



# MIL-DTL-83513/10 Thru /15 Micro-D CBR Condensed Right Angle PCB Terminated



### High Performance

These connectors feature gold-plated TwistPin contacts for best performance. PC tails are .020 inch diameter. Specify nickel-plated shells or cadmium plated shells for best availability.

### Solder-Dipped

Terminals are coated with Sn60/Pb40 tin-lead solder for best solderability.

## How To Order MIL-DTL-83513 Right Angle Micro-D Connectors

| Sample Part Number       | M83513/   | 13-B   | 02                                  | N | P |
|--------------------------|---|--|-------------------------------------|---|---|
| Base Part Number         | <b>M83513</b>   |  |                                     |   |   |
| Slash Number-Shell Sizes | <b>Plug (Pin Contacts)</b>  |  | <b>Receptacle (Socket Contacts)</b> |   |   |
|                          | <b>10-A</b> - 9 Contacts<br><b>10-B</b> - 15 Contacts<br><b>10-C</b> - 21 Contacts<br><b>10-D</b> - 25 Contacts<br><b>10-E</b> - 31 Contacts<br><b>10-F</b> - 37 Contacts<br><b>11-G</b> - 51 Contacts<br><b>12-H</b> - 100 Contacts<br>(See Table II)  | <b>13-A</b> - 9 Contacts<br><b>13-B</b> - 15 Contacts<br><b>13-C</b> - 21 Contacts<br><b>13-D</b> - 25 Contacts<br><b>13-E</b> - 31 Contacts<br><b>13-F</b> - 37 Contacts<br><b>14-G</b> - 51 Contacts<br><b>15-H</b> - 100 Contacts |                                     |   |   |
| PC Tail Length           | <b>01</b> - .109 Inch (2.77 mm)<br>PC Tail Length ± .015 (0.38)   | <b>02</b> - .140 Inch (3.56 mm)  | <b>03</b> - .172 Inch (4.37 mm)     |   |   |
| Shell Finish             | <b>C</b> - Cadmium<br><b>N</b> - Electroless Nickel<br><b>P</b> - Passivated SST  | <b>A</b> - Electrodeposited Aluminum<br><b>K</b> - Zinc Nickel<br><b>T</b> - Nickel Fluorocarbon Polymer   |                                     |   |   |
| Hardware Options         | <b>N</b> - No Jackpost <b>P</b> - Jackposts Installed<br><b>Sizes 9-51</b><br><b>T</b> - Threaded Insert in Board Mount Hole (No Jackposts)<br><b>W</b> - Threaded Insert in Board Mount Hole and jackposts Installed<br><b>Shell Size 100 (H)</b><br><b>U</b> - #4-40 Threaded Insert <b>Y</b> - #4-40 Threaded Insert & Jackpost<br>See "Hardware Options" below for Illustrations<br>(See Table I) |  |                                     |   |   |

Table I: Hardware Options

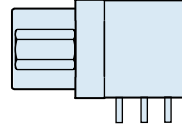
| N                | P                | T or U                 | W or Y                    |
|------------------|------------------|------------------------|---------------------------|
| <p>THRU HOLE</p> | <p>THRU HOLE</p> | <p>THREADED INSERT</p> | <p>THREADED INSERT</p>    |
| No Jackpost      | Jackpost         | Threaded Insert        | Jackpost, Threaded Insert |

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Micro-D  
MIL-DTL-83513

Table II: Dimensions



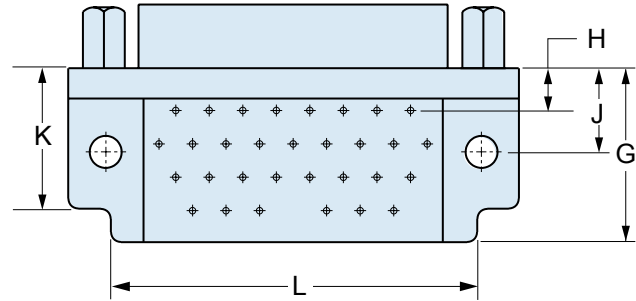
THREAD SIZES  
9-51 CONTACTS #2-56 UNC  
100 CONTACTS #4-40 UNC

