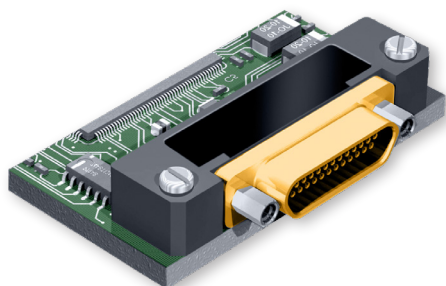




MIL-DTL-83513/16 Thru /21 Micro-D BR Right Angle PCB Terminated Connector



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) 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	Receptacle (Socket 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) PC Tail Length $\pm .015$ (0.38)					
Shell Finish	C - Cadmium N - Electroless Nickel P - Passivated SST	A - Electrodeposited Aluminum K - Zinc Nickel 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 Table I)					

Table I: Hardware Options

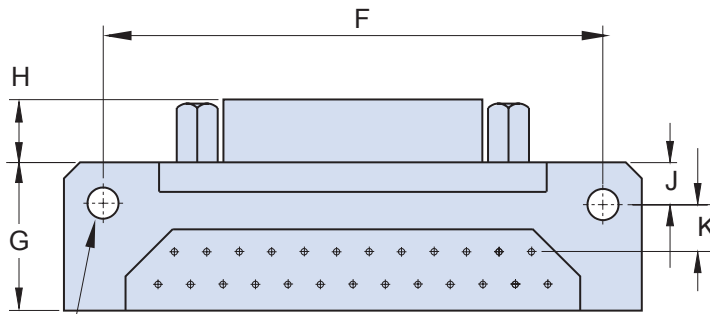
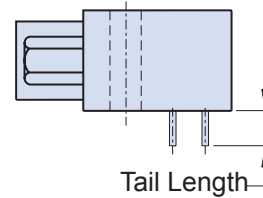
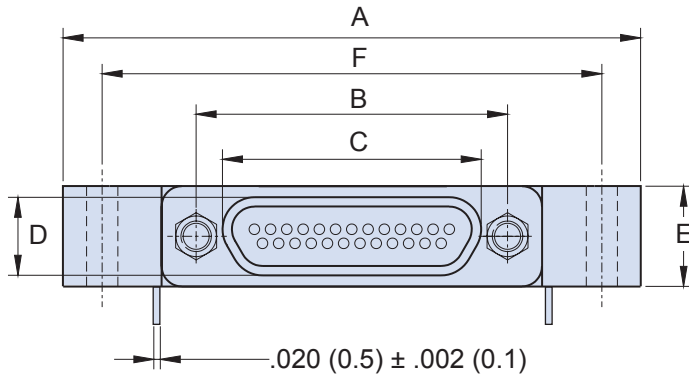
N	P	T or U	W or Y
THRU HOLE	THRU HOLE	THREADED INSERT	THREADED INSERT
No Jackpost	Jackpost	Threaded Insert	Jackpost, Threaded Insert

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



Micro-D
MIL-DTL-83513

Table II: Dimensions



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

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

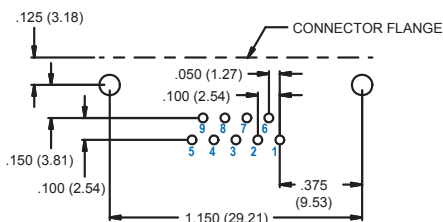
Layout	A Max.		B		C Max.		D Max.		E Max.		F		G Max.		H		J		K	
	In.	mm.	In. ±.005	mm. ±.13	In.	mm.	In.	mm.	In.	mm.	In. ±.005	mm. ± 0.13	In.	mm.	In. ±.003	mm. ±0.08	In. ±.015	mm. ±0.38	In. ±.010	mm. ±0.25
9P	1.390	35.31	.565	14.35	.333	8.46	.185	4.70	.325	8.26	1.150	29.21	.465	11.81	.183	4.65	.125	3.18	.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



