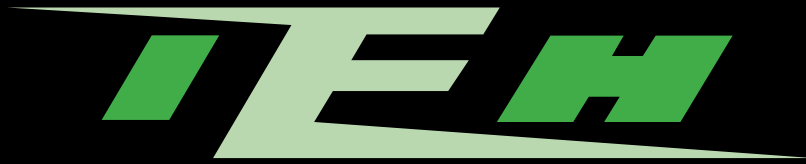


HGM .100" CENTERS .050" OFFSET SERIES

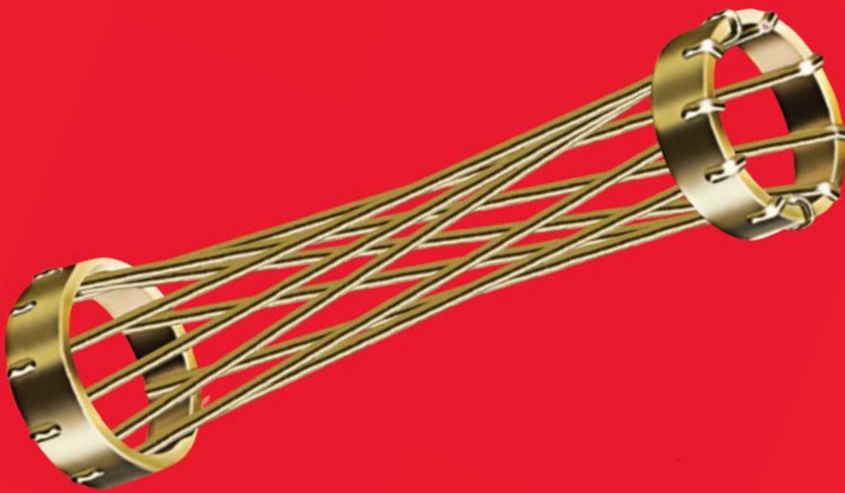


HYPERBOLOID CONNECTORS

FOR SUPERIOR PERFORMANCE IN ALL APPLICATIONS

IEH CORPORATION ISO 9001:2000

SMALL BUSINESS-HUB-ZONE CERTIFIED



www.iehcorp.com



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60	FEE - Receptacle, Right Angle (Dip Solder)
61	FVE - Receptacle, Compliant
62	MAE9, MVEA - Plug, Stacking
63	MBE, MDE, MSE, MWE - Plug, Straight (Flex Cable, Dip Solder, Solder Cup, Wire Wrap)
64	MEE, MLE, MXE - Plug, Right Angle (Dip Solder, Compliant, Solder Cup)
65	MVE - Plug, Compliant

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66	FAE9, FVEA - Receptacle, Stacking
67	FBE, FDE, FSE, FWE - Receptacle, Straight (Flex Cable, Dip Solder, Solder Cup, Wire Wrap)
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69	FVE - Receptacle, Compliant
70	MAE9, MVEA - Plug, Stacking
71	MBE, MDE, MSE, MWE - Plug, Straight (Flex Cable, Dip Solder, Solder Cup, Wire Wrap)
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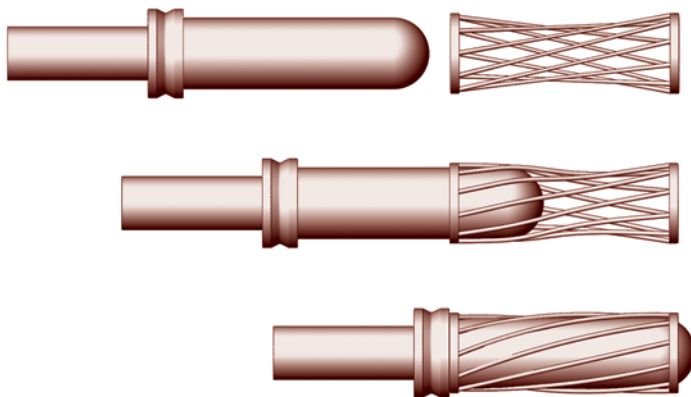
SPECIALTY - 4 ROW

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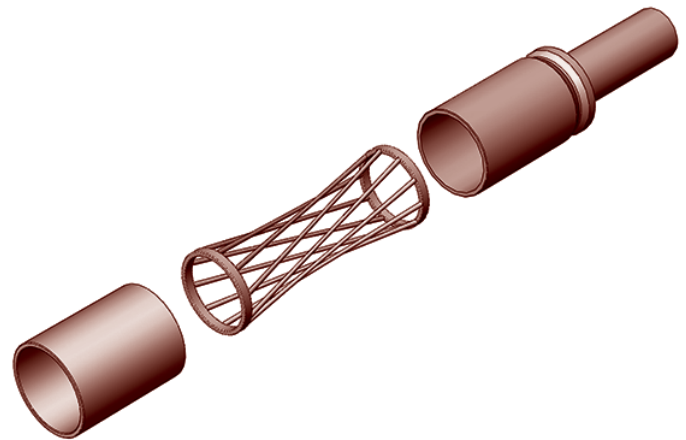
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The HYPERBOLOID contact is an advanced design that satisfies performance requirements previously considered impossible. Radically different in concept, it is used in connectors having the highest standards of performance. The distinguishing feature of the HYPERBOLOID socket is the hyper-boloid-shaped sleeve formed by straight wires strung at an angle to the longitudinal axis. Viewed from the side, you see a curve defined by a series of apparent short straight line segments which are tangent lines to points along a hyperbolic curve. This geometry provides for a design which has a decreasing circumscribed circle when viewed from the entry. It begins larger than the pin acceptance diameter and is less than this same diameter at the center. When the pin is inserted into this sleeve, the wires stretch, well within elastic limits, to accommodate it. In so doing, the wires wrap themselves around the pin providing a number of continuous line contact paths. The illustration below will assist in visualization.



The actual physical construction of the contact involves several components. The wires are strung on an internal wire carrier (inner sleeve) which is subsequently capped or enclosed by a front outer ring (front sleeve) and rear ring which includes the termination configuration (terminal). All components to the assembly are completely finished with the specified electroplating prior to assembly. The wires are continuous process plated on reel before use. In this manner, interface finish requirements can be controlled very closely without the common problems of gradient, shadow, or other finish imperfections often appearing in alternative designs. Very often, this processing feature permits the specifier to reduce precious metal content with resultant savings. Joints are calculated interference fits, insuring gas tight interfaces between all elements of the HYPERBOLOID construction. An exploded view is provided next.

The unique geometry, precision processing, and careful attention to quality result in a highly desirable contact design which provides:



- **VLIF (Very Low Insertion Force):** Common sizes #22 and less average under one ounce per contact.
- **Extraordinary Resistance to Shock & Vibration:** Tests exceeding 300 g's without discontinuity.
- **Duty Cycle Exceeding 100,000 Mate/Demate:** The burnishing action of the wires on the pin surface is non-destructive. Unlike the "plow" and scrape action of common designs, HYPERBOLOID's gentle mating action enhances life.
- **Low, Low Contact Resistance:** The multiplicity of line contact, as opposed to point contact in other designs, provides an excellent interface exhibiting low contact resistance (often less than 1/2 of MIL spec. allowances). This characteristic also provides for a cooler running contact under load.
- **Improved Current Carrying Capacity:** The low contact resistance gives a lower °C rise from ambient under load. This feature often allows the user to operate the same size contact under higher load.
- **Highest Reliability:** In use for over 40 years under the most demanding conditions HYPERBOLOID has proven itself to be the leading design for integrity and reliability. On space platforms, ships and boats at sea, land vehicles, fighter and transport aircraft, missiles, torpedoes, medical and transplant electronics, industrial and environmental controls, rail, construction, ATE and test equipment, PGA sockets, test interface stations, and other applications, HYPERBOLOID has lived up to its promise of the highest reliability connector available.

SPECIFICATIONS

MATERIALS:

Pin Contacts:	PhBr per ASTM B139, BeCu per ASTM B196 or B197, or Cu alloy
Pin Diameter:	.030" (.76mm)
Socket Contacts:	
Contact Wires:	BeCu per ASTM B196, or B197
Termination:	PhBr per ASTM B139 or Cu alloy
Support Elements:	Cu alloy
SMT Leads:	PhBr per ASTM B139
Hardware:	Corrosion resistant steel per ASTM A582 ('D' shaped guide receptacles are BeCu per ASTM B196 or B197) or Cu alloy
Insulator:	Modified polyphenylene sulfide per MIL-M-24519, Type GST-40F Diallyl Phthalate per ASTM D5948 (Not for New Designs)
Pin Shields:	Aluminum 5052-H32 per QQ-A-250/8

FINISHES:

Pin Contacts:	Gold per ASTM B488 Type II, Class 1.27, Code C over Nickel, 0.000050 min., per MIL-DTL-55302 over Copper per SAE AMS 2418 or ASTM B734
Socket Contacts:	
Contact Wires:	Gold per ASTM B488 Type II, Class 1.27, Code C over Nickel, 0.000050 min., per MIL-DTL-55302 over Copper per SAE AMS 2418 or ASTM B734
Termination:	Gold per ASTM B488, Class 0.50, Grade C over Nickel, 0.000050 min., per MIL-DTL-55302 over Copper per SAE AMS 2418 or ASTM B734 or solder dip over Nickel, 0.000050 min., per MIL-DTL-55302 over Copper per SAE AMS 2418 or ASTM B734
Support Elements:	Nickel, 0.000050 min., over Copper per SAE AMS 2418 or ASTM B734
SMT Leads:	Tin/Lead per SAE-AMS-P-81728
Hardware:	Passivate per SAE-AMS2700 except BeCu hardware to be Nickel plate, 0.000050 min.
Pin Shields:	Black Anodize per MIL-A-8625, Type II, Class 2

PERFORMANCE:

Current Rating:	5* amp continuous (higher ratings may be supported-contact factory)
Insulation Resistance:	5000 megaohms min. - EIA-364-21 & MIL-DTL-55302 (par. 4.5.8)
Contact Resistance:	8 milliohms max, - EIA-364-06 & MIL-DTL-55302 (par. 4.5.5)
Test Voltage (DWV):	1000 VAC RMS @ sea level - EIA-364-20 & MIL-DTL-55302 (par. 4.5.7.1) 300VAC RMS @ 70,000 ft.
Temperature:	-65°C to +125°C (-86°F to +257°F)
Mating Force:	0.15 lbs. x number of contacts, max. - MIL-STD-55302 (par. 4.5.4)
De-mating Force:	0.04 lbs. x number of contacts, min. - MIL-STD-55302 (par. 4.5.4)
Contact Life:	100,000 mating cycles - Exceeds MIL-DTL-55302 (par. 4.5.9)
Solderability:	IPC/EIA J-STD-002, Category 3
Humidity:	IAW EIA-364-31, Method IV, except 7A & 7B (not required)
Vibration:	IAW EIA-364-28 & MIL-DTL-55302 (par. 4.5.10)
Shock:	IAW EIA-364-27 & MIL-DTL-55302 (par. 4.5.14)
Salt Spray:	IAW EIA-364-26 & MIL-DTL-55302 (par. 4.5.11)
Temperature Cycling:	IAW EIA-364-32 & MIL-DTL-55302 (par. 4.5.13)

DIMENSIONS:

Catalog product dimensions are nominal. For linear and positional tolerances, contact factory.

* Ampacity ratings shown are derated in accordance with the published military specifications. For stand-alone, full service ratings, supported by test data, please refer to IEH's Contacts Catalog, or contact the factory.

All information contained herein is believed to be reliable as of the date of publication, but is subject to change without notice. Current product drawings and specifications are available upon request from IEH.

IEH warrants its products to be free of defects affecting normal use. If any shipment is found to be defective we will accept return for repair or replacement at our option within one year of shipment. IEH is not responsible for incidental or consequential damages arising out of the use of our products.

ORDERING CHART 2-ROW

HGM	010	F	D	E	1	X	99	E	000
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Series

Contact Capacity
(Use All 3 Places)

Contact Gender/Insulator	
F	Socket/Receptacle Low Profile (.335)
M	Pin/Plug High Profile (.400) ¹
M	Pin/Receptacle Low Profile (.335) ²
P	Pin/Plug Low Profile (.335)
R	Pin/Plug High Profile (.400)
S	Socket/Plug Low Profile (.335)

Termination Style	
A	Stacking
B	Flex Cable
D	Dip Solder Straight
E	Dip Solder Right Angle
L	Compliant Right Angle
R	Surface Mount
S	Solder Cup
V	Compliant
W	Wire Wrap
X	Solder Cup Right Angle
Contact Factory - Not Available In Every Configuration	

Insulator	
A	Diallyl Phthalate (Green) - Not For New Designs
E	Polyphenylene Sulfide (Ryton-Brown)

Termination Length - "L"			
Code	Dip Solder	Wire Wrap	Flex
1	.109	.375	.050
2	.140	.500	.098
3	.172	.625	-
4	.234	-	-
9	User Defined		
0	Use For Solder Cup & Compliant Without Extension		
A	Use For Compliant With Stacking Extension		

Variation Code - Factory Assigned	
Not Required When MIL-DTL-55302 Ordered	
020	Solder Dip Terminals
0C0	Epoxy Termination Sealed
0C2	Epoxy Sealed & Solder Dipped

Mounting Style	
A	Thru Hole Mtg.
B	Thru Hole Insert
C	Threaded Insert
D	Remove Mtg. Ears
E	Stud/Threaded

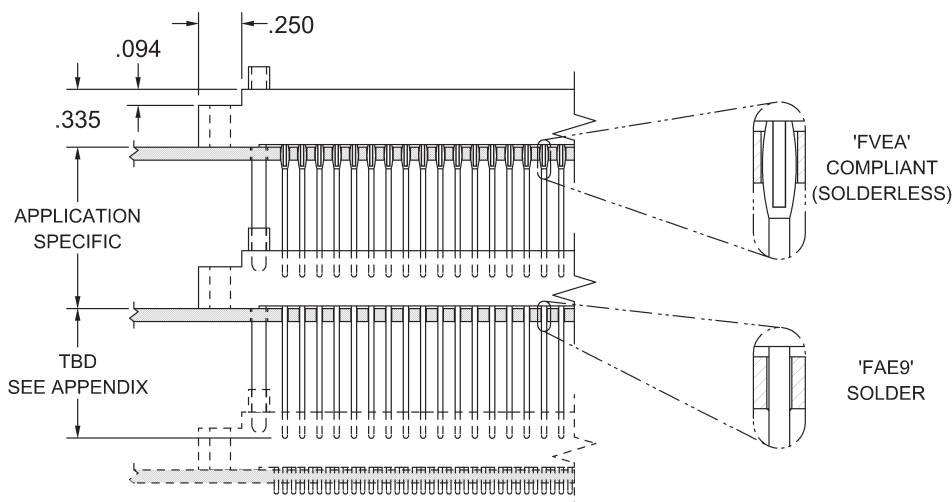
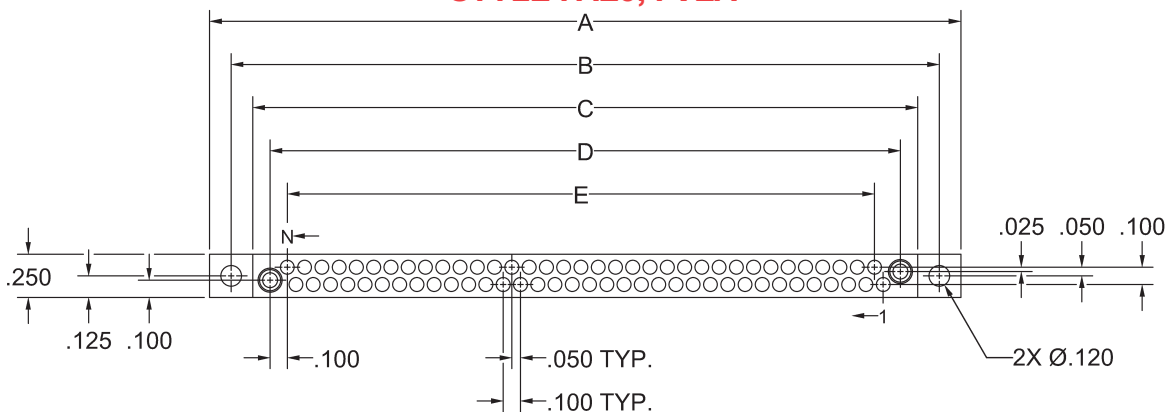
Hardware Arrangement	
00*	Assembled as "01" without Loctite
01 - 64*	Y - "D" Shaped Guides (Loctite)
65 - 68	Universal
69	IEH Standard Loctite Applied
70 - 72	See Appendix
97	2 Pin Guides Unassembled
98	2 Socket Guides Unassembled
99	1 Pin & Socket Unassembled
*Use with MIL-C-55302 Callout	

Hardware Style	
A	Round Guides w/ Mtg. Stud
B	"D" Shaped Guides w/ Mtg. Stud (Polarizing)
H	Short Rotating (Int. Hex)
K	Fixed Locking
L	Long Rotating (Slotted)
M	Med. Rotating (Slotted)
P	Rotating (Hex)
S	Short Rotating (Slotted)
T	Fixed Locking w/ Mtg. Stud
X	Round Guides
Y	"D" Shaped Guides (Polarizing)
0	No Hardware Supplied

Notes:

1. For Termination Style E, X, L.
2. For Termination Style A, B, D, R, S, V, W

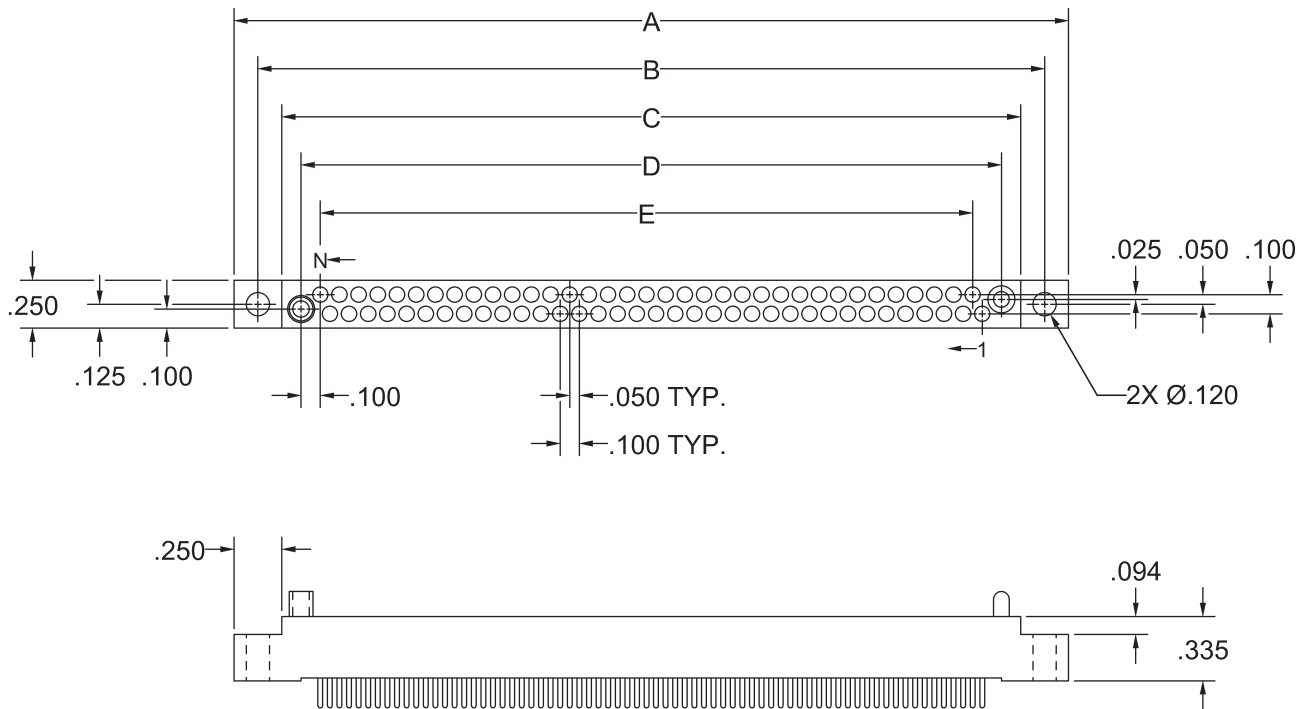
RECEPTACLE, STACKING STYLE FAE9, FVEA



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, STRAIGHT STYLE FBE, FDE, FSE, FWE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

Technical drawing of a mechanical part, showing two views: a top view and a side view.

Top View Dimensions:

- A:** Overall length.
- C:** Length of the central section.
- D:** Length of the finned section.
- E:** Length of the section containing the two holes.
- N:** Width of the finned section.
- .250:** Width of the left flange.
- .100:** Width of the central section.
- .025:** Width of the right flange.
- .100:** Width of the section containing the two holes.
- .050 TYP.:** Typical width of the finned section.
- .100 TYP.:** Typical width of the section containing the two holes.
- 2X Ø.120:** Two holes with a diameter of 0.120.

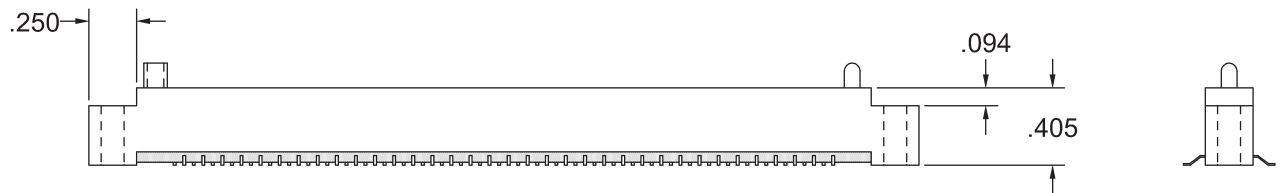
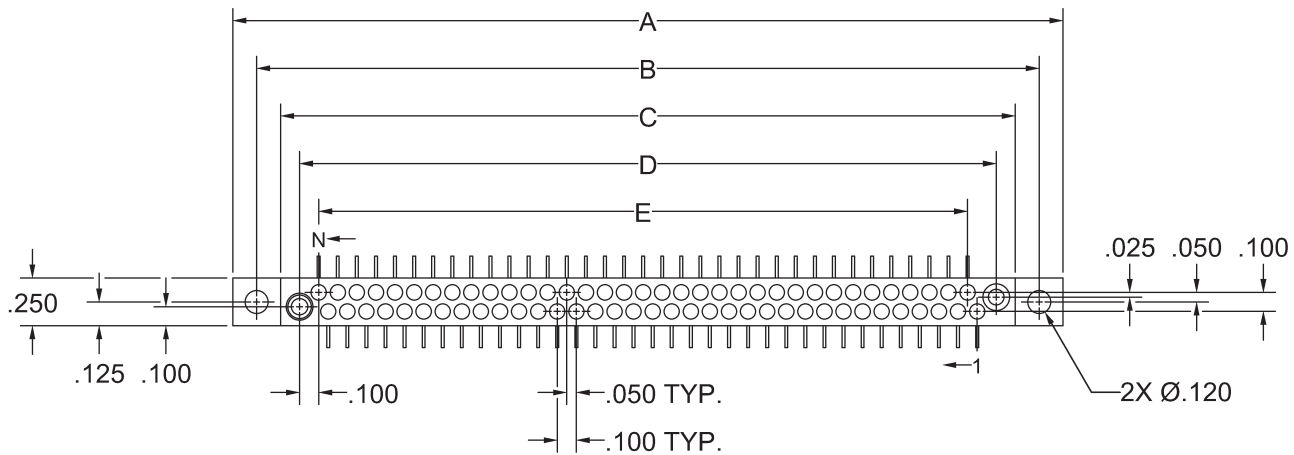
Side View Dimensions:

- .250:** Width of the left flange.
- .094:** Height of the finned section.
- .335:** Height of the section containing the two holes.
- .121:** Height of the right flange.
- 2X Ø.120:** Two holes with a diameter of 0.120.
- B:** Overall length.

'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

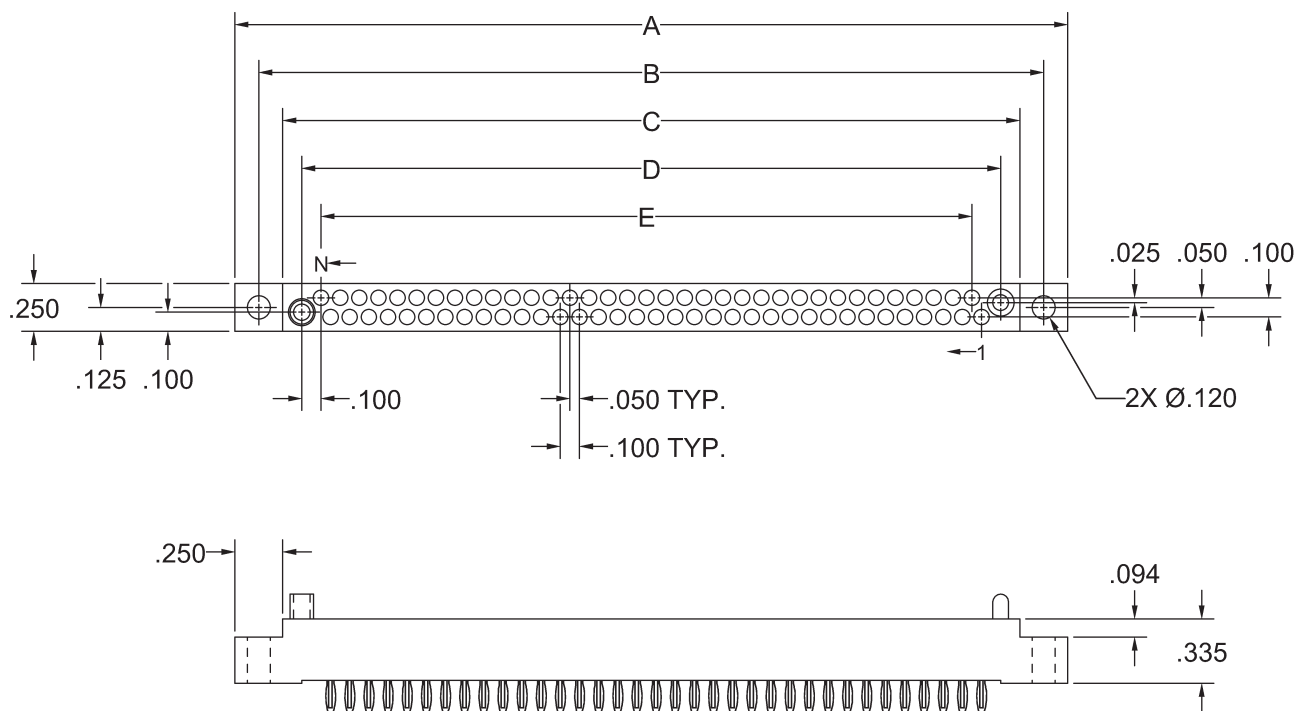
RECEPTACLE, SURFACE MOUNT STYLE FRE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

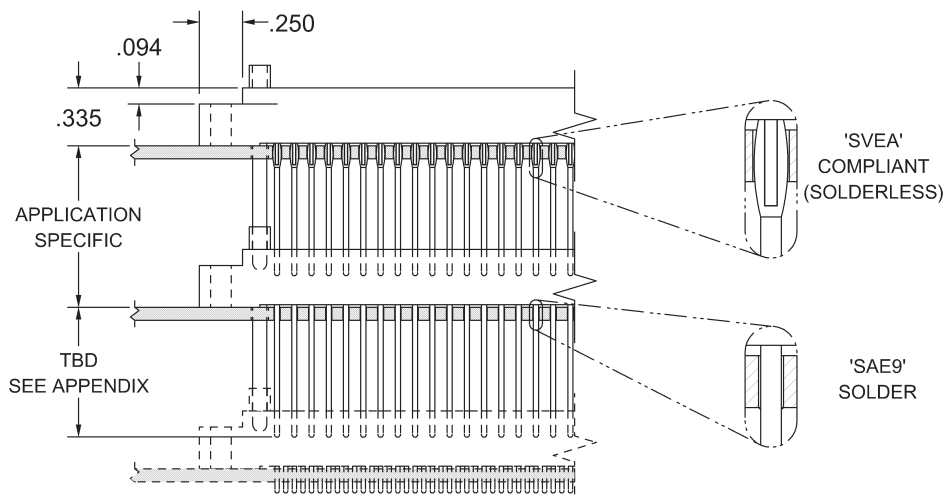
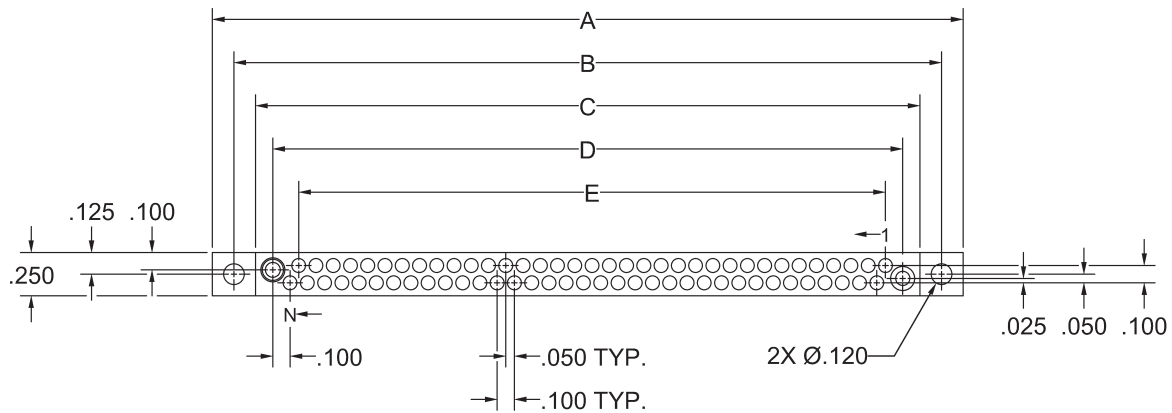
RECEPTACLE, COMPLIANT STYLE FVE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

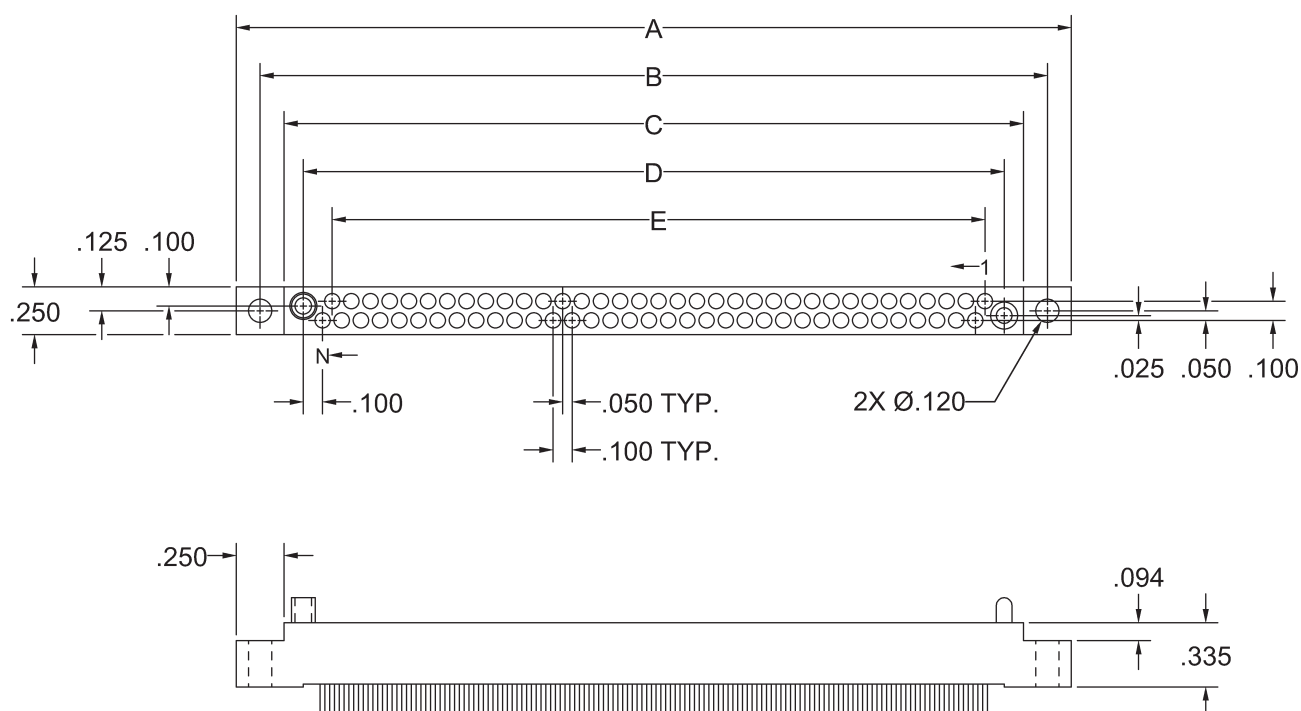
RECEPTACLE, PLUG PATTERN, STACKING STYLE SAE9, SVEA



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

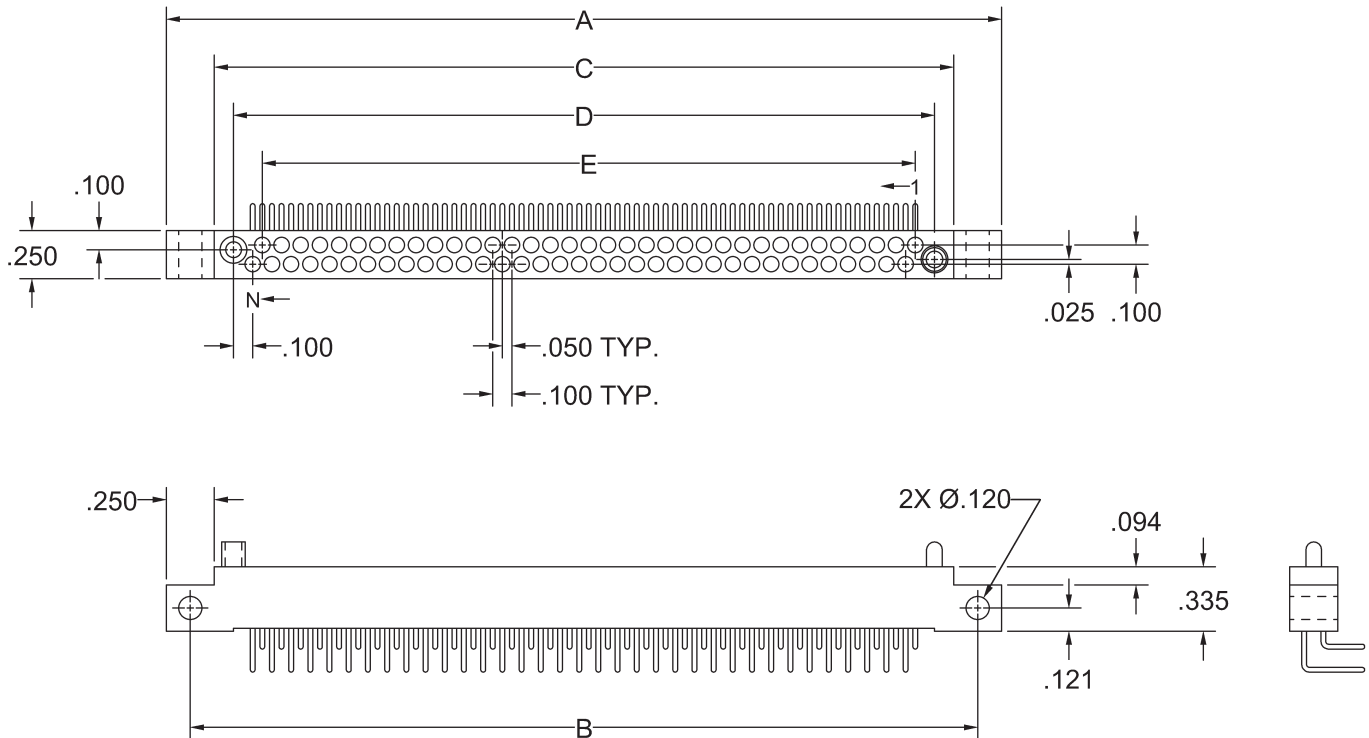
RECEPTACLE, PLUG PATTERN, STRAIGHT STYLE SBE, SDE, SSE, SWE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

