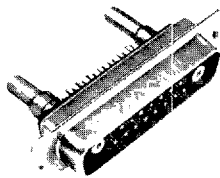


# Combo D<sup>®</sup> – Coaxial 75 and 50 Ohm

## Coaxial Housing With Solder Cup Signal Contacts



- Cable combinations supplied with preloaded solder signal contacts
- 50 ohm coax contacts supplied separately (see pages 27-28)
- 75 ohm coax contacts supplied separately (see page 23)

Clinch Nut and Float Mount Options Available:

Add: E = 4-40 Clinch Nut

Y = Float Mounting

Example: DAME3W3PK87

DAMY3W3PK87

Mounting Method Detail – Page 6.

Layout	Standard Socket	30 $\frac{1}{2}$ in. Gold Socket	Standard Pin	30 $\frac{1}{2}$ in. Gold Pin
DE-5W1	DEM5W1SA197	DEM5W1SK126	DEM5W1PK87	DEM5W1PK127
DA-7W2	DAM7W2SA197	DAM7W2SK126	DAM7W2PK87	DAM7W2PK127
DA-11W1	DAM11W1SA197	DAM11W1SK126	DAM11W1PK87	DAM11W1PK127
DA-3W3	DAM3W3SA197	DAM3W3SK126	DAM3W3PK87	DAM3W3PK127
DB-5W5	DBM5W5SA197	DBM5W5SK126	DBM5W5PK87	DBM5W5PK127
DB-9W4	DBM9W4SA197	DBM9W4SK126	DBM9W4PK87	DBM9W4PK127
DB-13W3	DBM13W3SA197	DBM13W3SK126	DBM13W3PK87	DBM13W3PK127
DB-17W2	DBM17W2SA197	DBM17W2SK126	DBM17W2PK87	DBM17W2PK127
DB-21W1	DBM21W1SA197	DBM21W1SK126	DBM21W1PK87	DBM21W1PK127
DC-8W8	DCM8W8SA197	DCM8W8SK126	DCM8W8PK87	DCM8W8PK127
DC-13W6	DCM13W6SA197	DCM13W6SK126	DCM13W6PK87	DCM13W6PK127
DC-17W5	DCM17W5SA197	DCM17W5SK126	DCM17W5PK87	DCM17W5PK127
DC-21WA4	DCM21WA4SA197	DCM21WA4SK126	DCM21WA4PK87	DCM21WA4PK127
DC-25W3	DCM25W3SA197	DCM25W3SK126	DCM25W3PK87	DCM25W3PK127
DC-27W2	DCM27W2SA197	DCM27W2SK126	DCM27W2PK87	DCM27W2PK127
DD-24W7	DDM24W7SA197	DDM24W7SK126	DDM24W7PK87	DDM24W7PK127
DD-36W4	DDM36W4SA197	DDM36W4SK126	DDM36W4PK87	DDM36W4PK127
DD-43W2	DDM43W2SA197	DDM43W2SK126	DDM43W2PK87	DDM43W2PK127
DD-47W1	DDM47W1SA197	DDM47W1SK126	DDM47W1PK87	DDM47W1PK127

Highlighted part numbers indicate standard product; usually available with shorter lead times.

## Contact Arrangements

(Will accommodate Removable Coax, Power and/or High Voltage Contacts)

Note. Color Code — Pin Connector: Red, Socket Connector Blue

Shell Size	E	A	A	A	B	B
Contact Arrangement	5W1	3W3	7W2	11W1	5W5	9W4
No. of Signal Contacts	4 #20	0	5 #20	10 #20	0	5 #20
No. of Coaxial Contacts	1	3	2	1	5	4
Shell Size	B	B	B	C		
Contact Arrangement	13W3	17W2	21W1	8W8		
No. of Signal Contacts	10 #20	15 #20	20 #20	0		
No. of Coaxial Contacts	3	2	1	8		
Shell Size	C	C	C	C		
Contact Arrangement	13W6	17W5	21WA4	25W3		
No. of Signal Contacts	7 #20	12 #20	17 #20	22 #20		
No. of Coaxial Contacts	6	5	4	3		
Shell Size	C	D	D			
Contact Arrangement	27W2	36W4	43W2			
No. of Signal Contacts	25 #20	32 #20	41 #20			
No. of Coaxial Contacts	2	4	2			
Shell Size	D	D				
Contact Arrangement	24W7	47W1				
No. of Signal Contacts	17 #20	46 #20				
No. of Coaxial Contacts	7	1				