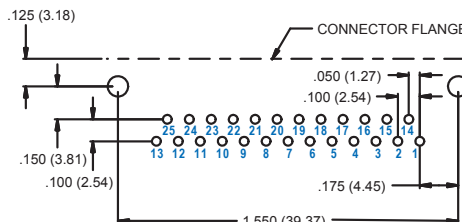
MIL-DTL-83513/16 Thru /21 Micro-D BR Right Angle PCB Terminated Connector

M83513/16 Thru /18 PCB Layouts – Pin Connectors

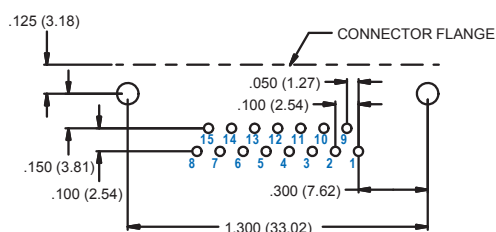
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



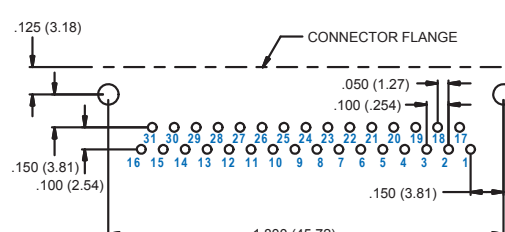
9 PIN M83513/16-A



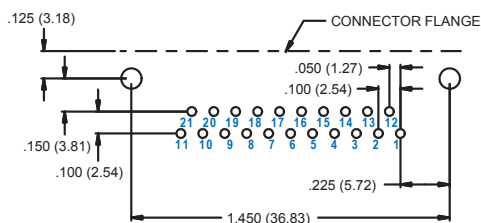
25 PIN M83513/16-D



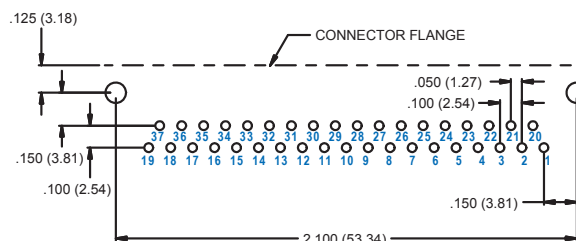
15 PIN M83513/16-B



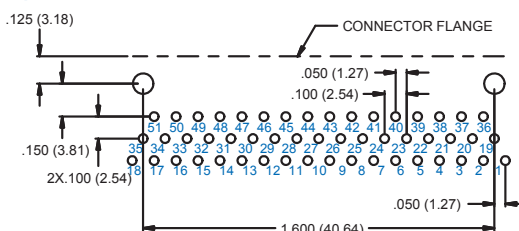
31 PIN M83513/16-E



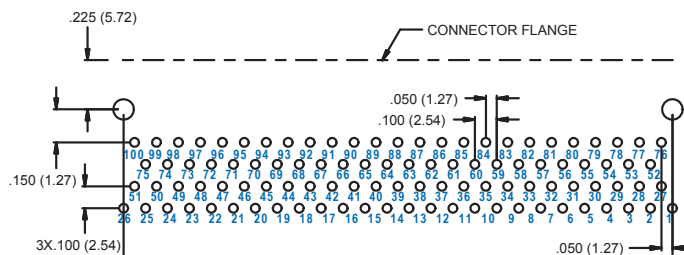
21 PIN M83513/16-C



37 PIN M83513/16-F



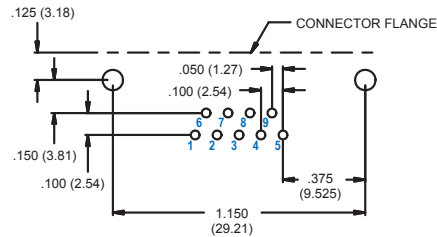
51 PIN M83513/17-G



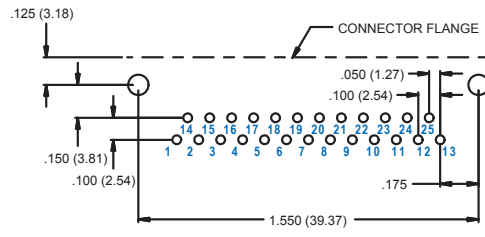
100 PIN M83513/18-H

M83513/19 Thru /21 PCB Layouts – Socket Connectors

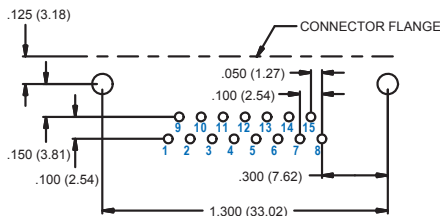
Patterns shown are for connector mounting side of PC board. 9 Thru 51 Contacts .096 (2.44) Diameter Mounting Holes, 100 Pin .125 (3.18) Diameter