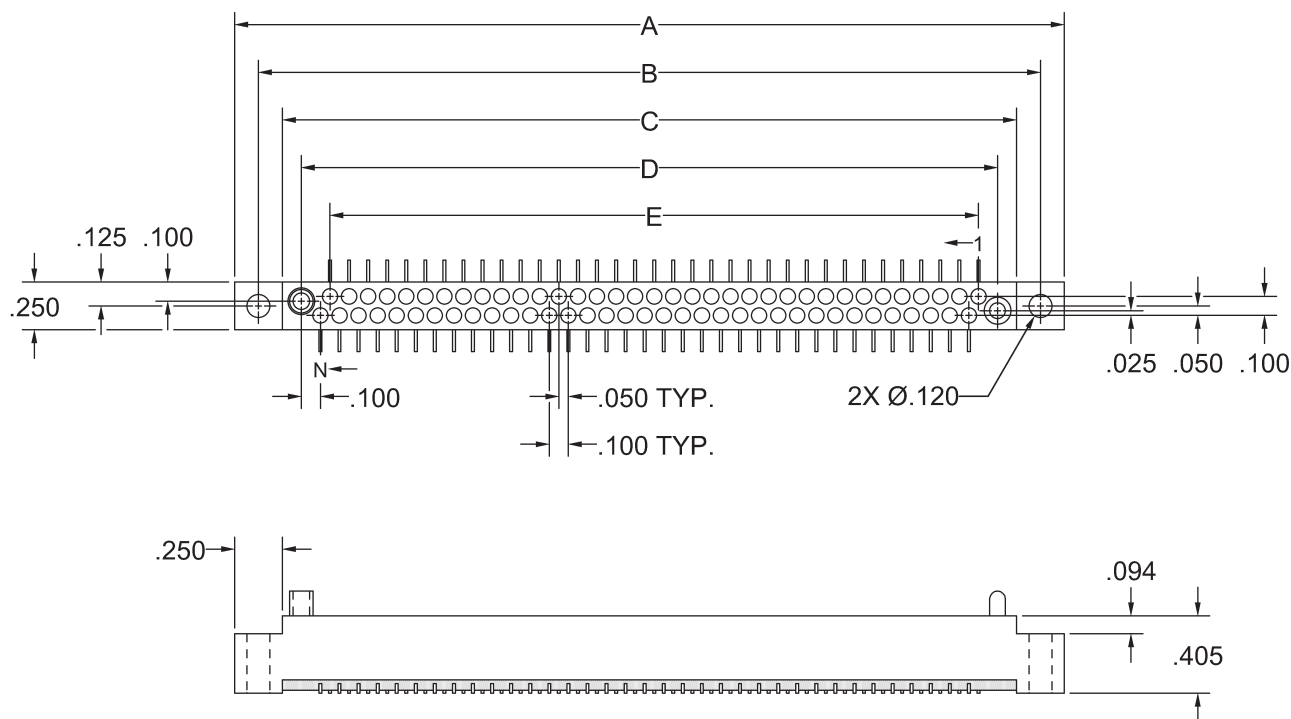
RECEPTACLE, PLUG PATTERN, RIGHT ANGLE STYLE SEE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

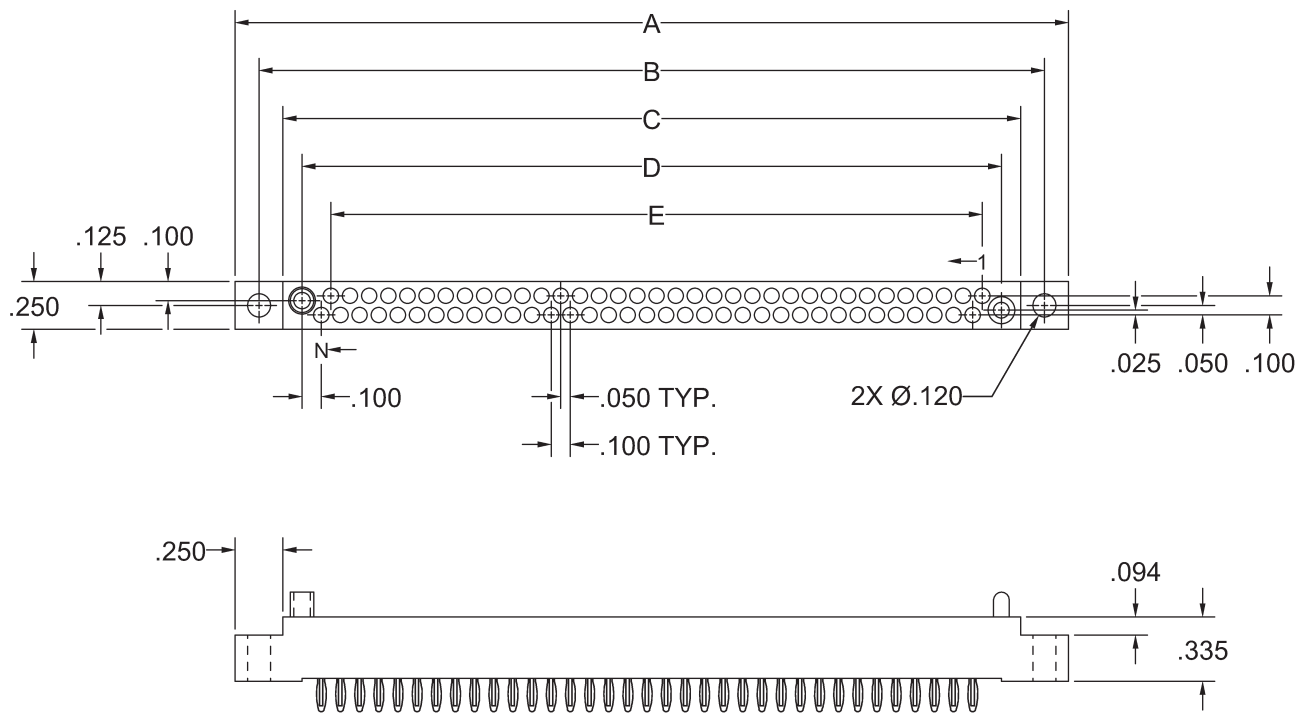
RECEPTACLE, PLUG PATTERN, SURFACE MOUNT STYLE SRE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

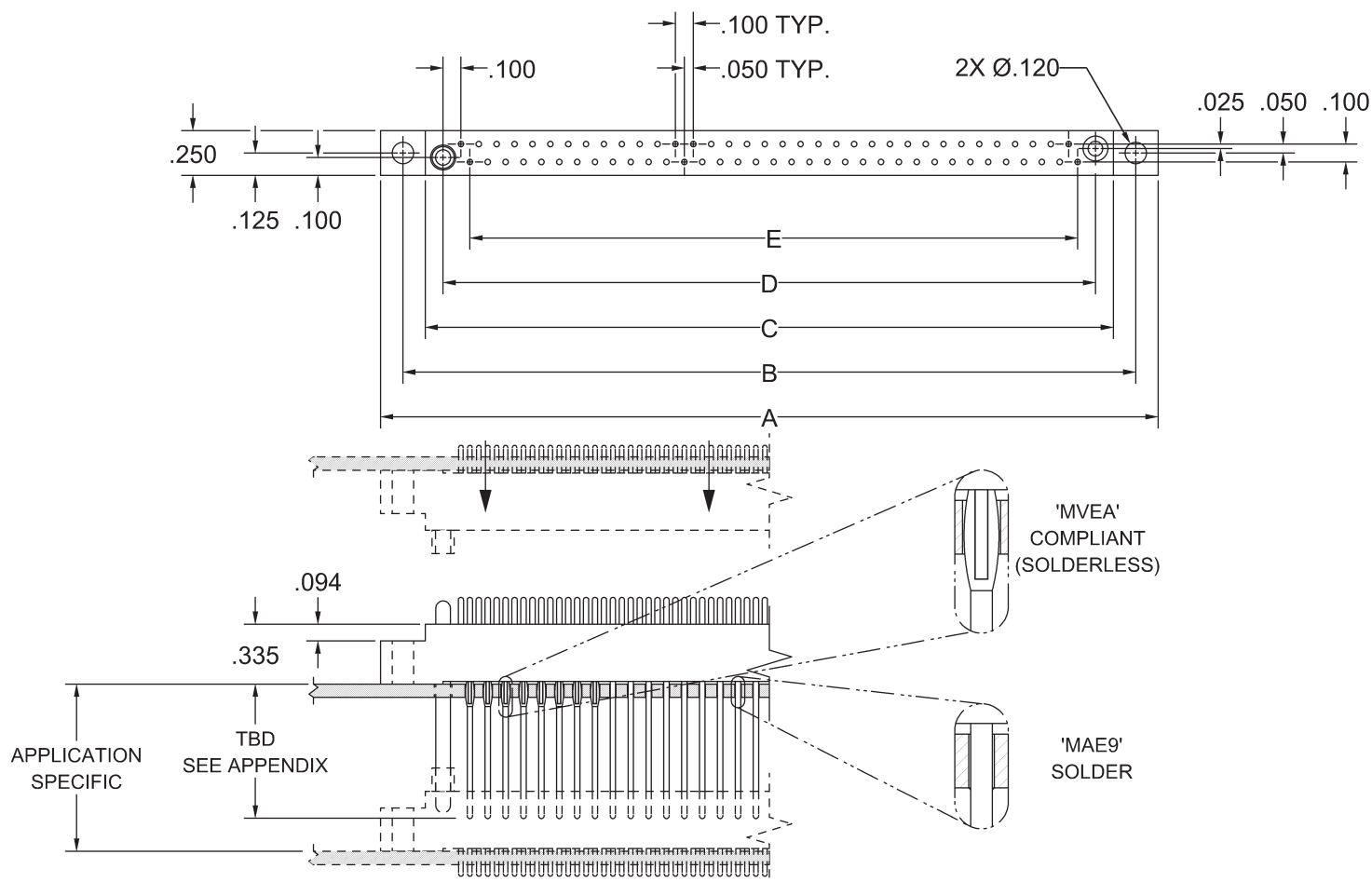
RECEPTACLE, PLUG PATTERN, COMPLIANT STYLE SVE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

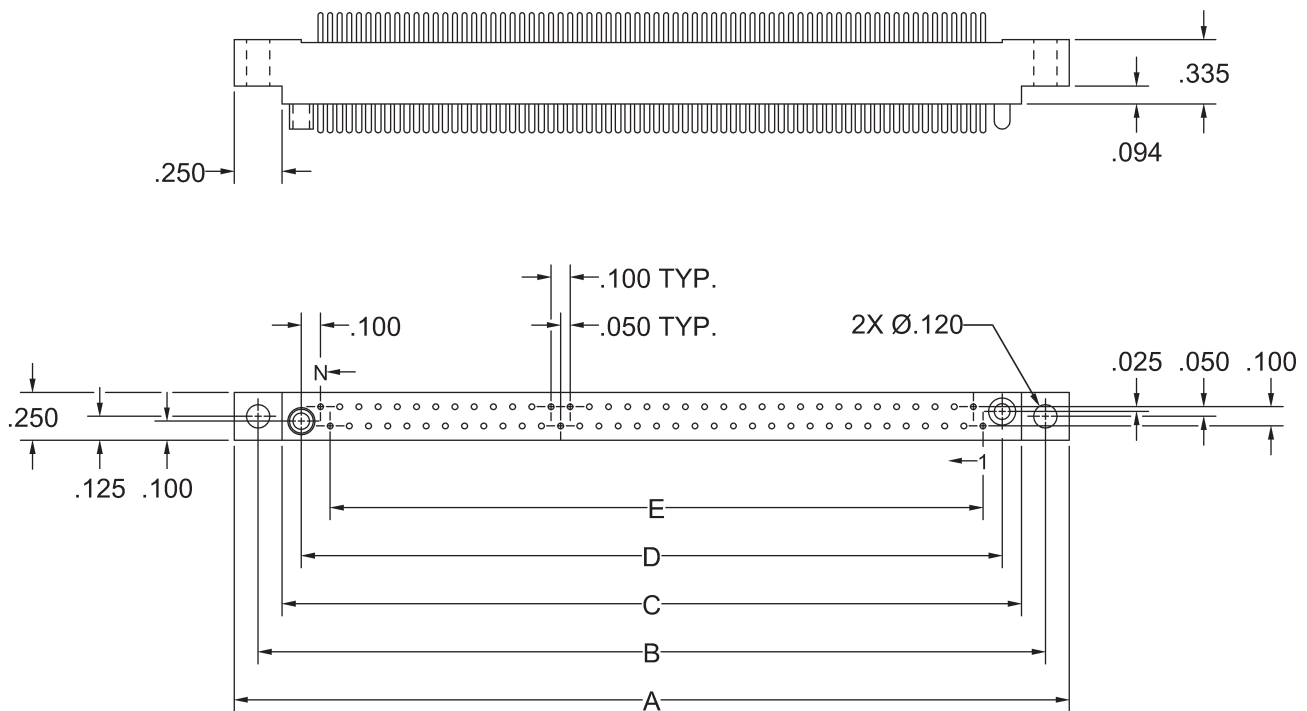
PLUG, RECEPTACLE PATTERN, STACKING STYLE MAE9, MVEA



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

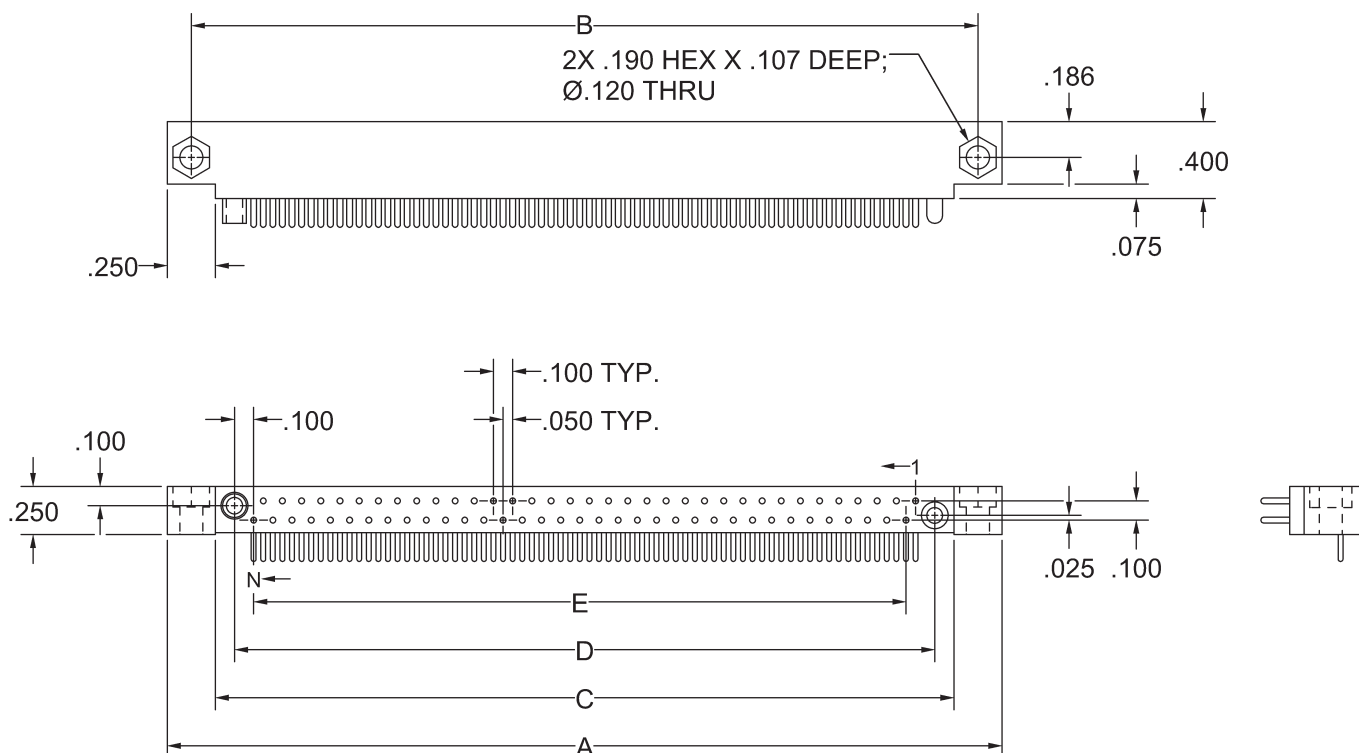
PLUG, RECEPTACLE PATTERN, STRAIGHT STYLE MBE, MDE, MSE, MWE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

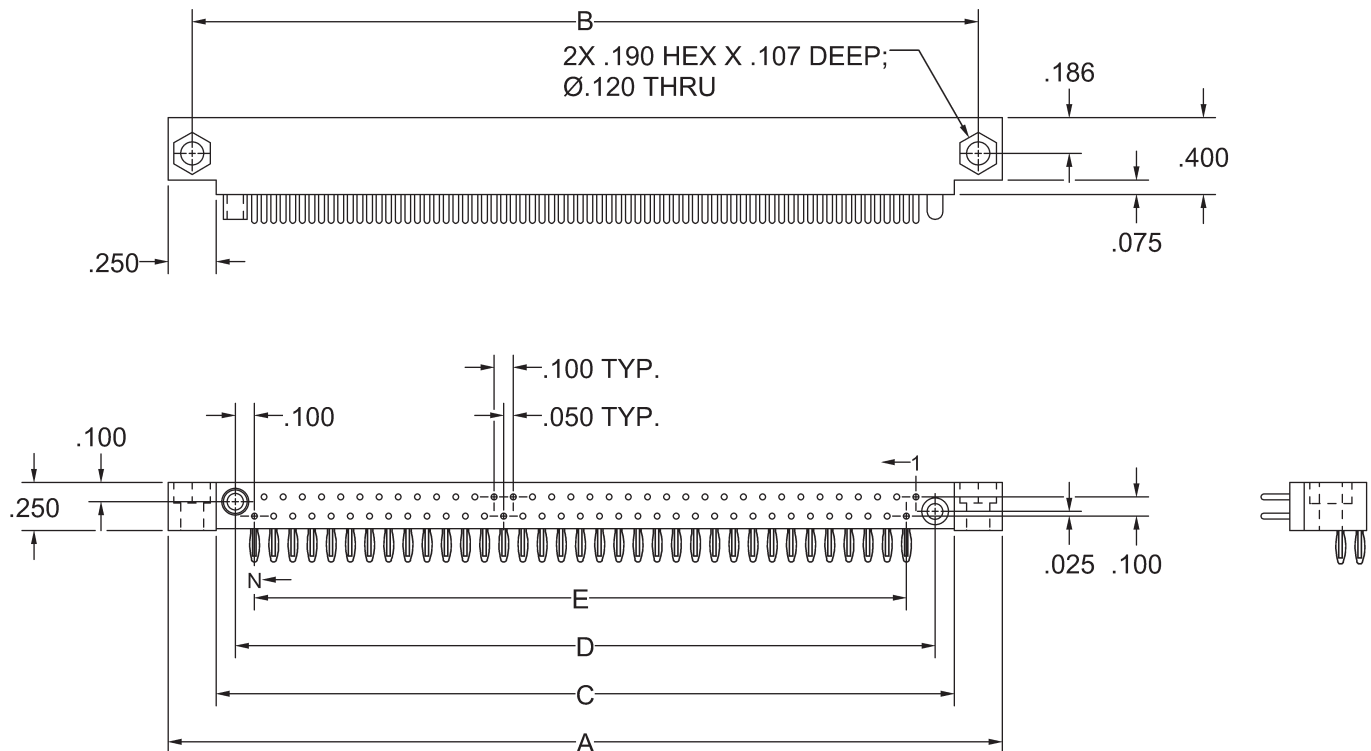
PLUG, RIGHT ANGLE STYLE MEE, MXE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

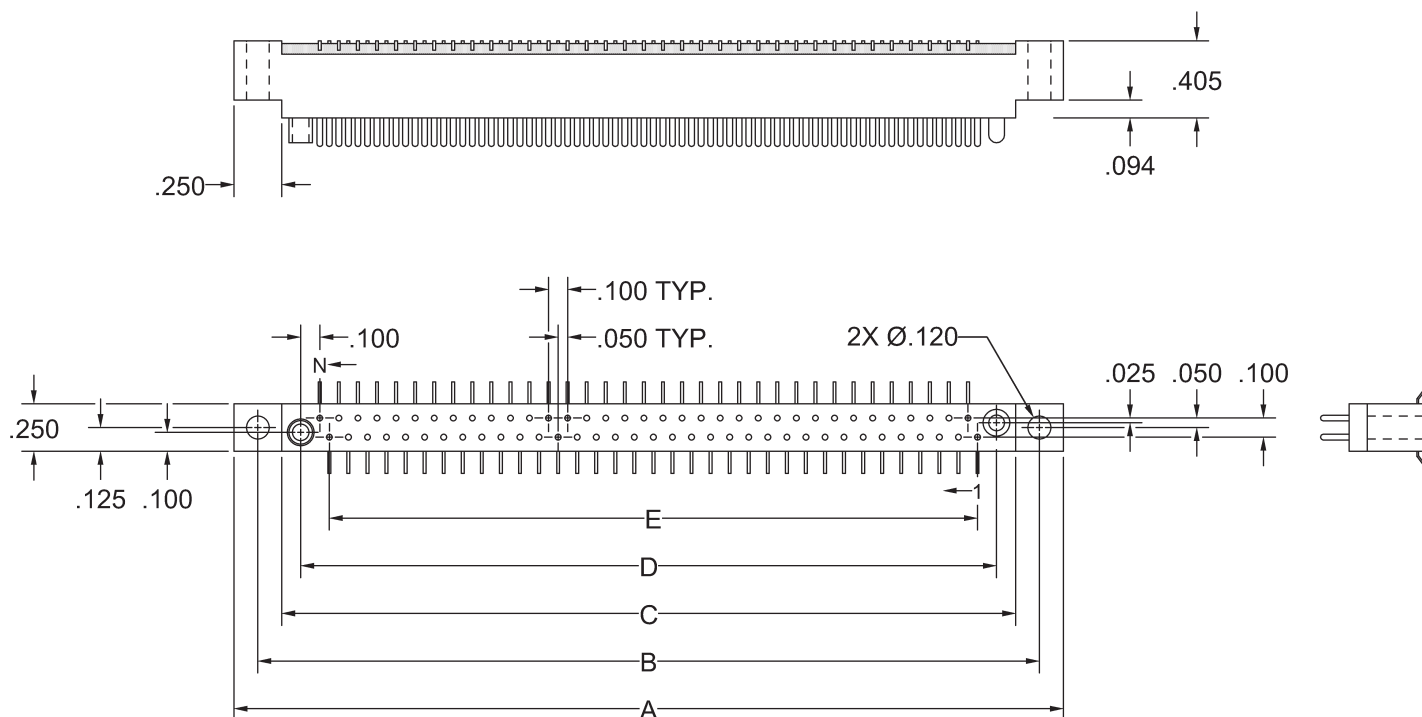
PLUG, RIGHT ANGLE, COMPLIANT STYLE MLE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

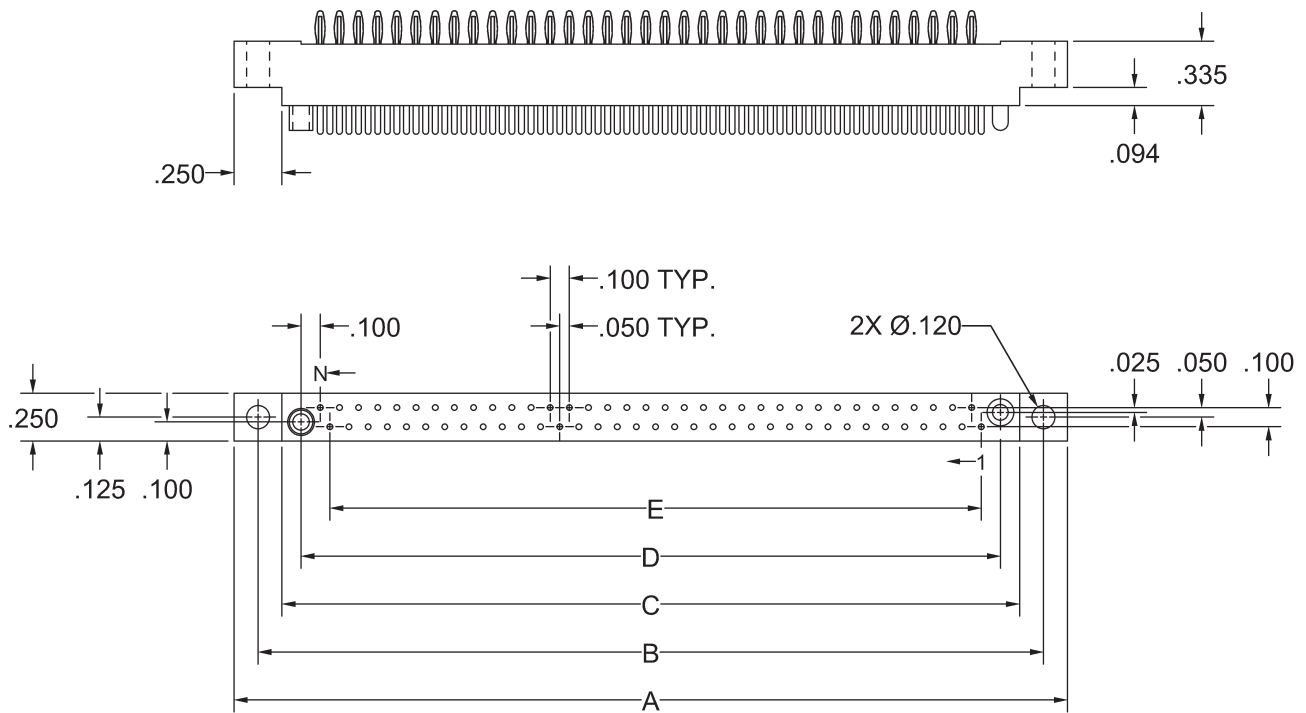
PLUG, RECEPTACLE PATTERN, SURFACE MOUNT STYLE MRE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

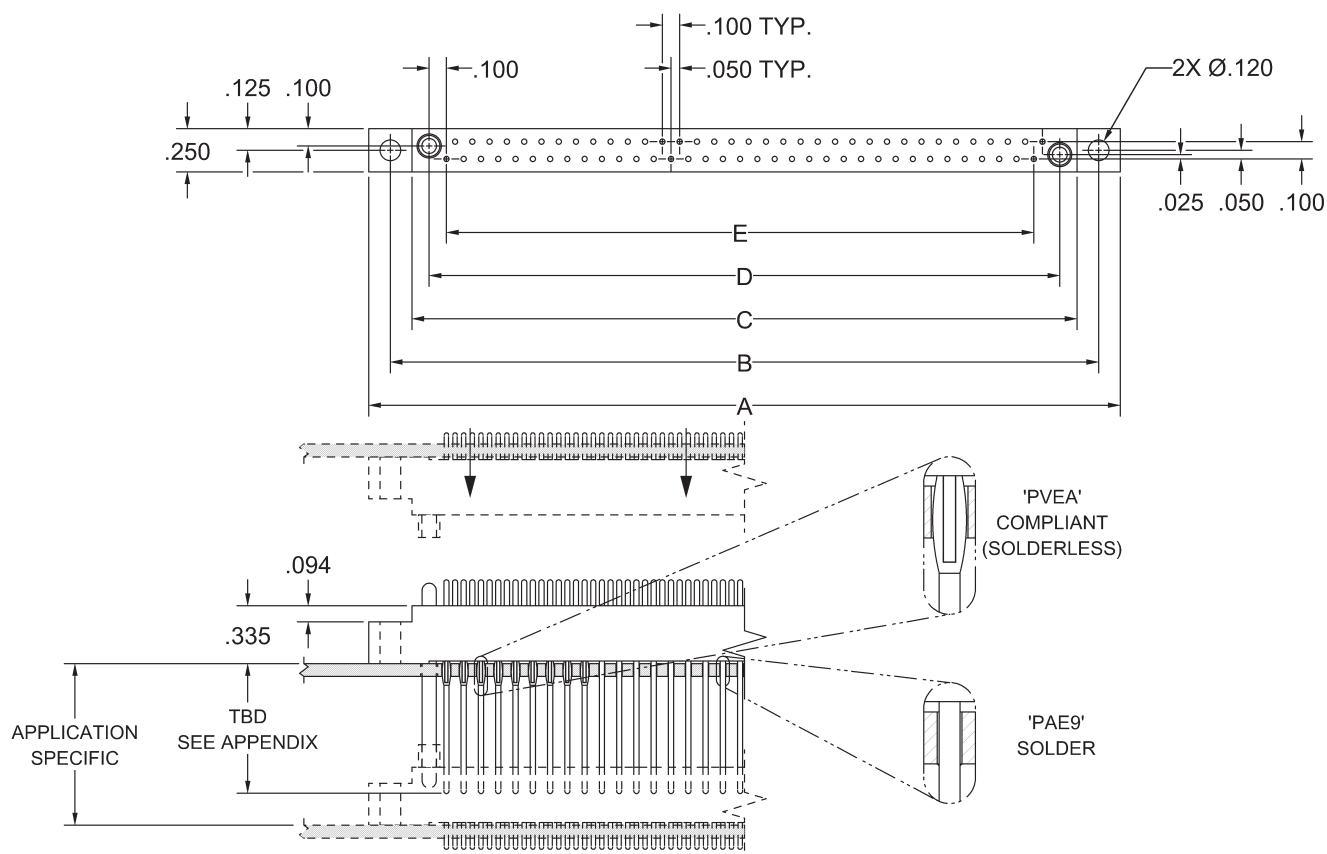
PLUG, RECEPTACLE PATTERN, COMPLIANT STYLE MVE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

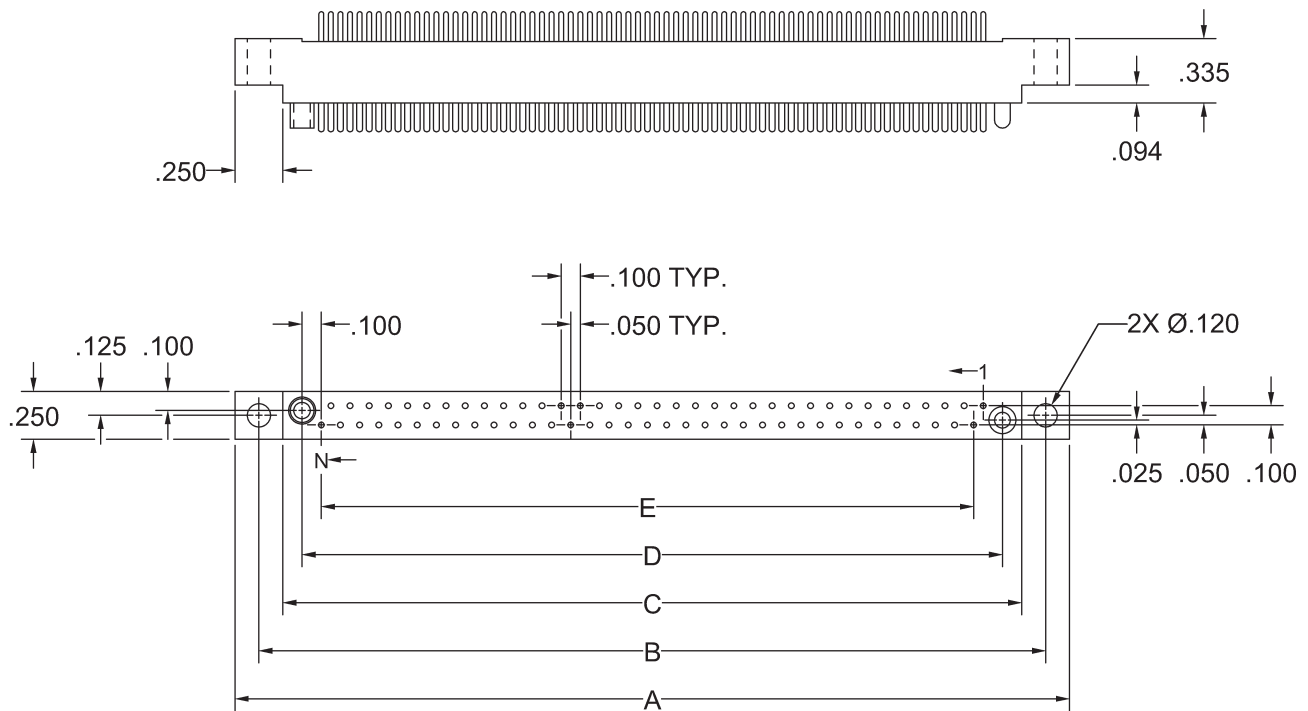
PLUG, STACKING STYLE PAE9, PVEA



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

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POLARIZATION CHART,
AND PWB PATTERNS

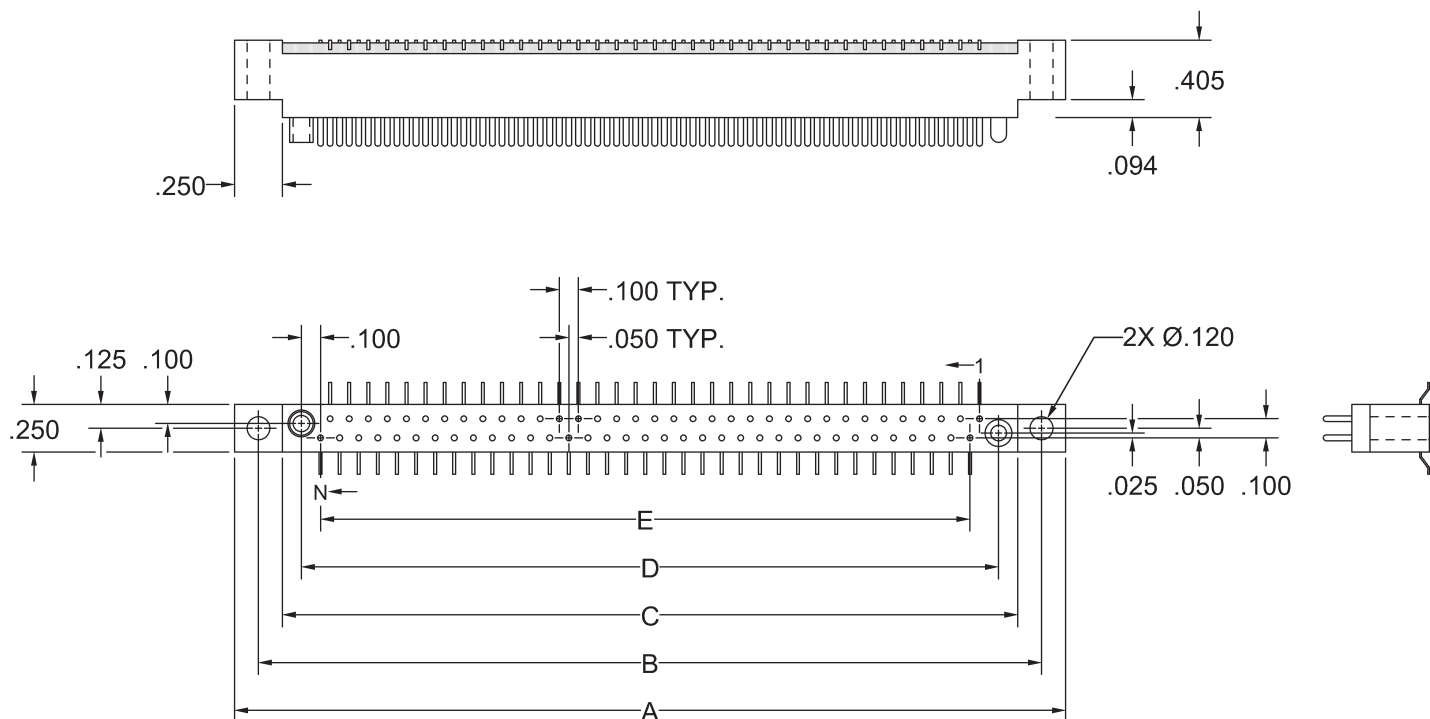
PLUG, STRAIGHT STYLE PBE, PDE, PSE, PWE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

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POLARIZATION CHART,
AND PWB PATTERNS

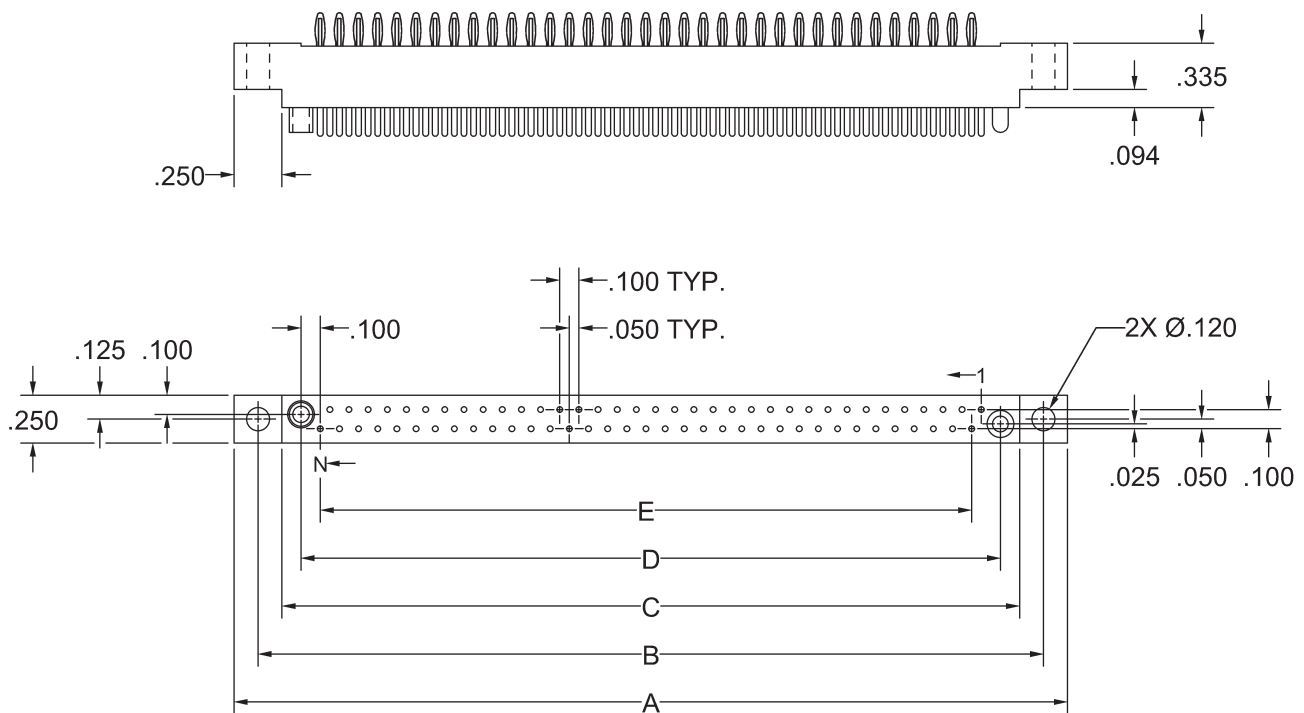
PLUG, SURFACE MOUNT STYLE PRE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

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POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, COMPLIANT STYLE PVE



'N' Contacts	A	B	C	D	E
010	1.350	1.100	.850	.650	.400
014	1.550	1.300	1.050	.850	.600
020	1.850	1.600	1.350	1.150	.900
024	2.050	1.800	1.550	1.350	1.100
026	2.150	1.900	1.650	1.450	1.200
030	2.350	2.100	1.850	1.650	1.400
036	2.650	2.400	2.150	1.950	1.700
040	2.850	2.600	2.350	2.150	1.900
044	3.050	2.800	2.550	2.350	2.100
050	3.350	3.100	2.850	2.650	2.400
054	3.550	3.300	3.050	2.850	2.600
056	3.650	3.400	3.150	2.950	2.700
060	3.850	3.600	3.350	3.150	2.900
066	4.150	3.900	3.650	3.450	3.200
070	4.350	4.100	3.850	3.650	3.400

**REFER TO APPENDIX FOR
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POLARIZATION CHART,
AND PWB PATTERNS**

Technical drawing of a mechanical part, showing top and side views with dimensions.

