



MIL-DTL-83513/28 Thru /33 Micro-D CBS Condensed Straight PCB Terminated Connectors



Space-Saving — These connectors take up less room on the PC board. PC tail spacing is .075 inch (1.9mm) between rows.

Threaded Inserts — Stainless steel inserts are insert molded into plastic trays. These inserts provide a ground path from the PC board to the mating cable.

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

How To Order Straight PCB Micro-D Connectors

| | | | | | |
|---------------------------------|--|-------------|---|----------|----------|
| Sample Part Number | M83513/ | 33-H | 01 | C | P |
| Base Part Number | M83513/ | | | | |
| Slash Number-Shell Sizes | Plug (Pin Contacts) 28-A - 9 Contacts 28-E - 31 Contacts 28-B - 15 Contacts 28-F - 37 Contacts 28-C - 21 Contacts 29-G - 51 Contacts 28-D - 25 Contacts 30-H - 100 Contacts | | Receptacle (Socket Contacts) 31-A - 9 Contacts 31-E - 31 Contacts 31-B - 15 Contacts 31-F - 37 Contacts 31-C - 21 Contacts 32-G - 51 Contacts 31-D - 25 Contacts 33-H - 100 Contacts | | |
| PC Tail Length | 01 - .109 Inch (2.77 mm) 02 - .140 Inch (3.56 mm) 03 - .172 Inch (4.37 mm) PC Tail Length ± .015 (0.38) | | (See Table II) | | |
| 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 (See Table I) | | Shell Size 100 (H) U - #4-40 Threaded Insert Y - #4-40 Threaded Insert & Jackpost | | |

Table I: Hardware Options

| HARDWARE OPTION N NO JACKPOST, NO THREADED INSERT | HARDWARE OPTIONS T or U THREADED INSERT, NO POST | HARDWARE OPTION P JACKPOST AND THRU-HOLE | HARDWARE OPTIONS W or Y JACKPOST AND THREADED INSERT |
|--|---|--|---|
| | | | |
| MTNG HOLE DIA. 9-51 CONTACTS .096/.088 (2.44/2.24) 100 CONTACTS .150/.145 (3.81/3.68) | THREAD SIZE 9-51 CONTACTS # 2-56 UNC-2B 100 CONTACTS # 4-40 UNC-2B | THREAD SIZE 9-51 CONTACTS # 2-56 UNC 100 CONTACTS # 4-40 UNC USE WITH .156 (3.96) MAX. PC BOARD THICKNESS | THREAD SIZE 9-51 CONTACTS #2-56 UNC 100 CONTACTS #4-40 UNC .160 (4.1) MIN. (9-51 PINS) .225 (5.7) MIN. (100 PIN) |

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Micro-D
MIL-DTL-83513

Table III: Dimensions



| Layout | A Max. | | B | | C Max. | | D Max. | | E Max. | | F | | G Max. | |
|--------|--------|-------|---------------|---------------|--------|-------|--------|------|--------|-------|---------------|---------------|--------|-------|
| | In. | mm. | In. ± .005 | mm. ± 0.13 | In. | mm. | In. | mm. | In. | mm. | In. ± .003 | mm. ± 0.08 | In. | mm. |
| 9P | .785 | 19.94 | .565 | 14.35 | .333 | 8.46 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 9S | .785 | 19.94 | .565 | 14.35 | .400 | 10.16 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 15P | .935 | 23.75 | .715 | 18.16 | .483 | 12.27 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 15S | .935 | 23.75 | .715 | 18.16 | .551 | 14.00 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 21P | 1.085 | 27.56 | .865 | 21.97 | .633 | 16.08 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 21S | 1.085 | 27.56 | .865 | 21.97 | .701 | 17.81 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 25P | 1.185 | 30.01 | .965 | 24.51 | .733 | 18.62 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 25S | 1.185 | 30.01 | .965 | 24.51 | .801 | 20.35 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 31P | 1.335 | 33.91 | 1.115 | 28.32 | .883 | 22.43 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 31S | 1.335 | 33.91 | 1.115 | 28.32 | .951 | 24.16 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 37P | 1.485 | 37.72 | 1.265 | 32.13 | 1.033 | 26.24 | .185 | 4.70 | .310 | 7.87 | .183 | 4.65 | .355 | 9.02 |
| 37S | 1.485 | 37.72 | 1.265 | 32.13 | 1.101 | 27.96 | .253 | 6.43 | .310 | 7.87 | .195 | 4.95 | .355 | 9.02 |
| 51P | 1.435 | 36.45 | 1.215 | 30.86 | .983 | 24.97 | .228 | 5.79 | .400 | 10.16 | .183 | 4.65 | .355 | 9.02 |
| 51S | 1.435 | 36.45 | 1.215 | 30.86 | 1.051 | 26.70 | .296 | 7.52 | .400 | 10.16 | .195 | 4.95 | .355 | 9.02 |
| 100P | 2.170 | 55.12 | 1.800 | 45.72 | 1.383 | 35.13 | .271 | 6.88 | .510 | 12.95 | .183 | 4.65 | .430 | 10.92 |
| 100S | 2.170 | 55.12 | 1.800 | 45.72 | 1.451 | 36.86 | .333 | 8.46 | .510 | 12.95 | .195 | 4.95 | .430 | 10.92 |

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M83513/28 Thru 30 PCB Layouts – Pin Connectors

Patterns shown are for connector mounting side of PC board.



9 PIN M83513/28-A



15 PIN M83513/28-B

Connector Orientation



Pin #1



21 PIN M83513/28-C



25 PIN M83513/28-D



31 PIN M83513/28-E



37 PIN M83513/28-F



51 PIN M83513/29-G



100 PIN M83513/30-H

MM83513/31 Thru /33 PCB Layouts – Socket Connectors

Patterns shown are for connector mounting side of PC board.



9 SOCKET M83513/31-A



15 SOCKET M83513/31-B

Connector Orientation



21 SOCKET M83513/31-C



25 SOCKET M83513/31-D



31 SOCKET M83513/31-E



37 SOCKET M83513/31-F



51 SOCKET M83513/32-G



100 Socket M83513/33-H