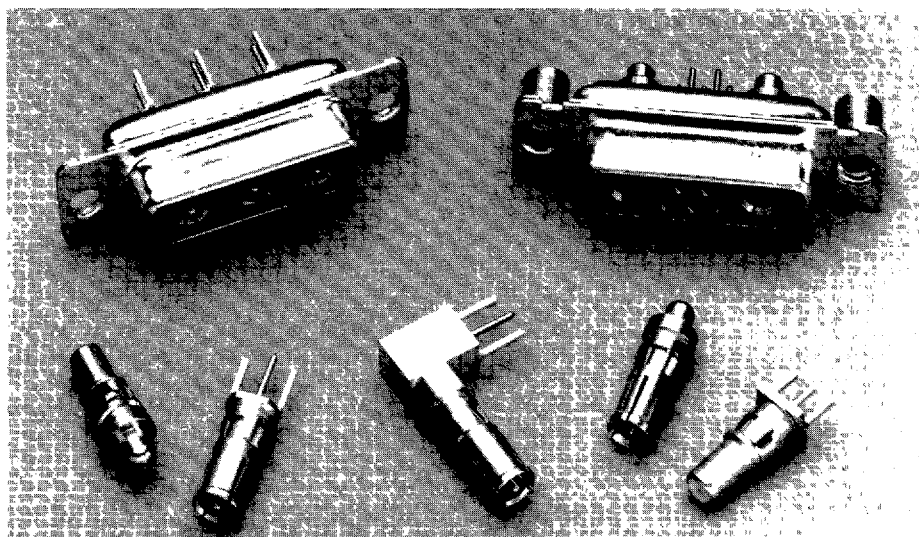
# Combo D<sup>®</sup>

Combination D Subminiature connectors are the fastest growing segment of the D Subminiature market. ITT Cannon engineering teams, in keeping pace with the demands of the industry, have developed the broadest selection of Combination D Subminiatures available.

We offer the ability to integrate signal and 50 and 75 ohm coax, high power, and high voltage. You can mix red, green, and blue video lines with signal and up to 40 amps of power in the same package.

Design variations of the new Combo D connector, versus other packaging methods, include the proven ITT Cannon polarized "D" shape to prevent mismatching; dense, space-saving packaging; and diverse mounting options. Choose from a variety of cable and printed wiring board selections. Printed wiring board combos come pre-assembled with fixed contacts eliminating the need to buy several components.

This new line of connectors offers you **unlimited design versatility**.



*Straight and right angle printed wiring board contacts are available in both coax and high power versions*

## Performance Specifications

### Connector Assemblies

Description	Material	Finish
Shell	Steel	Tin
Insulator	Thermoplastic or Diallyl Phthalate, UL 94V-0 rated.	None
Size 20 contacts when applicable	Copper alloy	Gold over nickel or 30 $\mu$ inches, gold over nickel.
Standoff	Copper alloy	Electrodeposited Tin/Lead over Copper
Bracket	Steel	
Rivnut	Steel or Copper alloy	Electrodeposited Tin/Lead over Copper.
Eyelet	Copper alloy	
<b>Coaxial Assembly</b>		
Contacts and shells	Copper alloy	Gold over nickel or 50 $\mu$ inches gold over copper.
Ring, retaining	Copper alloy	Nickel
Insulator	Teflon	None

U.L. File Number: E8572

### Performance Data

Signal Contact Current Rating	5 Amp
Temperature Rating	-65°C to +150°C
Signal Contact Resistance millivolt max.	55 @ 7.5 Amp test current
Coax Impedance	75 or 50 ohm
Coax VSWR	Less than 1.3-1.0 up to 500 megahertz
Coax Insertion Loss	.1 db loss at 500 megahertz.

