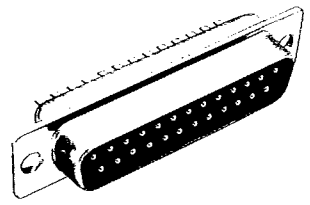
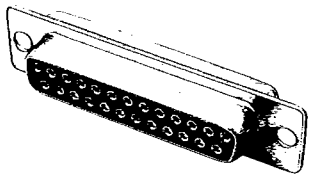
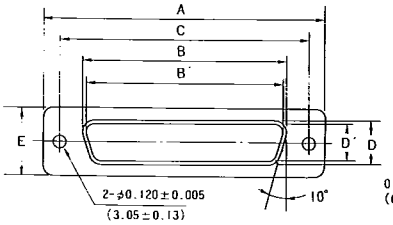
☐ D*M SOLDER TYPE

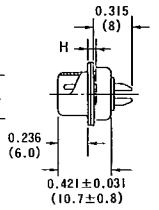
D*M Standard Shell



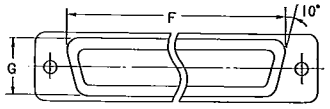




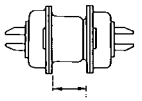
Pin side



Rear side

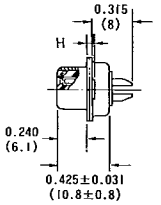


Dimensions after mating

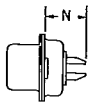


DE,DA···6.2
DB,DC,DD···6.0

Socket side

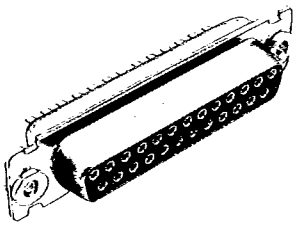


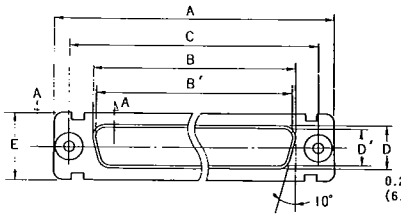
● Dimensions When Mated
See page 28 for the dimensions "N" when special contacts are used.



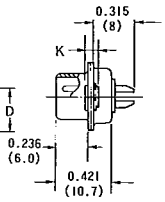
Note: The dimensions "B" and "D" denote the outer dimensions of the socket side shell and the dimensions "B'" and "D'" denote the inner dimmensions of the pin side shell.

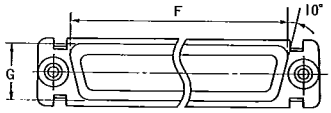
D*MF Float Mount



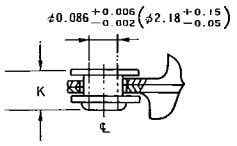


Pin side

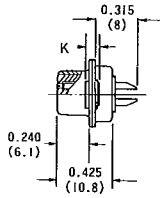




Floating rivet (A-A)



Socket side



The floating washer moves 0.4 mm in any direction with regards to the center (℄).

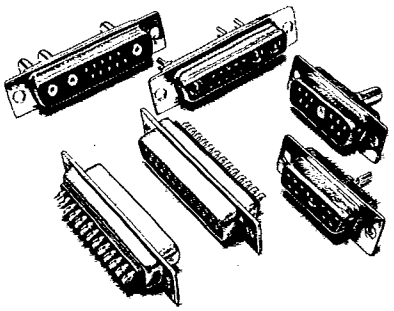
It is recommended that only one connector assembly, either plag or receptacle, be float mounted.