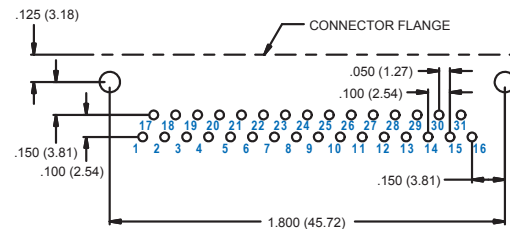
9 SOCKET M83513/19-A



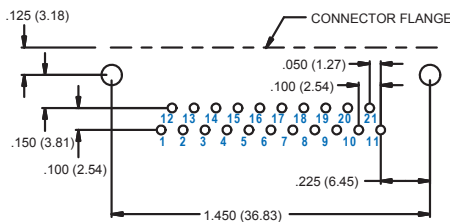
25 SOCKET M83513/19-D



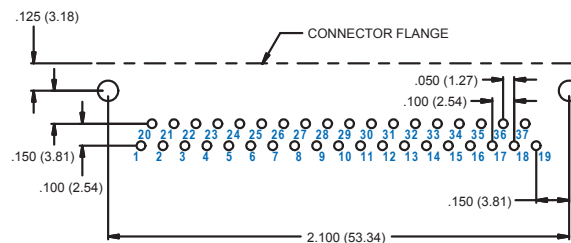
15 SOCKET M83513/19-B



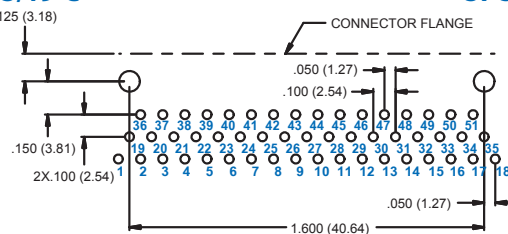
31 SOCKET M83513/19-E



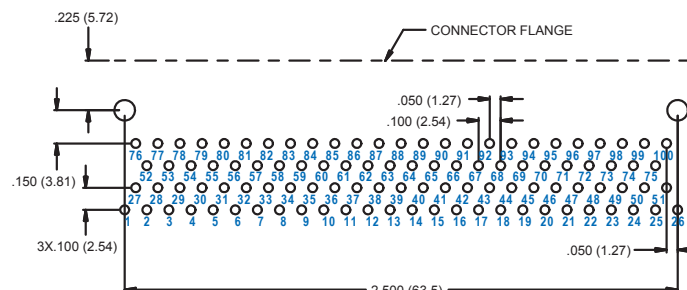
21 SOCKET M83513/19-C



37 SOCKET M83513/19-F



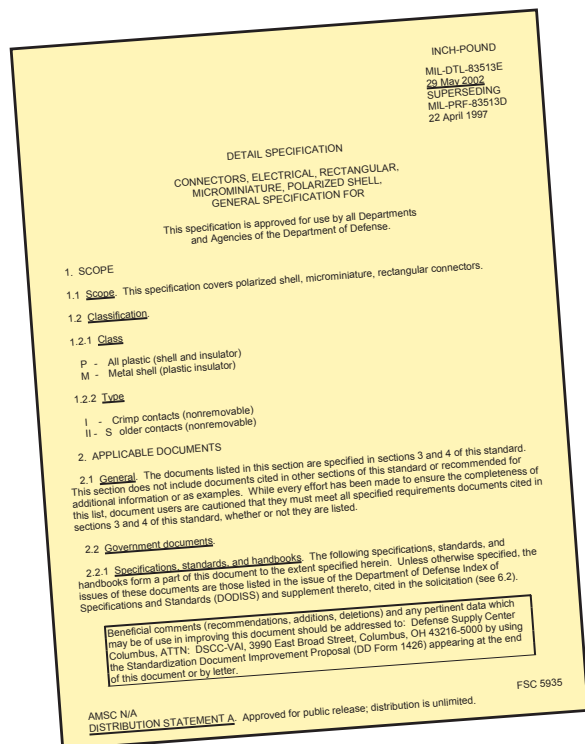
51 SOCKET M83513/20-G



100 SOCKET M83513/21-H



MIL-DTL-83513 At-A-Glance



What is the difference between a Glenair COTS Micro-D and a Glenair Mil Spec Micro-D? Which is less expensive?

All Glenair Micro-D's, whether mil spec or COTS, are built with the same components and meet identical requirements. A COTS Micro-D is not a lower cost version of a mil spec part. COTS versions offer more options than the mil spec versions.

Which is more readily available:

Mil Spec or COTS?

All M83513 aluminum shell connectors are in stock. All standard COTS versions are also stocked.

What is the difference between a Glenair Mil Spec connector and another brand?

MIL-DTL-83513 allows the use of low-cost stamped contacts; however, the Glenair Micro-D connector features the high performance TwistPin contact system. Glenair M83513 connectors are 100% Made in USA. Glenair's industry-leading Micro-D capacity and capabilities offer quick worldwide access to the full range of QPL items.

About The Mil Spec

