

# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors



## GVLM-BR Right-Angle PCB Connectors

### MATERIALS AND FINISHES

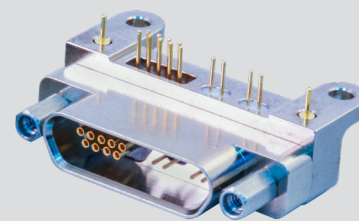
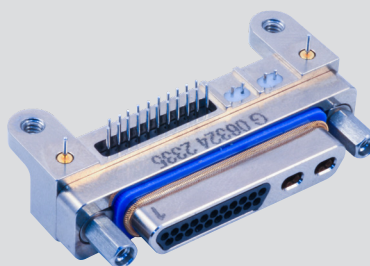
- Connector shell: aluminum alloy 6061
- Insulator (v): rigid dielectric
- Insulator (m): liquid crystal polymer (LCP) or polyphenylene sulfide (PPS)
- Flange seal: fluorosilicone rubber, blue
- Pin contact:  
copper alloy, gold over nickel plating
- Socket contact: copper alloy, gold over nickel plating
- Ground spring: stainless steel, gold plating
- Hardware: 300 series stainless steel, passivated
- Encapsulant: epoxy resin Hysol EE4215

### PERFORMANCE SPECIFICATIONS

- Current rating: 3 amp (micro-d pins)
- DWV: 600 VAC sea level
- Insulation resistance:  
5000 megohms minimum
- Operating temperature: -55°C to 150°C
- Mating force (contact m):  
(10 ounces) x (# of contacts)
- Mating force (contact v):  
(5 ounces) x (# of contacts)
- Electrical performance IAW Glenair specification GT-19-230
- Interface dimensions IAW MIL-DTL-83513
- Reference application notes AN0005 for optimal performance

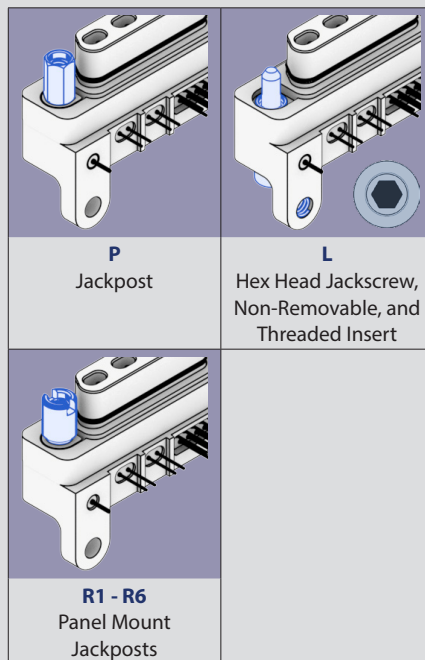
### NOTES

1. Refer to GHS4-M-1000 for insert arrangement details on page 90.
2. Refer to GVLM-1001 for GVLM-BR PCB footprints on page 119.
3. Recommended mating dimensions must be maintained when no hardware is used, see page 91.
4. Plug connector uses pin Micro-D contacts and socket VersaLink contacts. Receptacle uses socket Micro-D contacts and pin VersaLink contacts.
5. Hardware always required to ensure connector pair is fully mated when installed.
6. PC tails are solder-dipped in 60/40 tin-lead solder.
7. Refer to 500-154 for protective cover on page 161.



PART NUMBER DEVELOPMENT	
<b>Sample Part Number</b>	<b>GVLM</b> 2 L- 2-9 P BR P T -.110
<b>Series</b>	GVLM = VersaLink Micro-D
<b>Shell Finish</b>	2 = Nickel 5 = Gold
<b>Insulator Material</b>	L = LCP or PPS
<b>Contact Layout (V-M)<sup>1</sup></b>	1-0, 1-9, 2-0, 2-9, 2-15, 2-21, 3-9, 4-0, 4-15, 4-31, 8-9, 10-0
<b>Connector Type<sup>4</sup></b>	P = Plug S = Receptacle
<b>Connector Style</b>	BR = Board Right Angle
<b>Hardware<sup>2-5</sup></b> (see mounting hardware table)	P = Jackpost L = Hex head jackscrew (non-removeable) Panel Mount Jackposts: R1 = .032 panel R2 = .047 panel R3 = .062 panel R4 = .093 panel R5 = .125 panel R6 = .080 panel
<b>Threaded Insert Option</b>	T = Threaded insert in board-mount hole (required for L hardware) Omit for thru-hole
<b>PC Tail Length<sup>6</sup></b>	.080, .110, .140 (Length in Inches +.020/-0.000)