Top View Dimensions:

- Overall length: 5.650
- Distance from left edge to first hole center: 5.400
- Distance between hole centers: 5.150
- Distance from last hole center to right edge: 4.950
- Distance from left edge to first hole center: 2.200
- Distance from left edge to first hole center: .250
- Distance from left edge to first hole center: .125
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: .050 TYP.
- Distance from left edge to first hole center: .100 TYP.
- Distance from left edge to first hole center: .350
- Distance from left edge to first hole center: .025
- Distance from left edge to first hole center: .050
- Distance from left edge to first hole center: .100

Side View Dimensions:

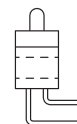
- Overall width: .250
- Distance from left edge to first hole center: .220
- Distance from left edge to first hole center: .094
- Distance from left edge to first hole center: .335

Other Features:

- 3X Ø.120 (Three holes with diameter .120)
- 90° (Right angle symbol)
- 1 (Dimension line indicator)

27

**RECEPTACLE, RIGHT ANGLE
STYLE HGM090 FEE**



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

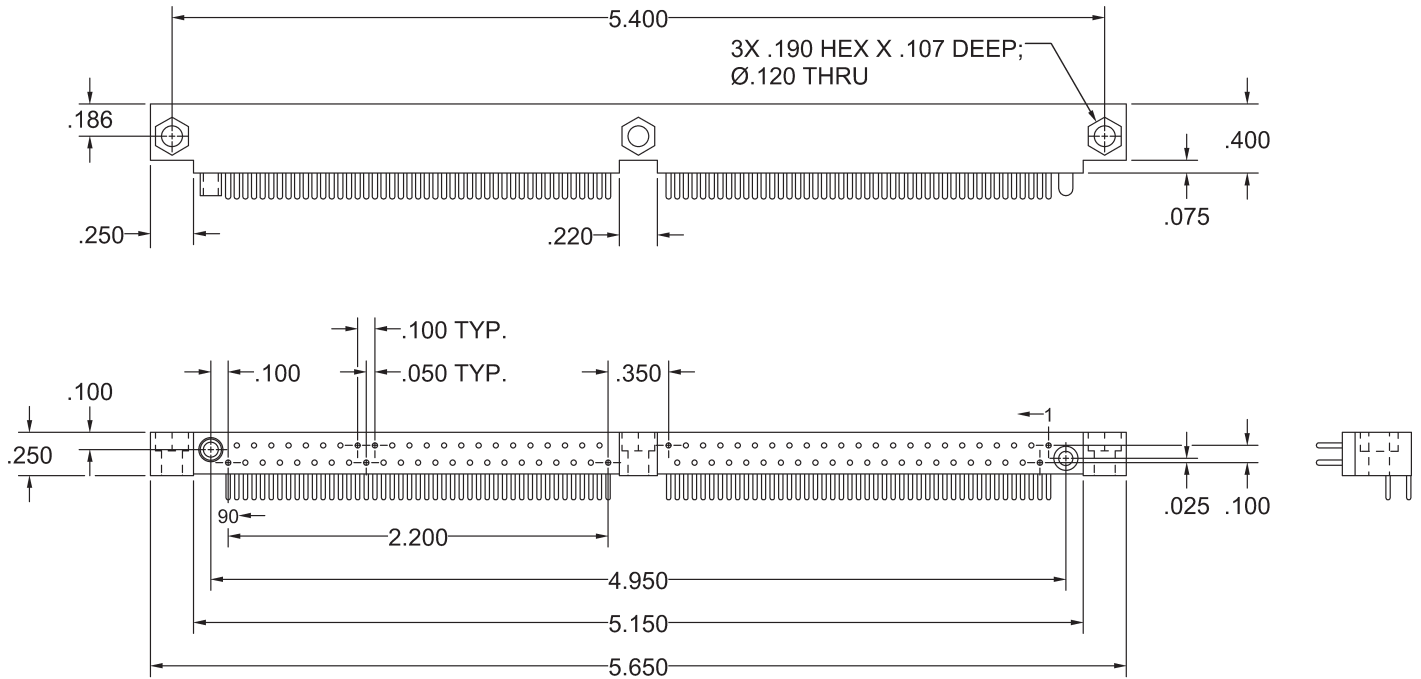
[illegible]

140 58th Street 8E, Brooklyn, NY 11220 Ph: (718) 492-4448 Fax: (718) 492-9898 www.iehcorp.com

[illegible]

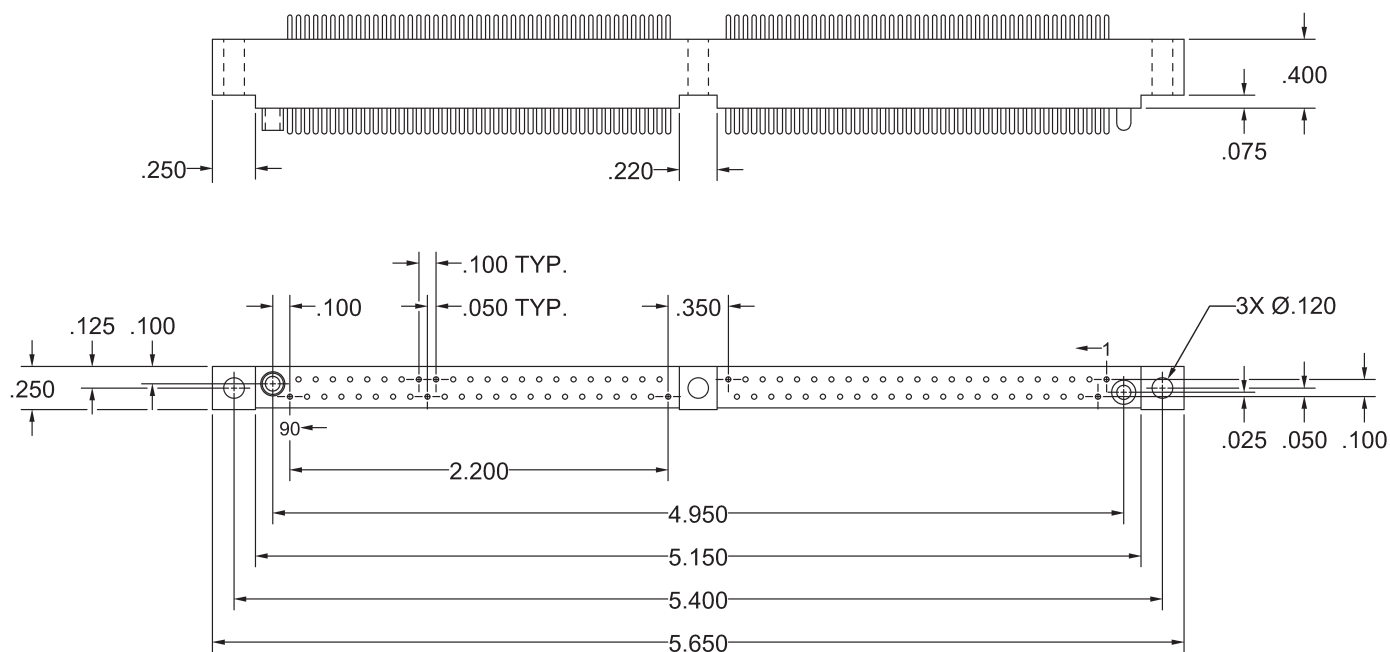
30

PLUG, RIGHT ANGLE STYLE HGM090 MEE



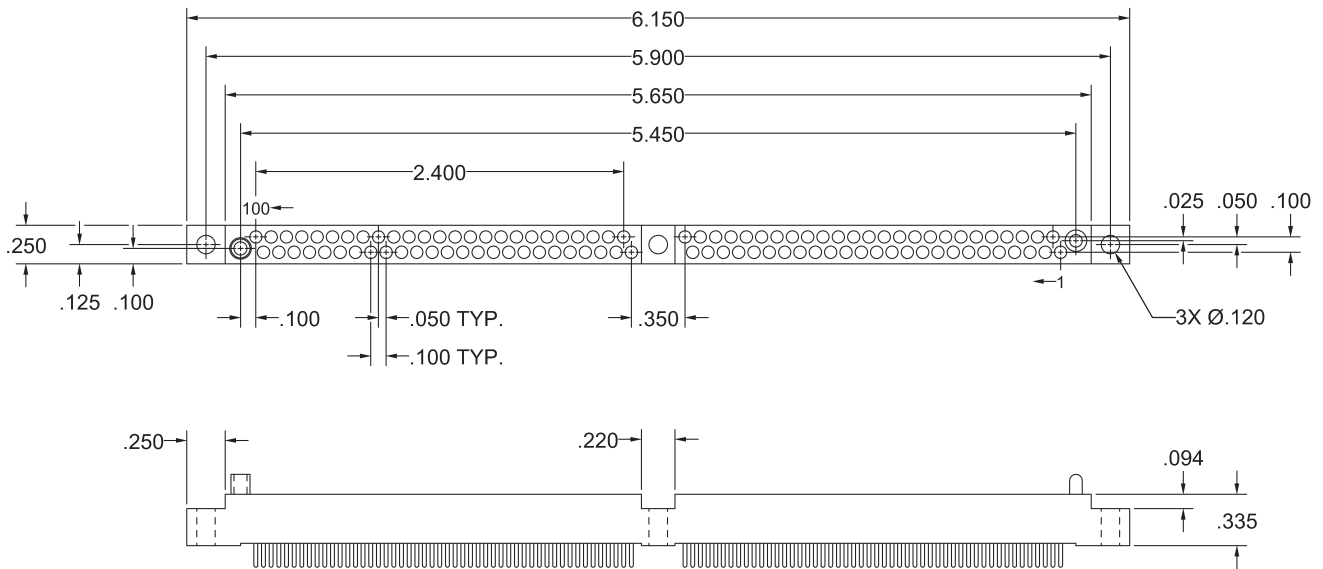
REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

PLUG, STRAIGHT
STYLE HGM090 RBE, RDE, RSE, RWE



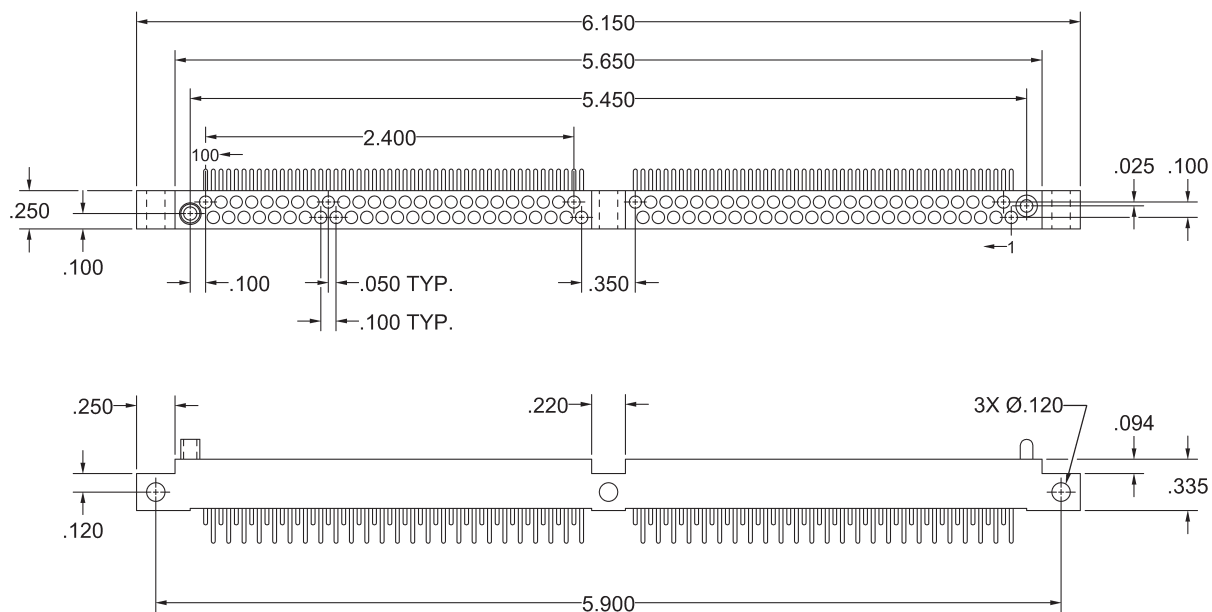
REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

RECEPTACLE, STRAIGHT **STYLE HGM100 FBE, FDE, FSE, FWE**



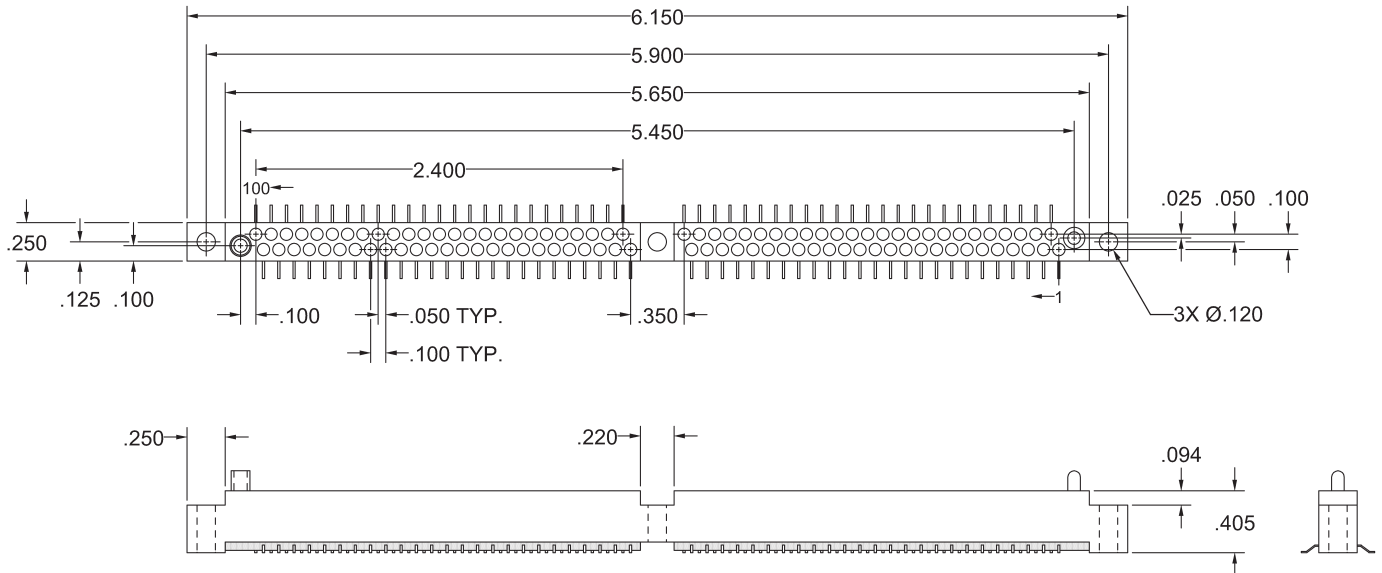
**REFER TO APPENDIX FOR
 TERMINATION DETAILS,
 HARDWARE STYLES,
 POLARIZATION CHART,
 AND PWB PATTERNS**

**RECEPTACLE, RIGHT ANGLE
STYLE HGM100 FEE**

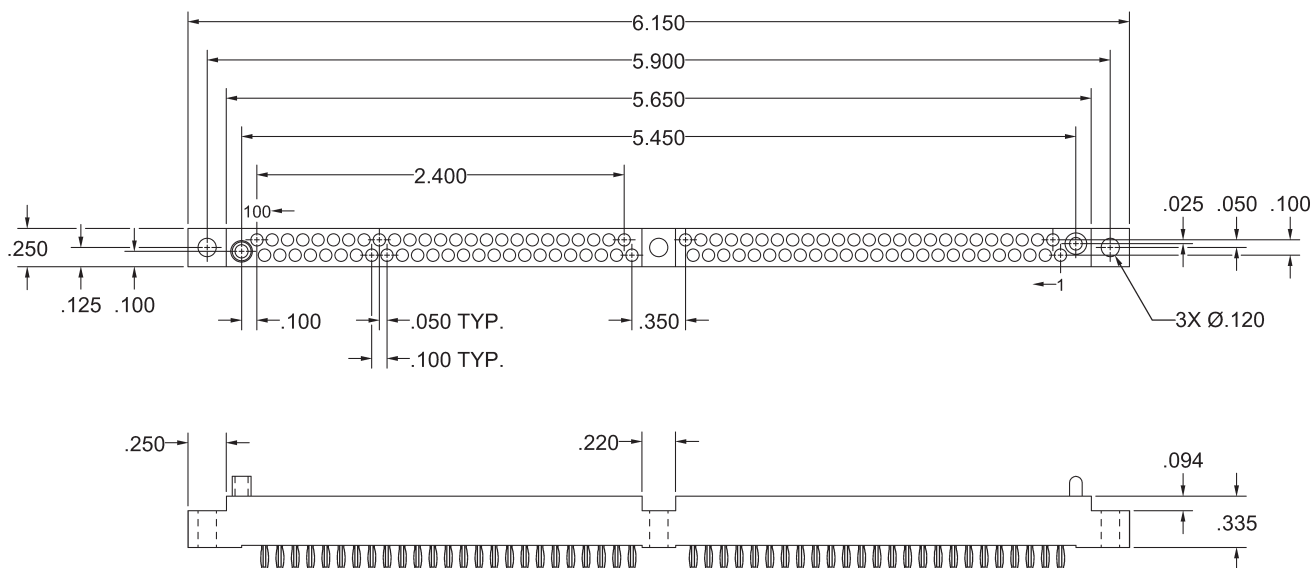


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, SURFACE MOUNT STYLE HGM100 FRE

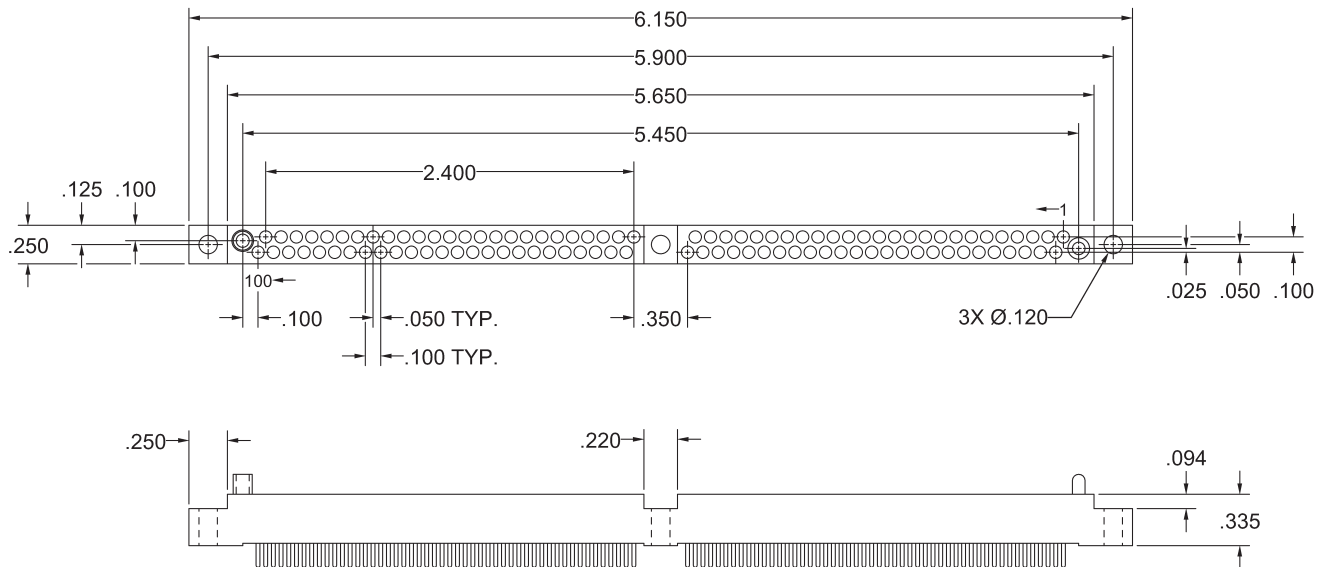


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

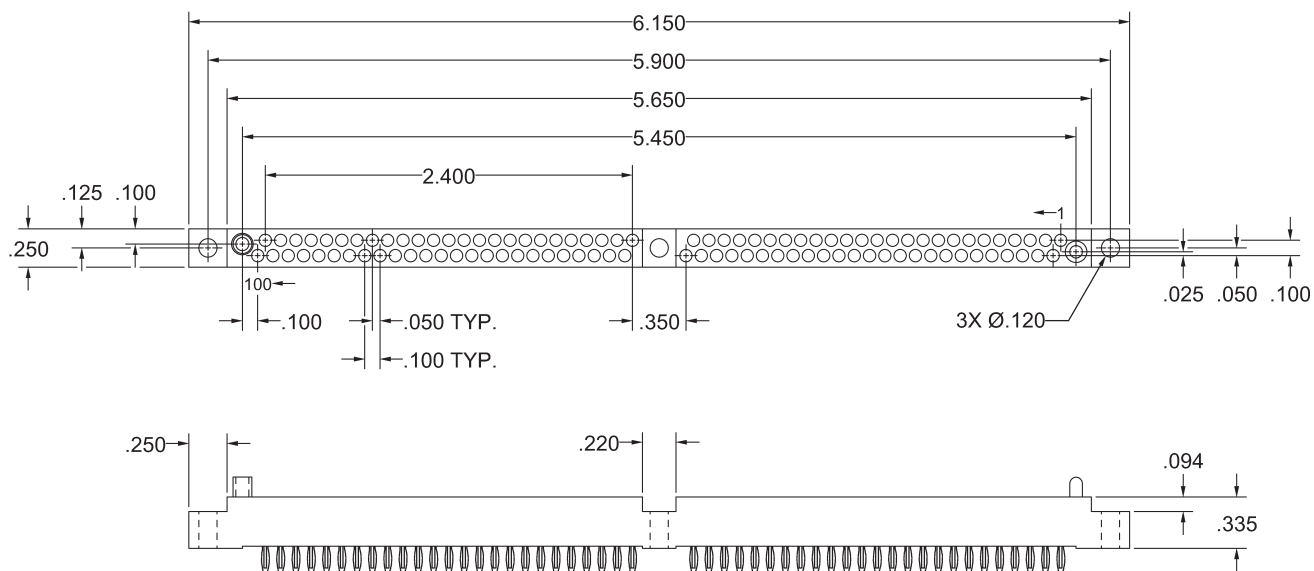
**RECEPTACLE, COMPLIANT
STYLE HGM100 FVE**

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, PLUG PATTERN, STRAIGHT **STYLE HGM100 SBE, SDE, SSE, SWE**

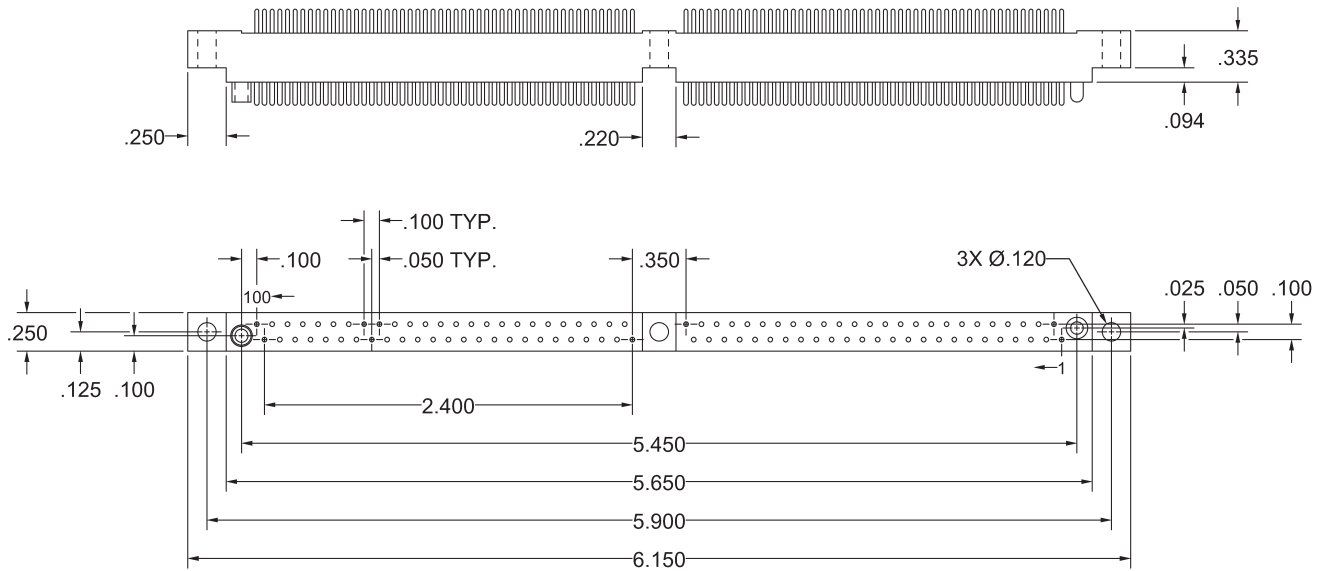


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**RECEPTACLE, PLUG PATTERN, COMPLIANT
STYLE HGM100 SVE**

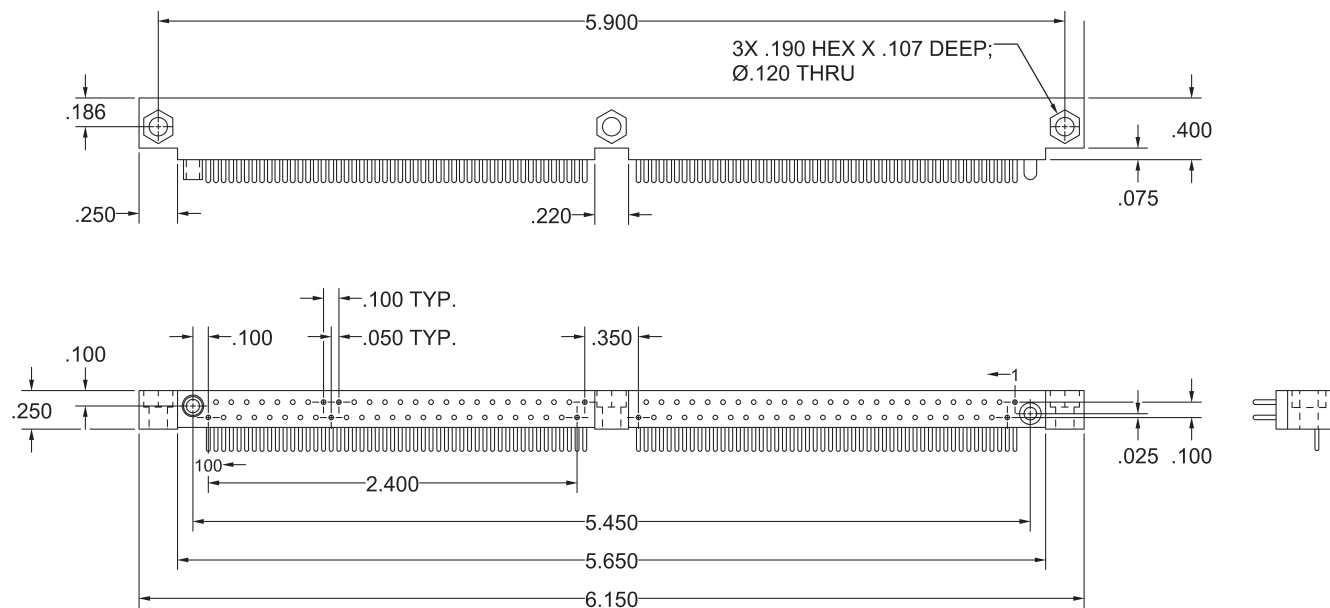
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, RECEPTACLE PATTERN, STRAIGHT STYLE HGM100 MBE, MDE, MSE, MWE



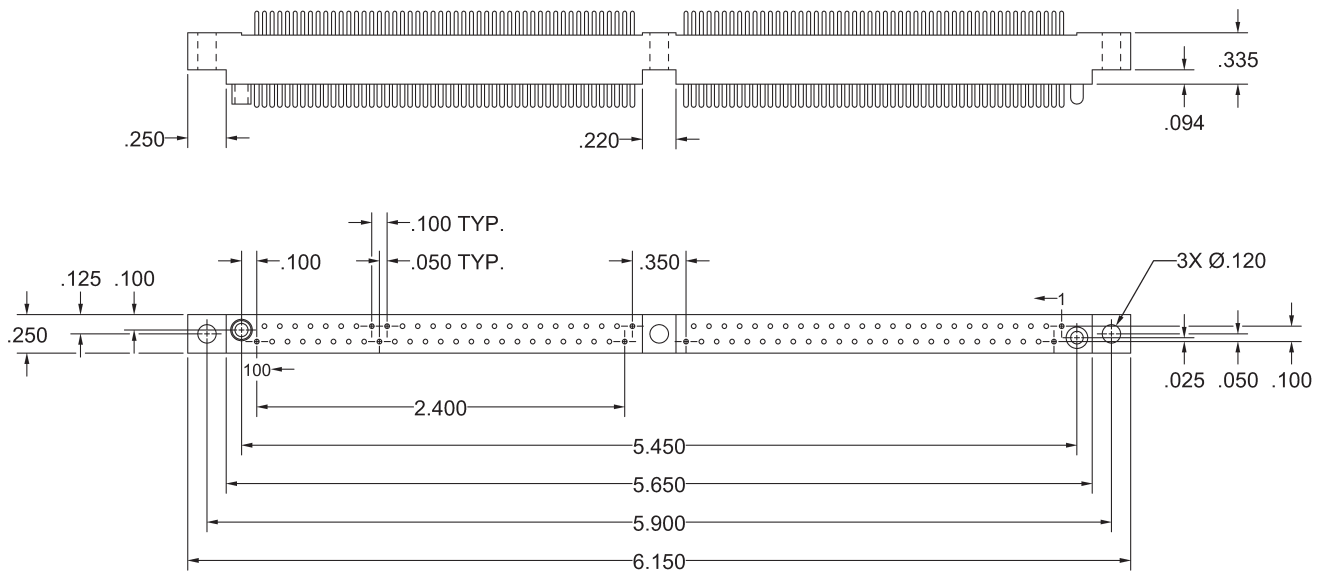
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, RIGHT ANGLE STYLE HGM100 MEE

