



# 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.

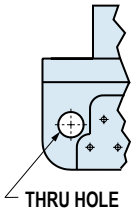
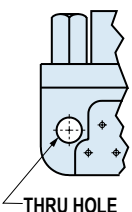
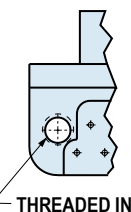
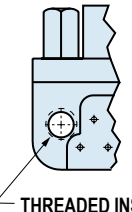
## Solder-Dipped

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

Table I: Hardware Options

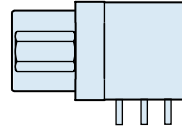
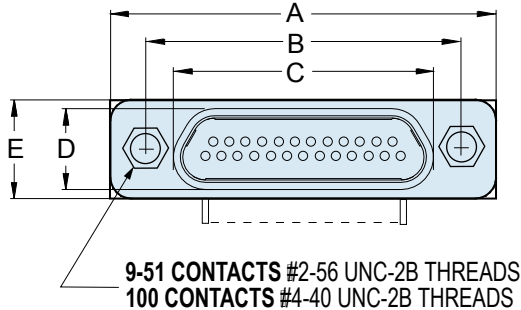
| N                                                                                   | P                                                                                   | T or U                                                                               | W or Y                                 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

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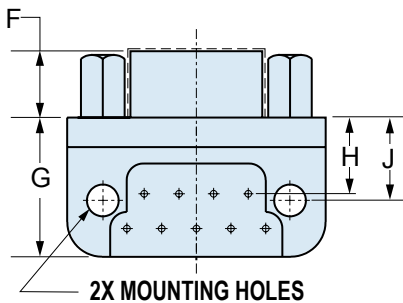
Micro-D  
MIL-DTL-83513

Table II: Dimensions



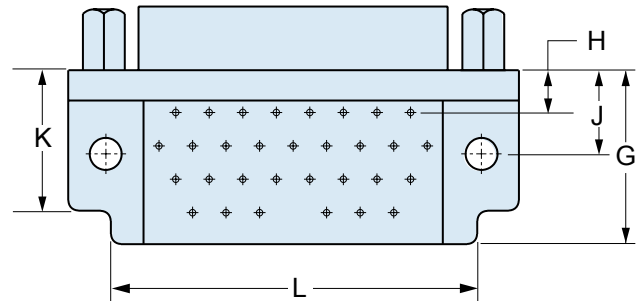
THREAD SIZES  
9-51 CONTACTS #2-56 UNC  
100 CONTACTS #4-40 UNC

## 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.   |
| 9P     | .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  | —      | —     | —      | —     |
| 9S     | .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  | —      | —     | —      | —     |
| 15P    | .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  | —      | —     | —      | —     |
| 15S    | .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  | —      | —     | —      | —     |
| 21P    | 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  | —      | —     | —      | —     |
| 21S    | 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  | —      | —     | —      | —     |
| 25P    | 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  | —      | —     | —      | —     |
| 25S    | 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  | —      | —     | —      | —     |
| 31P    | 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 |
| 31S    | 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 |
| 37P    | 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 |
| 37S    | 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 |
| 51P    | 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 |
| 51S    | 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 |
| 100P   | 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 |
| 100S   | 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 |

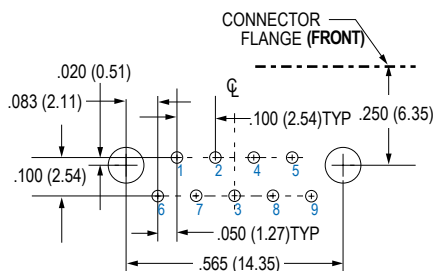
L



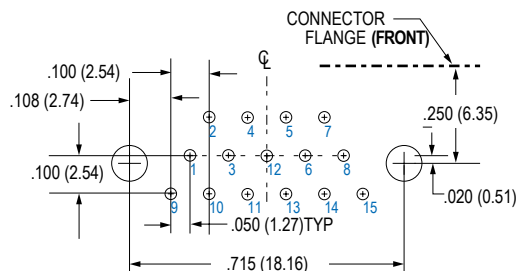
# MIL-DTL-83513/10 Thru /15 Micro-D CBR Condensed Right Angle PCB Terminated

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

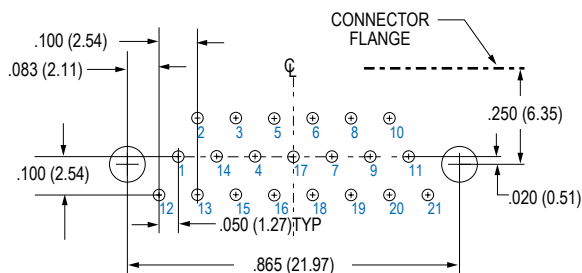
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