### HARDWARE



### INSERT ARRANGEMENTS

Insert Arrangements	No. of Contacts	
	VersaLink (V)	TwistPin (M)
1-0	1	0
2-0	2	0
1-9	1	9
2-9	2	9
4-0	4	0
2-15	2	15
2-21	2	21
3-9	3	9
4-15	4	15
4-31	4	31
8-9	8	9
10-0	10	0

MICRO-D VERSALINK CONNECTORS

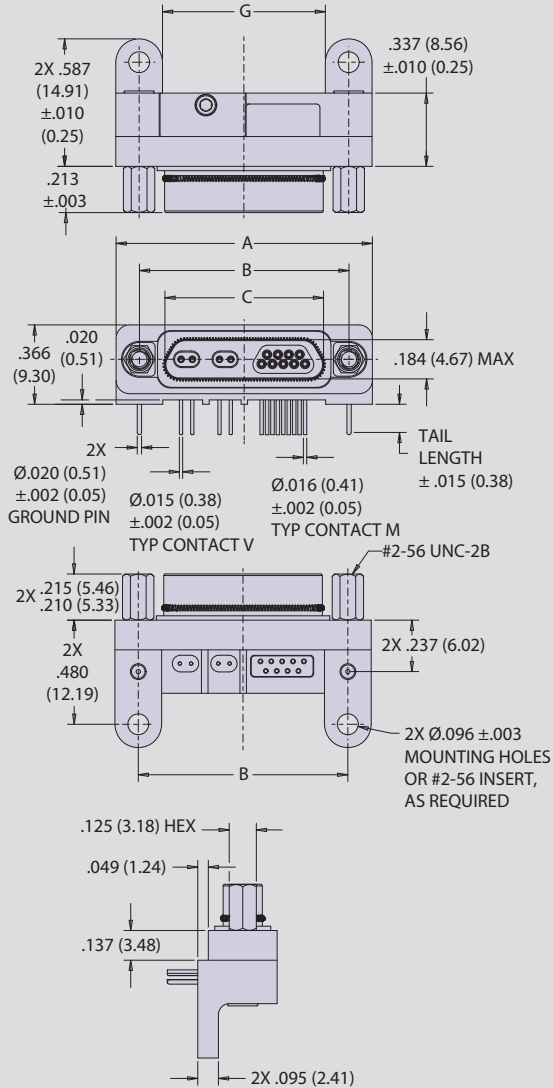
# "ZERO-CROSSTALK" M8513 Micro-D VersaLink™ Connectors