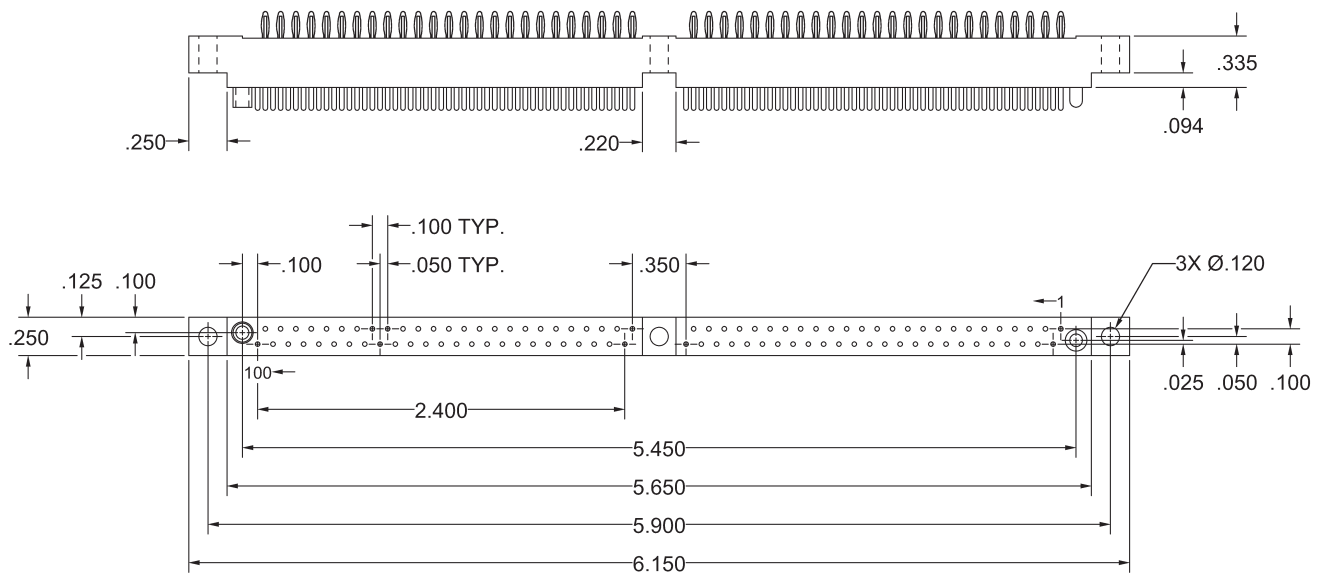


REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

PLUG, STRAIGHT **STYLE HGM100 PBE, PDE, PSE, PWE**

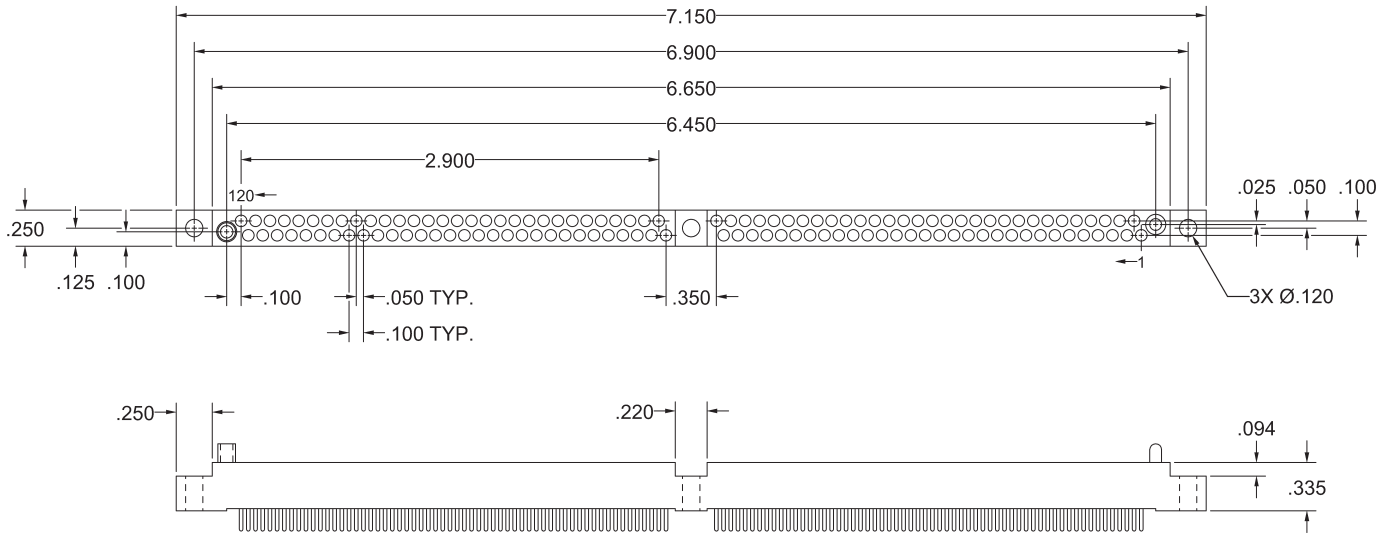


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**PLUG, COMPLIANT
STYLE HGM100 PVE**

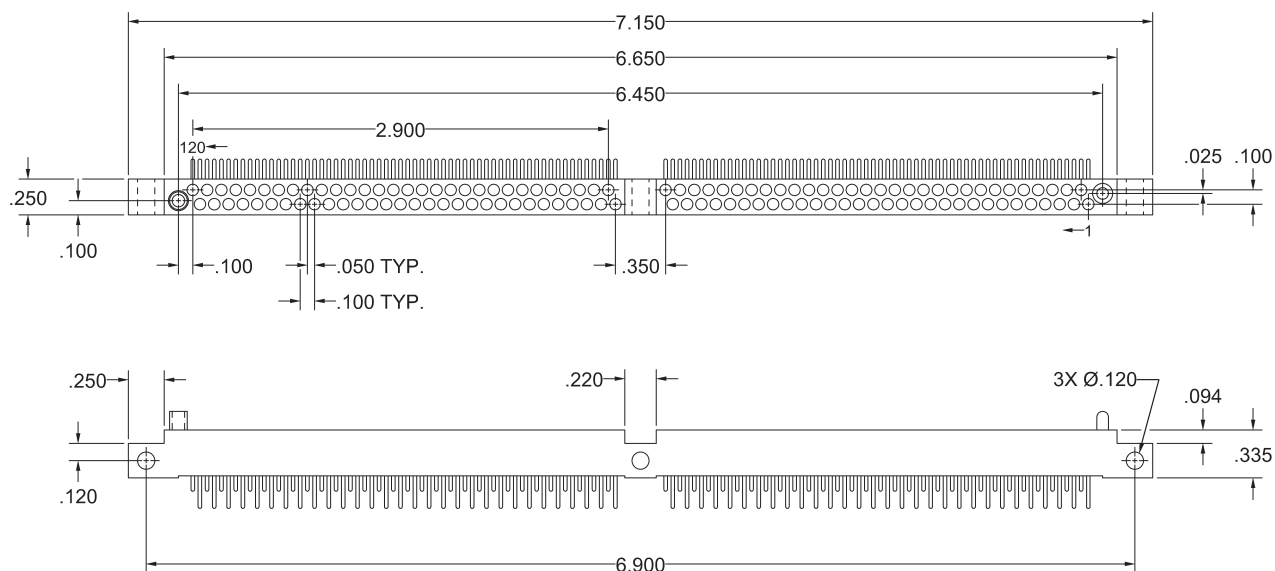
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, STRAIGHT STYLE HGM120 FBE,FDE,FSE,FWE



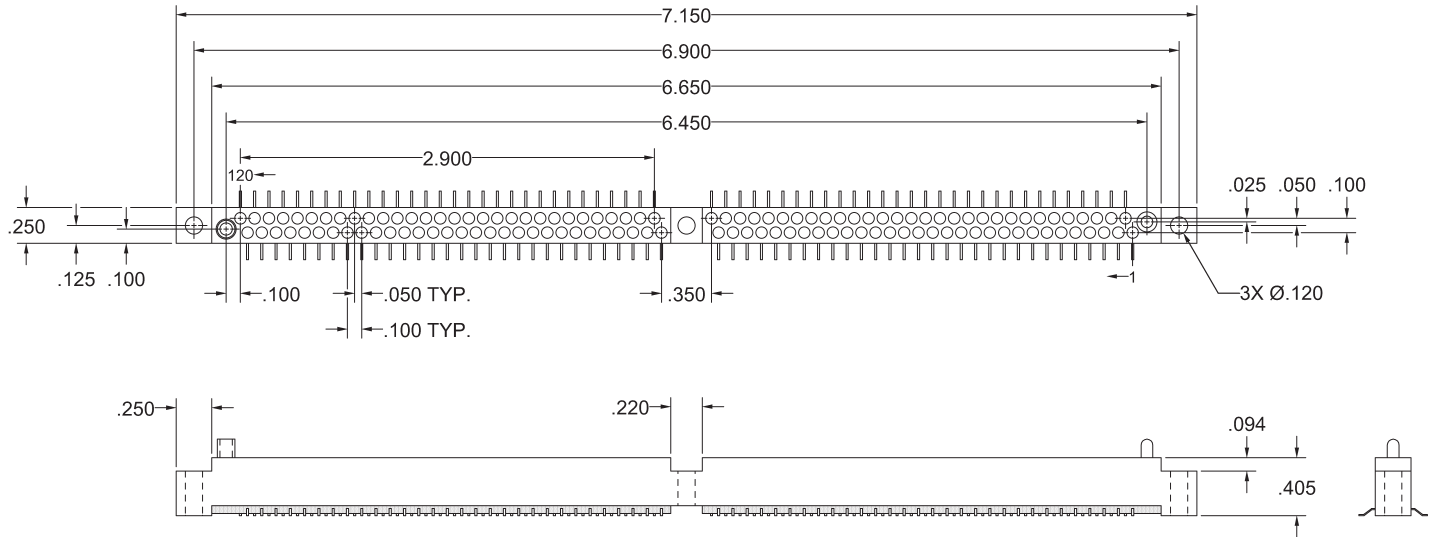
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**RECEPTACLE, RIGHT ANGLE
STYLE HGM120 FEE**



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, SURFACE MOUNT STYLE HGM120 FRE



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

Technical drawing of a mechanical part, showing top and side views with dimensions.

Top View Dimensions:

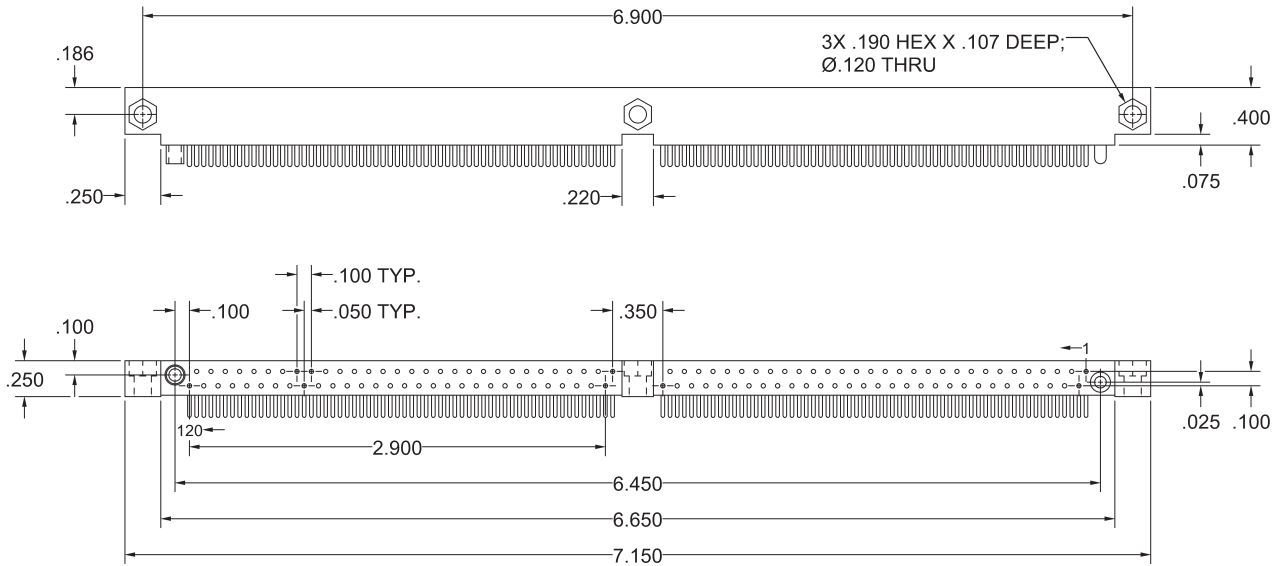
- Overall length: 7.150
- Distance from left edge to first hole center: 6.900
- Distance between hole centers: 6.650
- Distance from last hole center to right edge: 6.450
- Distance from left edge to first hole center: 2.900
- Hole diameter: 120
- Distance from left edge to first hole center: .250
- Distance from left edge to first hole center: .125
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: .050 TYP.
- Distance from left edge to first hole center: .100 TYP.
- Distance from left edge to first hole center: .350
- Distance from left edge to first hole center: .025
- Distance from left edge to first hole center: .050
- Distance from left edge to first hole center: .100
- Distance from left edge to first hole center: 3X Ø.120

Side View Dimensions:

- Overall height: .250
- Distance from left edge to first hole center: .220
- Distance from left edge to first hole center: .094
- Distance from left edge to first hole center: .335

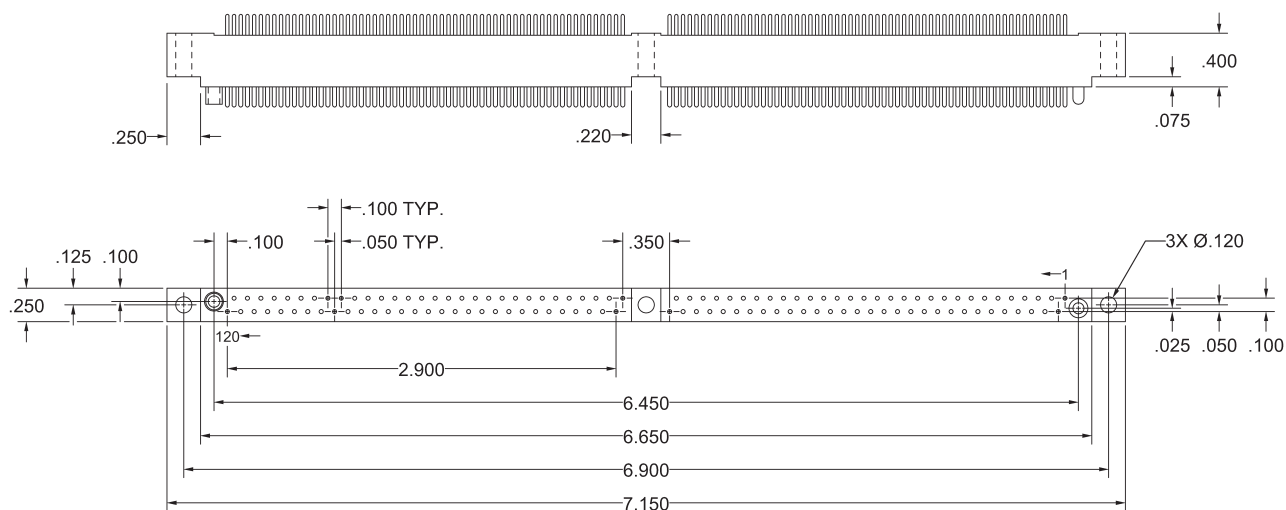
46

PLUG, RIGHT ANGLE STYLE HGM120 MEE



REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

PLUG, STRAIGHT
STYLE HGM120 RBE, RDE, RSE, RWE



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

ORDERING CHART 3-ROW

HGM	050	F	D	E	1	X	99	E	300
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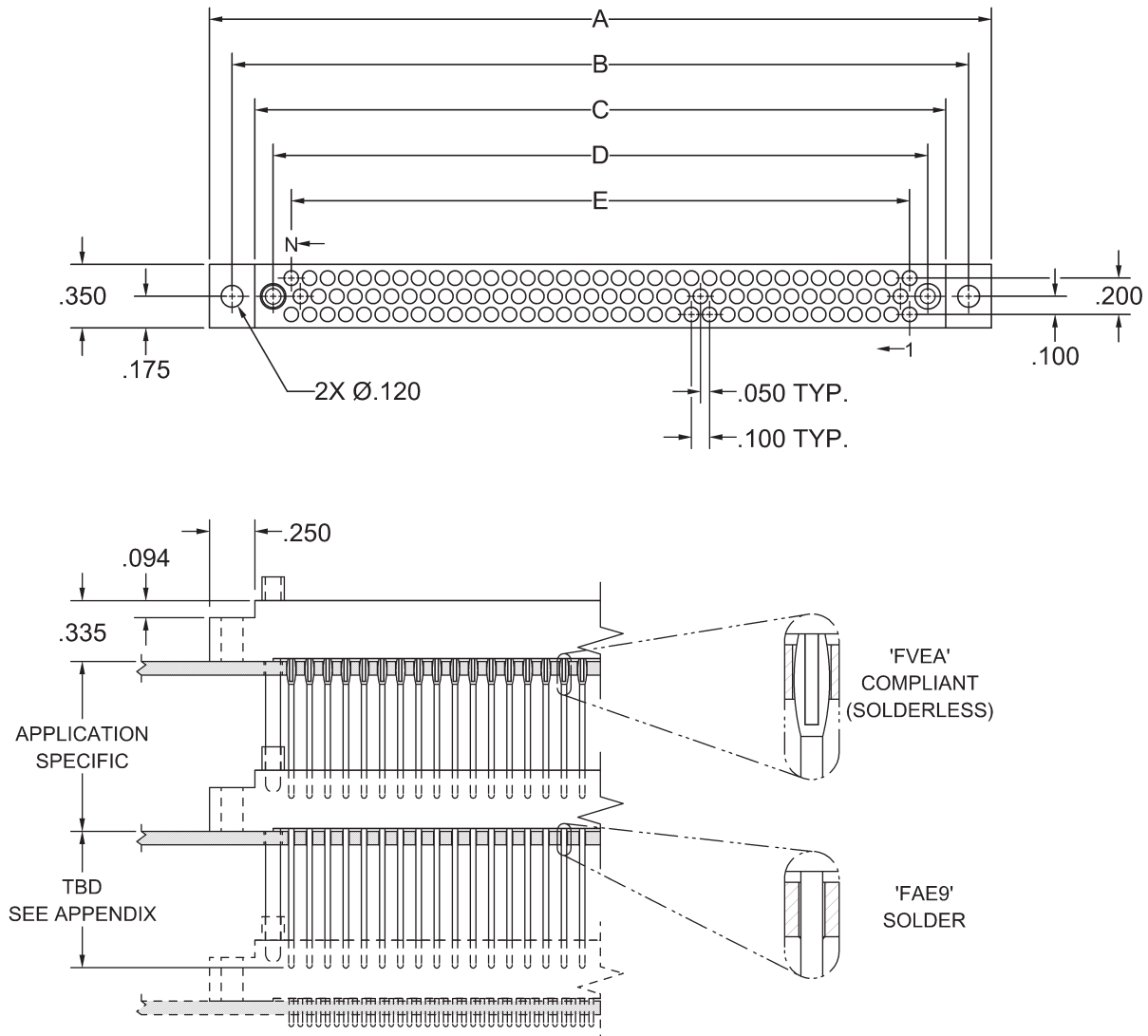
Series			
Contact Capacity (Use All 3 Places)			
Contact Gender			
F	Socket Low Profile (.335)		
M	Pin High Profile (.400) ¹		
M	Pin Low Profile (.335) ²		
Termination Style			
A	Stacking		
B	Flex Cable		
D	Dip Solder Straight		
E	Dip Solder Right Angle		
L	Compliant Right Angle		
S	Solder Cup		
V	Compliant		
W	Wire Wrap		
X	Solder Cup Right Angle		
Contact Factory - Not Available In Every Configuration			
Insulator			
A	Diallyl Phthalate (Green) - Not For New Designs		
E	Polyphenylene Sulfide (Ryton-Brown)		
Termination Length - "L"			
Code	Dip Solder	Wire Wrap	Flex
1	.109	.375	.050
2	.140	.500	.098
3	.172	.625	-
4	.234	-	-
9	User Defined		
0	Use For Solder Cup & Compliant Without Extension		
A	Use For Compliant With Stacking Extension		

Variation Code - Factory Assigned	
Not Required When MIL-C-55302 Ordered	
320	Solder Dip Terminals
3C0	Epoxy Termination Sealed
3C2	Epoxy Sealed & Solder Dipped
Mounting Style	
A	Thru Hole Mtg.
B	Thru Hole Insert
C	Threaded Insert
D	Remove Mtg. Ears
E	Stud/Threaded
Hardware Arrangement	
00*	Assembled as "01" without Loctite
01 - 64*	Y - "D" Shaped Guides (Loctite)
65 - 68	Universal
69	IEH Standard Loctite Applied
70 - 72	See Appendix
97	2 Pin Guides Unassembled
98	2 Socket Guides Unassembled
99	1 Pin & Socket Unassembled
*Use with MIL-C-55302 Callout	
Hardware Style	
A	Round Guides w/ Mtg. Stud
B	"D" Shaped Guides w/ Mtg. Stud (Polarizing)
H	Short Rotating (Int. Hex)
K	Fixed Locking
L	Long Rotating (Slotted)
M	Med. Rotating (Slotted)
P	Rotating (Hex)
S	Short Rotating (Slotted)
T	Fixed Locking w/ Mtg. Stud
X	Round Guides
Y	"D" Shaped Guides (Polarizing)
0	No Hardware Supplied

Notes:

1. For Termination Style E, X, L.
2. For Termination Style A, B, D, S, V, W

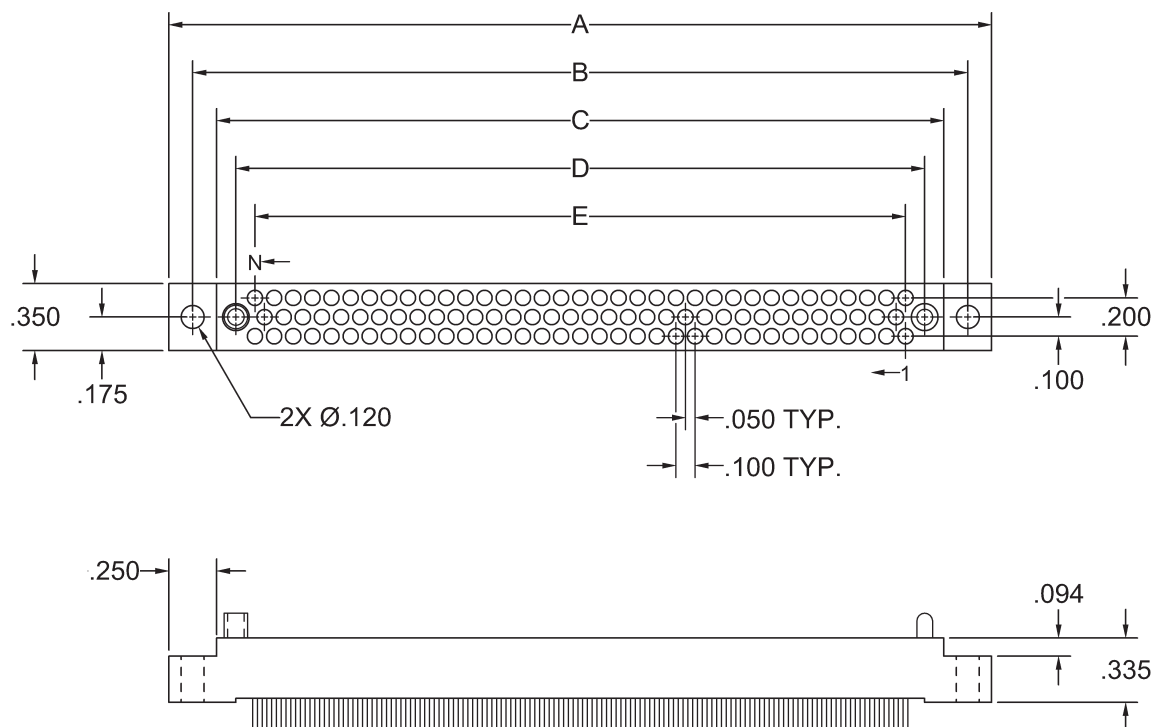
RECEPTACLE, STACKING STYLE FAE9, FVEA



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

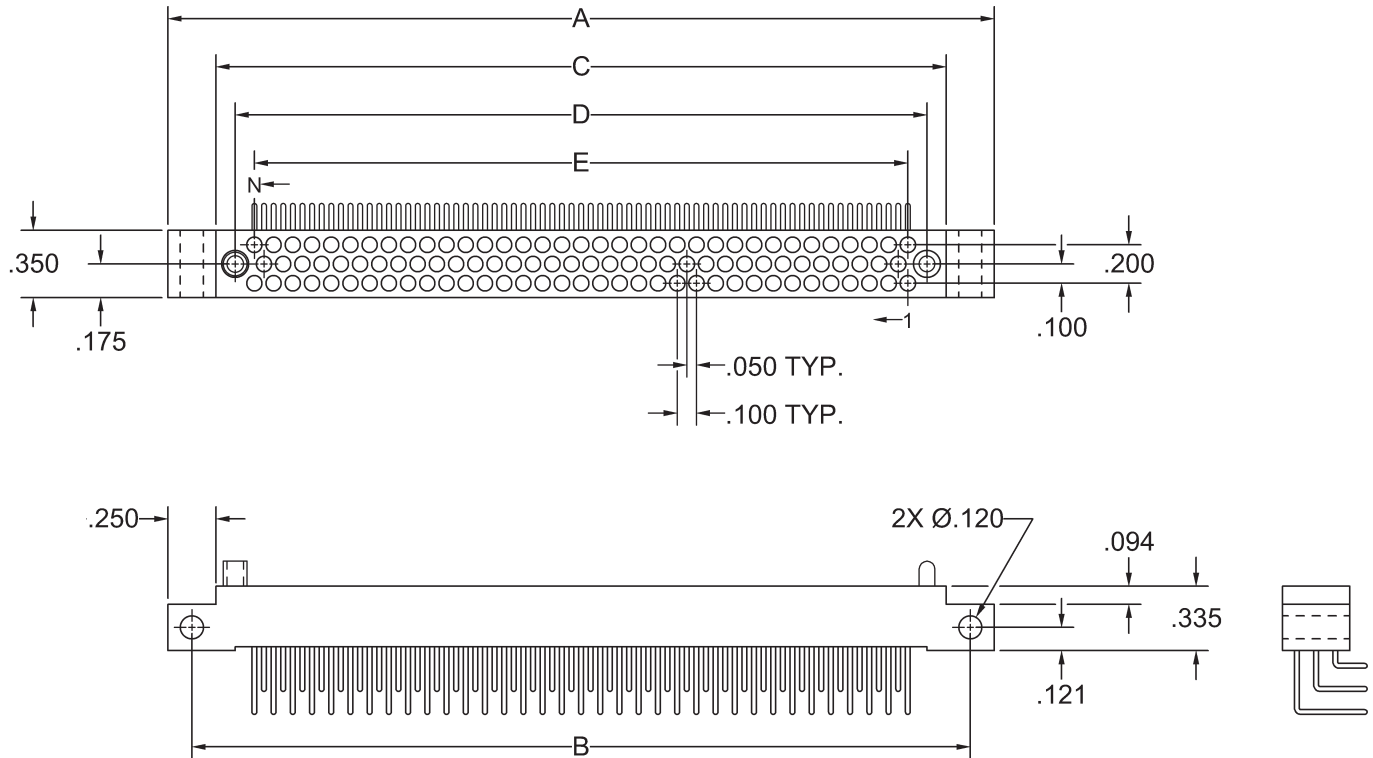
RECEPTACLE, STRAIGHT STYLE FBE, FDE, FSE, FWE



