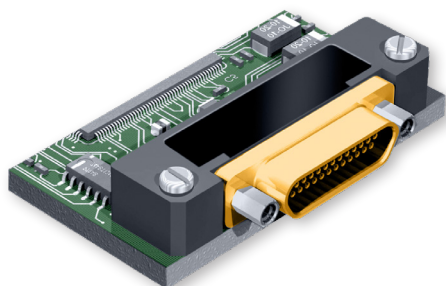




MIL-DTL-83513/16 Thru /21 Micro-D BR Right Angle PCB Terminated Connector



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 PCB Micro-D Connectors

| Sample Part Number | M83513/ | 19-F | 02 | N | P |
|--------------------------|--|--|--|---|---|
| Base Part Number | M83513 | | | | |
| Slash Number-Shell Sizes | Plug (Pin Contacts) | Receptacle (Socket Contacts) | | | |
| | 16-A - 9 Contacts 16-B - 15 Contacts 16-C - 21 Contacts 16-D - 25 Contacts 16-E - 31 Contacts 16-F - 37 Contacts 17-G - 51 Contacts 18-H - 100 Contacts | 19-A - 9 Contacts 19-B - 15 Contacts 19-C - 21 Contacts 19-D - 25 Contacts 19-E - 31 Contacts 19-F - 37 Contacts 20-G - 51 Contacts 21-H - 100 Contacts | | | |
| PC Tail Length | 01 - .109 Inch (2.77 mm) | 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 | | |
| Hardware Options | P - Passivated SST | | T - Nickel Fluorocarbon Polymer | | |
| | 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 Table I) | | | | |

Table I: Hardware Options

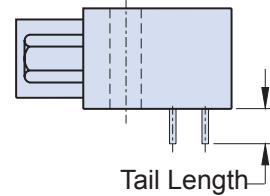
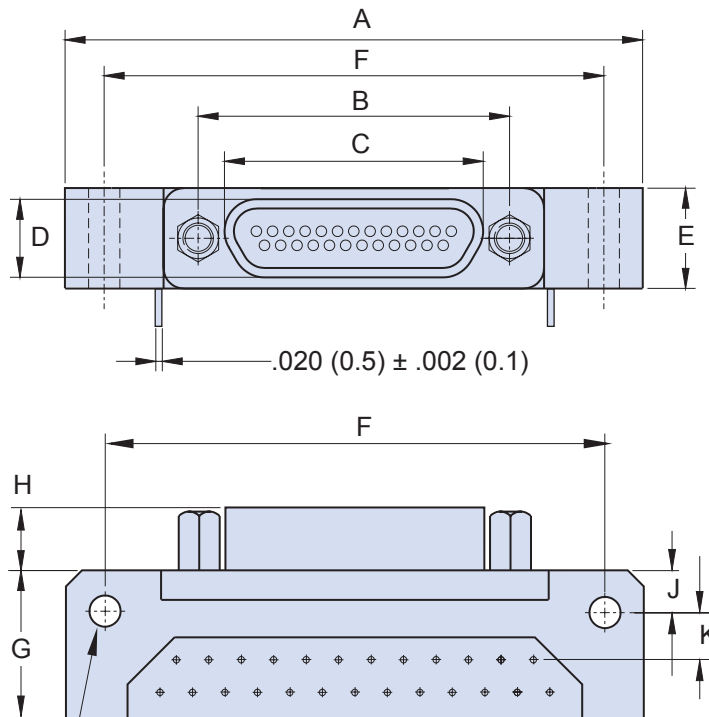
| N | P | T or U | W or Y |
|-------------|-----------|-----------------|---------------------------|
| | | | |
| THRU HOLE | THRU HOLE | THREADED INSERT | THREADED INSERT |
| No Jackpost | Jackpost | Threaded Insert | Jackpost, Threaded Insert |