### CONFIGURATION FOR 9-25 CONTACTS



PCB MOUNTING HOLES  
9-51 CONTACTS .096 DIA.  $\pm .003$  (2.44  $\pm$  0.08)  
100 CONTACTS .125 DIA.  $\pm .003$  (3.18  $\pm$  0.08)

### CONFIGURATION FOR 31-100 CONTACTS



| Layout      | A Max. |       | B     |       | C Max. |       | D Max. |      | E Max. |       | F    |      | G Max. |       | H    |      | J    |       | K Max. |       | L Max. |       |
|-------------|--------|-------|-------|-------|--------|-------|--------|------|--------|-------|------|------|--------|-------|------|------|------|-------|--------|-------|--------|-------|
|             | In.    | mm.   | In.   | mm.   | In.    | mm.   | In.    | mm.  | In.    | mm.   | In.  | mm.  | In.    | mm.   | In.  | mm.  | In.  | mm.   | In.    | mm.   | In.    | mm.   |
| <b>9P</b>   | .787   | 19.94 | .565  | 14.35 | .333   | 8.46  | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .425   | 10.80 | .230 | 5.84 | .250 | 6.35  | --     | --    | --     | --    |
| <b>9S</b>   | .787   | 19.94 | .565  | 14.35 | .400   | 10.16 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .425   | 10.80 | .230 | 5.84 | .250 | 6.35  | --     | --    | --     | --    |
| <b>15P</b>  | .937   | 23.75 | .715  | 18.16 | .483   | 12.27 | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>15S</b>  | .937   | 23.75 | .715  | 18.16 | .551   | 14.00 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>21P</b>  | 1.087  | 27.56 | .865  | 21.97 | .633   | 16.08 | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>21S</b>  | 1.087  | 27.56 | .865  | 21.97 | .701   | 17.81 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>25P</b>  | 1.187  | 30.01 | .965  | 24.51 | .733   | 18.62 | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>25S</b>  | 1.187  | 30.01 | .965  | 24.51 | .801   | 20.35 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .425   | 10.80 | .130 | 3.30 | .250 | 6.35  | --     | --    | --     | --    |
| <b>31P</b>  | 1.337  | 33.91 | 1.115 | 28.32 | .883   | 22.43 | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .525   | 13.34 | .130 | 3.30 | .250 | 6.35  | .450   | 11.43 | 1.085  | 27.56 |
| <b>31S</b>  | 1.337  | 33.91 | 1.115 | 28.32 | .951   | 24.16 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .525   | 13.34 | .130 | 3.30 | .250 | 6.35  | .450   | 11.43 | 1.085  | 27.56 |
| <b>37P</b>  | 1.487  | 37.72 | 1.265 | 32.13 | 1.033  | 26.24 | .184   | 4.67 | .310   | 7.87  | .183 | 4.65 | .525   | 13.34 | .130 | 3.30 | .250 | 6.35  | .450   | 11.43 | 1.185  | 30.10 |
| <b>37S</b>  | 1.487  | 37.72 | 1.265 | 32.13 | 1.101  | 27.96 | .250   | 6.35 | .310   | 7.87  | .195 | 4.95 | .525   | 13.34 | .130 | 3.30 | .250 | 6.35  | .450   | 11.43 | 1.185  | 30.10 |
| <b>51P</b>  | 1.435  | 36.45 | 1.215 | 30.86 | .983   | 24.97 | .228   | 5.79 | .351   | 8.92  | .183 | 4.65 | .660   | 16.76 | .150 | 3.81 | .300 | 7.62  | .450   | 11.43 | 1.225  | 31.12 |
| <b>51S</b>  | 1.435  | 36.45 | 1.215 | 30.86 | 1.051  | 26.70 | .296   | 7.52 | .351   | 8.92  | .195 | 4.95 | .660   | 16.76 | .150 | 3.81 | .300 | 7.62  | .450   | 11.43 | 1.225  | 31.12 |
| <b>100P</b> | 2.175  | 55.12 | 1.800 | 45.72 | 1.383  | 35.13 | .270   | 6.86 | .394   | 10.01 | .183 | 4.65 | 1.010  | 25.65 | .200 | 5.08 | .400 | 10.16 | .590   | 14.99 | 1.820  | 46.23 |
| <b>100S</b> | 2.175  | 55.12 | 1.800 | 45.72 | 1.451  | 36.86 | .333   | 8.46 | .394   | 10.01 | .195 | 4.95 | 1.010  | 25.65 | .200 | 5.08 | .400 | 10.16 | .590   | 14.99 | 1.820  | 46.23 |