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

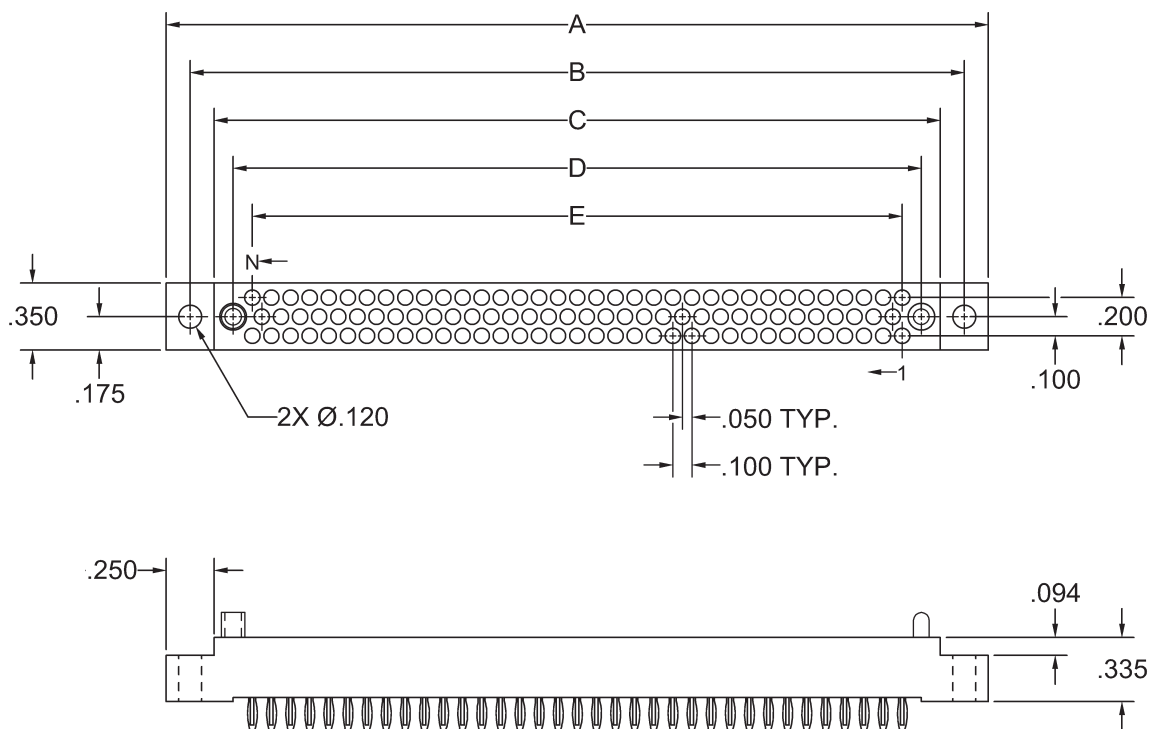
RECEPTACLE, RIGHT ANGLE STYLE FEE



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

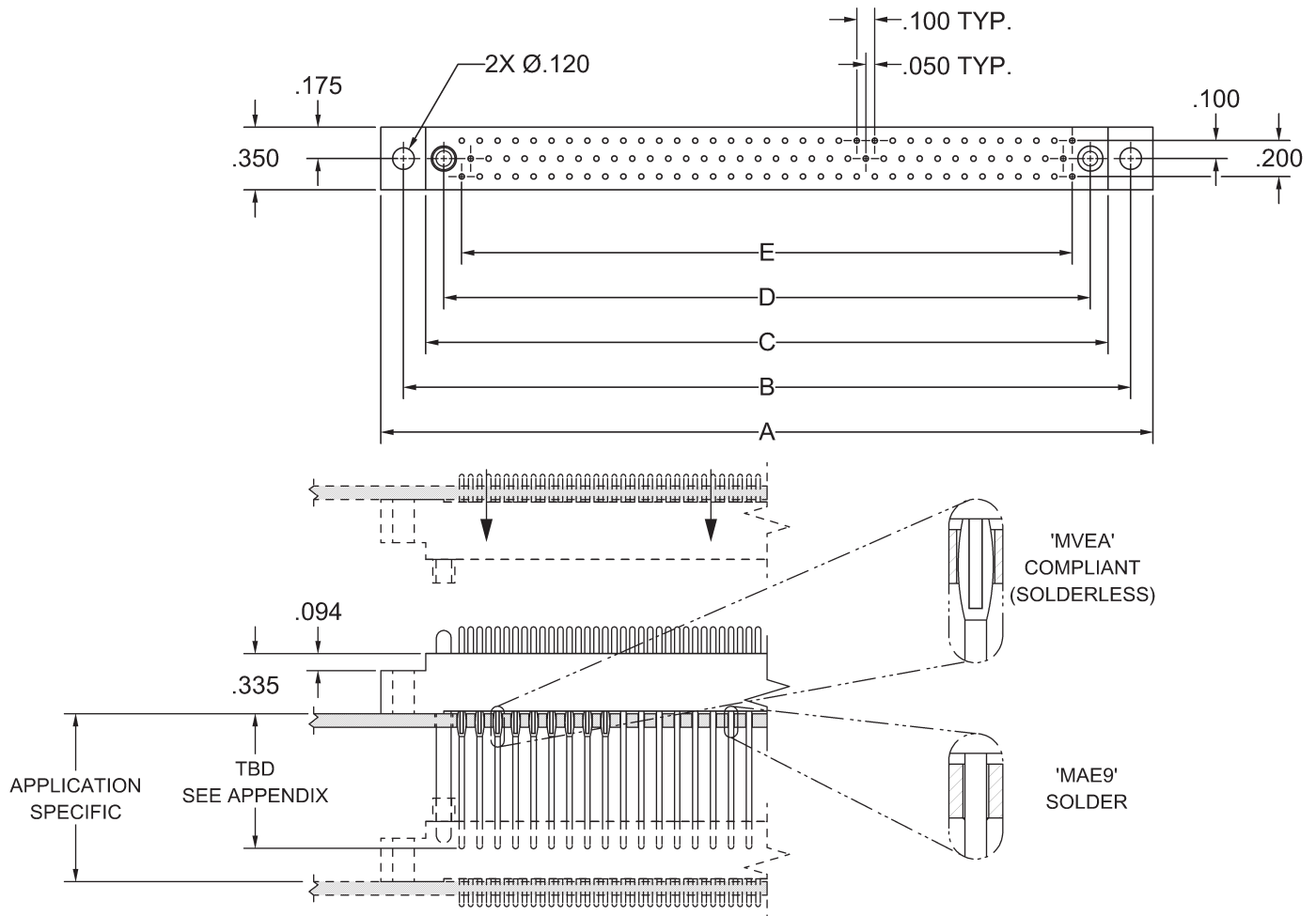
RECEPTACLE, COMPLIANT STYLE FVE



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

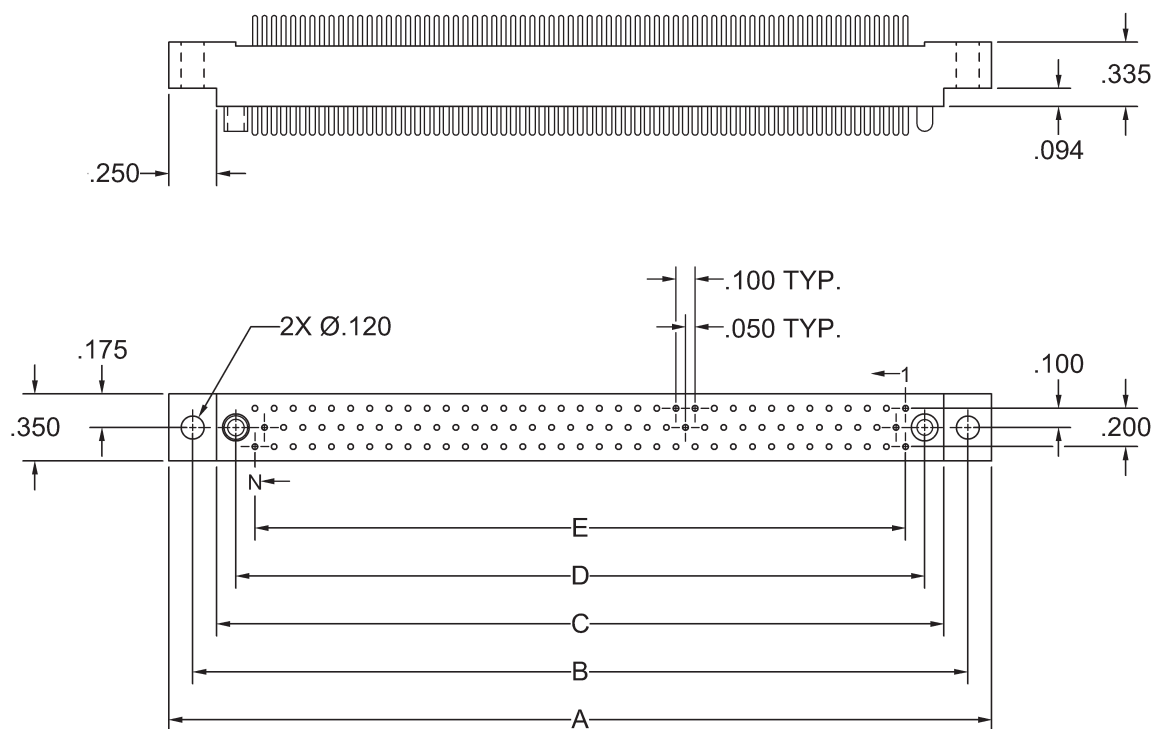
PLUG, STACKING STYLE MAE9, MVEA



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

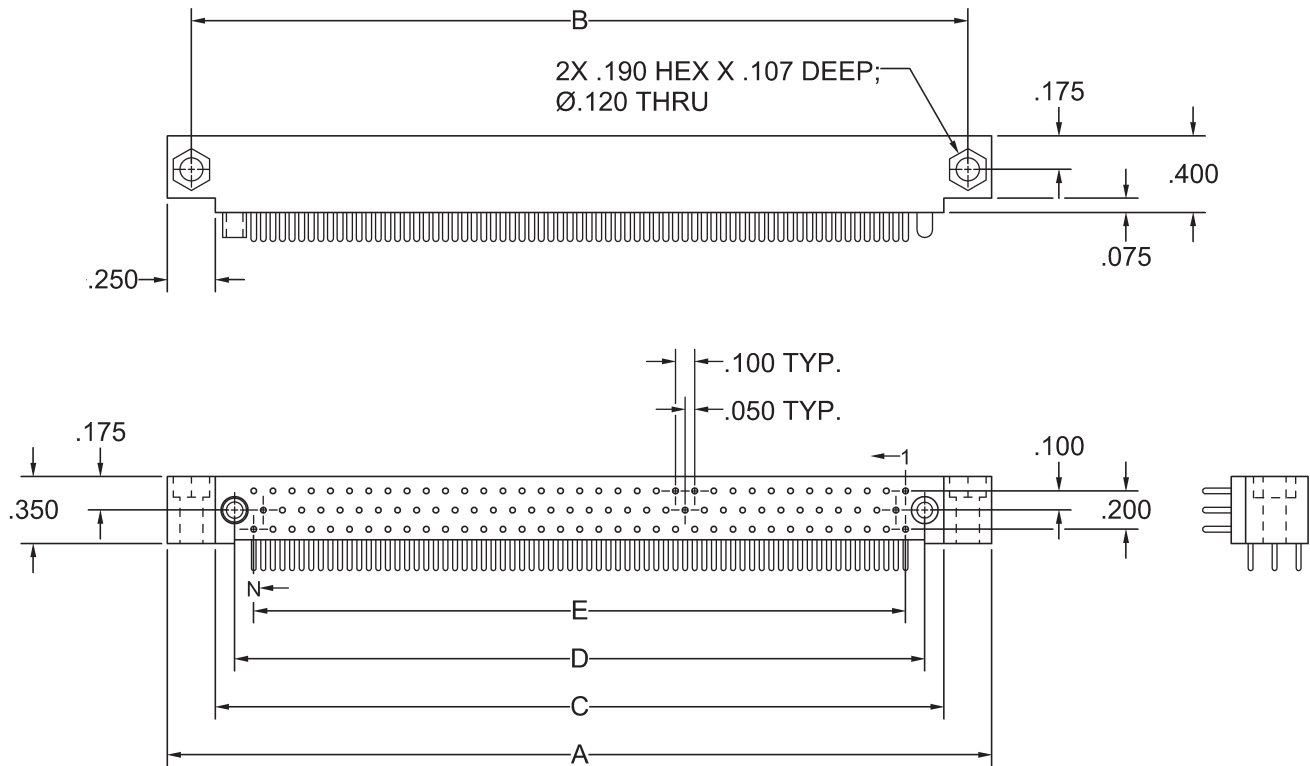
PLUG, STRAIGHT STYLE MBE, MDE, MSE, MWE



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

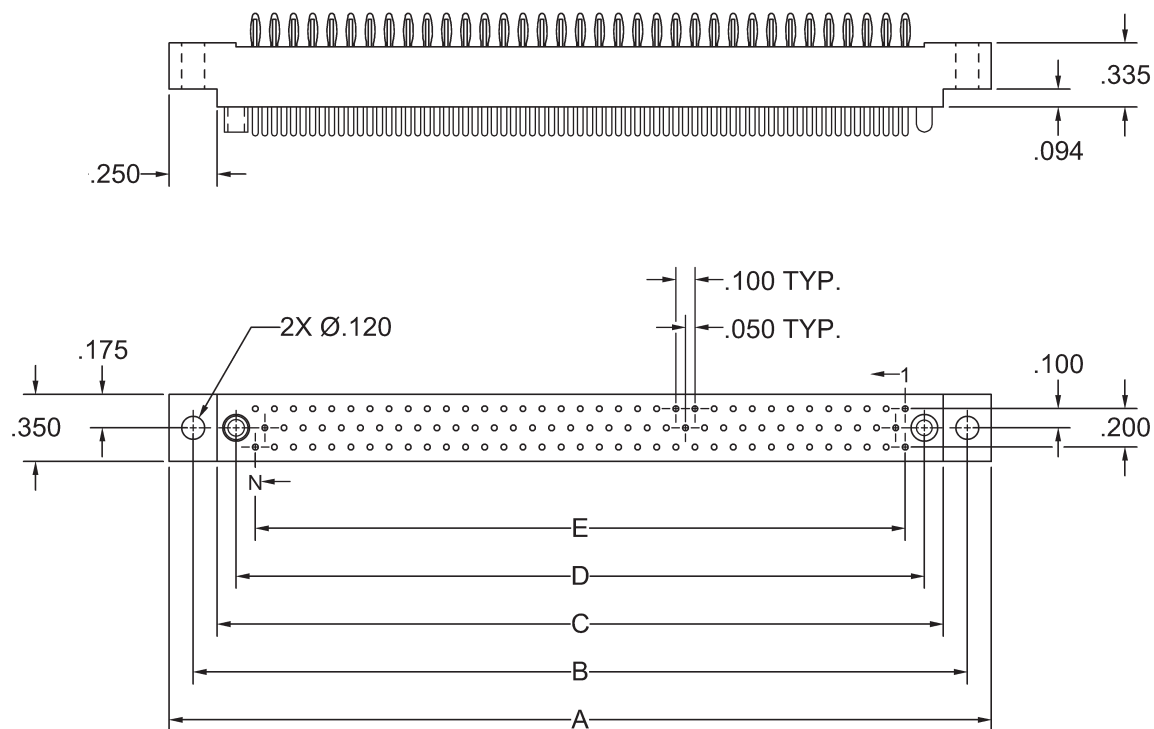
PLUG, RIGHT ANGLE STYLE MEE, MLE, MXE



'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, COMPLIANT STYLE MVE

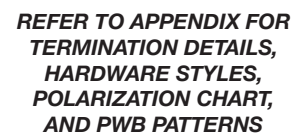


'N' Contacts	A	B	C	D	E
050	2.500	2.250	2.000	1.800	1.600
062	2.900	2.650	2.400	2.200	2.000
080	3.500	3.250	3.000	2.800	2.600
092	3.900	3.650	3.400	3.200	3.000
104	4.300	4.050	3.800	3.600	3.400

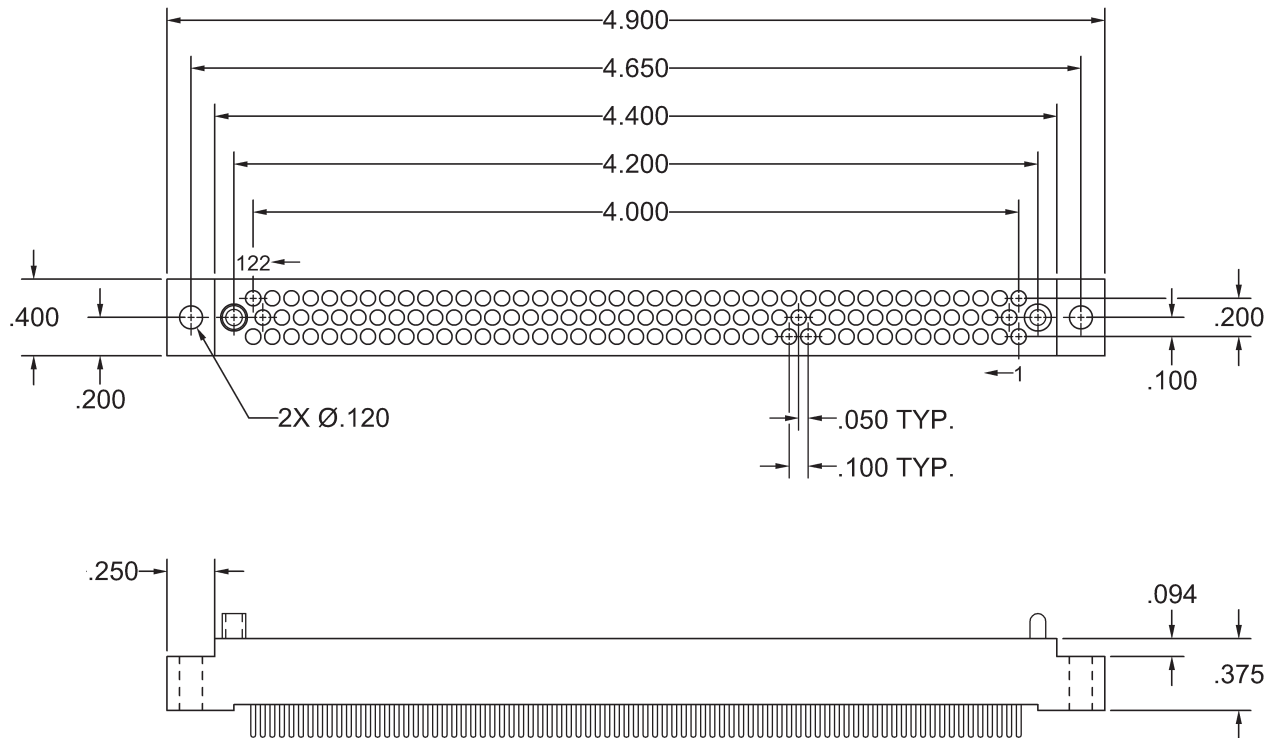
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

Technical drawing of a rectangular plate with the following specifications:

- Overall Dimensions:**
 - Length: 4.900
 - Width: 1.22
- Internal Dimensions (from left edge):**
 - 4.650
 - 4.400
 - 4.200
 - 4.000
- Edge Dimensions:**
 - Left edge: .400 (top), .200 (bottom)
 - Right edge: .200 (top), .100 (bottom)
- Hole Specifications:**
 - Top edge: 2X Ø.120 (two holes, one at each end)
 - Bottom edge: .050 TYP. (typical spacing), .100 TYP. (typical spacing)

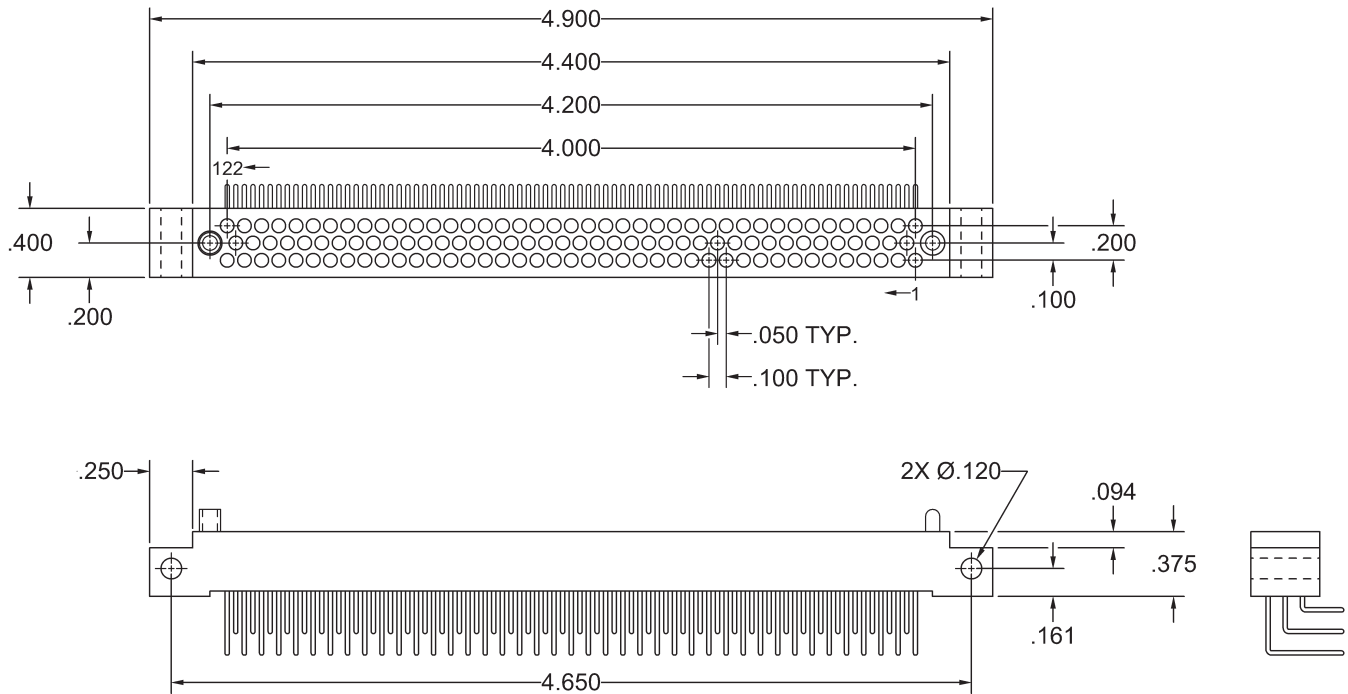


RECEPTACLE, STRAIGHT STYLE HGM122 FBE, FDE, FSE, FWE



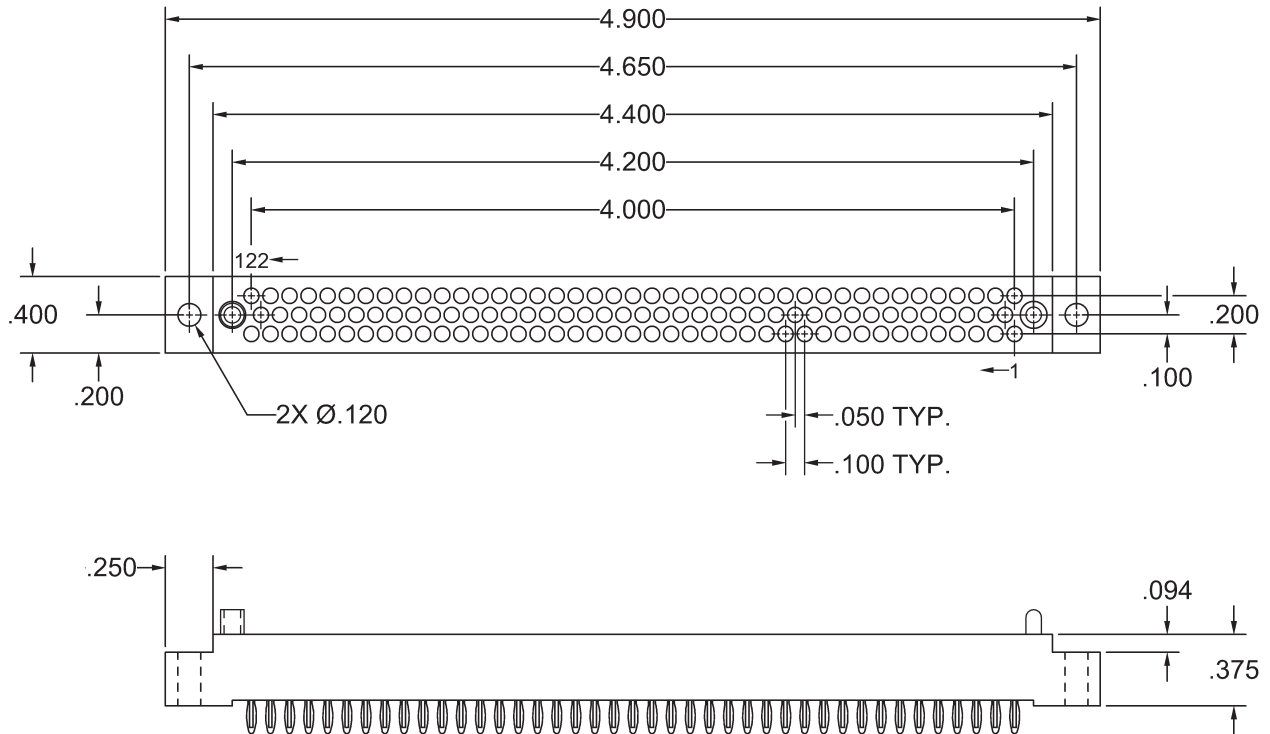
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, RIGHT ANGLE STYLE HGM122 FEE



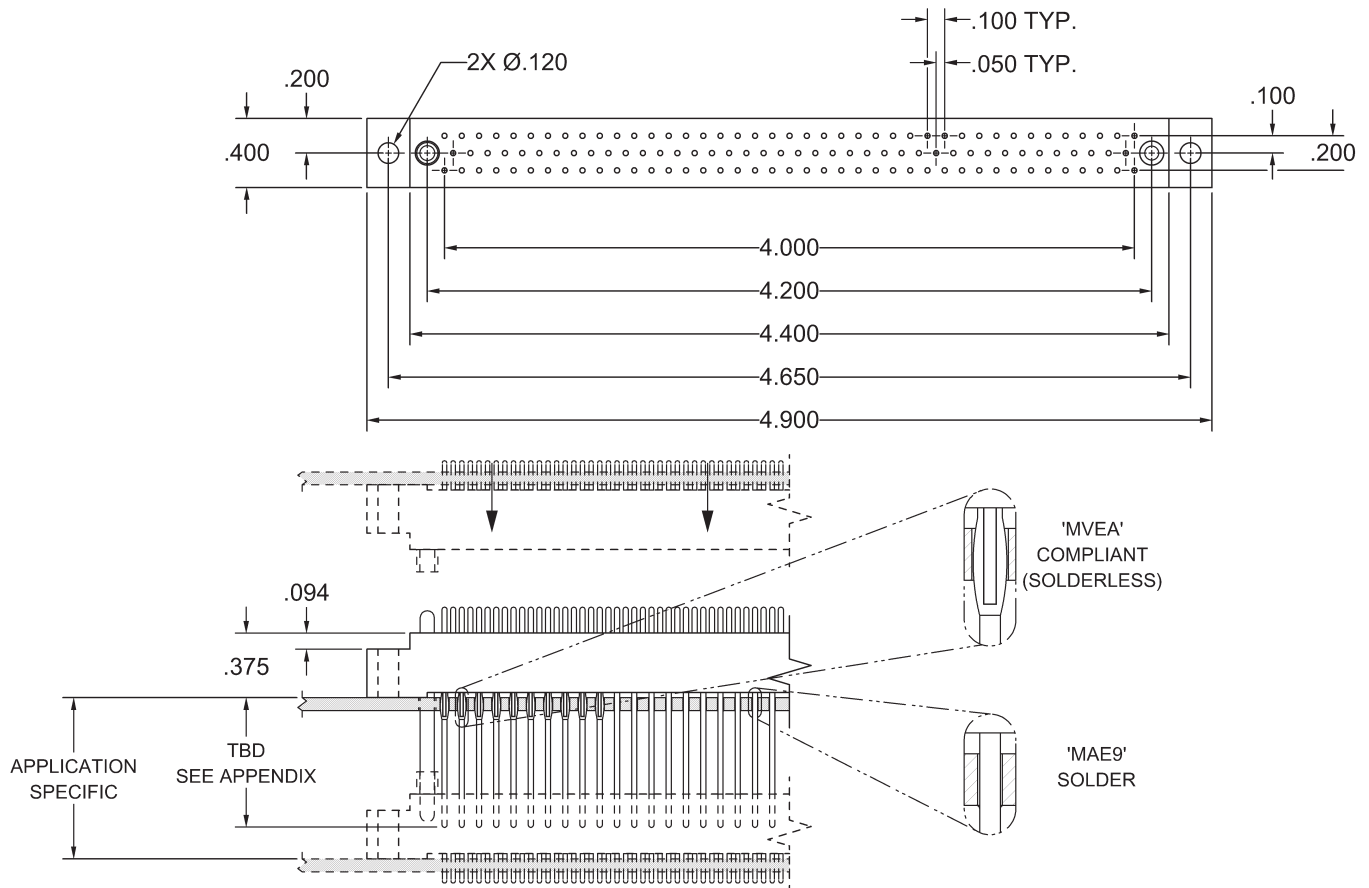
REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

RECEPTACLE, COMPLIANT STYLE HGM122 FVE



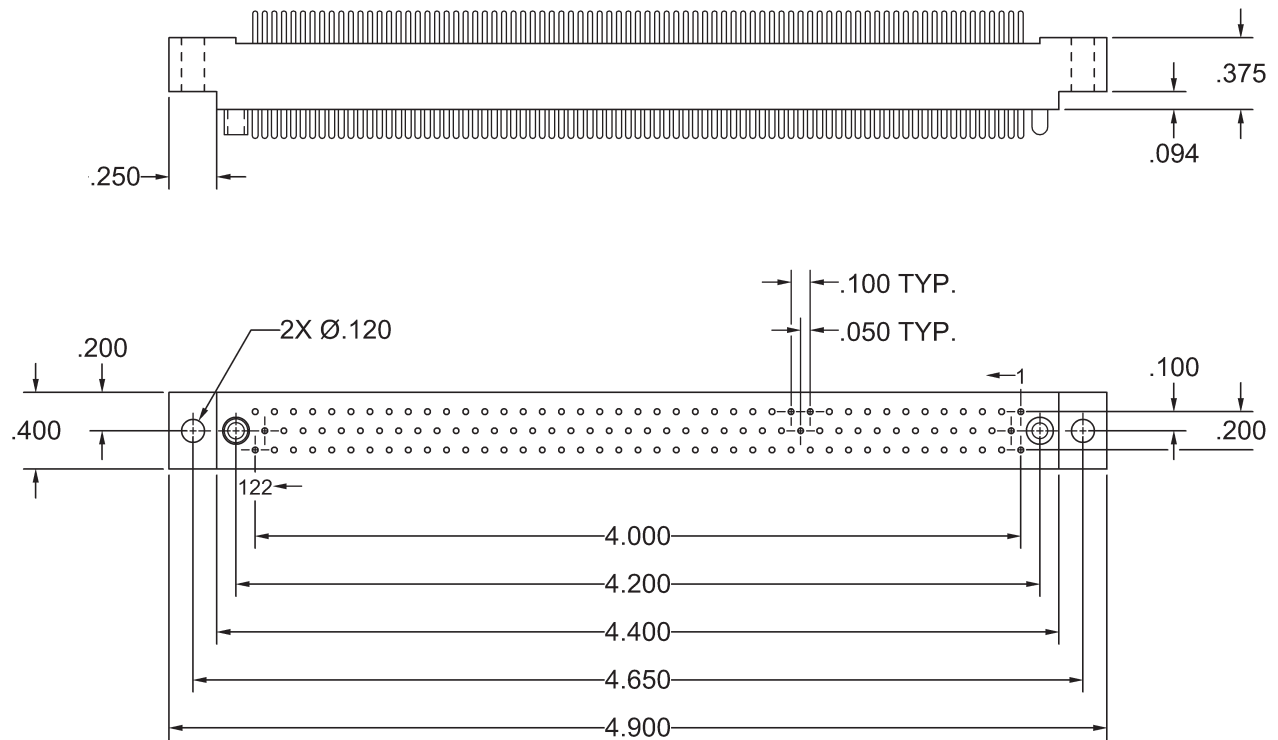
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, STACKING STYLE HGM122 MAE9, MVEA



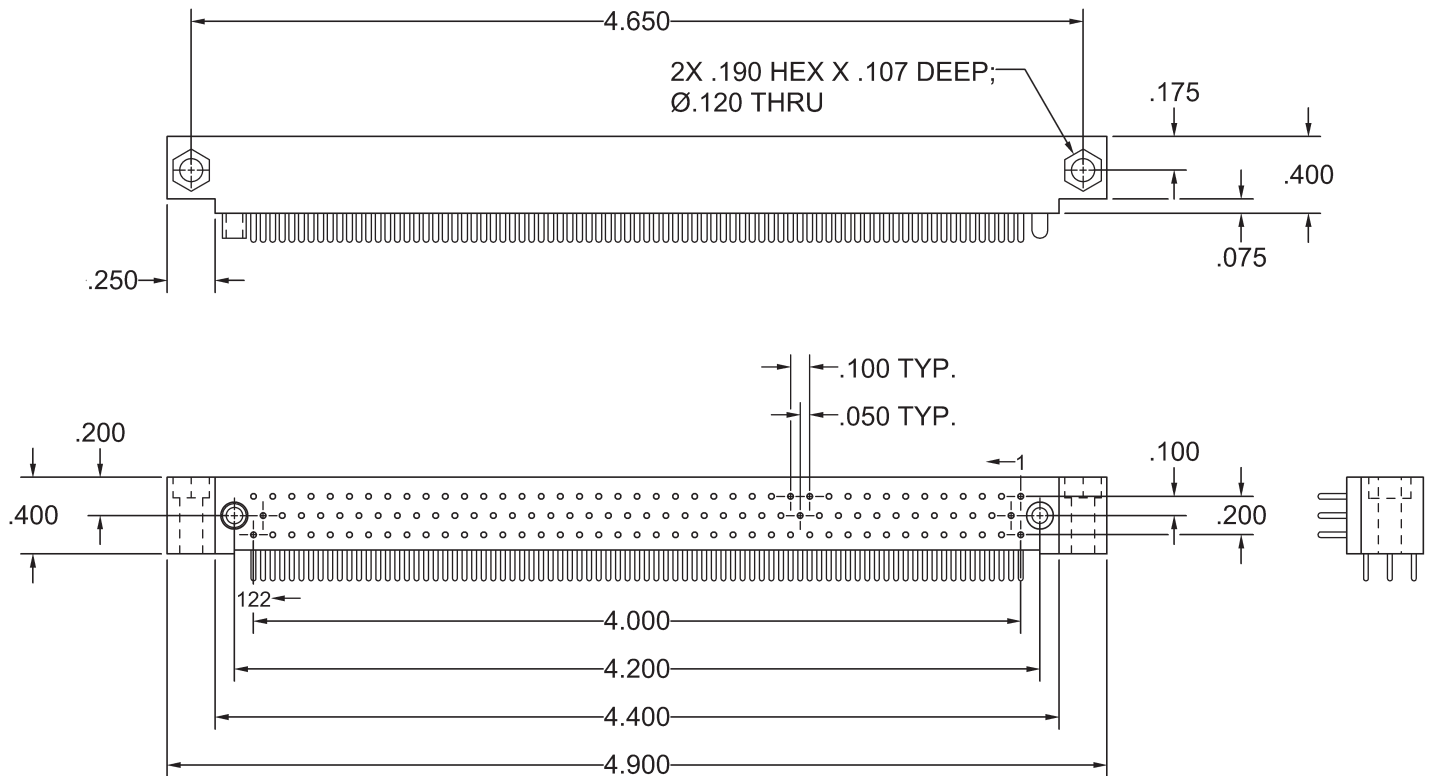
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**PLUG, STRAIGHT
STYLE HGM122 MBE, MDE, MSE, MWE**

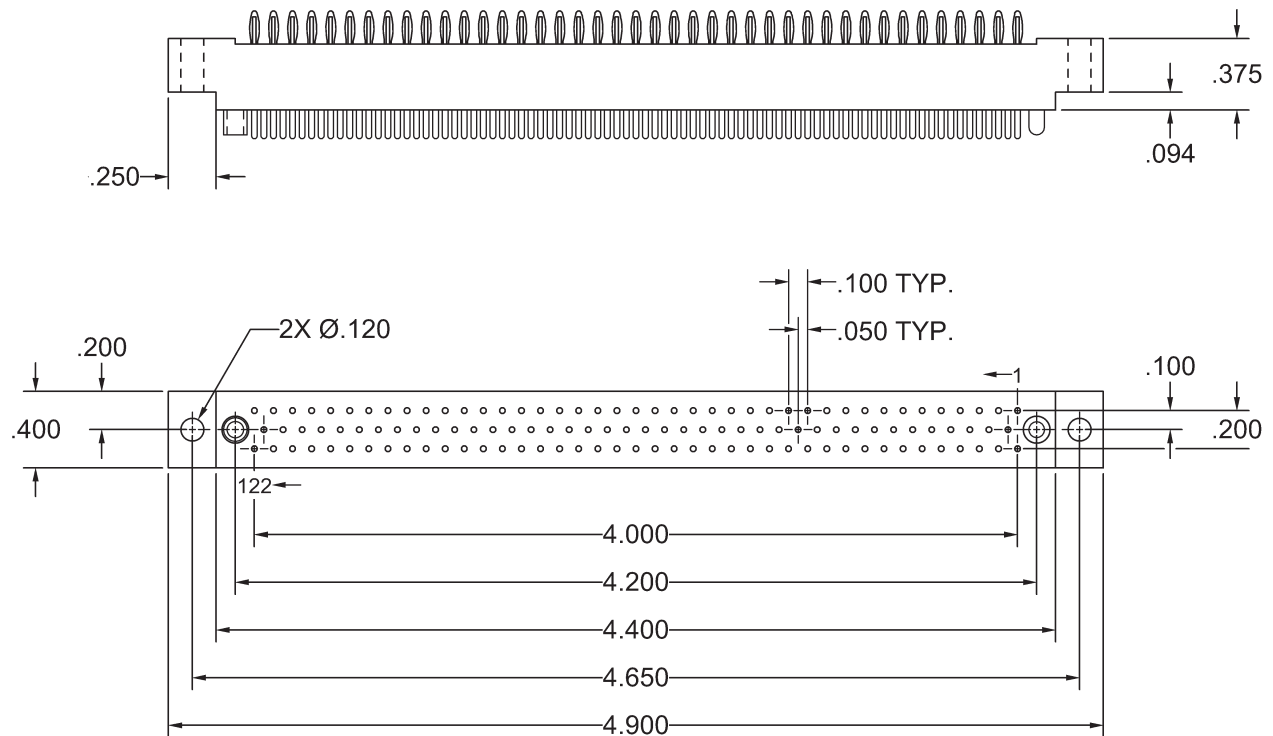


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**PLUG, RIGHT ANGLE
STYLE HGM122 MEE, MLE, MXE**

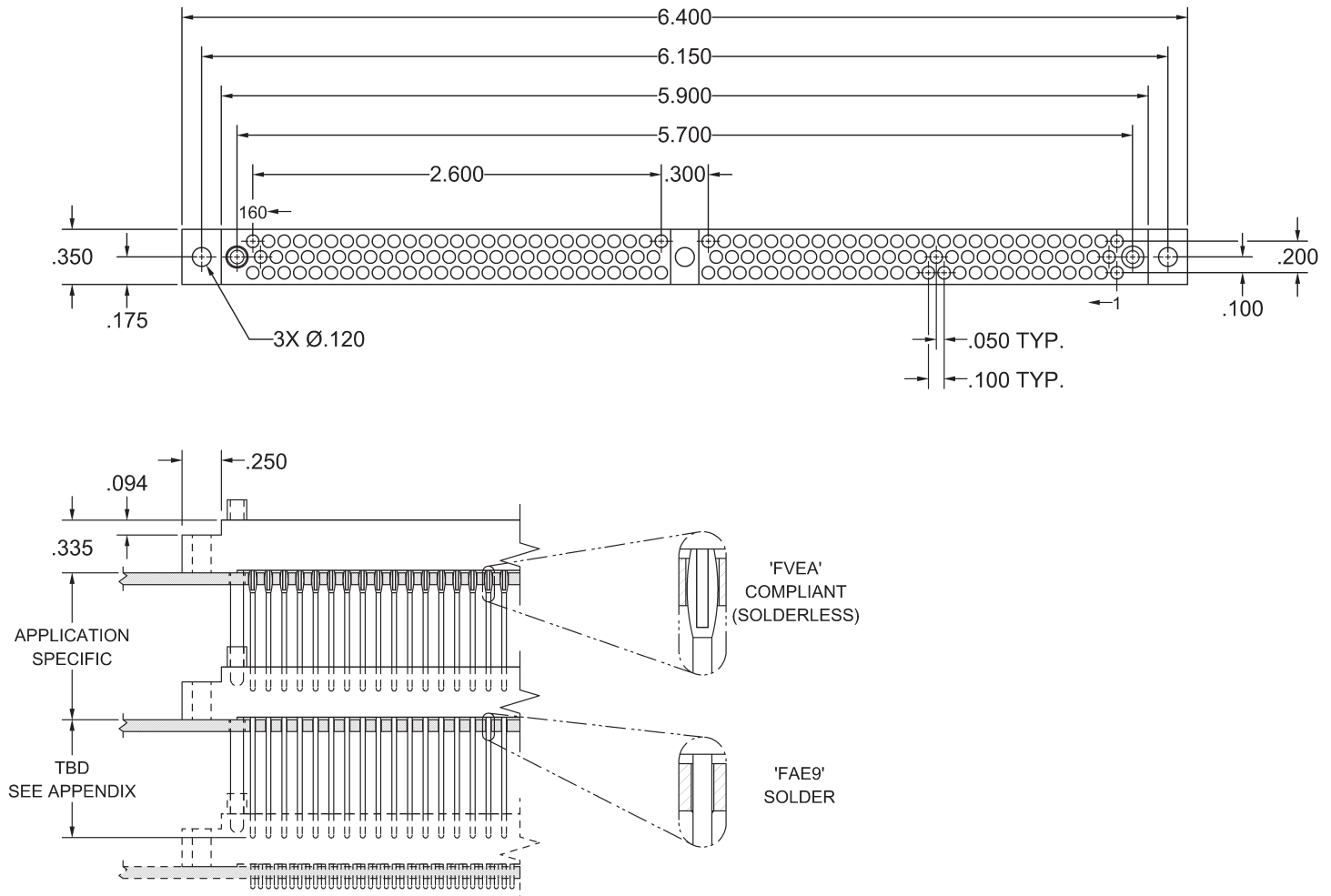


PLUG, COMPLIANT STYLE HGM122 MVE



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

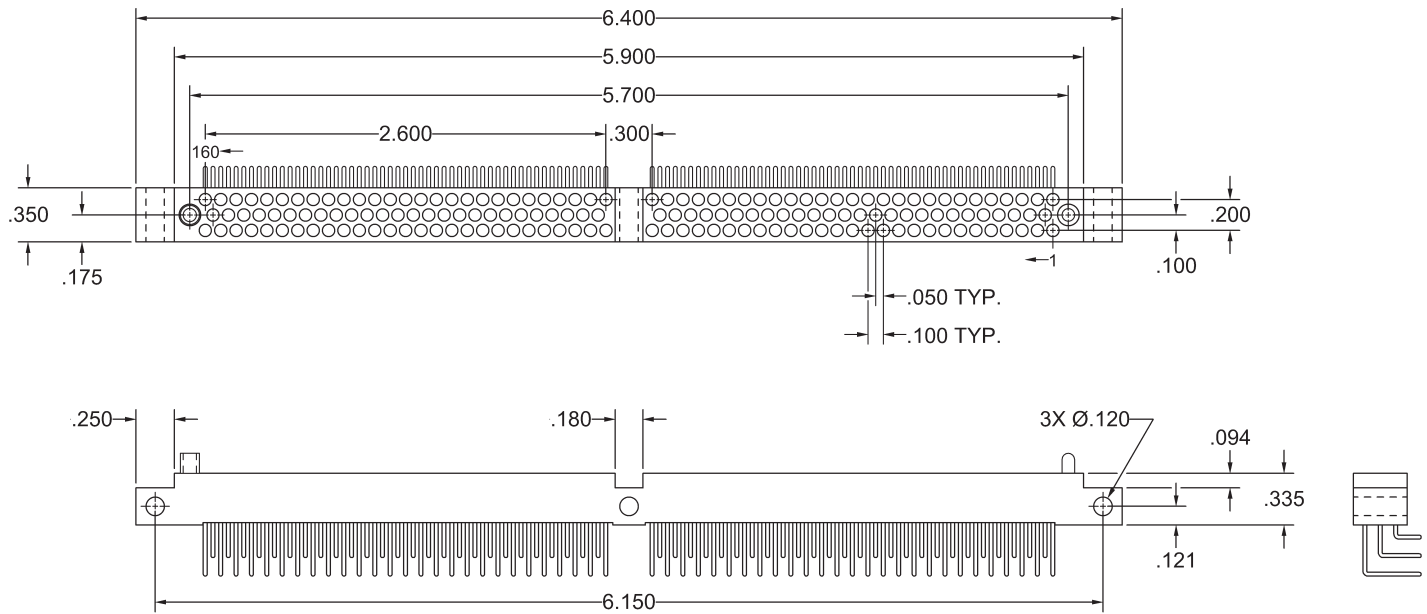
**RECEPTACLE, STACKING
STYLE HGM160 FAE9, FVEA**