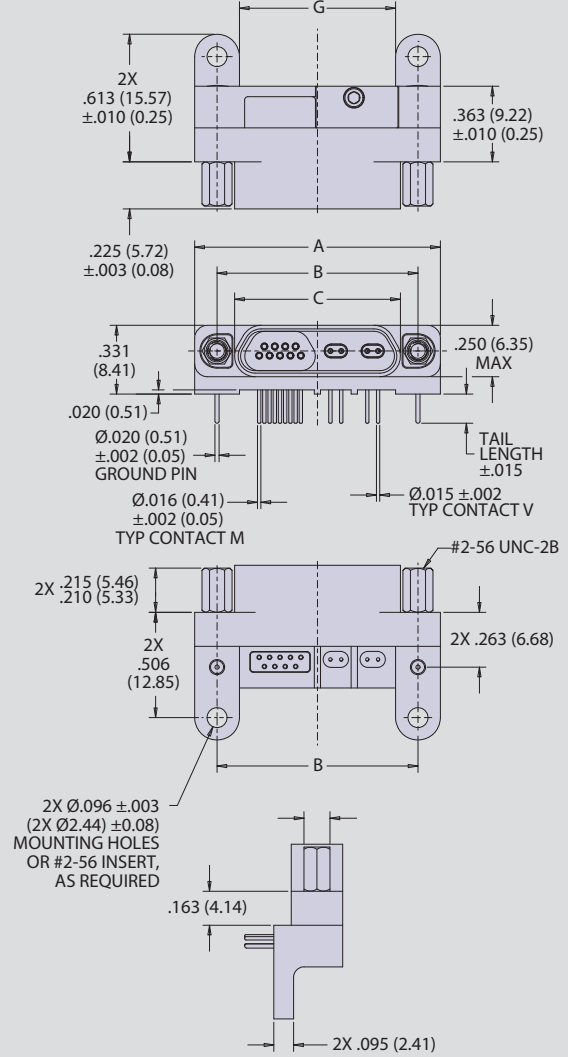
## GVLM-BR Right-Angle PCB Connectors

MICRO-D VERSALINK CONNECTORS

### GVLM PCB RIGHT ANGLE PLUG CONNECTOR



### GVLM PCB RIGHT ANGLE RECEPTACLE CONNECTOR



#### PLUG DIMENSIONS

LAYOUT	A MAX	B	C MAX	G
1-0P	0.785 (19.94)	0.565 (14.35)	0.333 (8.46)	0.350 (8.89)
2-0P	0.935 (23.75)	0.715 (18.16)	0.483 (12.27)	0.500 (12.70)
1-9P	1.085 (27.56)	0.865 (21.97)	0.633 (16.08)	0.650 (16.51)
2-9P	1.185 (30.10)	0.965 (24.51)	0.733 (18.62)	0.750 (19.05)
4-0P	1.185 (30.10)	0.965 (24.51)	0.733 (18.62)	0.750 (19.05)
2-15P	1.335 (33.91)	1.115 (28.32)	0.833 (21.16)	0.900 (22.86)
2-21P	1.485 (37.72)	1.265 (32.13)	1.033 (26.24)	1.050 (26.67)
3-9P	1.485 (37.72)	1.265 (32.13)	1.033 (26.24)	1.050 (26.67)
4-15P	1.835 (46.61)	1.615 (41.02)	1.384 (35.15)	1.400 (35.56)
4-31P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	1.800 (45.72)
8-9P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	1.800 (45.72)
10-0P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	1.800 (45.72)

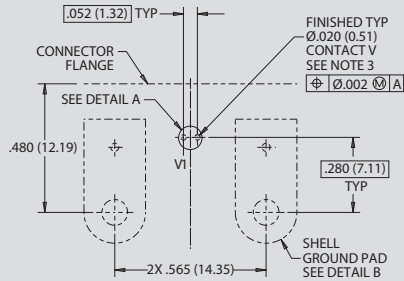
#### RECEPTACLE DIMENSIONS

LAYOUT	A MAX	B	C MAX	G
1-0S	0.785 (19.94)	0.565 (14.35)	0.400 (10.16)	0.350 (8.89)
2-0S	0.935 (23.75)	0.715 (18.16)	0.551 (14.00)	0.500 (12.70)
1-9S	1.085 (27.56)	0.865 (21.97)	0.701 (17.81)	0.650 (16.51)
2-9S	1.185 (30.10)	0.965 (24.51)	0.801 (20.35)	0.750 (19.05)
4-0S	1.185 (30.10)	0.965 (24.51)	0.801 (20.35)	0.750 (19.05)
2-15S	1.335 (33.91)	1.115 (28.32)	0.951 (24.16)	0.900 (22.86)
2-21S	1.485 (37.72)	1.265 (32.13)	1.101 (27.97)	1.050 (26.67)
3-9S	1.485 (37.72)	1.265 (32.13)	1.101 (27.97)	1.050 (26.67)
4-15S	1.835 (46.61)	1.615 (41.02)	1.450 (36.83)	1.400 (35.56)
4-31S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	1.800 (45.72)
8-9S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	1.800 (45.72)
10-0S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	1.800 (45.72)

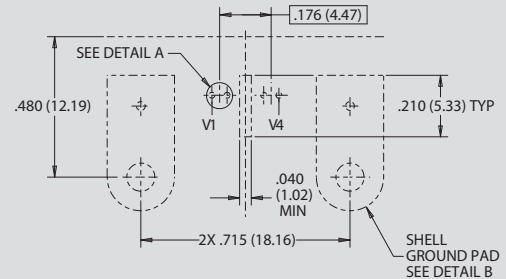
# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors



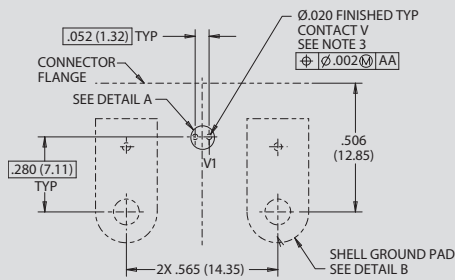
## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints