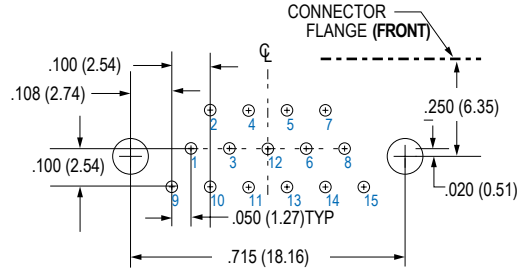
# MIL-DTL-83513/10 Thru /15 Micro-D CBR Condensed Right Angle PCB Terminated

## M83513/10 Thru /12 Connector PCB Layouts – Pin Connectors

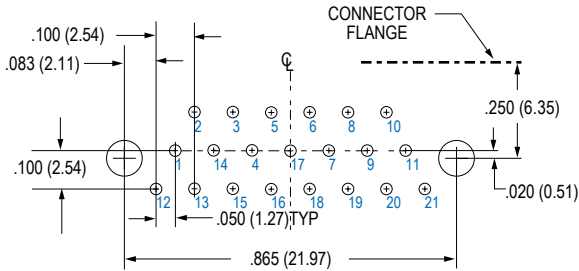
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



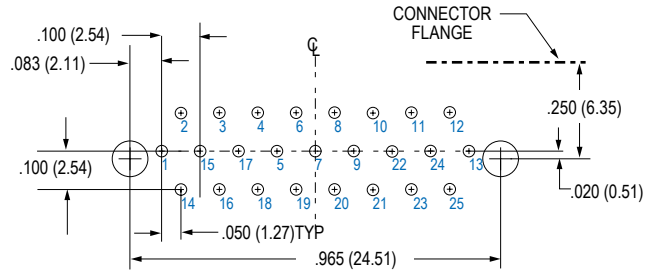
**9 PIN M83513/10-A**



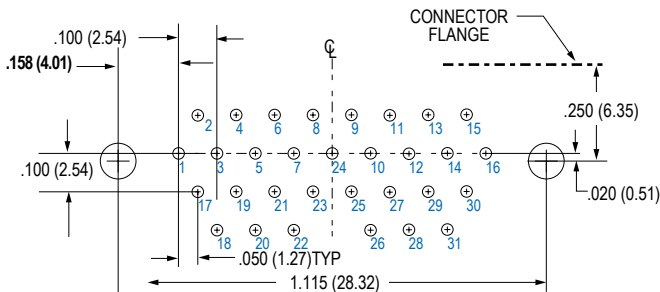
**15 PIN M83513/10-B**



**21 PIN M83513/10-C**



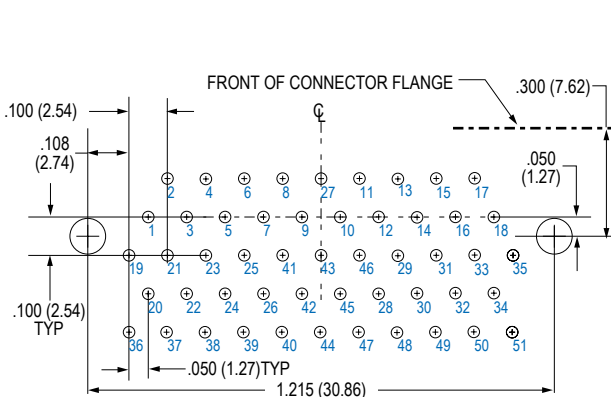
**25 PIN M83513/10-D**



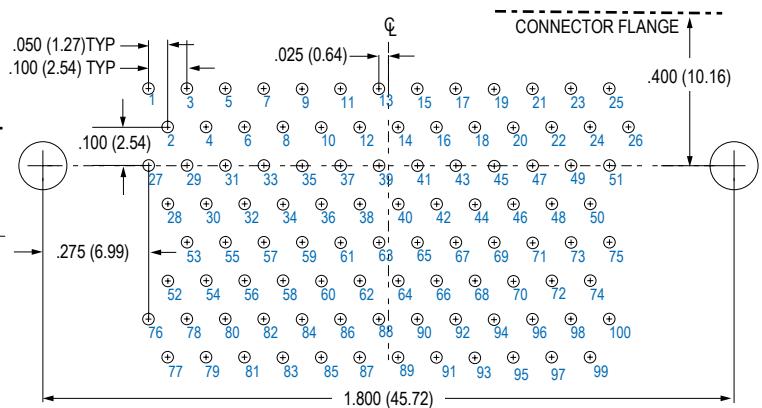