MIL-DTL-83513/16 Thru /21 Micro-D BR Right Angle PCB Terminated Connector



Micro-D
MIL-DTL-83513

Table II: Dimensions



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

2 X PCB MTNG HOLES
9-51 CONTACTS $.096 \pm .005$ (2.43 ± 0.13)
100 CONTACTS $.125 \pm .005$ (23.18 ± 0.13)

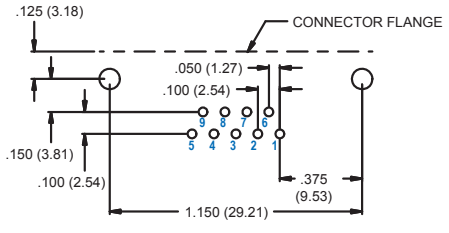
| Layout | A Max. | | B | | C Max. | | D Max. | | E Max. | | F | | G Max. | | H | | J | | K | |
|--------|--------|-------|-------------------|------------------|--------|-------|--------|------|--------|-------|-------------------|-------------------|--------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | In. | mm. | In. $\pm .005$ | mm. $\pm .13$ | In. | mm. | In. | mm. | In. | mm. | In. $\pm .005$ | mm. ± 0.13 | In. | mm. | In. $\pm .003$ | mm. ± 0.08 | In. $\pm .015$ | mm. ± 0.38 | In. $\pm .010$ | mm. ± 0.25 |
| 9P | 1.390 | 35.31 | .565 | 14.35 | .333 | 8.46 | .185 | 4.70 | .325 | 8.26 | 1.150 | 29.21 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 9S | 1.390 | 35.31 | .565 | 14.35 | .400 | 10.16 | .253 | 6.26 | .325 | 8.26 | 1.150 | 29.21 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 15P | 1.540 | 39.12 | .715 | 18.16 | .483 | 12.27 | .185 | 4.70 | .325 | 8.26 | 1.300 | 33.02 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 15S | 1.540 | 39.12 | .715 | 18.16 | .551 | 14.00 | .253 | 6.26 | .325 | 8.26 | 1.300 | 33.02 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 21P | 1.690 | 42.93 | .865 | 21.97 | .633 | 16.08 | .185 | 4.70 | .325 | 8.26 | 1.450 | 36.83 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 21S | 1.690 | 42.93 | .865 | 21.97 | .701 | 17.81 | .253 | 6.26 | .325 | 8.26 | 1.450 | 36.83 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 25P | 1.790 | 45.47 | .965 | 24.51 | .733 | 18.62 | .185 | 4.70 | .325 | 8.26 | 1.550 | 39.37 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 25S | 1.790 | 45.47 | .965 | 24.51 | .801 | 20.35 | .253 | 6.26 | .325 | 8.26 | 1.550 | 39.37 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 31P | 2.040 | 51.82 | 1.115 | 28.32 | .883 | 22.43 | .185 | 4.70 | .325 | 8.26 | 1.800 | 45.72 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 31S | 2.040 | 51.82 | 1.115 | 28.32 | .951 | 24.16 | .253 | 6.26 | .325 | 8.26 | 1.800 | 45.72 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 37P | 2.340 | 59.44 | 1.265 | 32.13 | 1.033 | 26.24 | .185 | 4.70 | .325 | 8.26 | 2.100 | 53.34 | .465 | 11.81 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 37S | 2.340 | 59.44 | 1.265 | 32.13 | 1.101 | 27.96 | .253 | 6.26 | .325 | 8.26 | 2.100 | 53.34 | .465 | 11.81 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 51P | 1.875 | 47.63 | 1.215 | 30.86 | .983 | 24.97 | .228 | 5.79 | .360 | 9.14 | 1.600 | 40.64 | .565 | 14.35 | .183 | 4.65 | .125 | 3.18 | .150 | 3.81 |
| 51S | 1.875 | 47.63 | 1.215 | 30.86 | 1.051 | 26.70 | .296 | 7.52 | .360 | 9.14 | 1.600 | 40.64 | .565 | 14.35 | .195 | 4.95 | .125 | 3.18 | .150 | 3.81 |
| 100P | 2.780 | 70.60 | 1.800 | 45.72 | 1.383 | 35.13 | .271 | 6.88 | .420 | 10.67 | 2.500 | 63.50 | .765 | 19.43 | .183 | 4.65 | .225 | 5.72 | .150 | 3.81 |
| 100S | 2.780 | 70.60 | 1.800 | 45.72 | 1.451 | 36.86 | .333 | 8.64 | .420 | 10.67 | 2.500 | 63.50 | .765 | 19.43 | .195 | 4.95 | .225 | 5.72 | .150 | 3.81 |