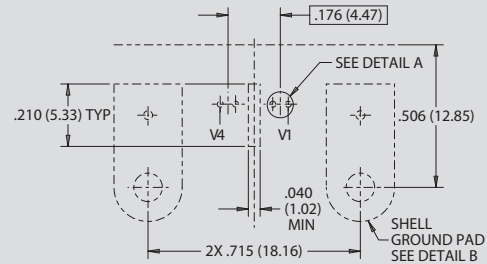
**Plug Layout 1-0**



**Plug Layout 2-0**



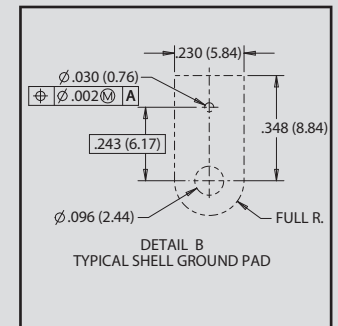
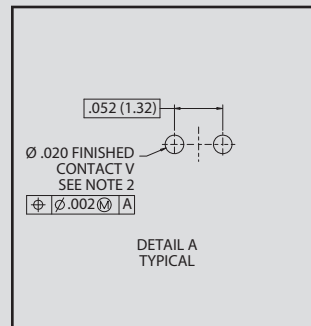
**Receptacle Layout 1-0**



**Receptacle Layout 2-0**

### NOTES

1. Patterns shown are for connector mounting side of PC board.
2. Reference application notes AN0005 for optimal performance.



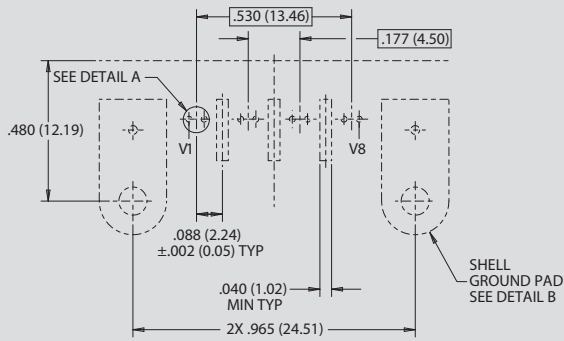
MICRO-D VERSALINK CONNECTORS

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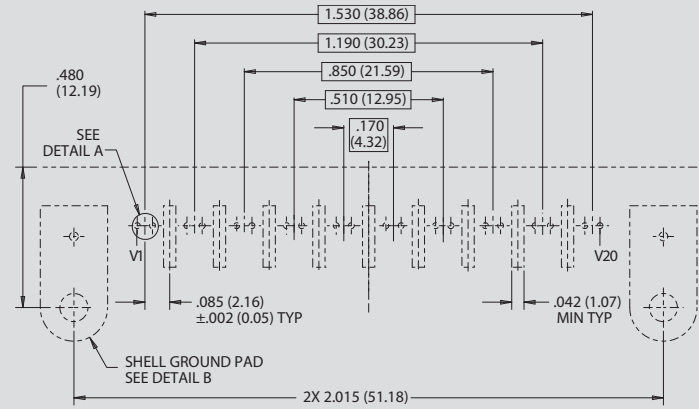


## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints

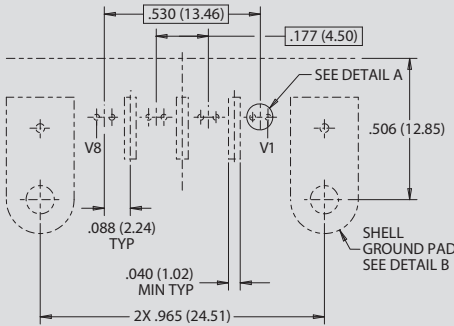
MICRO-D VERSALINK CONNECTORS



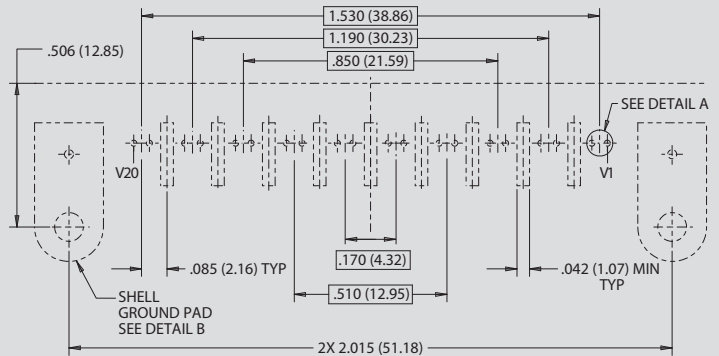
**Plug Layout 4-0**



**Plug Layout 10-0**



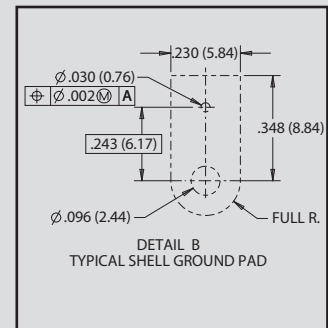
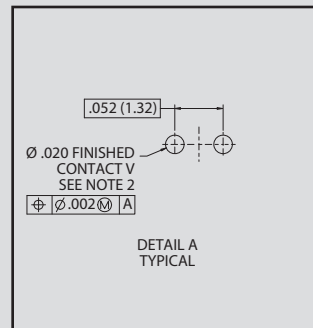
**Receptacle Layout 4-0**



**Receptacle Layout 10-0**

### NOTES

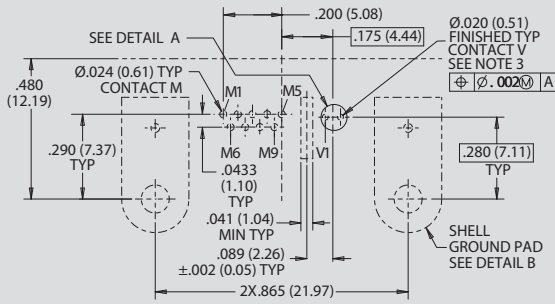
1. Patterns shown are for connector mounting side of PC board.
2. Reference application notes AN0005 for optimal performance.



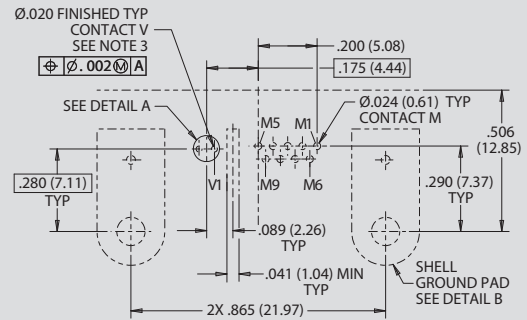
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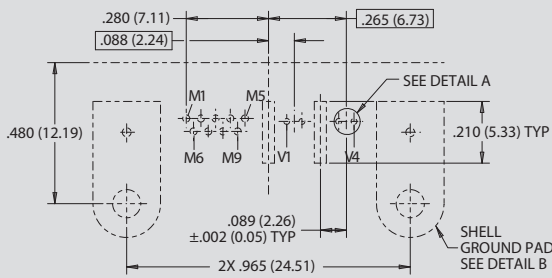
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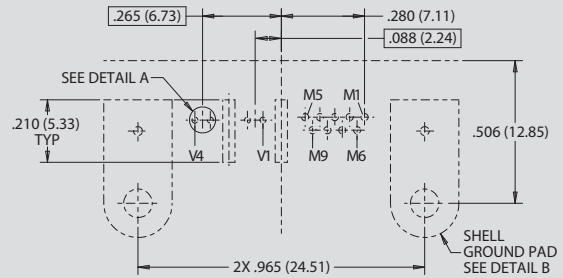
**Plug Layout 1-9**



