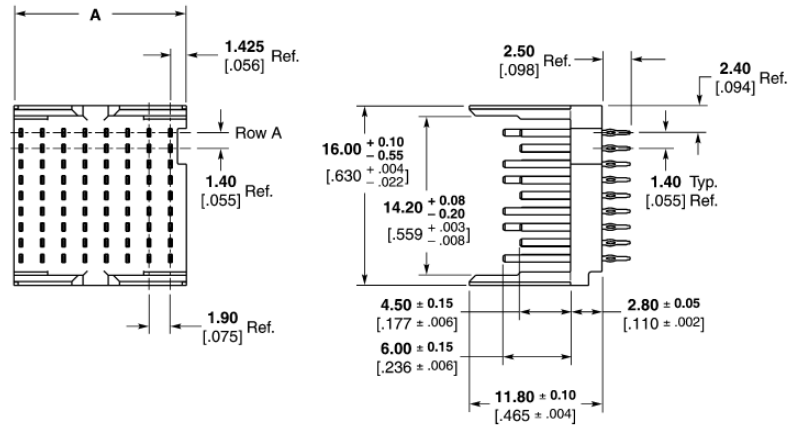
* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

3 Pair Vertical Header Assemblies

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934299-1	15.35 .604	13.30 .524	1-1901457-1	1934226-1
10	1934339-1	19.15 .754	17.10 .673	1-1901457-2	1934228-1
16	1934343-1	30.55 1.203	28.50 1.122	1-1901457-3	1934229-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

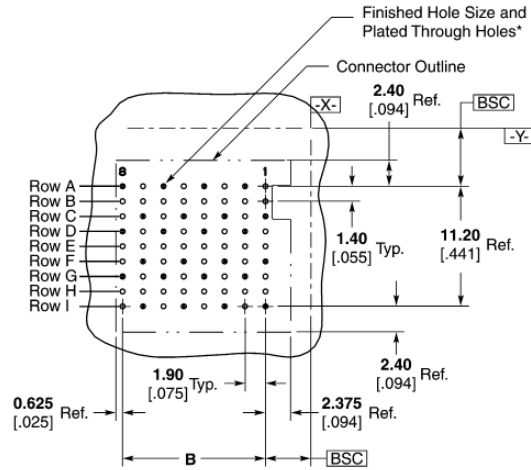
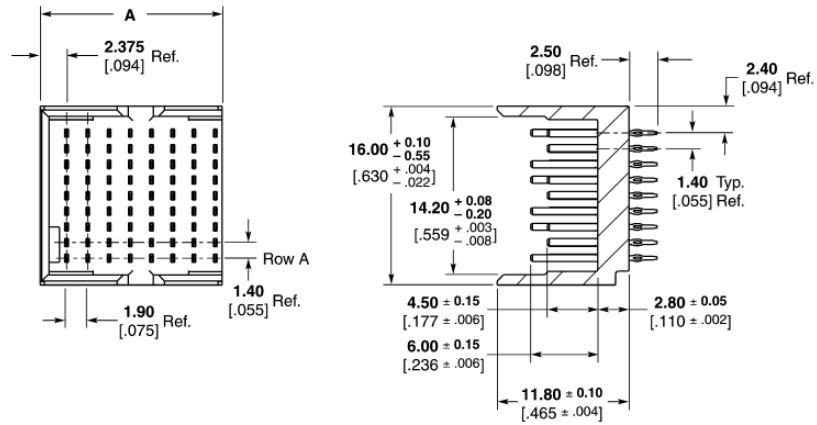
* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

3 Pair Vertical Header Assemblies — Left End Wall

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934300-1	16.30 .642	13.30 .524	1-1901457-1	1934226-1
10	1934340-1	20.10 .791	17.10 .673	1-1901457-2	1934228-1
16	1934344-1	31.50 1.240	28.50 1.122	1-1901457-3	1934229-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