No. of Contacts	Part Number		A ±.020 (±0.5)	B ±.010 (±0.25)	B' ±.010 (±0.25)	C ±.005 (±0.13)	D ±.010 (±0.25)	D' ±.010 (±0.25)	E ±.020 (±0.5)	F ±.016 (±0.4)	G ±.016 (±0.4)	H ±.016 (±0.4)	K ±.010 (±0.25)
9	Pin	DEM-9P	1.213 (30.8)	—	.665 (16.90)	.984 (24.99)	—	.328 (8.34)	.496 (12.6)	.760 (19.3)	.421 (10.7)	.047 (1.2)	.120 (3.05)
	Socket	DEM-9S	1.213 (30.8)	.640 (16.26)	—	.984 (24.99)	.308 (7.82)	—	.496 (12.6)	.760 (19.3)	.421 (10.7)	.047 (1.2)	.120 (3.05)
15	Pin	DAM-15P	1.539 (39.1)	—	.994 (25.24)	1.312 (33.32)	—	.328 (8.34)	.496 (12.6)	1.083 (27.5)	.421 (10.7)	.047 (1.2)	.120 (3.05)
	Socket	DAM-15S	1.539 (39.1)	.968 (24.59)	—	1.312 (33.32)	.308 (7.82)	—	.496 (12.6)	1.083 (27.5)	.421 (10.7)	.047 (1.2)	.120 (3.05)
25	Pin	DBM-25P	2.087 (53.0)	—	1.536 (39.01)	1.852 (47.04)	—	.331 (8.40)	.496 (12.6)	1.626 (41.3)	.421 (10.7)	.059 (1.5)	.129 (3.28)
	Socket	DBM-25S	2.087 (53.0)	1.508 (38.30)	—	1.852 (47.04)	.308 (7.82)	—	.496 (12.6)	1.626 (41.3)	.421 (10.7)	.047 (1.2)	.120 (3.05)
37	Pin	DCM-37P	2.728 (69.3)	—	2.184 (55.47)	2.500 (63.50)	—	.331 (8.40)	.496 (12.6)	2.272 (57.7)	.421 (10.7)	.059 (1.5)	.129 (3.28)
	Socket	DCM-37S	2.728 (69.3)	2.156 (54.76)	—	2.500 (63.50)	.308 (7.82)	—	.496 (12.6)	2.272 (57.7)	.421 (10.7)	.047 (1.2)	.120 (3.05)
50	Pin	DDM-50P	2.634 (66.9)	—	2.081 (52.86)	2.406 (61.11)	—	.439 (11.16)	.606 (15.4)	2.177 (55.3)	.547 (13.9)	.059 (1.5)	.129 (3.28)
	Socket	DDM-50S	2.643 (66.9)	2.061 (52.34)	—	2.406 (61.11)	.419 (10.65)	—	.606 (15.4)	2.177 (55.3)	.547 (13.9)	.047 (1.2)	.120 (3.05)

- To order float mount type, add "F" to the part description (e.g. DEMF-9S).
- Those connectors having "W" in the contact arrangements are of the same dimensions as standard connectors of the same shell size except for the dimension "N" (e.g. "DEM-5WIP" = size of "DEM-9P").
- See page 28 for the dimension "N" when special contacts are used.

SOLDER TYPE

D*M Type



FEATURES

• High reliability, rugged construction
The insulator is a mono-block type molded of glass-filled diallyl phthalate which excels in heat and environmental resistance, dimensional stability, etc.
A beryllium copper spring member is used in the socket contact to assure contact stability and reliability.

• Broad lineup of contact layouts
In addition to standard solder type contacts (size No. 20, rated current 5 A), special contacts such as coaxial, high-voltage, and high-current types are available. Special mixed-content layouts combining these contacts are also available, in addition to the basic layouts for 9 to 50 conductors. The special contacts are ordered separately (shown on pages 27 and 28).
• As specified by RS-232 and JIS C-6361, the Interface between Data Circuit Terminating Equipment (DCE) and Data Terminal Equipment (DTE) is a 25-position D Subminiature connector, as used in data communication and other equipment.

• Wire connection by soldering
Use standard wire under 20 AWG. The capacity of the soldering iron must be between 40 and 60 W. Install special contacts in the insulator after being terminated.