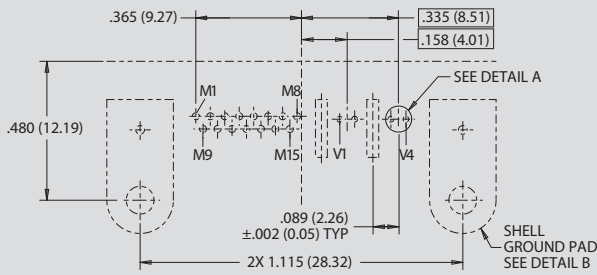
**Receptacle Layout 1-9**



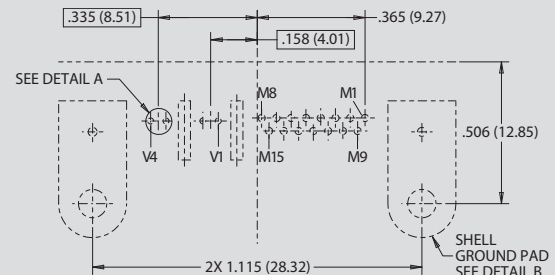
**Plug Layout 2-9**



**Receptacle Layout 2-9**



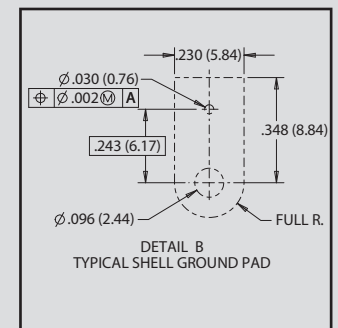
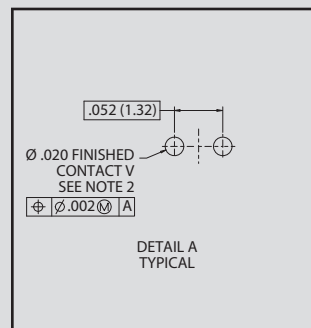
**Plug Layout 2-15**



**Receptacle Layout 2-15**

### NOTES

1. Patterns shown are for connector mounting side of PC board.
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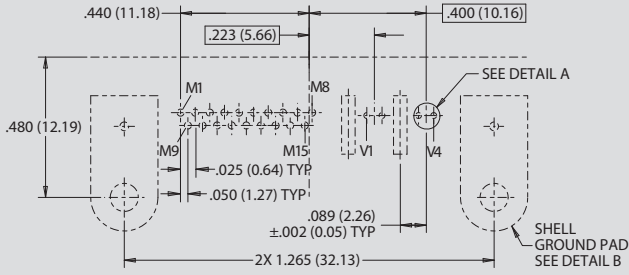
MICRO-D VERSALINK CONNECTORS

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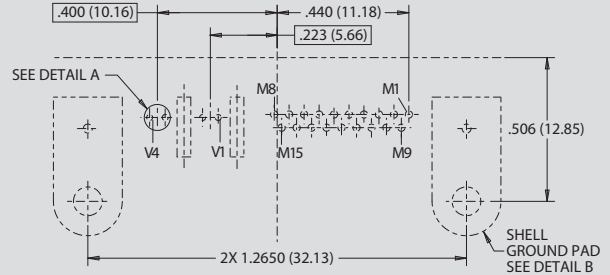


## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints

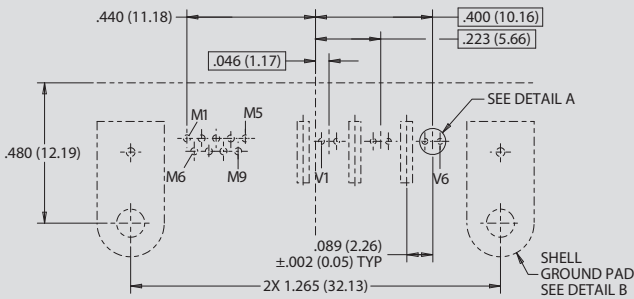
MICRO-D VERSALINK CONNECTORS



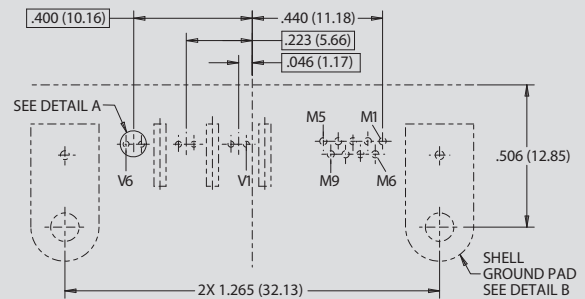
**Plug Layout 2-21**



**Receptacle Layout 2-21**



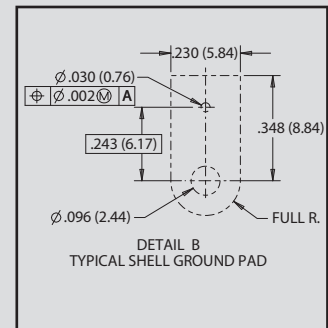
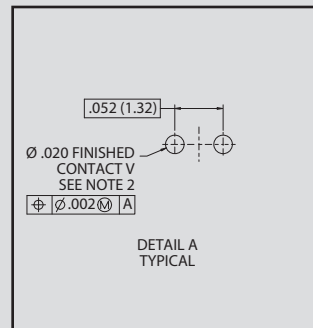
**Plug Layout 3-9**



**Receptacle Layout 3-9**

### NOTES

1. Patterns shown are for connector mounting side of PC board.
2. Reference application notes AN0005 for optimal performance.