### Dielectric Withstanding Voltage

Type of Contact		Altitude (feet/m)							
		Sea Level		20,000/6096		50,000/15240		70,000/1336	
		90°	Straight	90°	Straight	90°	Straight	90°	Straight
Center Conductor to Coaxial Shell	Average Flashover	1200	1500	900	1000	600	700	400	500
	Test	800	1000	600	650	400	475	275	325
Coaxial Shell to Nearest Standard Solder Pot Contact	Average Flashover	•	1500	•	1500	•	900	•	650
	Test	•	1000	•	1000	•	600	•	425
High Power contact and/or Coaxial Shell to Plug Shell	Average Flashover	1500	1500	1000	1000	500	500	500	500
	Test	1000	1000	650	650	325	325	325	325
#20 Signal	Average Flashover	1700		1000		650		500	
	Test	1250		750		475		375	
HV Contact to Nearest Contact or to Shell	Average Flashover	3800	3800	2300	2300	900	900	650	650
	Test	2800	2800	1700	1700	675	675	475	475

All voltage figures are rms AC 60 rms cps, measured at approximately +25°C, 50% rh.

Impedance: 50 ohm, 75 ohm

# ITT Cannon

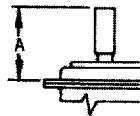
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Combo D<sup>®</sup>

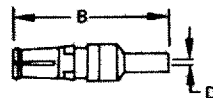
# Combo D<sup>®</sup> – Coaxial 75 Ohm

## Cable Combinations – 75 Ohm Contacts

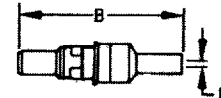
Color Code: Receptacle - Blue; Plug - Red



(Dimensions include outer sleeve.)



Receptacle



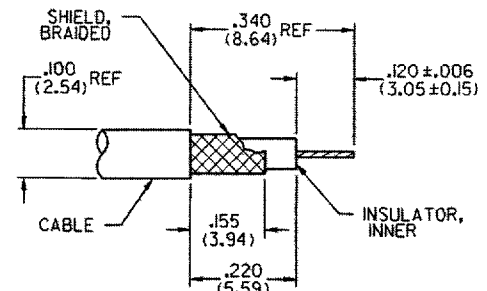
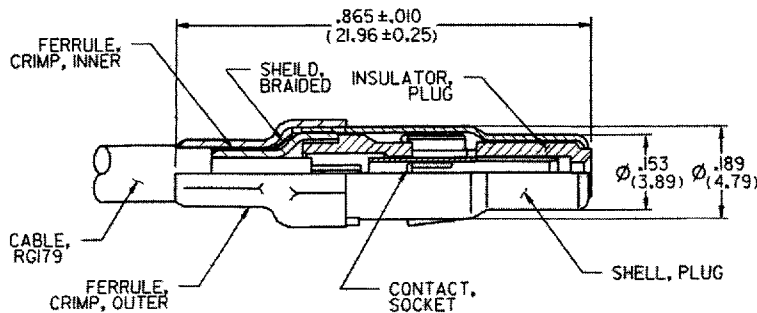
Plug

Machined Solder/Crimp	Part Number	A	B	D	RG Cable No.
Plug	DM53740-31	.811 (20.60)	±.015 (0.38)	±.005 (0.13)	179/U
Receptacle	DM53742-31	.834 (21.18)	1.037 (26.34)	.067 (1.70)	179/U

**NOTE:** Tooling and Assembly – Pages 28-29

Stamped Crimp/Crimp	Loose 15μ in. Gold	Loose 30μ in. Gold	10,000 Piece 15μ in. Gold	10,000 Piece 30μ in. Gold	B	D	RG Cable No.
Plug	D130322-2	D130322-1	D130322-102	D130322-101	±.010 (0.25)	—	179/U
Receptacle	D130344-1	D130344	D130344-101	D130344-100	.865 (21.97)	—	179/U

### Recommended Strip Length for Stamped Crimp/Crimp



RECOMMENDED STRIP LENGTH

### Tooling for Stamped Crimp/Crimp

Description	Crimping Tool	Tool Number
Stamped Center Conductor	Hand Crimp, "B" Crimp	CCTP-750HM
	Semi-Automatic Crimper	ABT-607
Stamped Outer Conductor	Hand Tool, Hex Crimp	CCTP-DM
	Pneumatic Hex Crimp	CPT-DM

Highlighted part numbers indicate standard product; usually available with shorter lead times.

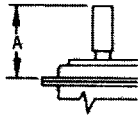
Combo D<sup>®</sup>

# Combo D<sup>®</sup> – Coaxial/50 Ohm

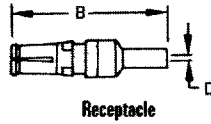
## Cable Combinations – 50 Ohm Coaxial Contacts

Color Code: Receptacle - Blue; Plug - Red

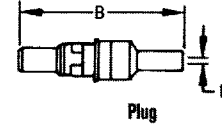
### Straight Crimp Braid



(Dimensions include outer sleeve.)