• Connector mating combinations
Mate connectors that have the same shell sizes and contact layouts but different contact sex.
Example: (a) DAM-15P (15 conductors, male pin side) combined with DAM-15S (15 conductors, female socket side)
(b) DBM-17W2P (17 conductors, pin side, with two special contact cavities) combined with DBM-17W2S (17 conductors, socket side, with two special contact cavities)

HOW TO ORDER

DBM -25 P
DBMF-13W3S
DBM -25 S-0001

- **Modification codes (see Note 2)**
- **Contact type:** P . . . Pin, S . . . Socket
- **Contact arrangements:** 9, 15, 25, 37, 50 and special arrangements (see Note 1)
- **Mounting type:** No designator . . . Standard; F. . . Float Mount (rear mounting)
- **Connector type:** M . . . Monoblock Insulator
- **Shell size:** E, A, B, C, D
- **Series prefix**

Notes: (1) **Special contact arrangements**
a) Those contact arrangements having "W" in between such as "13W3" mean that the insulator has cavities for coaxial, high voltage, and/or high power contacts. For example, "13W3" means that of the 13 contacts, three are special and the remaing ten are standard.
b) Connectors come without special contacts. Refer to page 27 and 28, and order separately.
(2) **Modification code —0001**
a) Means two pieces of jack screws (P/N D20418-J2) are mounted. Applies to DBM-25S only.
b) DBM-25S-0001 is a receptacle meeting the requirements of JIS-C-6361.

CONTACT ARRANGEMENTS

See page 26.

STANDARD DATA

• Materials/Finishes

Component	Material	Finish
Contact	Copper alloy (Socket contact spring — Beryllium copper)	Gold plate
Lock ring	Beryllium copper	Gold plate
Insulator	Glass-filled diallylphthalate	Color: Dark green
Shell	Steel	Yellow chromate over zinc plate

• Electrical Data

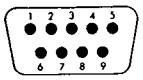
Current Rating	5 amp
Dielectric Rating	1,250 VAC r.m.s
Insulation Resistance	5,000 megohms min.
Contact Resistance	2.7 milliohms max. (Voltage drop method)

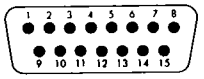
■ For details, see pages 6 and 7.
■ For terminating and assemblying methods, see pages 62 thru 66.

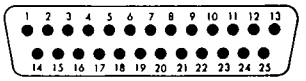
CONTACT ARRANGEMENTS (NUMBER OF CONTACTS)

Face View of Pin Inserts

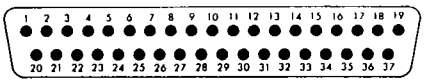
Basic Contact Arrangements

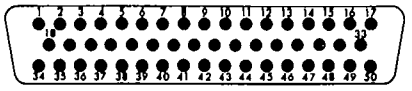






Shell Size	E	A	B
Contact Arrangements (Number of Contacts)	9	15	25



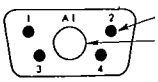


Shell Size	C	D
Contact Arrangements (Number of Contacts)	37	50

Arrangements of Coaxial, High Voltage and High Power Contacts

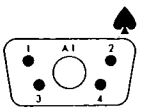
(Order special contacts separately. See page 27 and 28.)

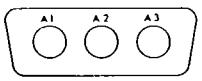
Example: ♠ . . . Standard insert

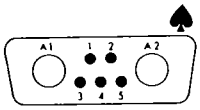


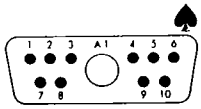
#20 size contact

Cavity for special contact (Special contacts do not come with connectors. See pages 27 thru 8 and order separately.)

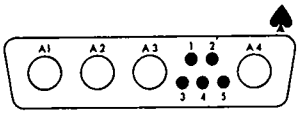


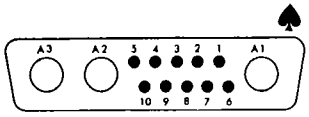


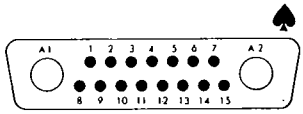


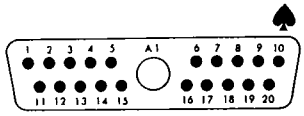


Shell Size	E	A	A	A
Contact Arrangements (Number of Contacts)	5W1	3W3	7W2	11W1

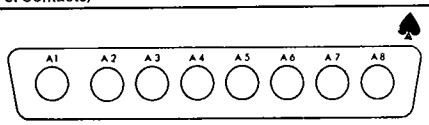


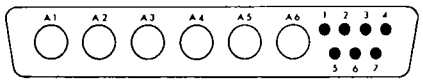


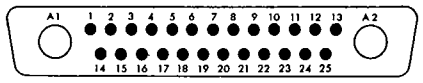




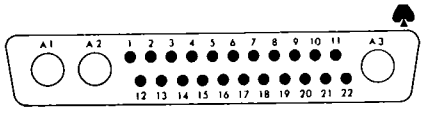
Shell Size	B	B	B	B
Contact Arrangements (Number of Contacts)	9W4	13W3	17W2	21W1