**31 PIN M83513/10-E**



**37 PIN M83513/10-F**



**51 PIN M83513/11-G**



**100 PIN M83513/12-H**

## M83513/13 THRU /15 connector PCB Layouts – Socket Connectors

Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



9 SOCKET M83513/13-A



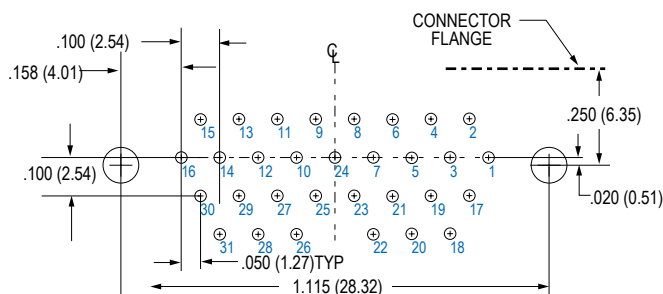
15 SOCKET M83513/13-B



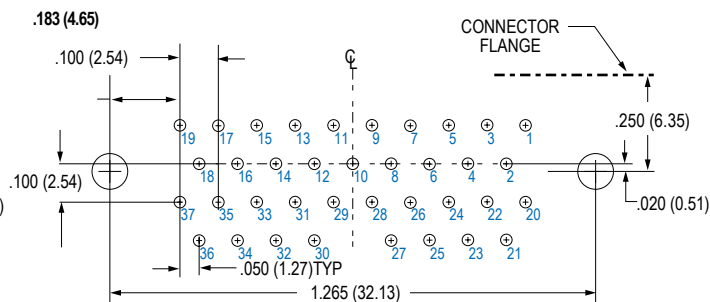
21 SOCKET M83513/13-C



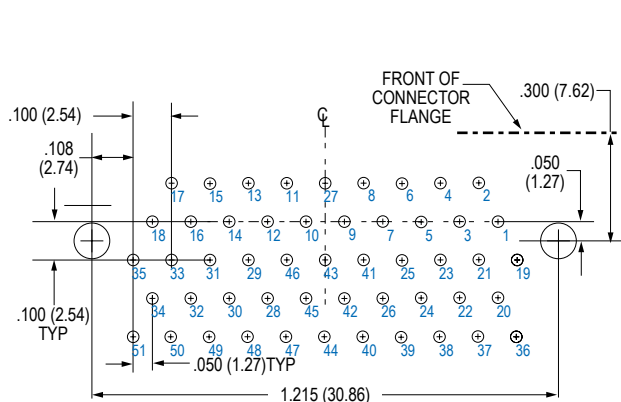
25 SOCKET M83513/13-D



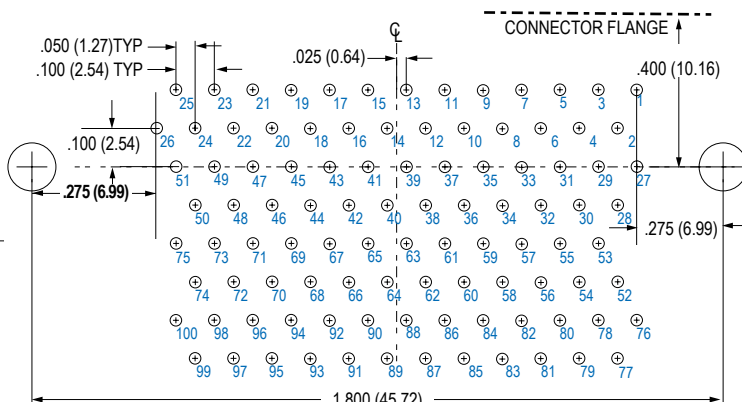
31 SOCKET M83513/13-E



37 SOCKET M83513/13-F



51 SOCKET M83513/14-G



100 SOCKET M83513/15-H