**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

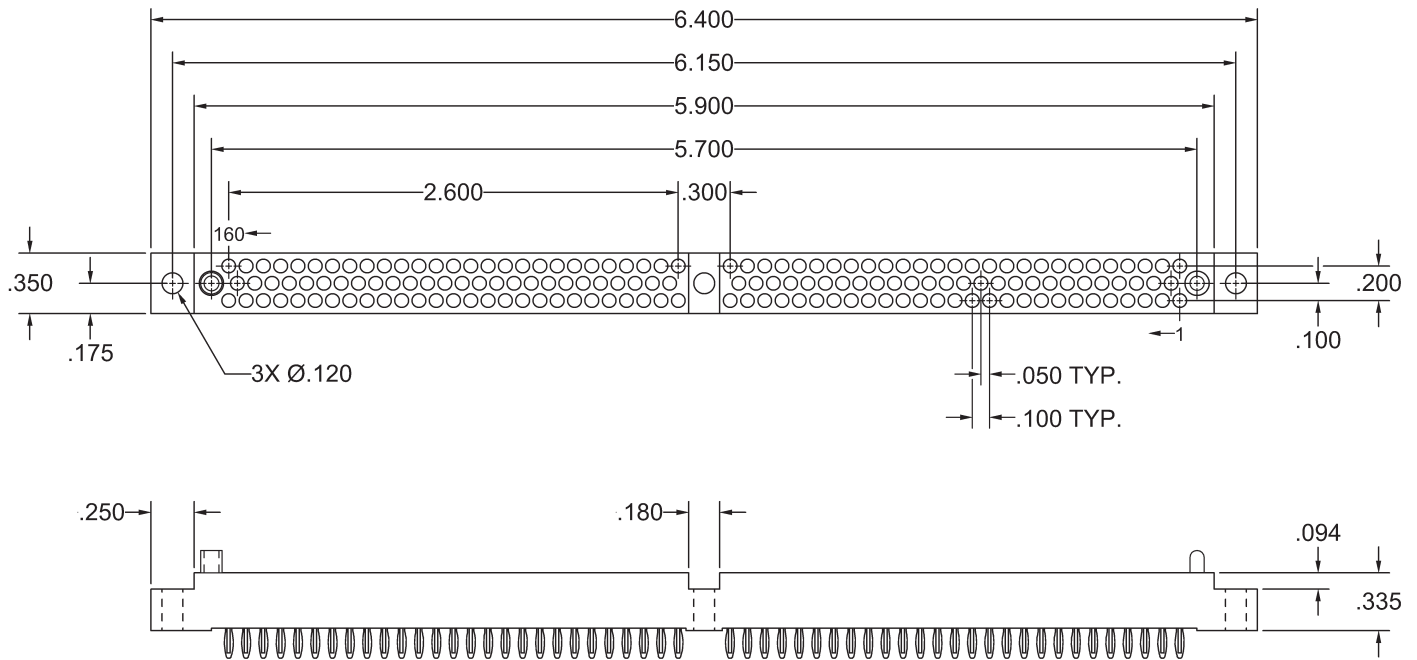
67

RECEPTACLE, RIGHT ANGLE STYLE HGM160 FEE



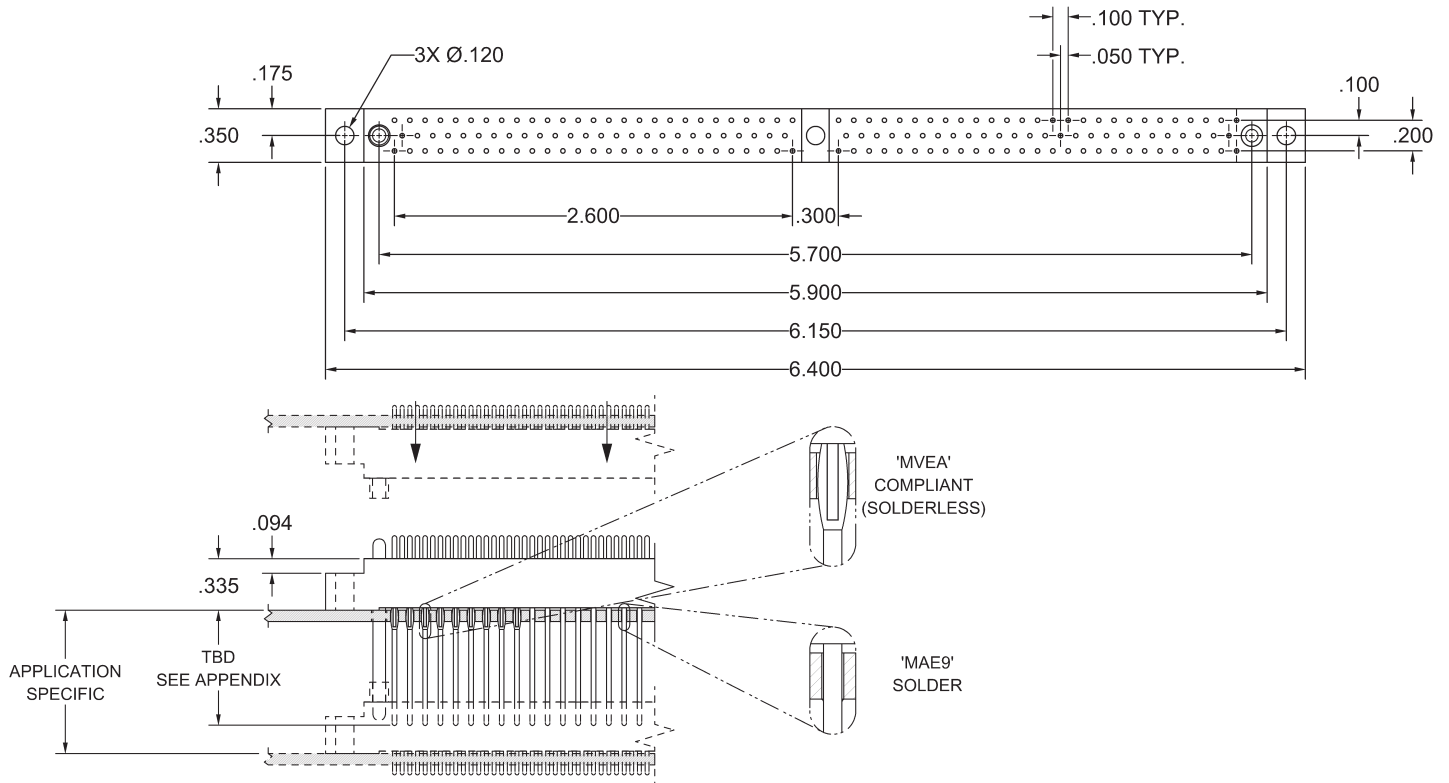
REFER TO APPENDIX FOR
 TERMINATION DETAILS,
 HARDWARE STYLES,
 POLARIZATION CHART,
 AND PWB PATTERNS

RECEPTACLE, COMPLIANT STYLE HGM160 FVE

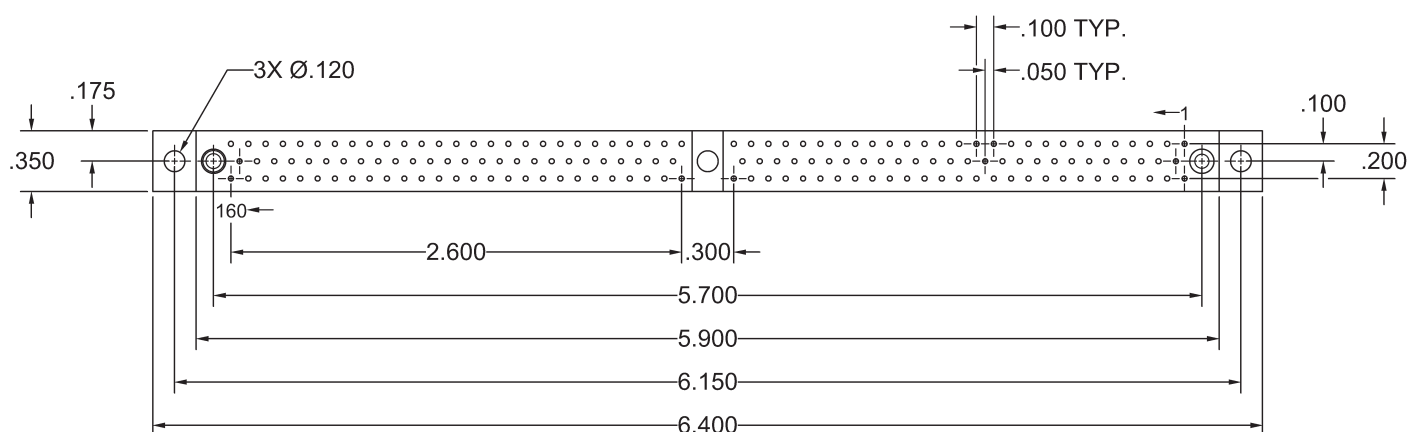


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, STACKING STYLE HGM160 MAE9, MVEA

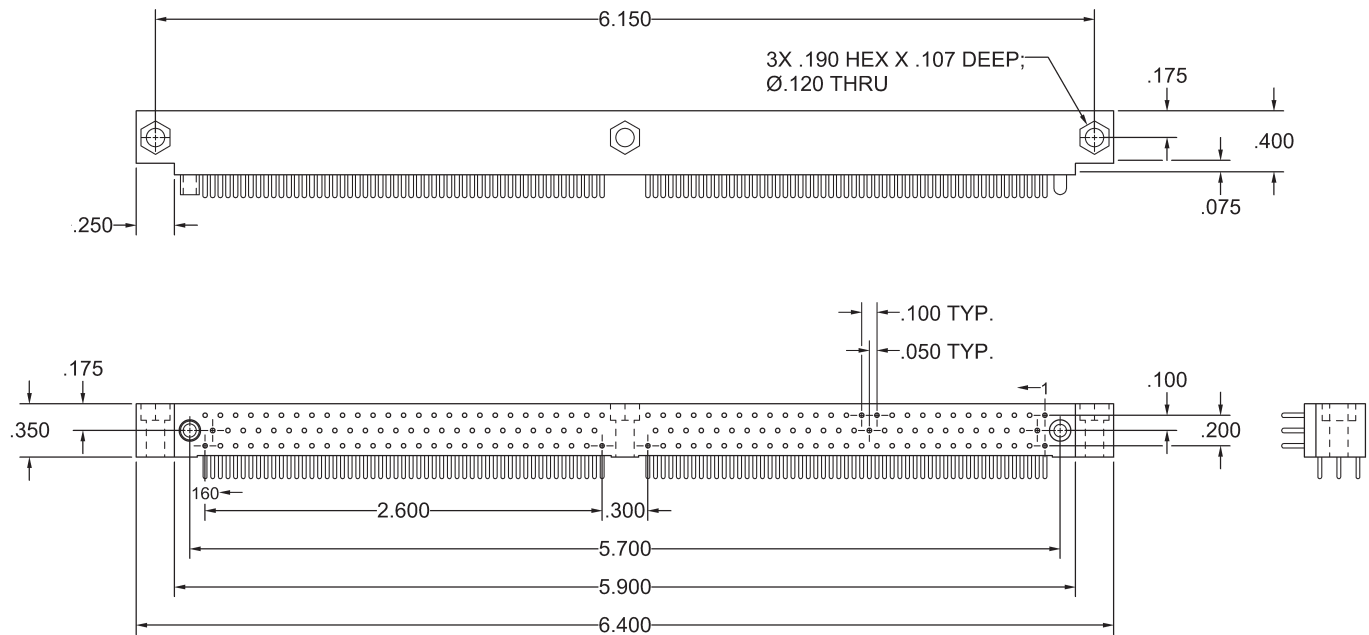


**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**



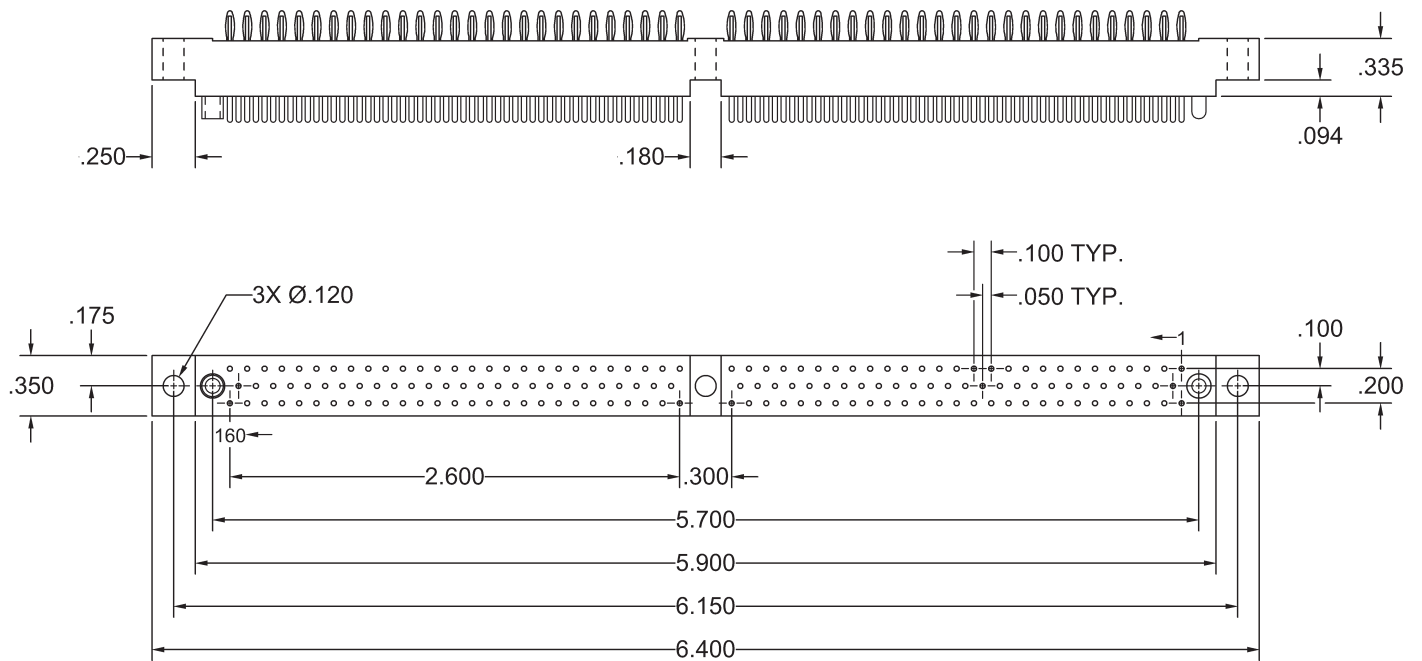
140 58th Street 8E, Brooklyn, NY 11220 Ph: (718) 492-4448 Fax: (718) 492-9898 www.iehcorp.com

**PLUG, RIGHT ANGLE
STYLE HGM160 MEE, MLE, MXE**



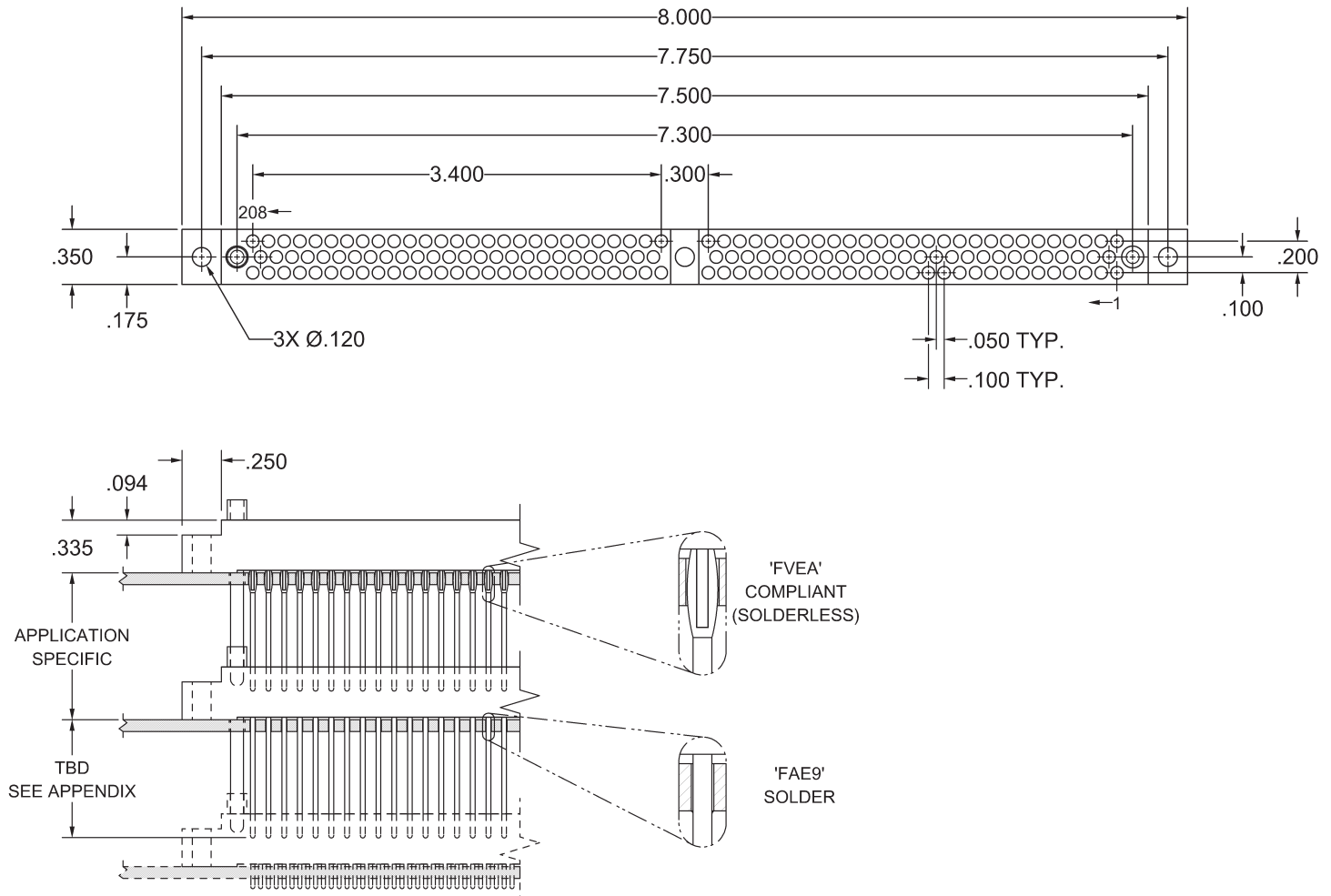
**REFER TO APPENDIX FOR
TERMINATION DETAILS,
HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, COMPLIANT STYLE HGM160 MVE



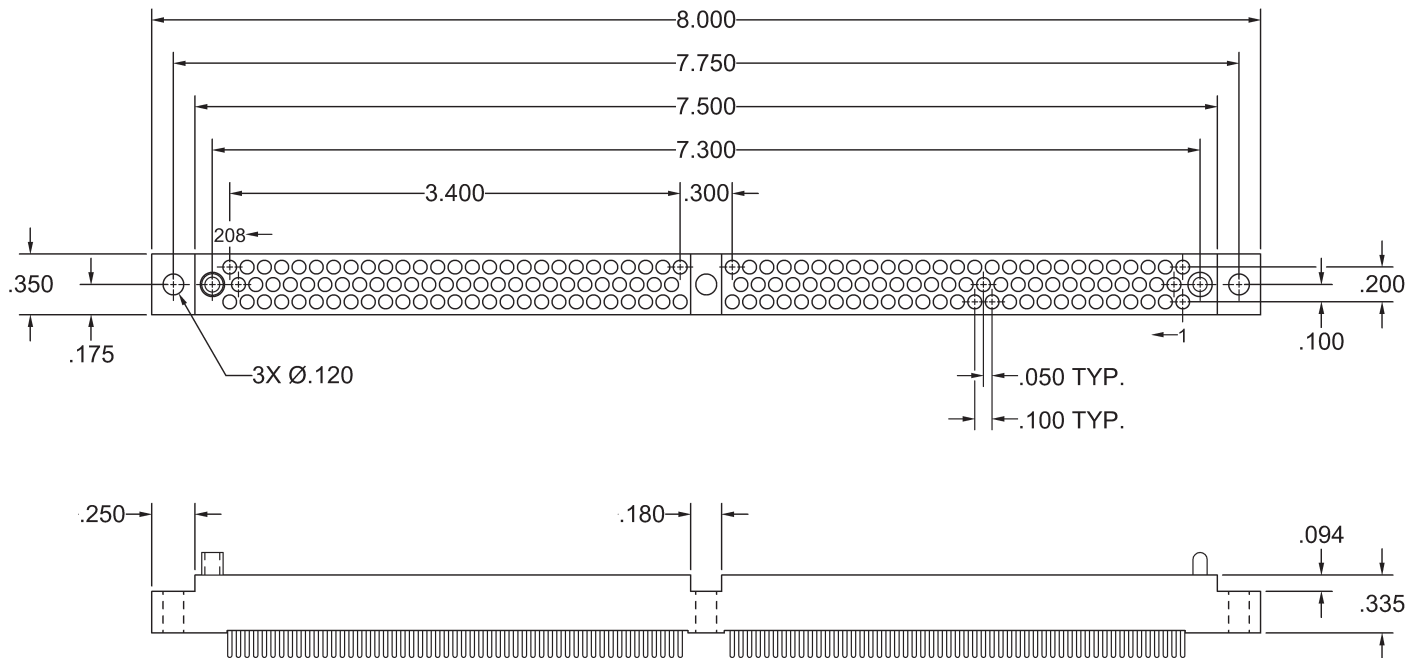
**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, STACKING STYLE HGM208 FAE9, FVEA



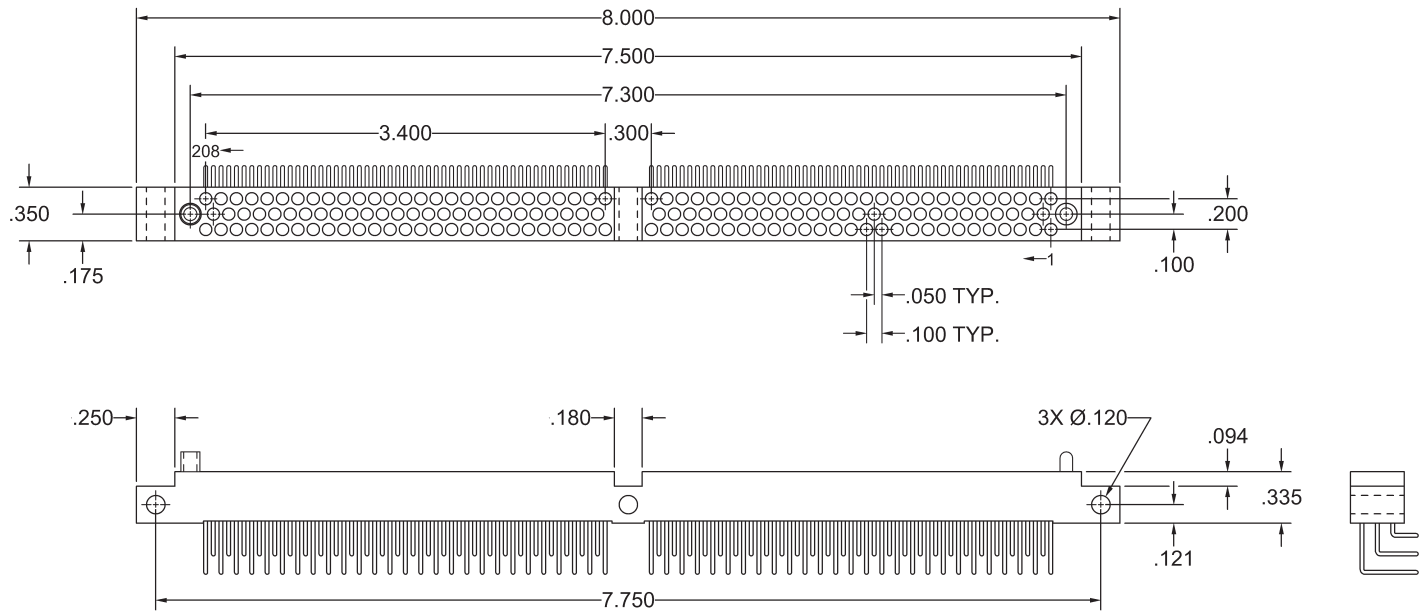
REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

RECEPTACLE, STRAIGHT STYLE HGM208 FBE, FDE, FSE, FWE



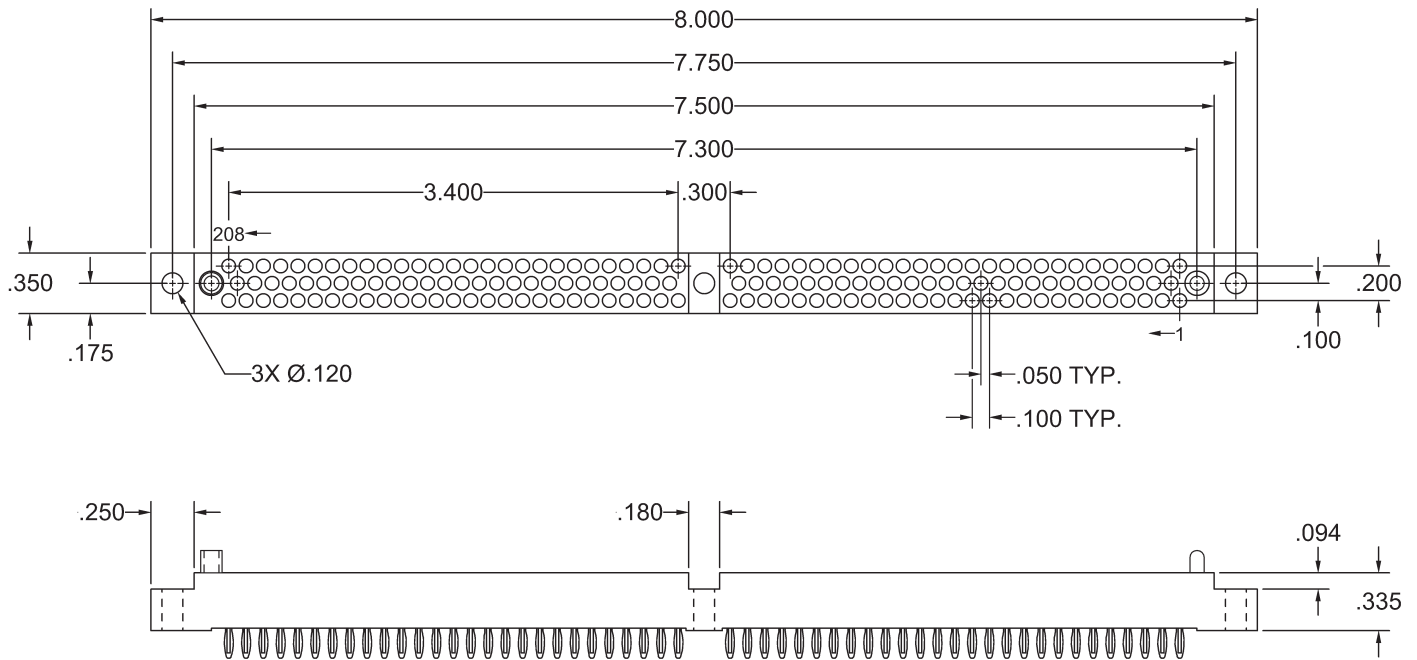
**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

RECEPTACLE, RIGHT ANGLE STYLE HGM208 FEE



REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS

RECEPTACLE, COMPLIANT STYLE HGM208 FVE

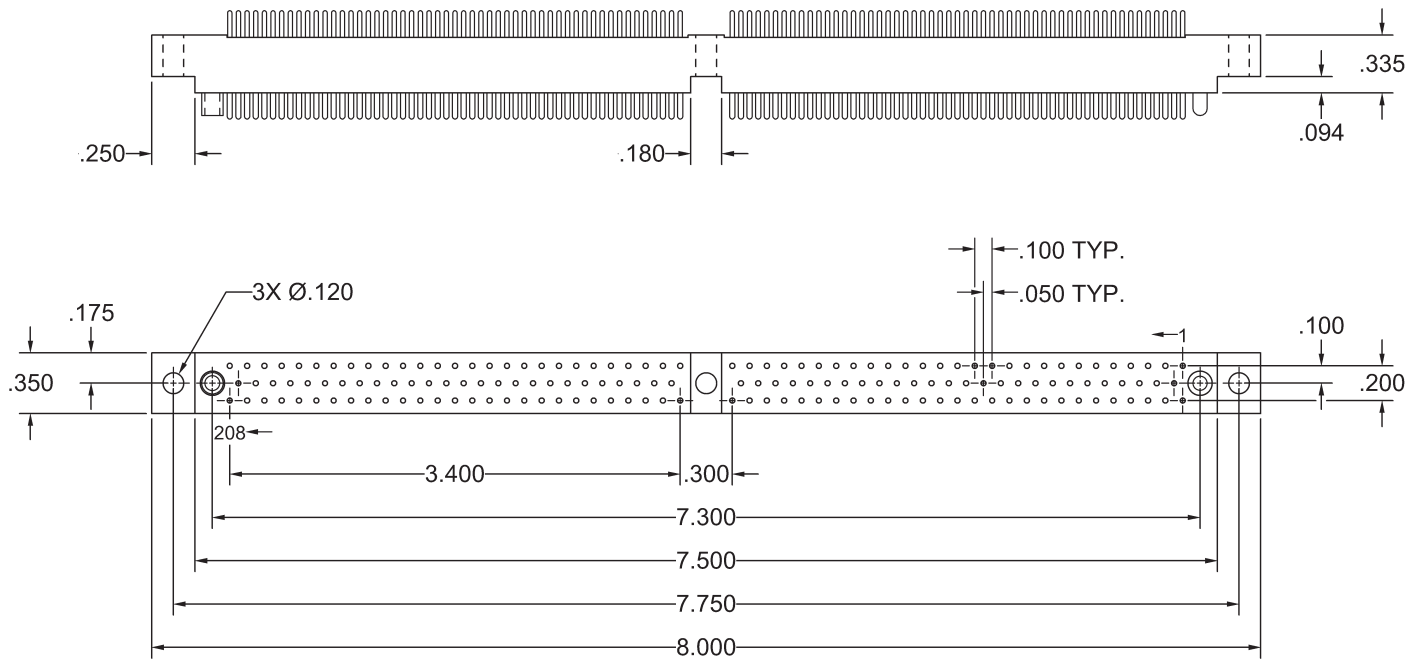


**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

Technical drawing of a 16-channel backplane connector. The top view shows a rectangular connector with dimensions: overall width .350, top thickness .175, bottom thickness .200, and a central slot width .100 TYP. The length is 8.000. There are 3x Ø.120 holes on the left and right sides. The side view shows a height of .094 and a bottom thickness of .335. The connector is labeled 'APPLICATION SPECIFIC' and 'TBD SEE APPENDIX'. Two cross-sections are shown: 'MVEA' COMPLIANT (SOLDERLESS) and 'MAE9' SOLDER.