Receptacle

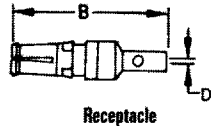
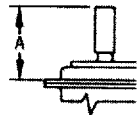


Plug

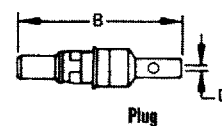
	Crimp/Crimp Gold Over Ni	Gold Over Nickel	Part Number		A Max.	B Max.	D Min.	RG Cable No.	
			50 $\mu$ in.	Gold Over Copper				Old	New
Plug		DM53740	DM53740-17		.739 (18.8)	.945 (24.00)	.040 (1.00)	196/U	178B/U
Plug	DM53740-37*	DM53740-1	DM53740-15		.739 (18.8)	.945 (24.00)	.067 (1.70)	187/U	179B/U
Plug		DM53740-35	—		.739 (18.8)	.945 (24.00)	.067 (1.70)	—	RD316
Plug		DM53740-3	DM53740-16		.847 (21.5)	1.037 (26.34)	.110 (2.79)	195/U	180B/U
Plug		DM53740-5	DM53740-18		.847 (21.5)	1.037 (26.34)	.125 (3.18)	58/U	58B/U
Receptacle		DM53742	DM53742-18		.739 (18.8)	.945 (24.00)	.040 (1.00)	196/U	178B/U
Receptacle	DM53742-38*	DM53742-1	DM53742-16		.739 (18.8)	.945 (24.00)	.067 (1.70)	187/U	179B/U
Receptacle		DM53742-36	—		.739 (18.8)	.945 (24.00)	.067 (1.70)	—	RD316
Receptacle		DM53742-3	DM53742-17		.847 (21.5)	1.037 (26.34)	.110 (2.79)	195/U	180B/U
Receptacle		DM53742-5	DM53742-19		.847 (21.5)	1.037 (26.34)	.125 (3.18)	58/U	58B/U

\* Consult factory for center contact crimp tooling.

### Straight Solder Braid



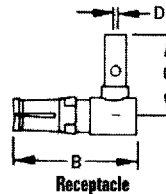
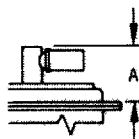
Receptacle



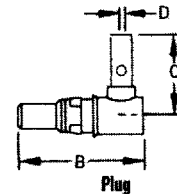
Plug

	Gold Over Nickel	Part Number		A Max.	B Max.	D Min.	RG Cable No.	
		50 $\mu$ in.	Gold Over Copper				Old	New
Plug	DM53740-5008	DM53740-5105		.739 (18.8)	.945 (24.00)	.040 (1.00)	196/U	178B/U
Plug	DM53740-5001	DM53740-5099		.739 (18.8)	.945 (24.00)	.067 (1.70)	187/U	179B/U
Plug	DM53740-5145	—		.739 (18.8)	.945 (24.00)	.067 (1.70)	—	RD316
Plug	DM53740-5002	DM53740-5104		.847 (21.5)	1.037 (26.34)	.110 (2.79)	195/U	180B/U
Plug	DM53740-5005	DM53740-5101		.847 (21.5)	1.037 (26.34)	.125 (3.18)	58/U	58/U
Receptacle	DM53742-5006	DM53742-5092		.739 (18.8)	.945 (24.00)	.040 (1.00)	196/U	178B/U
Receptacle	DM53742-5001	DM53742-5089		.739 (18.8)	.945 (24.00)	.067 (1.70)	187/U	179B/U
Receptacle	DM53742-5126	—		.739 (18.8)	.945 (24.00)	.067 (1.70)	—	RD316
Receptacle	DM53742-5002	DM53742-5091		.847 (21.5)	1.037 (26.34)	.110 (2.79)	195/U	180B/U
Receptacle	DM53742-5004	DM53742-5086		.847 (21.5)	1.037 (26.34)	.125 (3.18)	58/U	58/U
Plug (Short Type)	DM53740-5000	DM53740-5100		.670 (17.0)	.874 (22.20)	.045 (1.14)	196/U	178B/U
Receptacle (Short Type)	DM53742-5000	DM53742-5085		.670 (17.0)	.874 (22.20)	.045 (1.14)	196/U	178B/U