The United States Department of Defense, Defense Logistics Agency, Defense Supply Center, Columbus, Ohio (DSCC, pronounced "Dessy"), maintains a vast library of military specifications covering all kinds of components used in defense equipment. These mil specs simplify system design and procurement, because mil spec parts do not require costly testing for suitability. Easy multiple sourcing is another key advantage of a mil spec part. MIL-DTL-83513 is a detail spec controlling dimensions, materials, performance and testing. This spec covers plastic and metal shell Micro-D connectors.

The QPL At-A-Glance

Manufacturers are required to perform a series of mechanical, electrical and environmental tests in order to be eligible for listing as an approved supplier. When DSCC approval is granted, the manufacturer is added to the Qualified Products List (QPL). Glenair is QPL approved for all M83513 variations.

The "Slash Sheets" At-A-Glance

In addition to the general specification, MIL-DTL-83513 contains a total of 33 Detail Specification Sheets, nicknamed "slash sheets" because a forward slash is used in the numbering system.

How to get a copy of the spec

DSCC specs are available for download. The documents include:

MIL-DTL-83513 Detail Specification (the general spec)

MIL-DTL-83513 Slash Sheets (33 individual specs)

These specs can be found at:

<http://www.dscclia.mil/Programs/MilSpec/DocSearch.asp>

The QPL can be found at:

<http://www.dscclia.mil/programs/qmlqpl/default.asp>

Glenair CAGE Codes

A **CAGE** (**C**ommercial **A**nd **G**overnment **E**ntity) Code is a five position code that identifies companies doing or wishing to do business with the Federal Government. Glenair uses two CAGE codes to identify M83513 products: **06324**, Glenair, Glendale, California
0CA77, Glenair Microway Division, Lincolnwood Illinois.