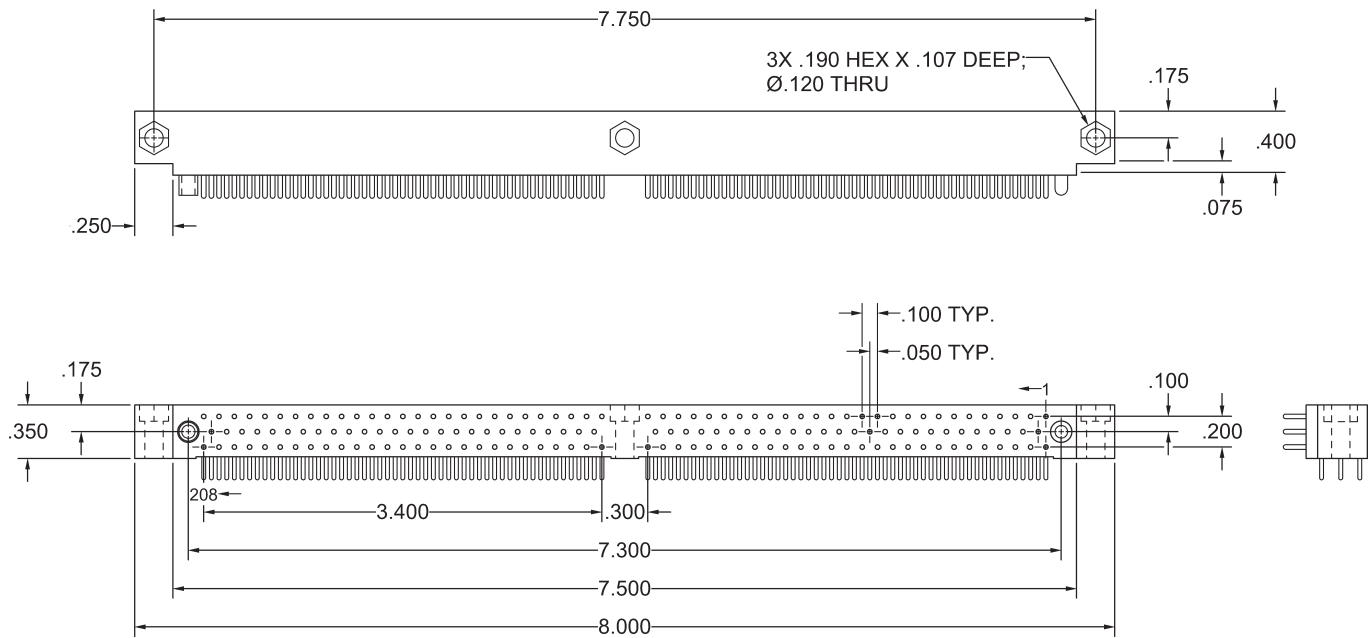
78

PLUG, STRAIGHT **STYLE HGM208 MBE, MDE, MSE, MWE**



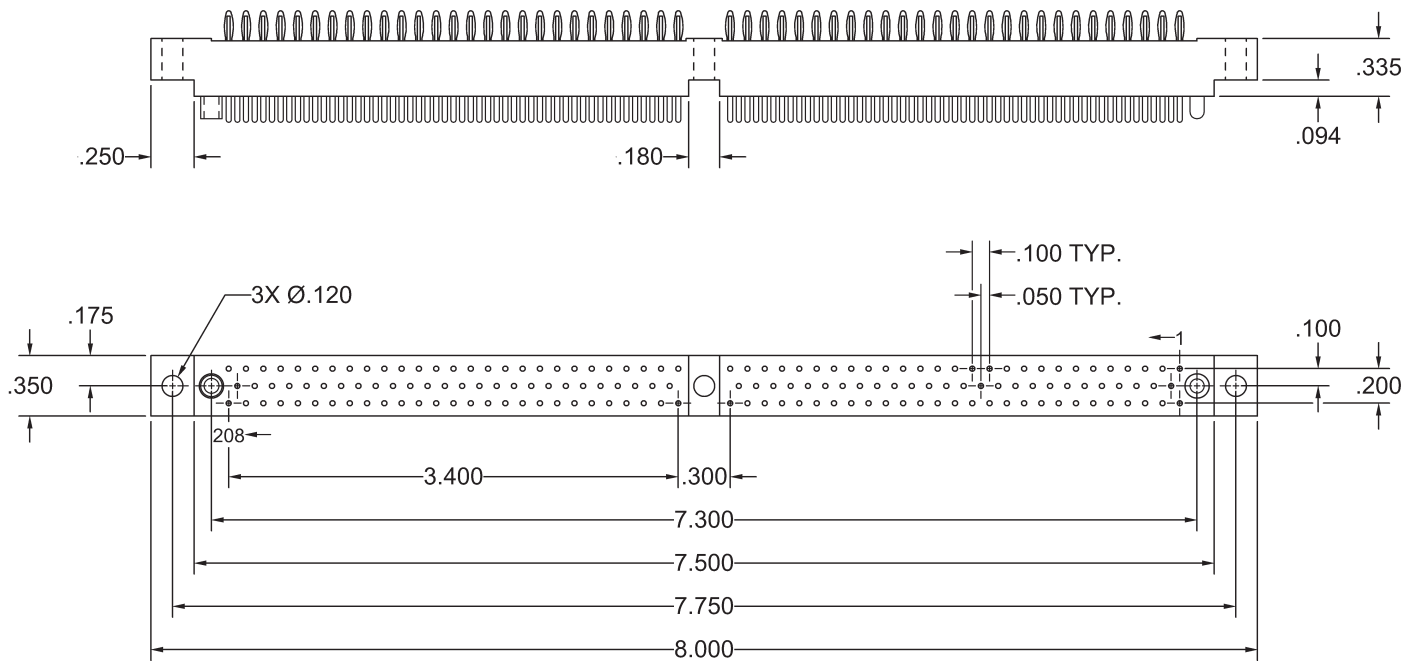
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

PLUG, RIGHT ANGLE
STYLE HGM208 MEE, MLE, MXE

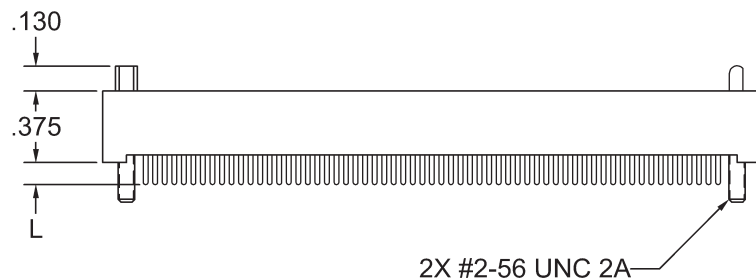
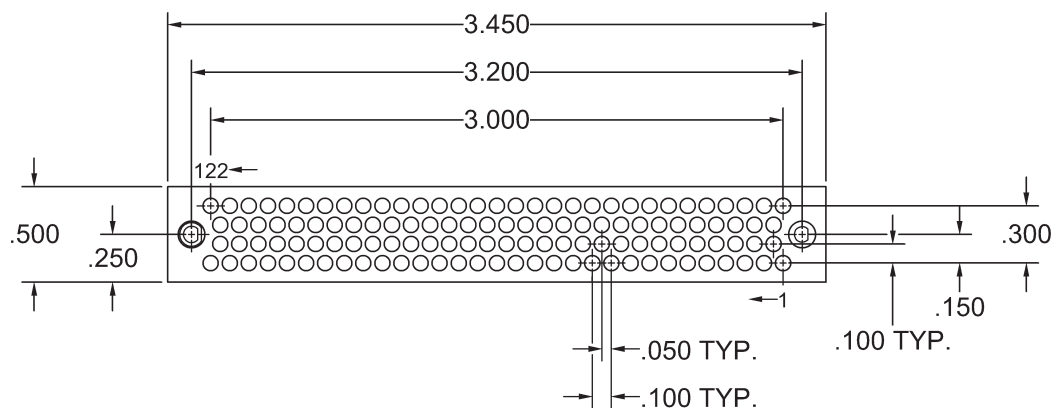


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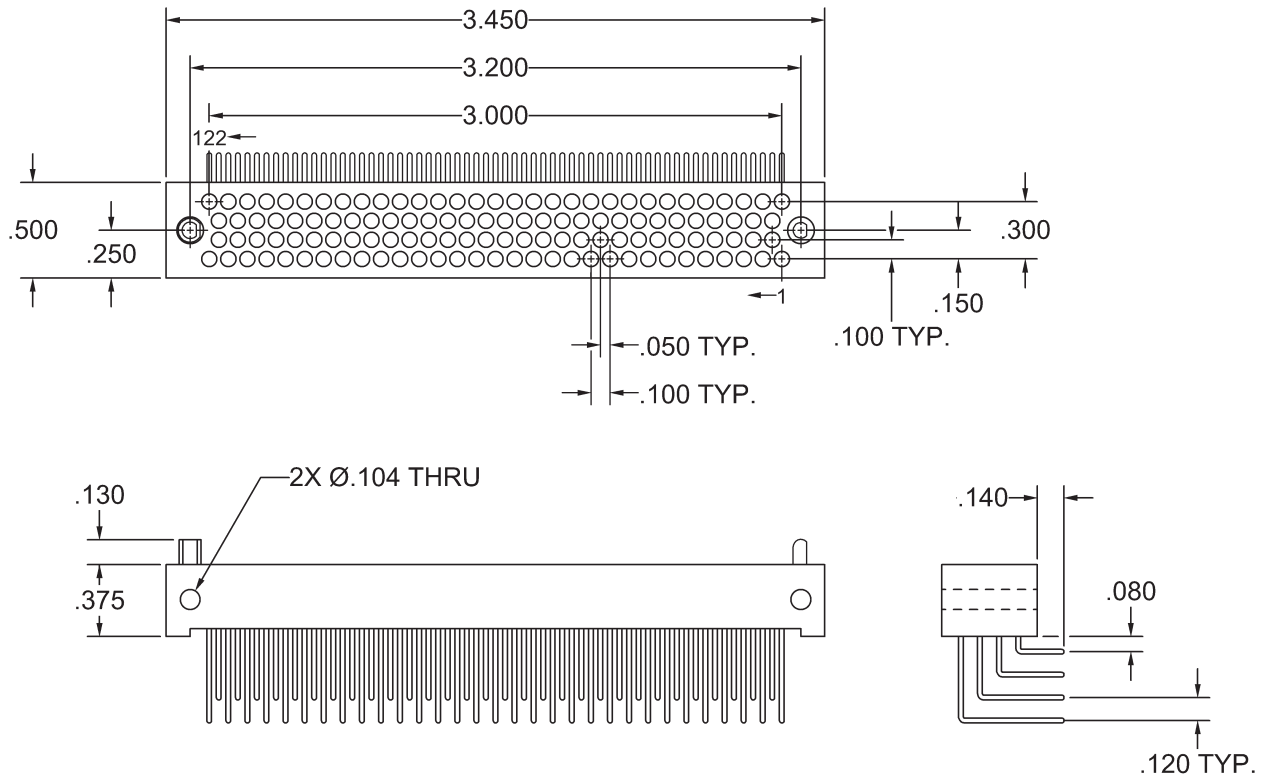
PLUG, COMPLIANT STYLE HGM208 MVE



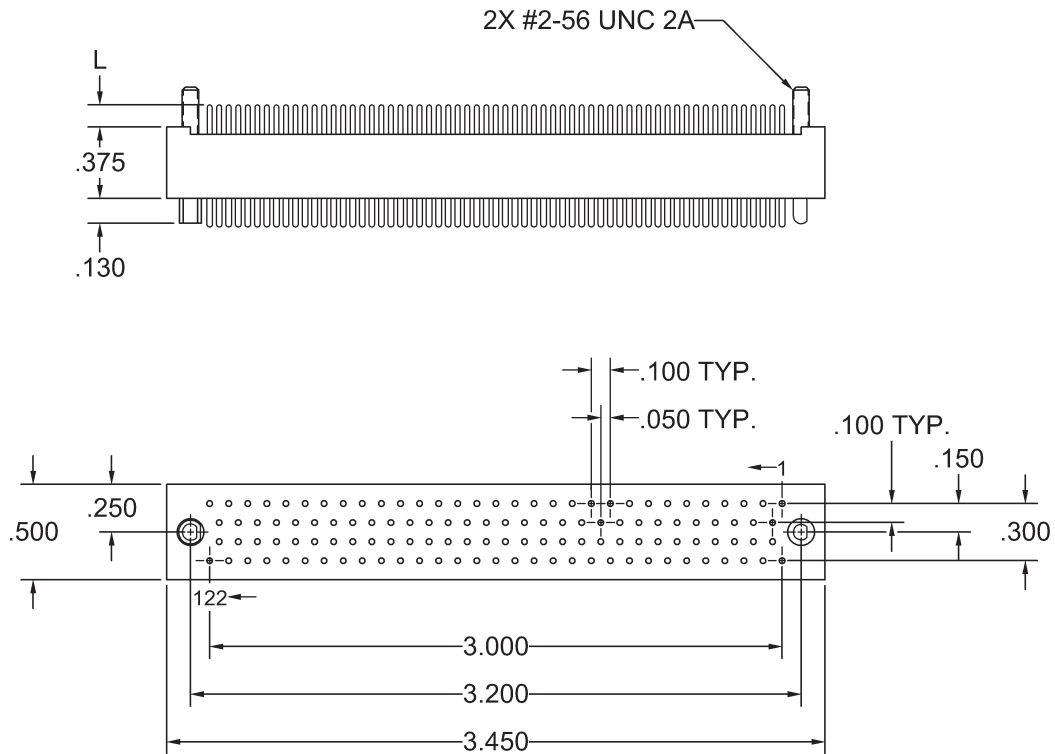
**REFER TO APPENDIX FOR
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HARDWARE STYLES,
POLARIZATION CHART,
AND PWB PATTERNS**

**RECEPTACLE, STRAIGHT
STYLE HGM122 FBE, FDE, FSE, FWE**

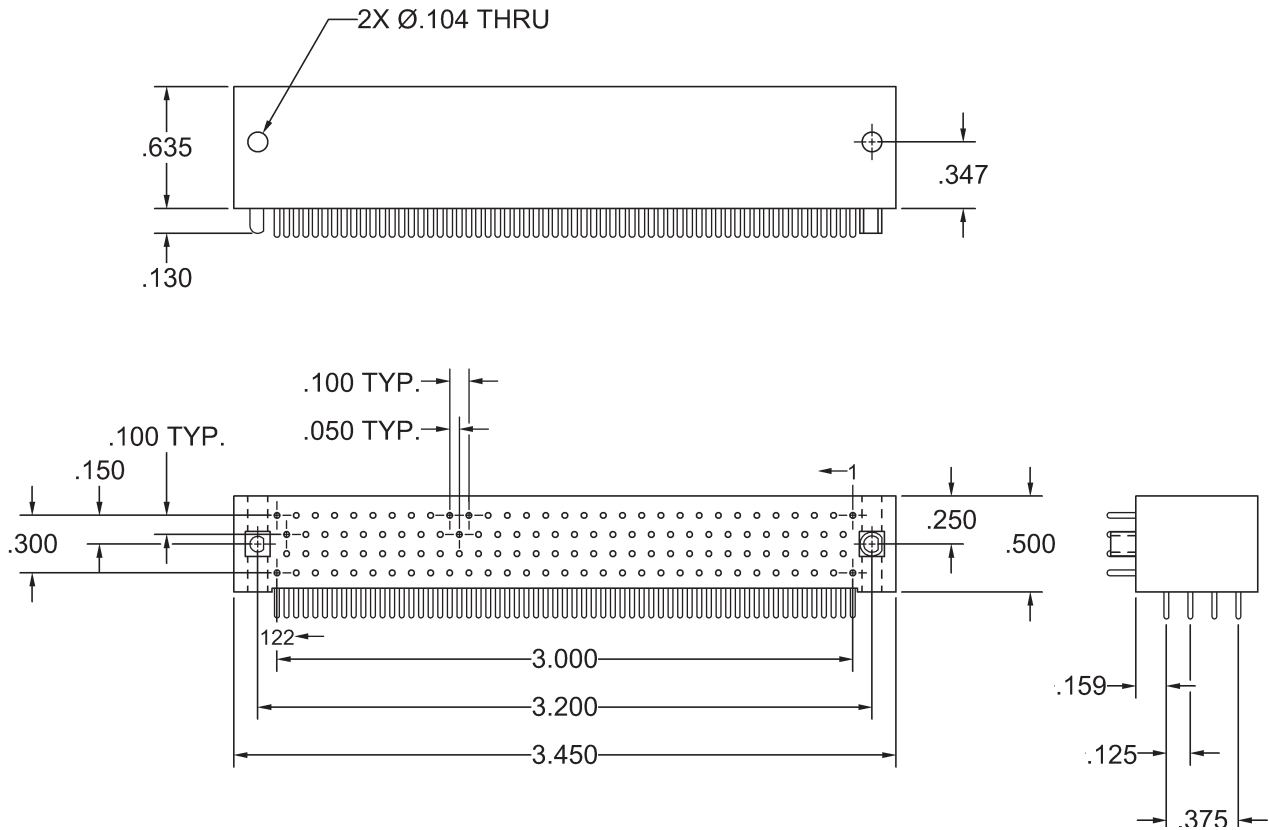
**RECEPTACLE, RIGHT ANGLE
STYLE HGM122 FEE**



**PLUG, STRAIGHT
STYLE HGM122 MBE, MDE, MSE, MWE**



**PLUG, RIGHT ANGLE
STYLE HGM122 MEE**

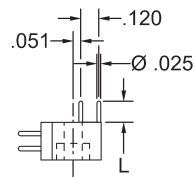


TERMINATION STYLES - 2ROW
RECEPTACLE
HARDWARE OMITTED FOR CLARITY

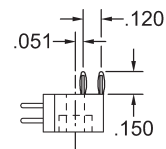
FAE9 SAE9 STACKING		FVEA SVEA COMPLIANT STACKING
FBE SBE FLEX CABLE		FDE SDE DIP SOLDER
FEE SEE DIP SOLDER RIGHT ANGLE		FRE SRE SURFACE MOUNT
FSE SSE SOLDER CUP		FVE SVE COMPLIANT
FWE SWE WIRE WRAP		

TERMINATION STYLES - 2 ROW PLUG, RIGHT ANGLE HARDWARE OMITTED FOR CLARITY

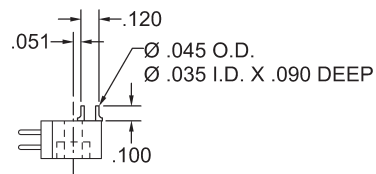
MEE
DIP SOLDER
RIGHT ANGLE



MLE
COMPLIANT
RIGHT ANGLE



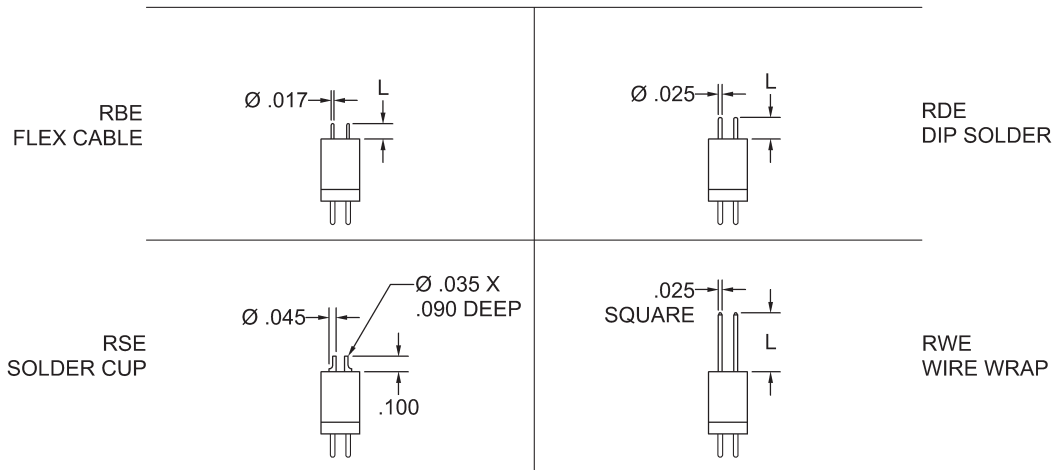
MXE
SOLDER CUP
RIGHT ANGLE



TERMINATION STYLES - 2 ROW
PLUG, STRAIGHT
HARDWARE OMITTED FOR CLARITY

MAE9 PAE9 STACKING		MVEA PVEA COMPLIANT STACKING
MBE PBE FLEX CABLE		MDE PDE DIP SOLDER
MRE PRE SURFACE MOUNT		MSE PSE SOLDER CUP
MVE PVE COMPLIANT		MWE PWE WIRE WRAP

**TERMINATION STYLES - 2 ROW
PLUG, STRAIGHT, HIGH PROFILE, 090 & 120 ONLY
HARDWARE OMITTED FOR CLARITY**

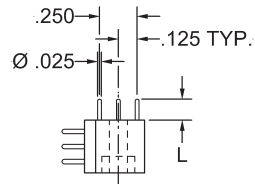


TERMINATION STYLES - 3 ROW
RECEPTACLE
HARDWARE OMITTED FOR CLARITY

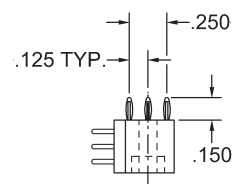
F AE9 STACKING		FVEA COMPLIANT STACKING																					
FBE FLEX CABLE		FDE DIP SOLDER																					
FVE COMPLIANT		FWE WIRE WRAP																					
FSE SOLDER CUP		<table border="1"><thead><tr><th>CONNECTOR</th><th>A</th><th>B</th><th>C</th></tr></thead><tbody><tr><td>HGM[050-104]</td><td>Ø .039 X.090 DEEP</td><td>0.18</td><td>0.055</td></tr><tr><td>HGM122</td><td>Ø .039 X.090 DEEP</td><td>0.15</td><td>0.055</td></tr><tr><td>HGM160</td><td>Ø .035 X.090 DEEP</td><td>0.10</td><td>0.045</td></tr><tr><td>HGM208</td><td>Ø .035 X.090 DEEP</td><td>0.10</td><td>0.045</td></tr></tbody></table>		CONNECTOR	A	B	C	HGM[050-104]	Ø .039 X.090 DEEP	0.18	0.055	HGM122	Ø .039 X.090 DEEP	0.15	0.055	HGM160	Ø .035 X.090 DEEP	0.10	0.045	HGM208	Ø .035 X.090 DEEP	0.10	0.045
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FEE DIP SOLDER RIGHT ANGLE		<table border="1"><thead><tr><th>CONNECTOR</th><th>A</th><th>B</th></tr></thead><tbody><tr><td>HGM[050-104]</td><td>0.200</td><td>0.120</td></tr><tr><td>HGM122</td><td>0.240</td><td>0.125</td></tr><tr><td>HGM160</td><td>0.200</td><td>0.120</td></tr><tr><td>HGM208</td><td>0.200</td><td>0.120</td></tr></tbody></table>		CONNECTOR	A	B	HGM[050-104]	0.200	0.120	HGM122	0.240	0.125	HGM160	0.200	0.120	HGM208	0.200	0.120					
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HGM160	0.200	0.120																					
HGM208	0.200	0.120																					

TERMINATION STYLES - 3 ROW PLUG, RIGHT ANGLE HARDWARE OMITTED FOR CLARITY

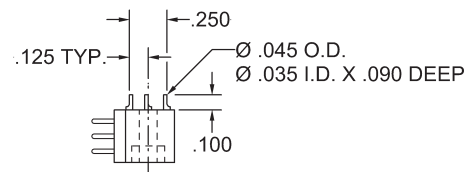
MEE
DIP SOLDER
RIGHT ANGLE



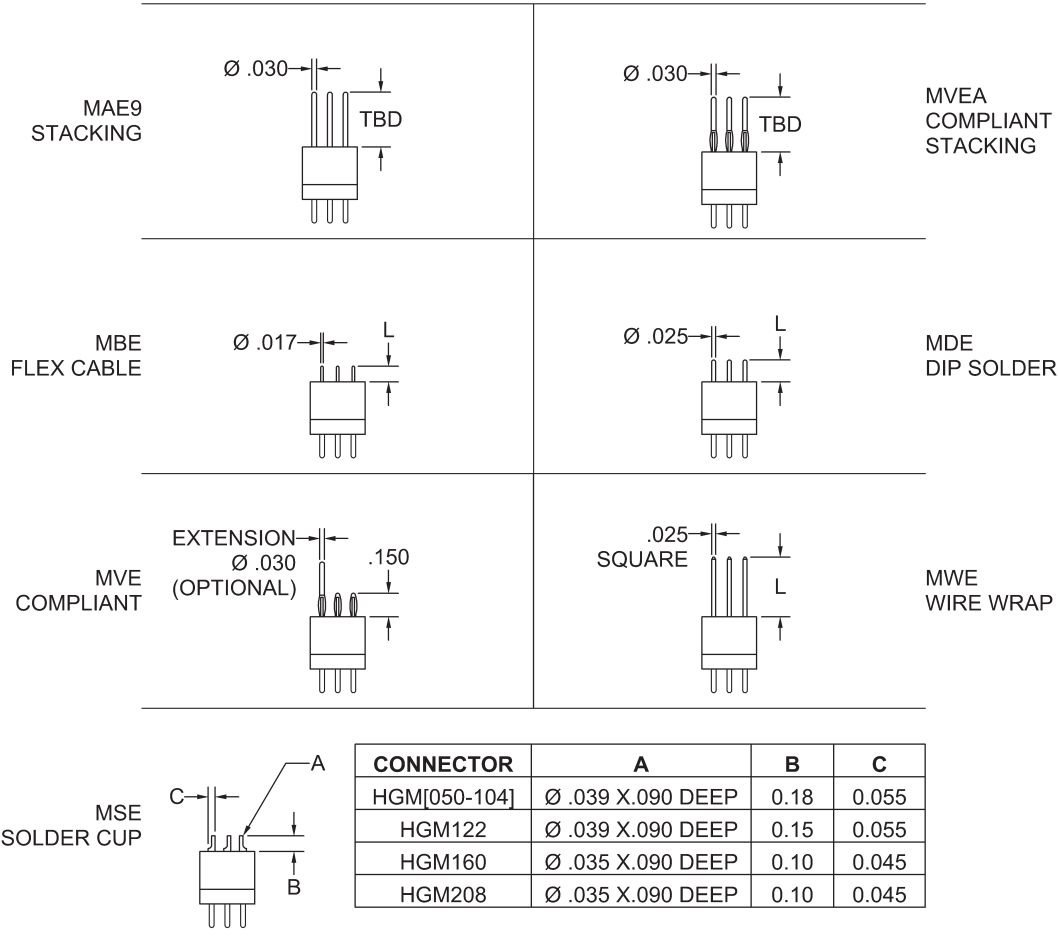
MLE
COMPLIANT
RIGHT ANGLE



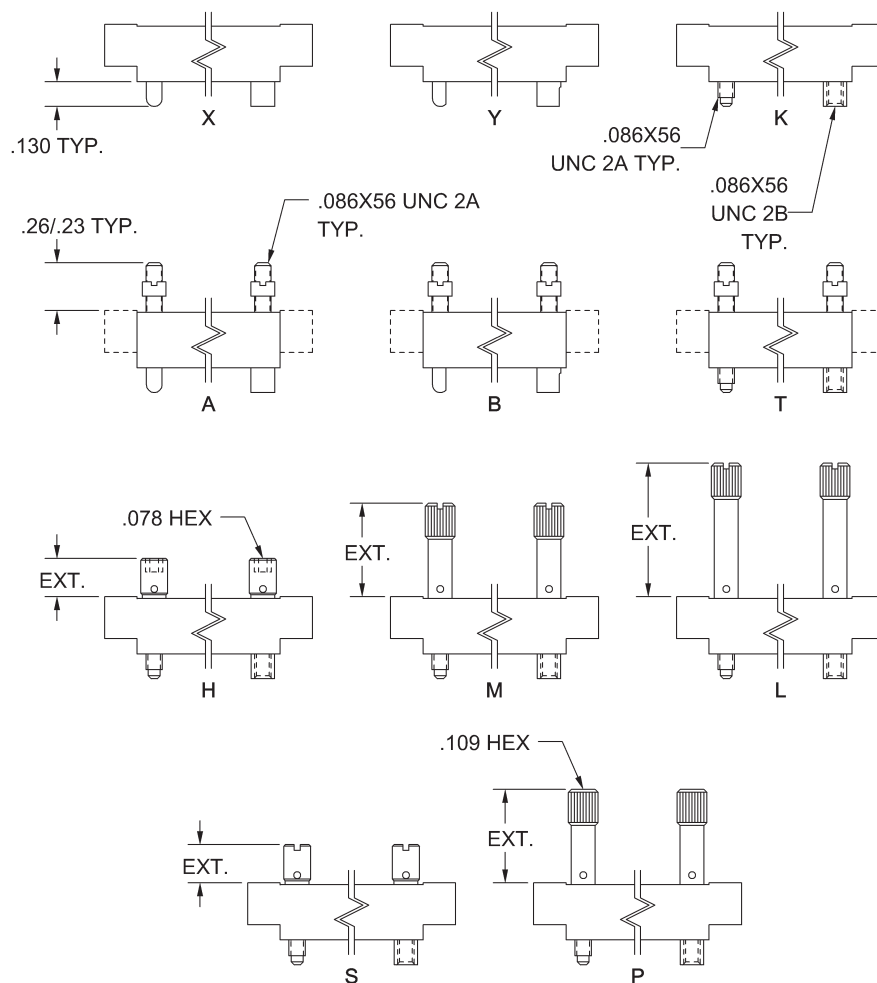
MXE
SOLDER CUP
RIGHT ANGLE



TERMINATION STYLES - 3 ROW
PLUG, STRAIGHT
HARDWARE OMITTED FOR CLARITY



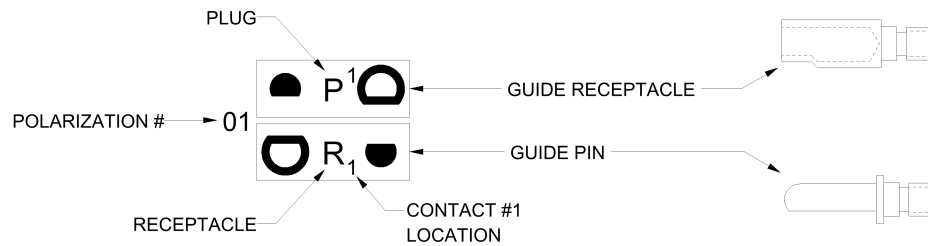
HARDWARE STYLES 2 & 3 ROW



HARDWARE EXTENSION (EXT.)		
STYLE	LOW PROFILE INSULATOR	HIGH PROFILE INSULATOR
H,S	.200	.135
M,P	.500	.435
L	.700	.635

HARDWARE COMPATIBILITY											
	A	B	H	K	L	M	P	S	T	X	Y
A	•									•	
B		•									•
H				•					•		
K			•		•	•	•	•			
L				•					•		
M				•					•		
P				•					•		
S				•					•		
T			•		•	•	•	•			
X	•									•	
Y		•									•

POLARIZATION CHART 2 & 3 ROW



01 - 64 USE FOR HARDWARE STYLE 'Y' AND 'B'

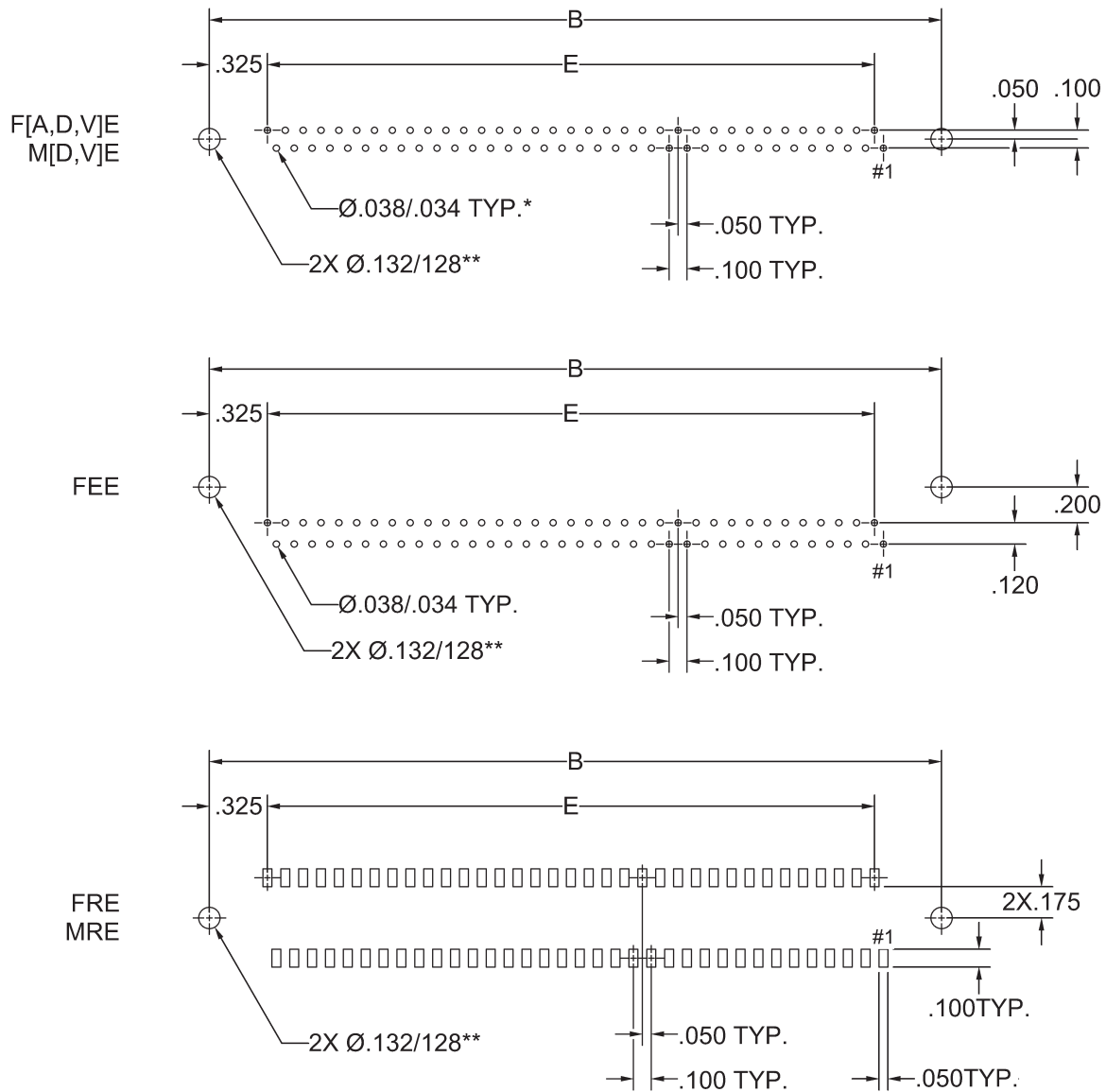
01	09	17	25	33	41	49	57
02	10	18	26	34	42	50	58
03	11	19	27	35	43	51	59
04	12	20	28	36	44	52	60
05	13	21	29	37	45	53	61
06	14	22	30	38	46	54	62
07	15	23	31	39	47	55	63
08	16	24	32	40	48	56	64

UNIVERSAL TEST

USE FOR OPTION: A,H,K,L,M,P,S,T,X

65	66	67	68	69	70	71	72
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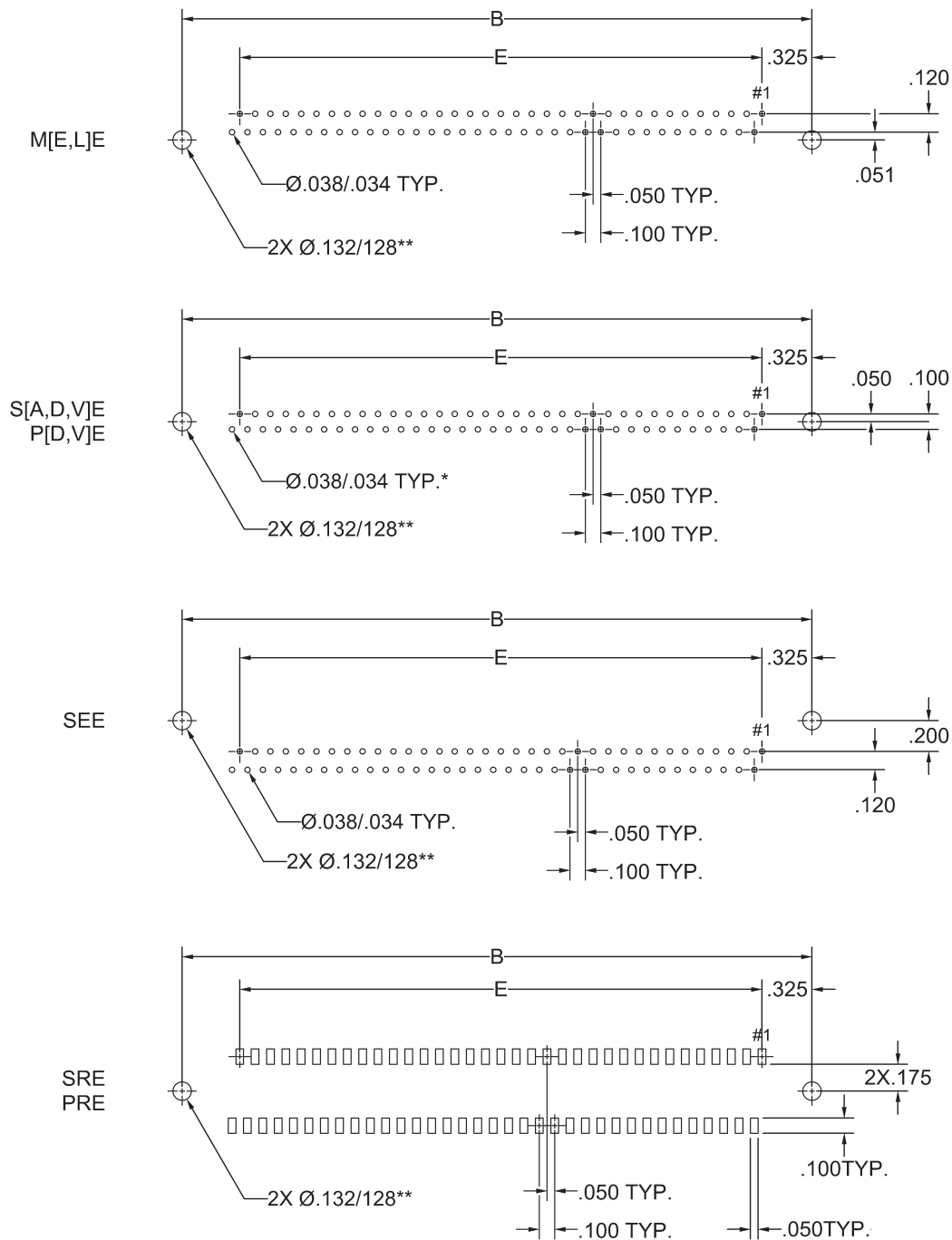
**PWB PATTERN - 2 ROW
010-070, RECEPTACLE PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



*.042/.038 RECOMMENDED HOLE SIZE FOR COMPLIANT TERMINATION STYLE CONTACTS.. FOR ALL OTHERS, HOLE SIZE SUBJECT TO USER MODIFICATION FOR APPLICATION OR ALTERNATIVE STANDARDS.