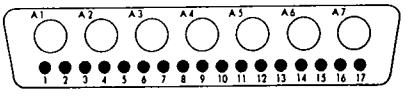




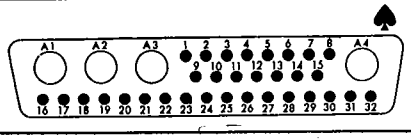


Shell Size	C	C	C
Contact Arrangements (Number of Contacts)	8W8	13W6	27W2





Shell Size	C	D
Contact Arrangements (Number of Contacts)	25W3	24W7



Shell Size	D
Contact Arrangements (Number of Contacts)	36W4

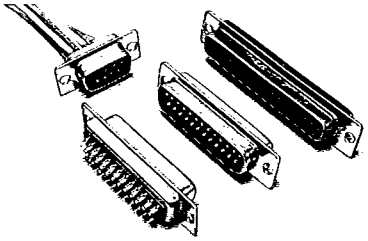
2378 B-07

■APPLICATIONS

Computers, OA equipment, communications, measuring instruments, medical equipment, broadcasting equipment, audio and acoustic equipment, machine tools, FA equipment, control equipment, aviation and space equipment, rolling stock and vehicles, consumer equipment, and other electronic and electric equipment.

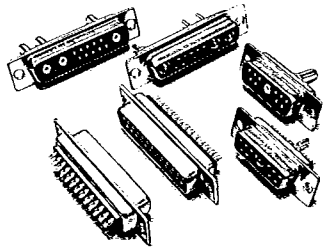
SOLDER TYPE

D*-N/D*-UL 24 Page



- The "original" of the D Sub series. Easy-to-use, and low-cost.
- Insulator materials are flame-retardant per UL 94V-0.
- Two contact types are available — stamped (D*-N) and machined (D*-UL).
- Number of conductors; 9, 15, 25, 37, or 50

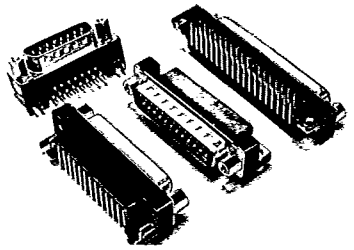
D*M .....26 Page



- High-reliability machined contacts with beryllium copper spring on socket contact.
- Special contacts also available for coaxial, high voltage, and high current applications in all-special or mixed-contact layouts.
- Number of conductors: 9, 15, 25, 37, or 50, plus special layouts.

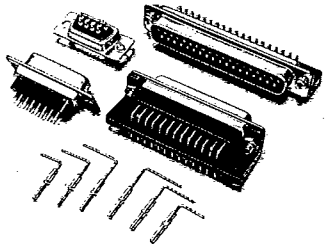
PRINTED CIRCUIT BOARD THROUGH HOLE TYPE

D*LC ..... 33 Page



- Right Angle PC solder tail.
- One-piece molded plastic body. Metal shell provided on front mating surface.
- Screw lock assemblies for the mating connector are available.
- Electromagnetic Interference shielding and grounding is obtained with the nickel-plated metal shell and grounding lugs that can be grounded to the printed board circuit.
- Number of conductors: 9, 15, 25, or 37.

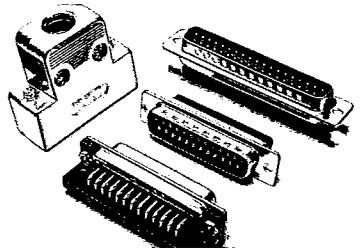
D*/D*U .....36 Page



- D*-A-J4 (Right angle PC, machined contacts)
- D*-A-N (Right angle PC, stamped contacts)
- D*-T (Straight PC, machined contacts)
- D*-T-N (Straight PC, stamped contacts)
- D*-R (Wrap contacts)
- D*U (Straight and right angle contacts)