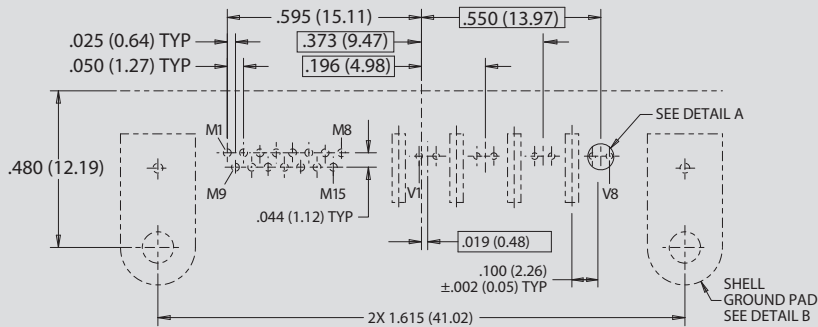


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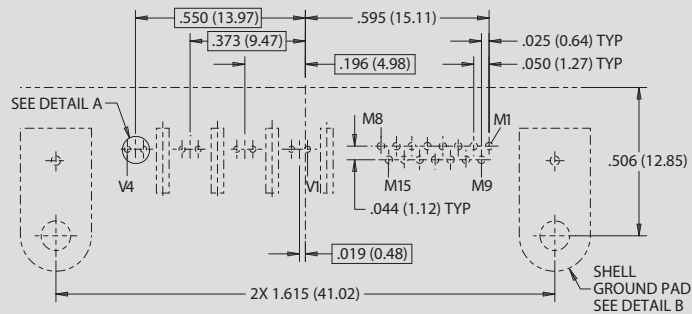


## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints

MICRO-D VERSALINK CONNECTORS



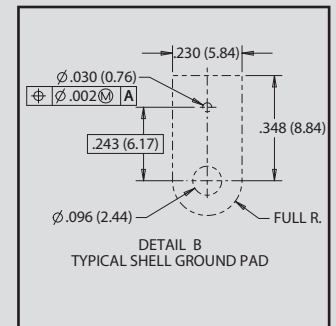
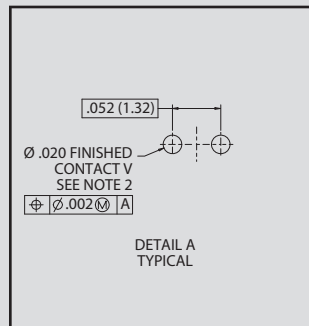
**Plug Layout 4-15**



**Receptacle Layout 4-15**

### NOTES

1. Patterns shown are for connector mounting side of PC board.
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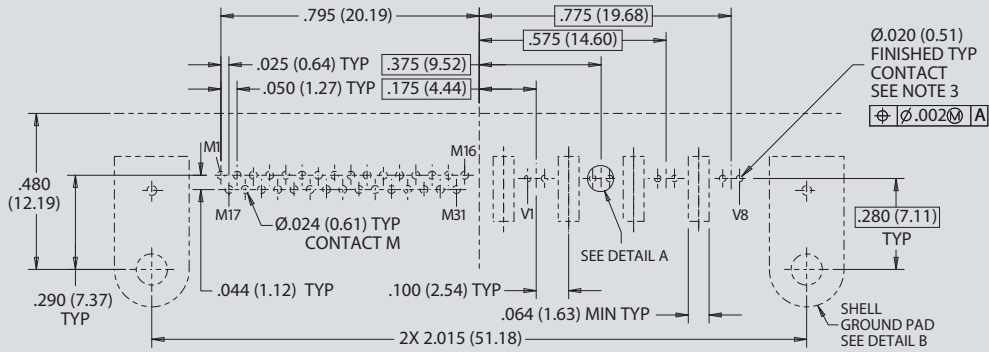