**RECOMMENDATION. MAY BE MODIFIED FOR APPLICATION OR ALTERNATIVE STANDARDS.

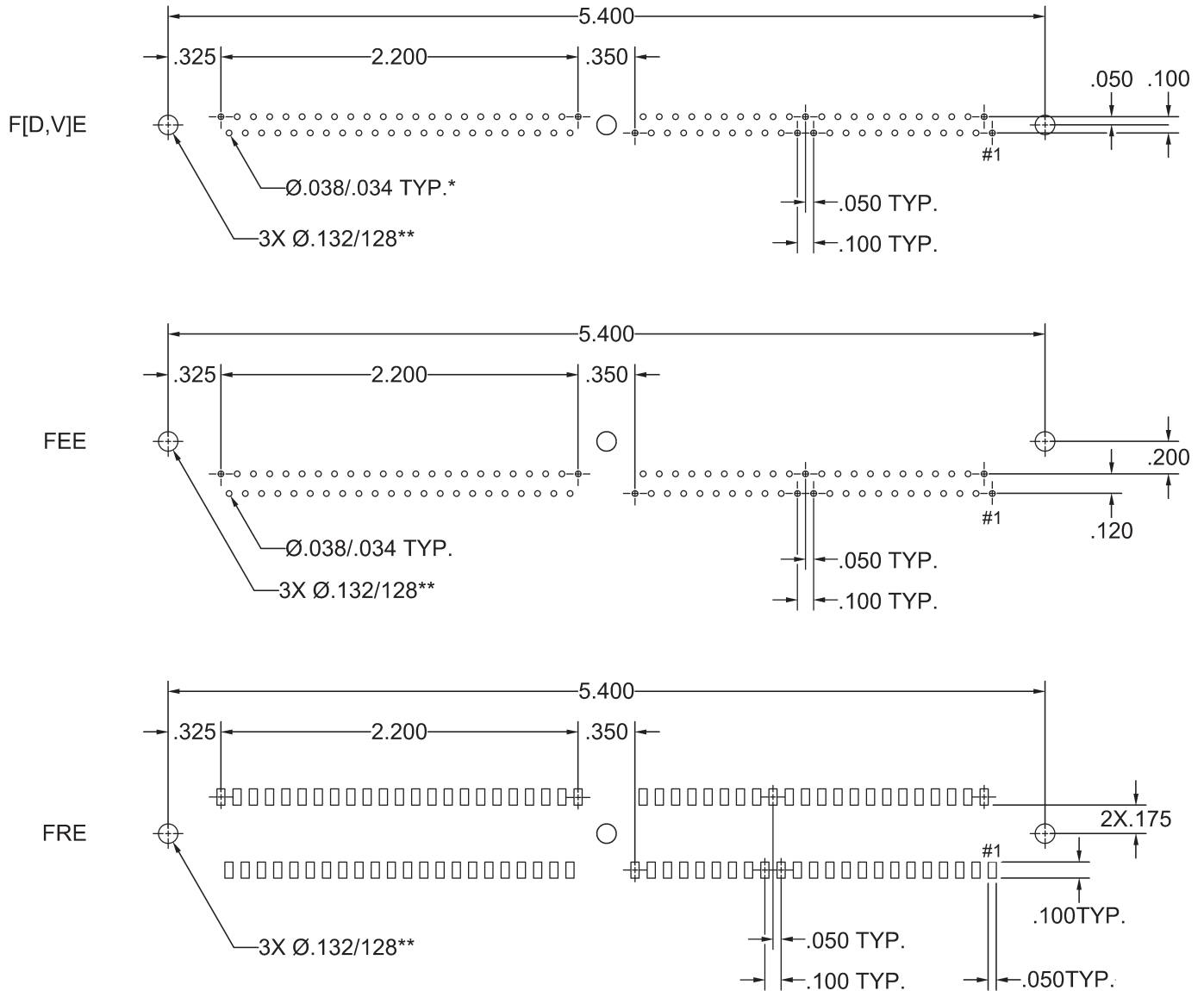
**PWB PATTERN - 2 ROW
010-070, PLUG PATTERN
AS VIEWED FROM THE COMPONENTSIDE**



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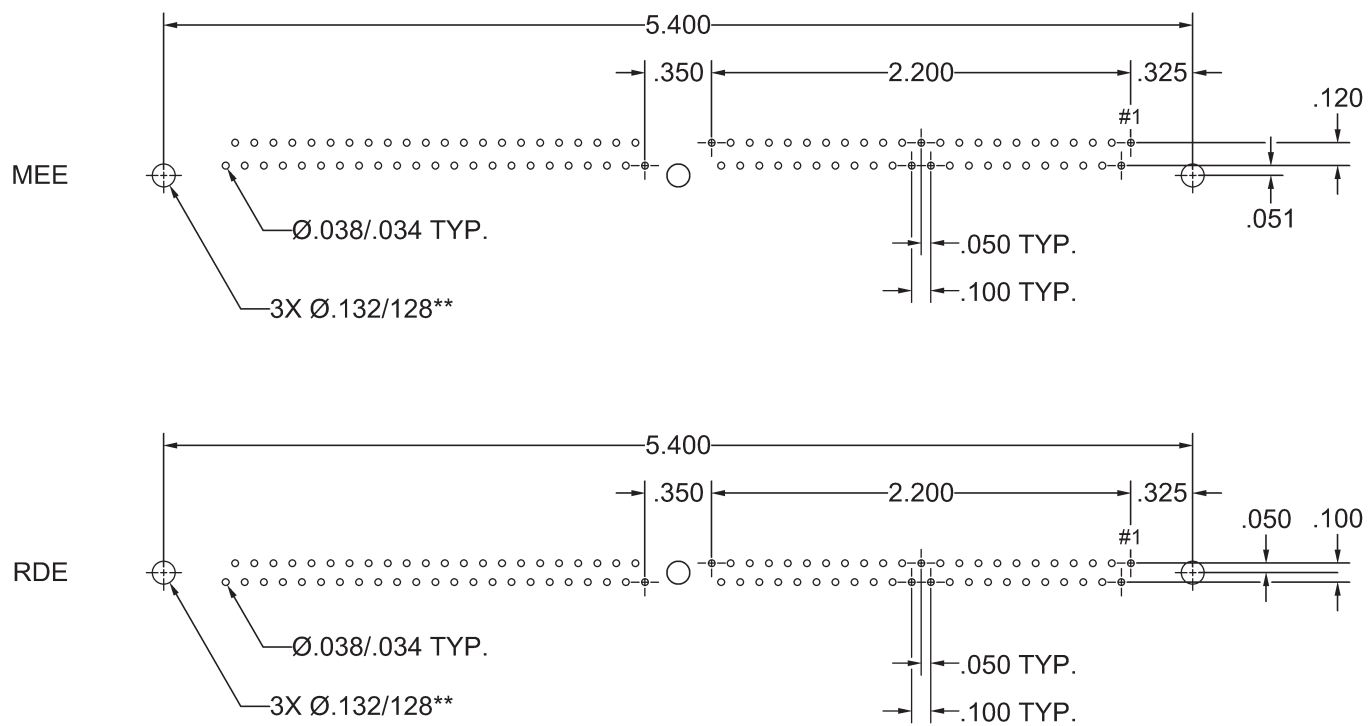
**PWB PATTERN - 2 ROW
090, RECEPTACLE PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



*.042/.038 RECOMMENDED HOLE SIZE FOR COMPLIANT TERMINATION STYLE CONTACTS.. FOR ALL OTHERS, HOLE SIZE SUBJECT TO USER MODIFICATION FOR APPLICATION OR ALTERNATIVE STANDARDS.

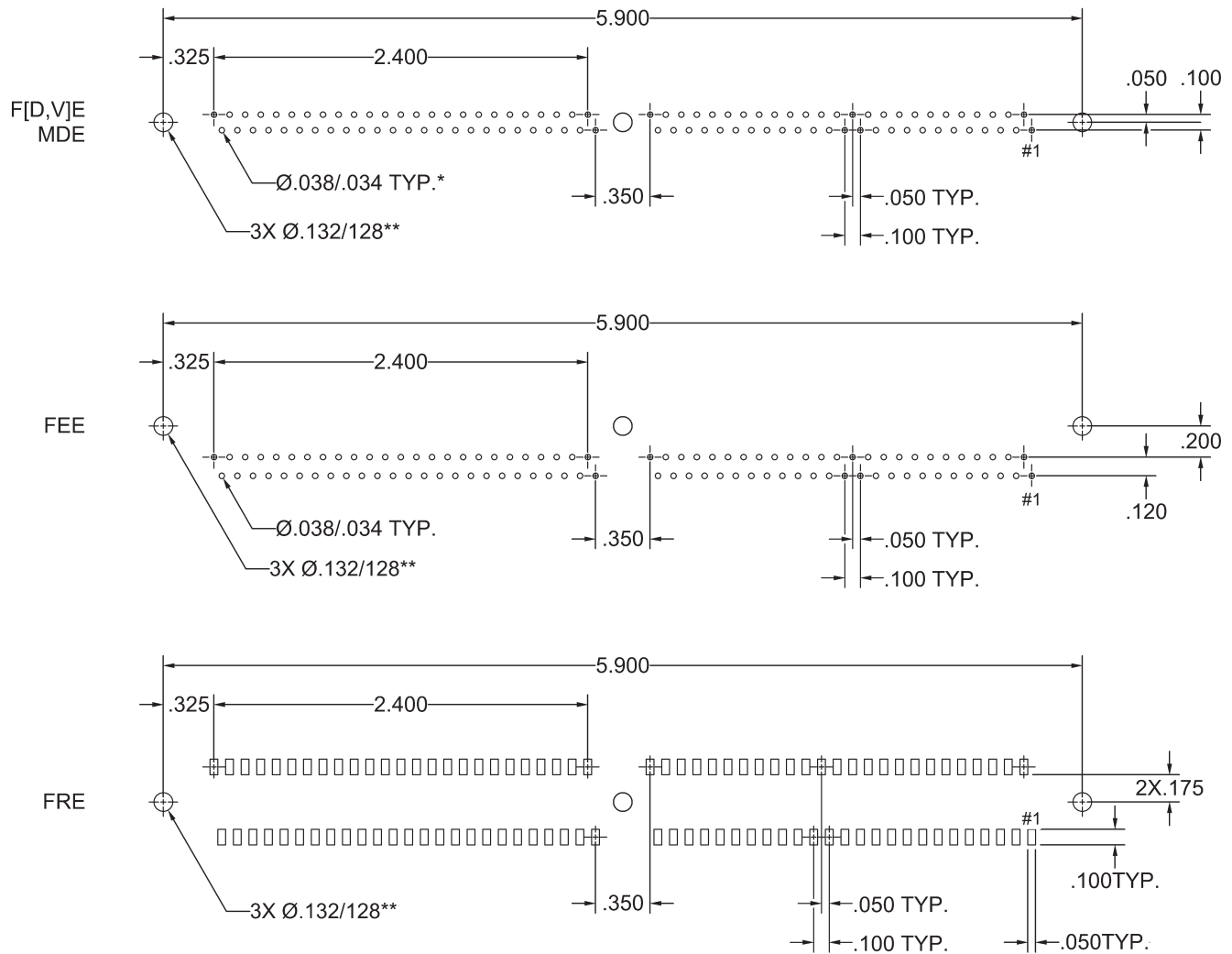
**RECOMMENDATION. MAY BE MODIFIED FOR APPLICATION OR ALTERNATIVE STANDARDS.

**PWB PATTERN - 2 ROW
090, PLUG PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



**RECOMMENDATION. MAY BE MODIFIED FOR APPLICATION OR ALTERNATIVE STANDARDS.

**PWB PATTERN - 2 ROW
100, RECEPTACLE PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



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MEE

5.900

2.400

.325

.120

.051

.050 TYP.

.100 TYP.

.350

Ø.038/.034 TYP.

3X Ø.132/128**

#1

S[D,V]E

P[D,V]E

5.900

2.400

.325

.050

.100

.050 TYP.

.100 TYP.

.350

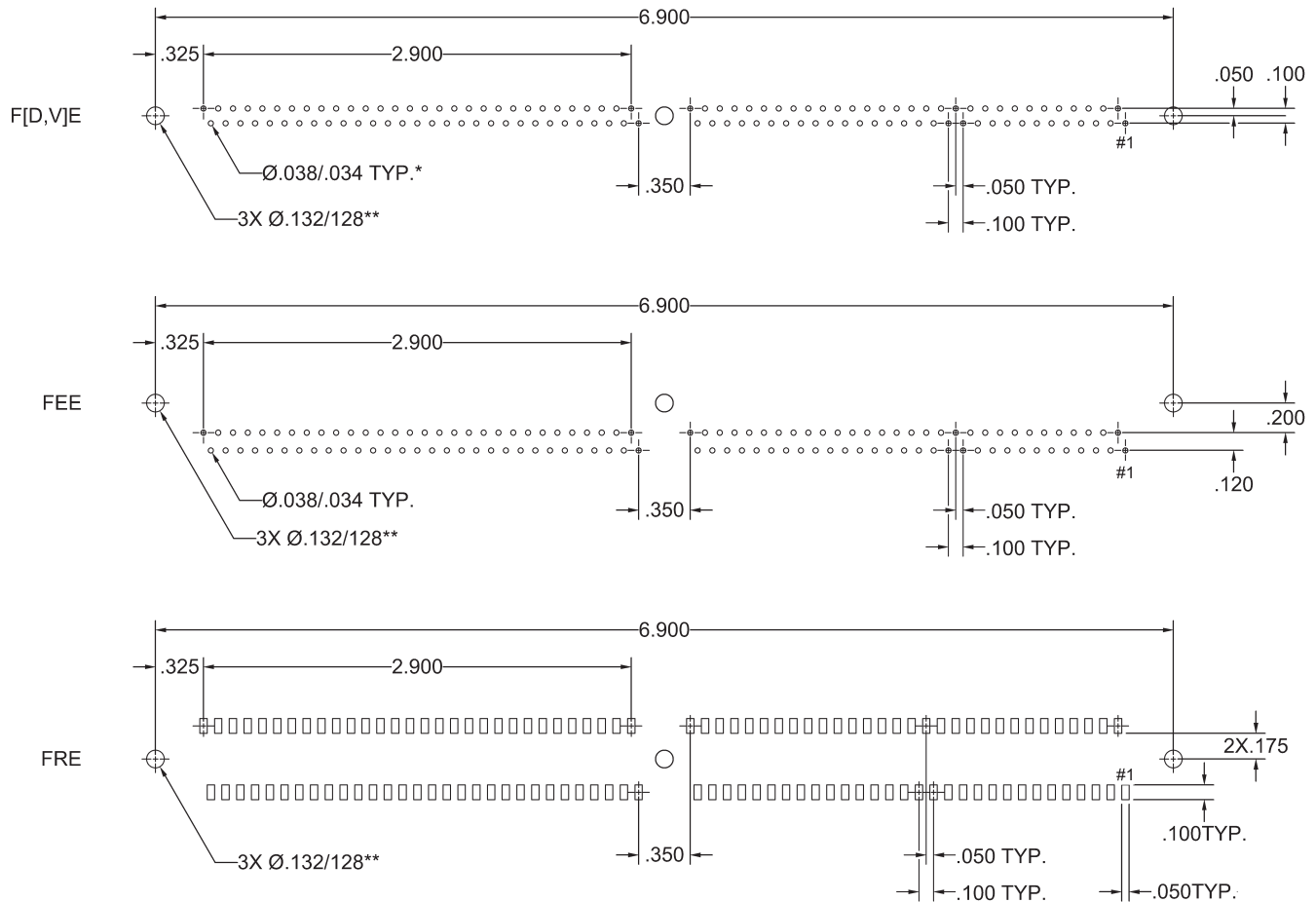
Ø.038/.034 TYP.*

3X Ø.132/128**

#1

**RECOMMENDATION. MAY BE MODIFIED FOR APPLICATION OR ALTERNATIVE STANDARDS.

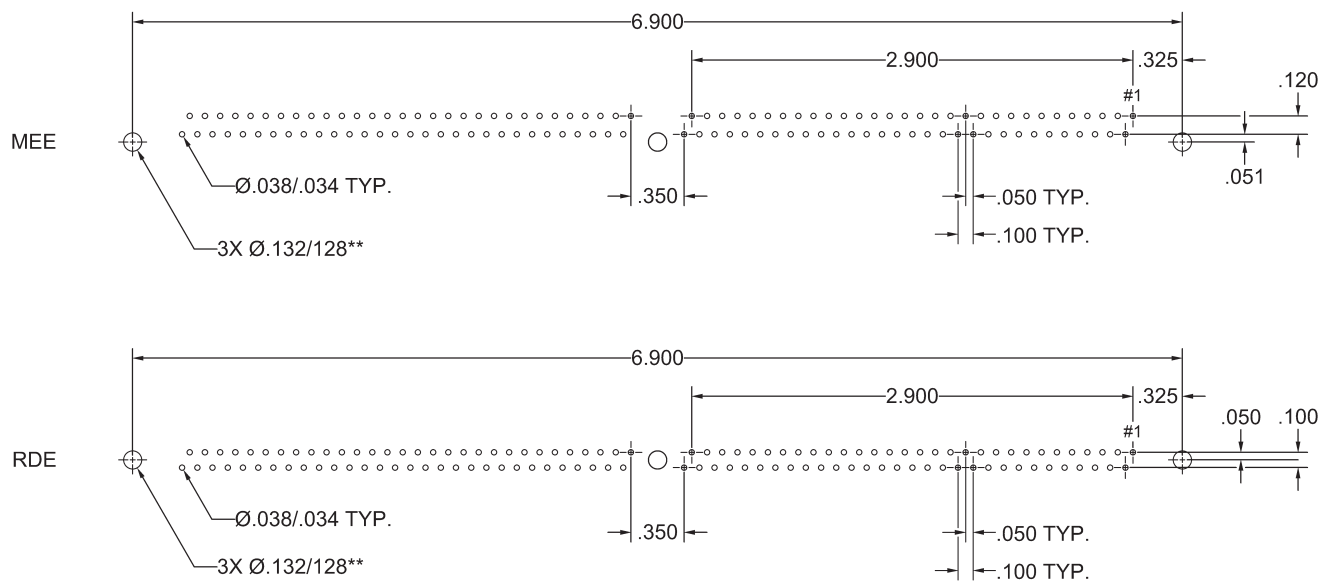
**PWB PATTERN - 2 ROW
120, RECEPTACLE PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



*.042/.038 RECOMMENDED HOLE SIZE FOR COMPLIANT TERMINATION STYLE CONTACTS.. FOR ALL OTHERS, HOLE SIZE SUBJECT TO USER MODIFICATION FOR APPLICATION OR ALTERNATIVE STANDARDS.

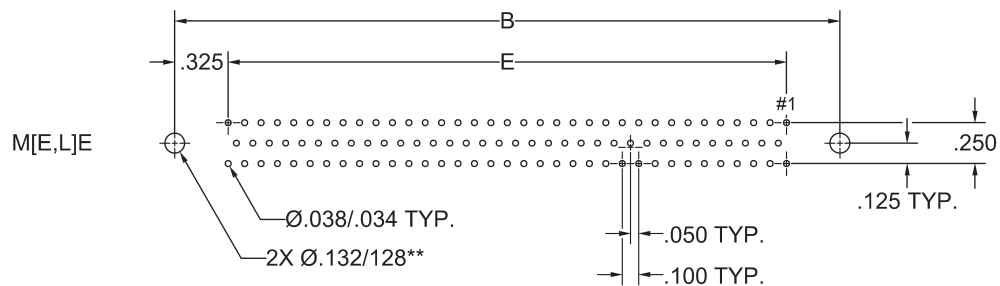
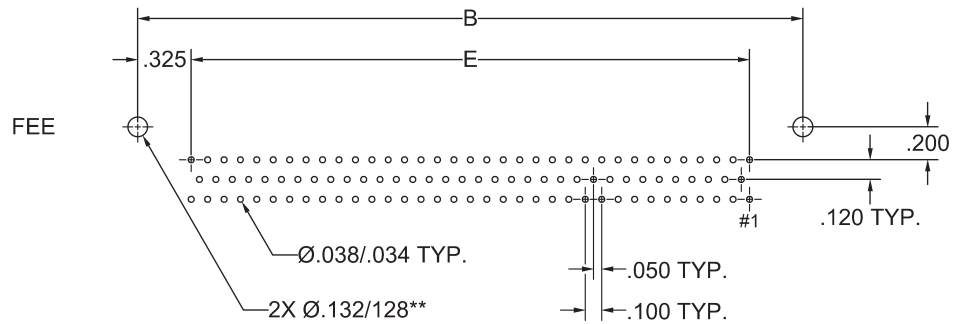
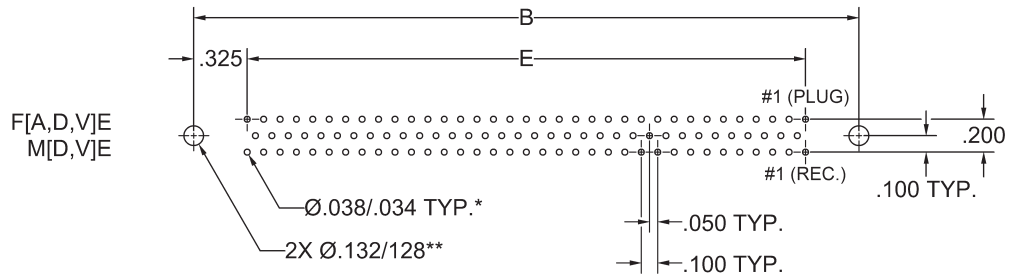
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**PWB PATTERN - 2 ROW
120, PLUG PATTERN
AS VIEWED FROM THE COMPONENT SIDE**



**RECOMMENDATION. MAY BE MODIFIED FOR APPLICATION OR ALTERNATIVE STANDARDS.

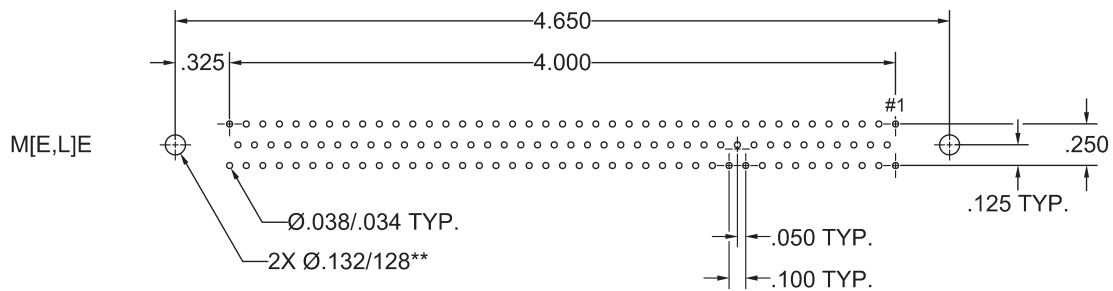
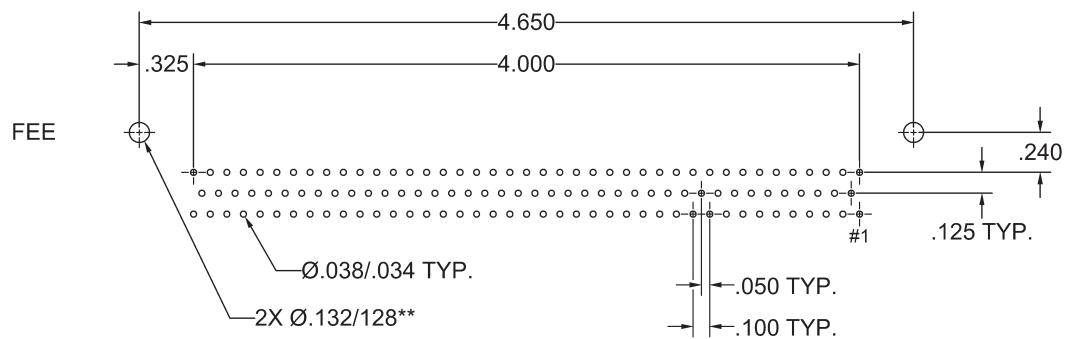
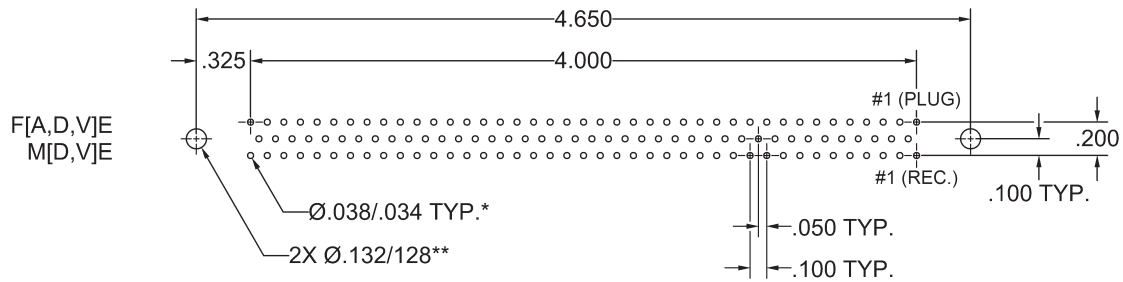
PWB PATTERN - 3 ROW
050-104
AS VIEWED FROM THE COMPONENT SIDE



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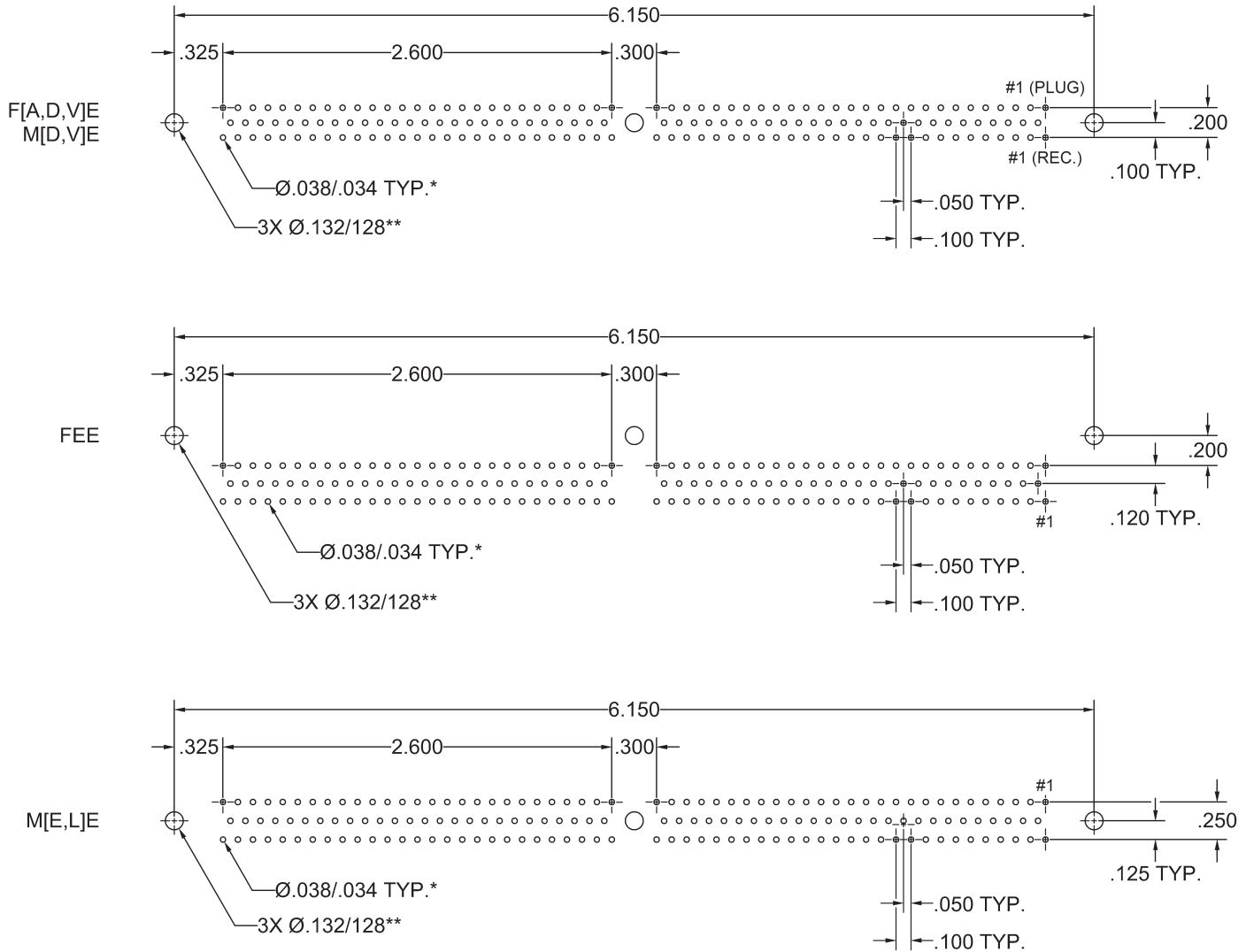
PWB PATTERN - 3 ROW
122
AS VIEWED FROM THE COMPONENT SIDE



*.042/.038 RECOMMENDED HOLE SIZE FOR COMPLIANT TERMINATION STYLE CONTACTS. FOR ALL OTHERS, HOLE SIZE SUBJECT TO USER MODIFICATION FOR APPLICATION OR ALTERNATIVE STANDARDS.

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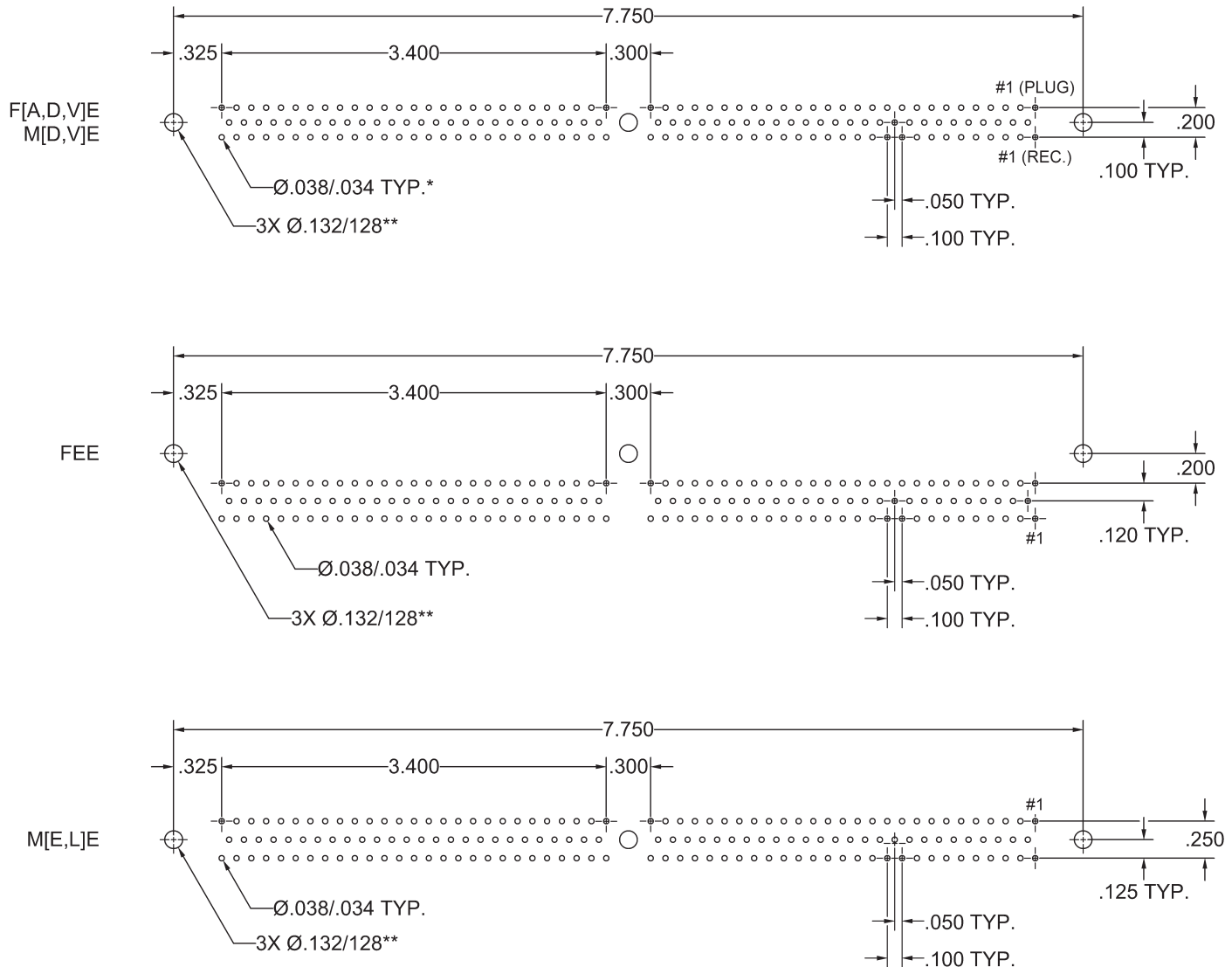
PWB PATTERN - 3 ROW
160
AS VIEWED FROM THE COMPONENT SIDE



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PWB PATTERN - 3 ROW
208
AS VIEWED FROM THE COMPONENT SIDE



*.042/.038 RECOMMENDED HOLE SIZE FOR COMPLIANT TERMINATION STYLE CONTACTS. FOR ALL OTHERS, HOLE SIZE SUBJECT TO USER MODIFICATION FOR APPLICATION OR ALTERNATIVE STANDARDS.

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