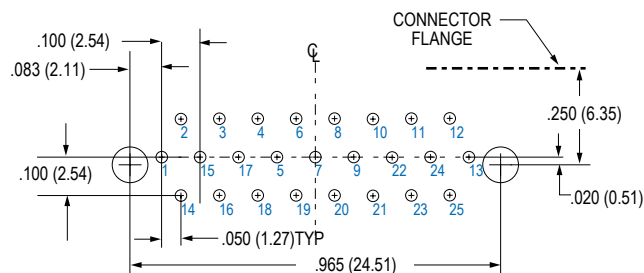
**9 PIN M83513/10-A**



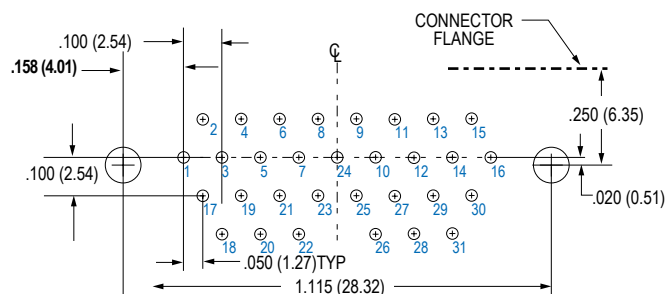
**15 PIN M83513/10-B**



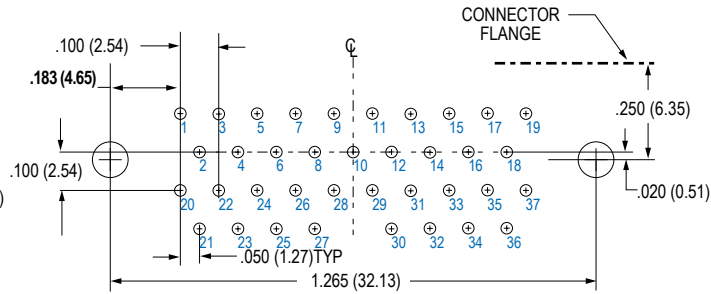
**21 PIN M83513/10-C**



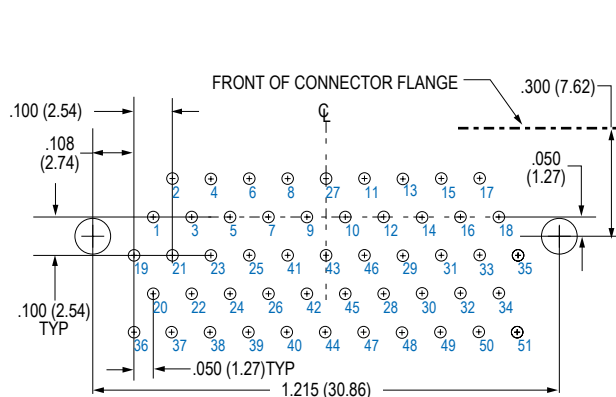
**25 PIN M83513/10-D**



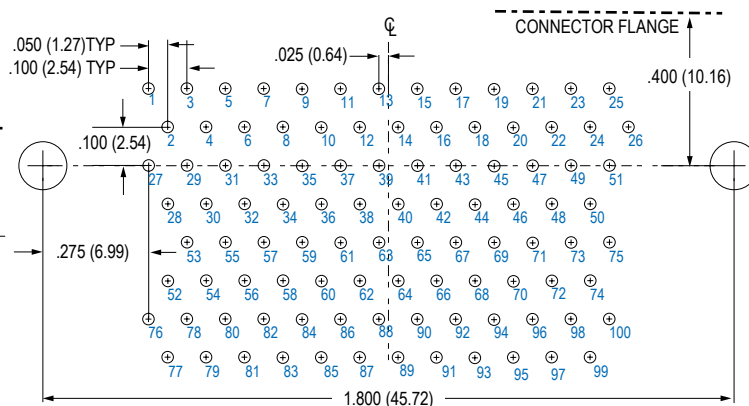
**31 PIN M83513/10-E**



**37 PIN M83513/10-F**



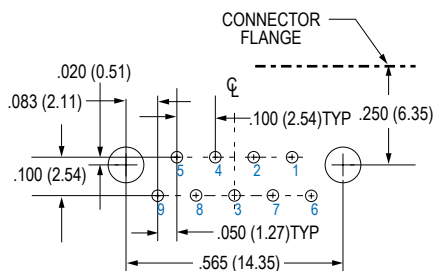
**51 PIN M83513/11-G**



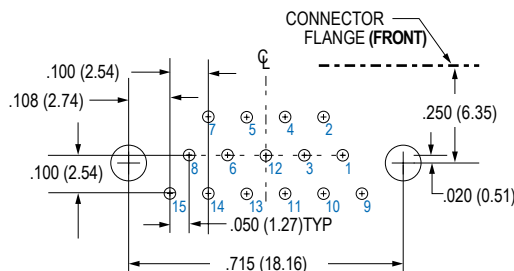
**100 PIN M83513/12-H**

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

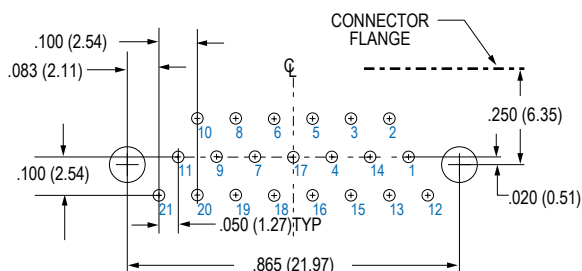
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