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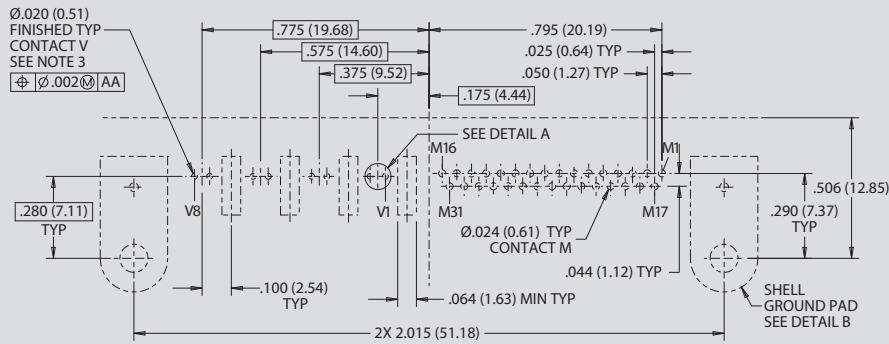


## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints

MICRO-D VERSALINK CONNECTORS



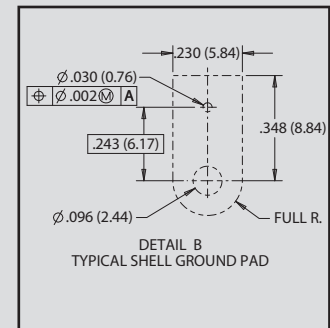
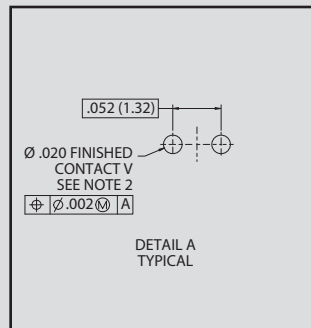
**Plug Layout 4-31**



**Receptacle Layout 4-31**

### NOTES

1. Patterns shown are for connector mounting side of PC board.
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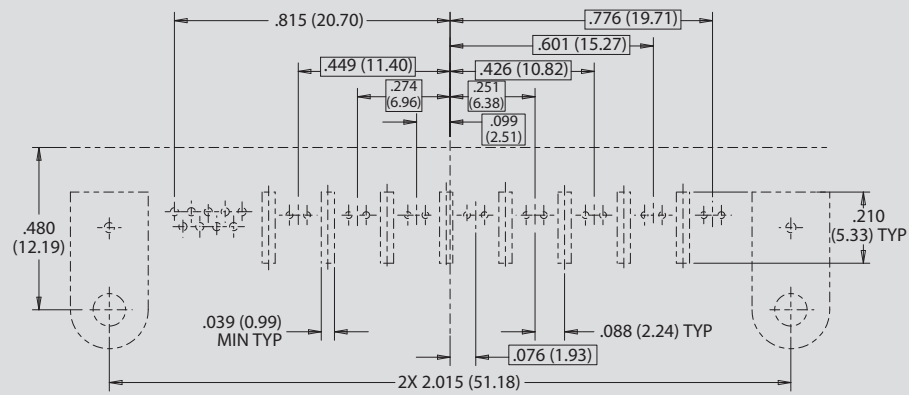


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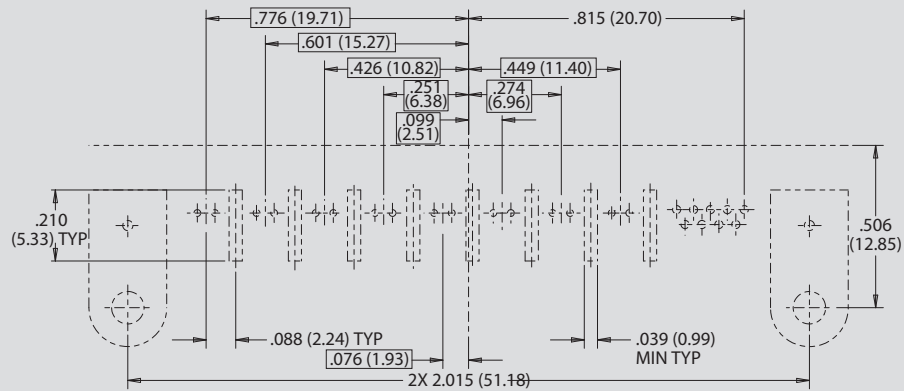


## GVLM-1001: GVLM-BR PCB VersaLink Right-Angle Connector PCB Footprints

MICRO-D VERSALINK CONNECTORS



**Plug Layout 8-9**



**Receptacle Layout 8-9**

### NOTES

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