ELECTROMAGNETIC INTERFERENCE (EMI) CONTROL TYPE

D Sub-F .....42 Page



- D Sub types with higher shielding effectiveness for electromagnetic interference control to meet FCC and other strict applications.
- Without cost penalty over standard versions.
- Grounding dimples, in the front metal shell of the pin side, assure complete grounding when mated. The cable clamp hood has shielded construction incorporating both lightness and smart appearance.
- Nickel-plated front-shells and strain-relief back-shells (hoods).
- Back shells are available in both all-metal and lightweight metallized-plastic versions. Screw lock assemblies are offered with either metric or inch threads.
- Connector Types:

Solder	D*-F-N
Crimp Contact	D*U-F
Insulation Displacement	D*SP-F
Printed Circuit Board	D*LC-J, D*-AF-N, D*U-F

FEATURES

A-17-03
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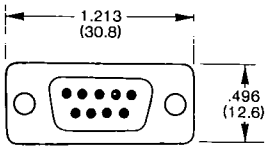
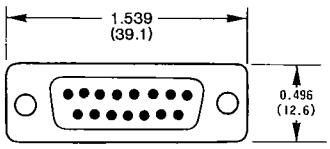
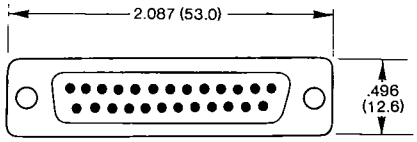
• Five different shell sizes and numbers of conductors
The connector housing is compact and rectangular. The contacts and insulators are contained in a rugged steel shell. There are five shell sizes (E, A, B, C, and D), respectively with standard contact counts of 9, 15, 25, 37, and 50. Special layouts to accept coaxial, high-voltage, and high-current contacts are also available.

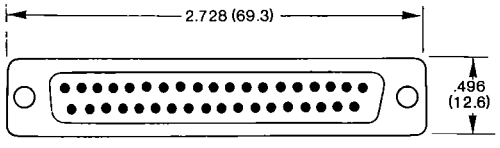
E	A	Shell Size:
9	15	Number of Conductors:



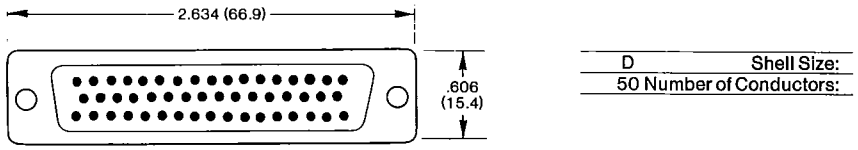




B	Shell Size:
25	Number of Conductors:



C	Shell Size:
37	Number of Conductors:

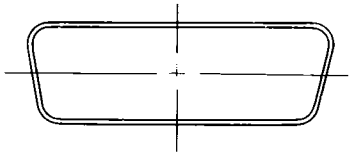


D	Shell Size:
50	Number of Conductors:

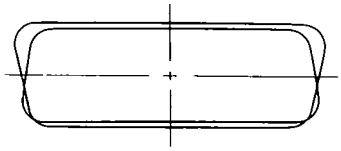
Special Layouts (D*M Type)

• Fail-Safe Polarizing Mechanism
The shell connecting part is keystone trapezoidal which inherently prevents incorrect coupling.

Can be mated



Cannot be mated



• Official Standards
D Sub connectors conform to many international standards Including:

Japan Industrial Standards
- JIS-C-6361
- JIS-C-6366
- JIS-C-6367

Japan Defense Agency Standards
- NDSXC 6116
- DSP C 6242

US Military Standards
- MIL-C-24308

• Shell Type
The shell profile comes in a panel-mounting standard type and floating type (the latter aids in rack-to-panel connection).

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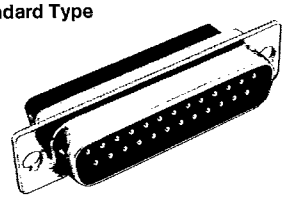
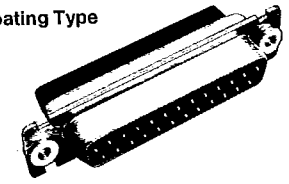
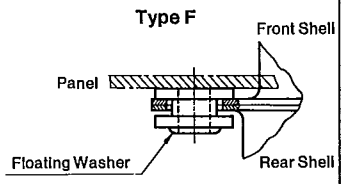
Standard Type



Floating Type

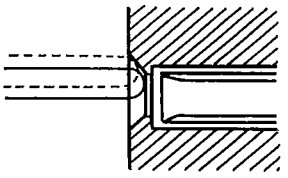


Type F



The floating washer moves .030 in. (0.4 mm) in any direction relative to the center (℄).