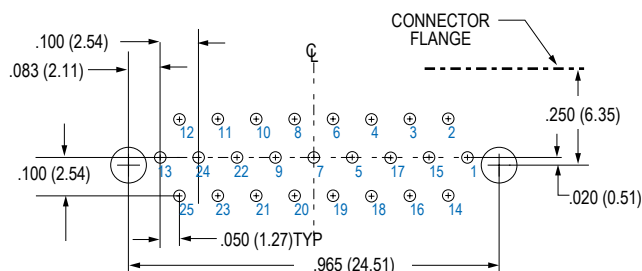
**9 SOCKET M83513/13-A**



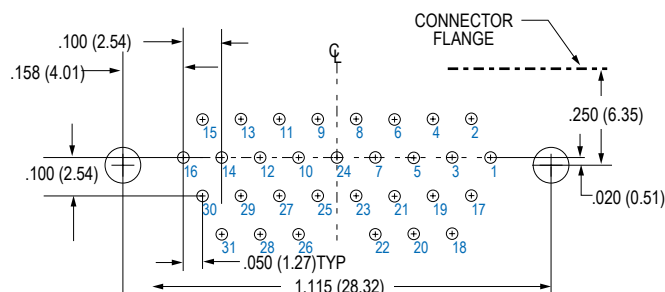
**15 SOCKET M83513/13-B**



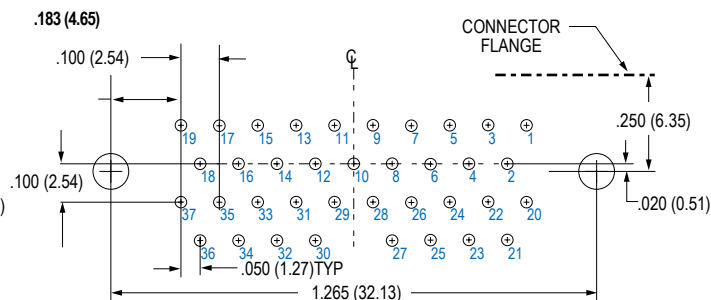
**21 SOCKET M83513/13-C**



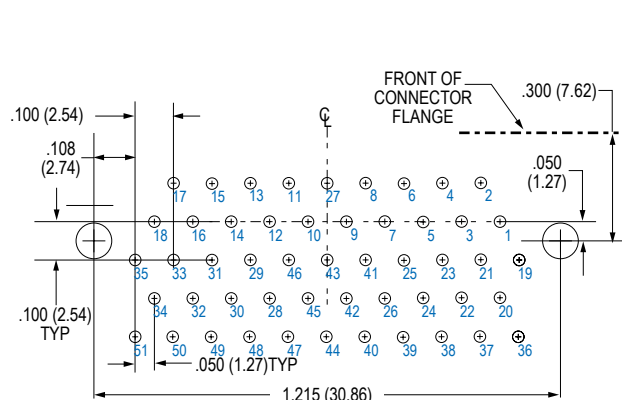
**25 SOCKET M83513/13-D**



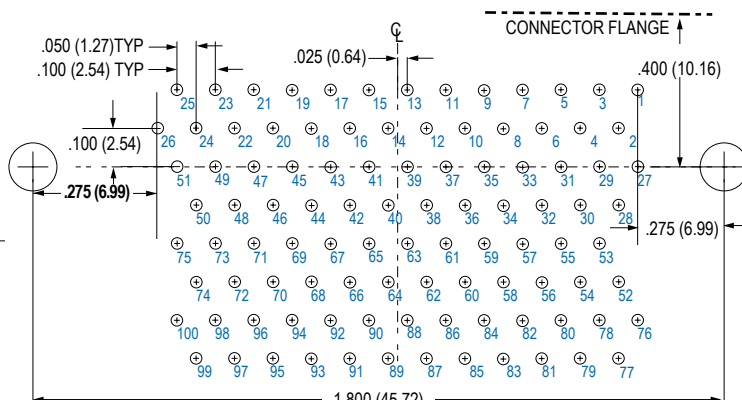
**31 SOCKET M83513/13-E**



**37 SOCKET M83513/13-F**



**51 SOCKET M83513/14-G**



**100 SOCKET M83513/15-H**