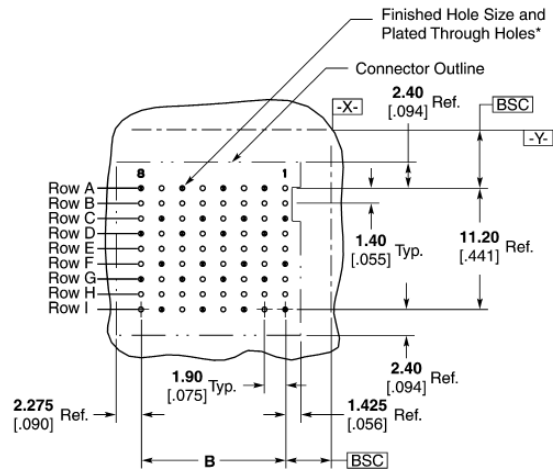
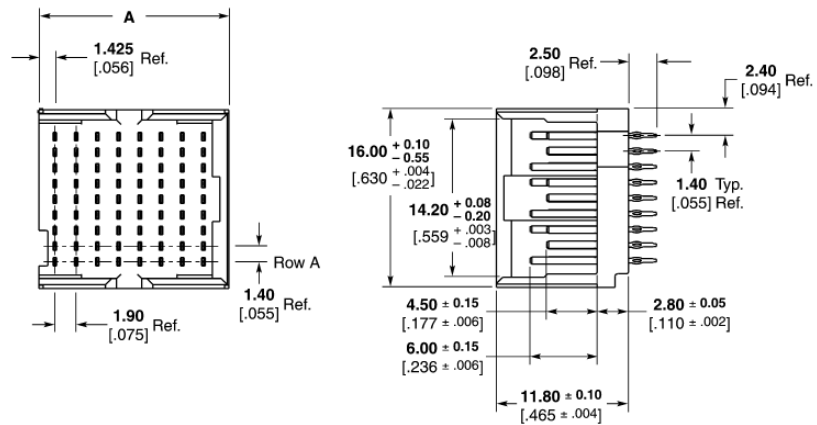
* Finished Hole Diameter = 0.46 ± 0.05 [.018 ± .002]
 Drilled Hole Diameter = 0.55 ± 0.02 [.022 ± .001]
 Copper Thickness = 0.038 ± 0.013 [.0015 ± .0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [.0003 ± .0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

3 Pair Vertical Header Assemblies — Right End Wall

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934301-1	17.00 .669	13.30 .524	1-1901457-1	1934226-1
10	1934341-1	20.08 .791	17.10 .673	1-1901457-2	1934228-1
16	1934345-1	32.20 1.268	28.50 1.122	1-1901457-3	1934229-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

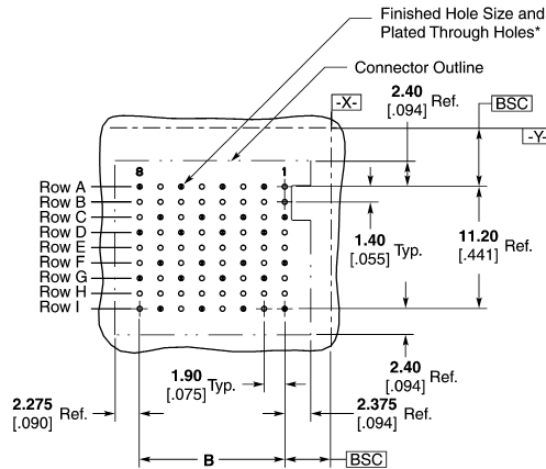
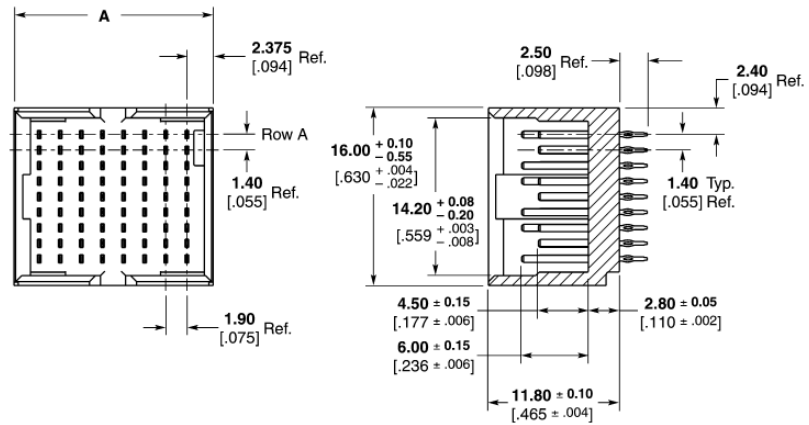
* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± 0.002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± 0.001]
 Copper Thickness = 0.038 ± 0.013 [0.0015 ± 0.0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.

3 Pair Vertical Header Assemblies — Double End Walls

Column	Part Number	Dimension		Application Tooling*	Mates With
		A	B		
8	1934302-1	17.95 .707	13.30 .524	1-1901457-1	1934226-1
10	1934342-1	21.75 .856	17.10 .673	1-1901457-2	1934228-1
16	1934346-1	33.15 1.305	28.50 1.122	1-1901457-3	1934229-1

* Reference Application Specification 114-13202.



**Recommended PC Board Layout
Component Side Shown**

Note: For additional information on pcb routing guidelines, reference the Z-PACK TinMan Connector Routing Guide Report #27GC001-1.

* Finished Hole Diameter = 0.46 ± 0.05 [0.018 ± 0.002]
 Drilled Hole Diameter = 0.55 ± 0.02 [0.022 ± 0.001]
 Copper Thickness = 0.038 ± 0.013 [0.0015 ± 0.0005]
 Tin-Lead Thickness = 0.008 ± 0.004 [0.0003 ± 0.0002]
 Finishes other than Tin-Lead, See Appl. Spec. 114-13202

Note: All part numbers are RoHS compliant. Tin-Lead parts are RoHS compliant through exemption for lead in press-fit connectors.