• Close Entry Construction
Socket insulators have a closed entry construction which prevents entry of oversized contacts or probes.



• Compatibility
Individual connector types are interchangeable as are the accessories.

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A-65-07

■General Specification (Principal Performance)

Division	Item	Performance					
		D*		D*M	D*U		
		Stamped Contacts	Machined Contacts		Stamped Contacts	Machin	
Electrical Performance	Rated Current	5A					
	Dielectric Strength (See Level)	AC 1250 V r.m.s			AC 1000 V r.m.s		
	Insulation Resistance	5000 M-ohm or greater					
	Contact Resistance	2.7 m-ohm or less (5.0 m-ohm or less after the life and after salt spray). Test current: AWG No. 20, 7.5 a; AWG No. 22, 5; AWG No. 24, 3. *Through hole (PCB mounted connectors not applicable).					
Mechanical Performance	Contact Force	Mating force: 28.4~408 g Unmating force: 28.4~272 g	Mating force: 28.4~340 g Unmating force: 28.4~227 g		Mating force: 28.4~408 g Unmating force: 28.4~272 g		
	Connector Mating/Unmating Force	Mating force: (408 g × number of contacts) or less. Unmating force: (272 g × number of contacts) or less.	Mating force: (340 g × number of contacts) or less. Unmating force: (227 g × number of contacts) or less.		kg or less	Stamped Contact	Machin
						Mating Force	Unmating Force	Mating Force
					9	3.7	2.4	3.1
					15	6.1	4.1	5.1
					25	10.2	6.8	8.5
					37	15.1	10.1	12.6
					50	20.4	13.6	17.0
	Contact Retention Force (kg or larger)	D*		D*M	D*U		
		Stamped Contacts	Machined Contacts		Stamped Contacts		Mach
		4.5		4.1	3.6		4.5
	Vibrations	(1) The current (discontinuity) shall not exceed one (1) microsecond. (2) Shall pass the dielectric strength test at sea level. (3) Parts shall be free of cracks, damage, and looseness.					

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Contacts	D* MA	D* SP	Description
		1A	
		AC 600 V r.m.s	There shall be no breakdown discharge after the test voltage (see at left) is applied for one minute between adjacent contacts and between shell and closest contact.
		1000 M-ohm or greater	The value specified at the left shall be met when 500 VDC is applied and measured between adjacent contacts and between contact and the shell.
		15 m-ohm or less (30 m-ohm or less)	Mate pin and socket contacts terminated to wire, apply a test current, then measure by the voltage drop method. The value at the left shall be satisfied.
Mating force: 28.4～340 g Unmating force: 28.4～227 g			Mate and unmate the largest test pin (1.041 $\phi^{+0}_{-0.003}$) three times. Measure mating/unmating forces during the third cycle. Mate and unmate the smallest test pin (0.991 $\phi^{+0}_{-0.003}$) and measure mating/unmating forces during first cycle. The value at the left should be satisfied.

Contact Unmating Force	Mating force: (340 g × number of contacts) or less. Unmating force: (222 g × number of contacts) or less.	kg or less	Mating Force	Unmating Force	Description
2.0		9	3.1	2.0	Mate and unmate the connector on the pin side while completely anchoring the connector on the socket side. The measured mating and unmating forces shall satisfy the values at the left.
3.4		15	5.1	3.4	
5.7		25	8.5	5.7	
8.4		37	12.6	8.4	
11.3					

Contacts	D* MA	D* SP	Description
	4.5	1.0	Apply an axial load to the contacts
			Vibration to supply full sine wave .06 (1.52 mm) in total amplitude or 10 G, whichever is smaller, over a frequency range 10 to 500 Hz. The full frequency range is applied both ways for 15 minutes. This cycle is repeated 12 times each in the three axial directions. All contacts to be connected serially and apply a 100-mA current during the test.