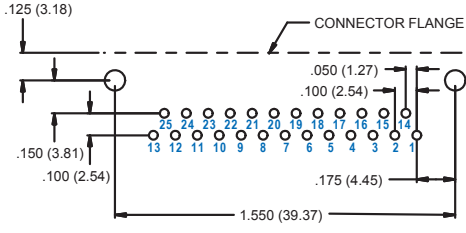
MIL-DTL-83513/16 Thru /21 Micro-D BR Right Angle PCB Terminated Connector

M83513/16 Thru /18 PCB Layouts – Pin Connectors

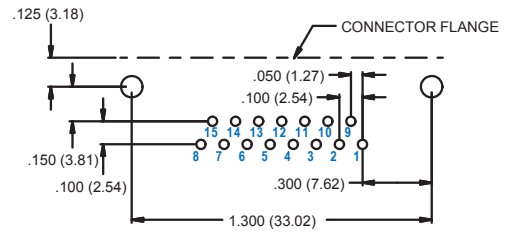
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



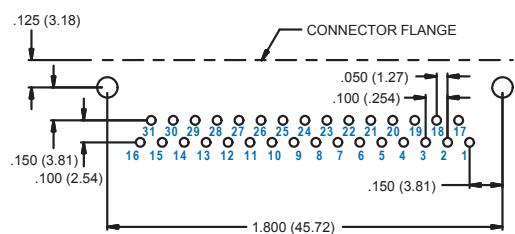
9 PIN M83513/16-A



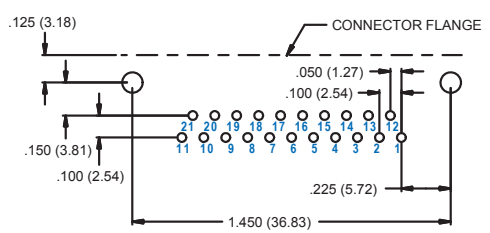
25 PIN M83513/16-D



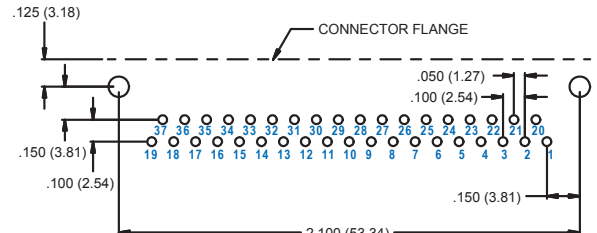
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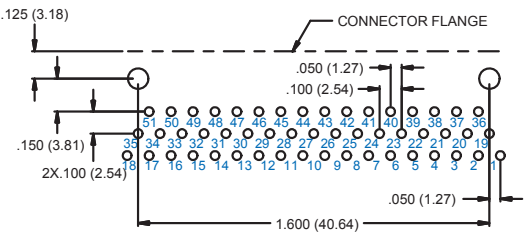
31 PIN M83513/16-E



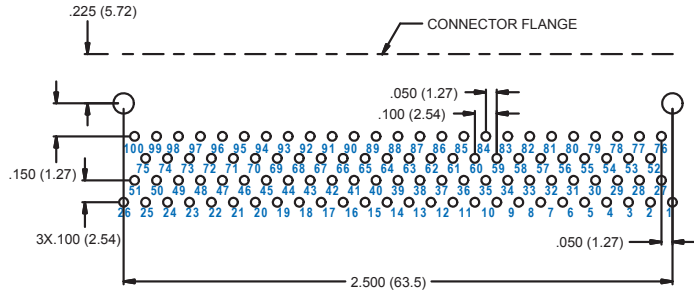
21 PIN M83513/16-C



37 PIN M83513/16-F



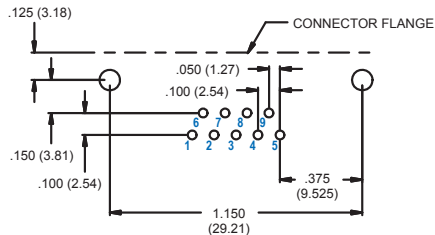
51 PIN M83513/17-G



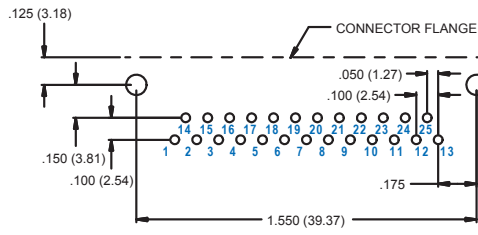
100 PIN M83513/18-H

M83513/19 Thru /21 PCB Layouts – Socket Connectors

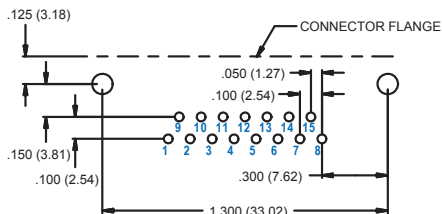
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



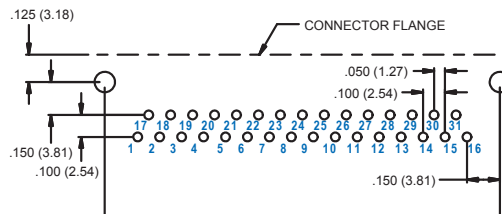
9 SOCKET M83513/19-A



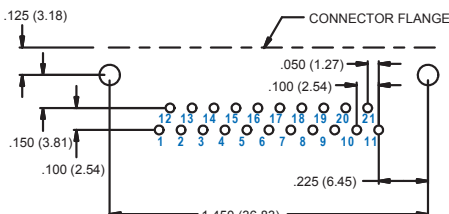
25 SOCKET M83513/19-D



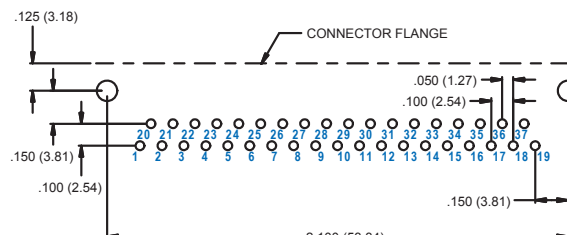
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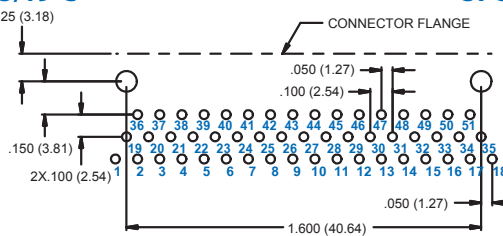
31 SOCKET M83513/19-E



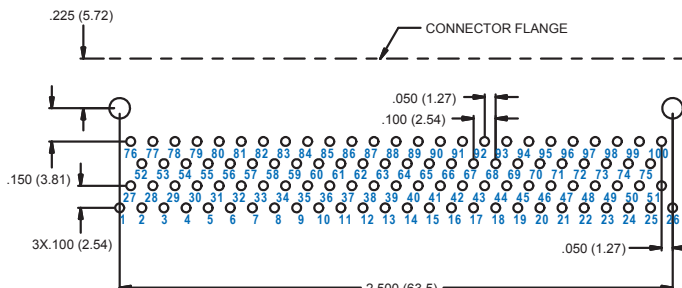
21 SOCKET M83513/19-C



37 SOCKET M83513/19-F



51 SOCKET M83513/20-G



100 SOCKET M83513/21-H