### Right Angle Solder Braid



Receptacle



Plug

	Gold Over Nickel	Part Number		A Max.	B Max.	C	D Min.	RG Cable No.	
		50 $\mu$ in.	Gold Over Copper					Old	New
Plug	DM53741-5000	DM53741-5059		.530 (13.46)	.745 (18.92)	.544 (15.10)	.040 (1.00)	196/U	178B/U
Plug	DM53741-5001	DM53741-5062		.530 (13.46)	.745 (18.92)	.544 (15.10)	.067 (1.70)	187/U	179B/U
Plug	DM53741-5003	DM53741-5063		.530 (13.46)	.745 (18.92)	.630 (16.00)	.110 (2.79)	195/U	180B/U
Plug	DM53741-5004	DM53741-5060		.530 (13.46)	.745 (18.92)	.630 (16.00)	.125 (3.18)	58/U	58/U
Receptacle	DM53743-5000	DM53743-5073		.530 (13.46)	.745 (18.92)	.594 (15.09)	.040 (1.00)	196/U	178B/U
Receptacle	DM53743-5001	DM53743-5076		.530 (13.46)	.745 (18.92)	.594 (15.09)	.067 (1.70)	187/U	179B/U
Receptacle	DM53743-5003	DM53743-5077		.530 (13.46)	.745 (18.92)	.630 (16.00)	.110 (2.79)	195/U	180B/U
Receptacle	DM53743-5004	DM53743-5074		.530 (13.46)	.745 (18.92)	.630 (16.00)	.125 (3.18)	58/U	58B/U

Highlighted part numbers indicate standard product; usually available with shorter lead times.

**ITT Cannon**

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Dimensions are shown in inches (millimeters).  
Dimensions subject to change.

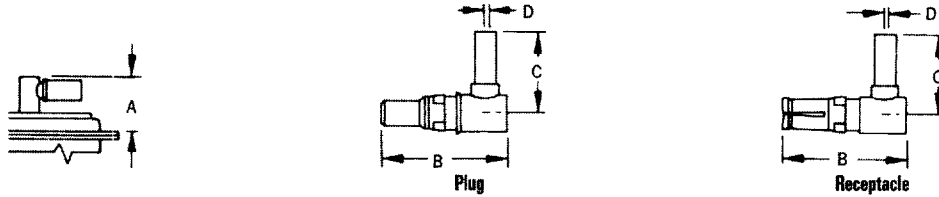
Combo D<sup>®</sup>

# Combo D<sup>®</sup> – Coaxial/50 Ohm

## Cable Combinations – 50 Ohm Coaxial Contacts (Continued)

Right Angle Crimp Braid

(Dimensions include outer sleeve.)  
Color Code: Receptacle - Blue; Plug - Red



	Part Number		A Max.	B Ref.	C	D ±.005 (0.13)	RG Cable No.	
	Gold Over Nickel	50 $\Omega$ in. Gold Over Copper					Old	New
Plug	DM53741	DM53741-12	.530 (13.46)	.745 (18.92)	.594 (15.10)	.045 (1.14)	196/U	178B/U
Plug	DM53741-1	DM53741-11	.530 (13.46)	.745 (18.92)	.594 (15.10)	.072 (1.83)	187/U 188/U	179B/U 316B/U
Plug	DM53741-3	DM53741-10	.530 (13.46)	.745 (18.92)	.630 (16.00)	.110 (2.79)	195/U	180B/U
Plug	DM53741-4	DM53741-13	.530 (13.46)	.745 (18.92)	.630 (16.00)	.125 (3.18)	58/U	58B/U
Receptacle	DM53743-2	DM53743-18	.530 (13.46)	.745 (18.92)	.594 (15.10)	.045 (1.14)	196/U	178B/U
Receptacle	DM53743-3	DM53743-16	.530 (13.46)	.745 (18.92)	.594 (15.10)	.072 (1.83)	187/U 188/U	179B/U 316B/U
Receptacle	DM53743-5	DM53743-17	.530 (13.46)	.745 (18.92)	.630 (16.00)	.110 (2.79)	195/U	180B/U
Receptacle	DM53743-6	DM53743-19	.530 (13.46)	.745 (18.92)	.630 (16.00)	.125 (3.18)	58/U	58B/U

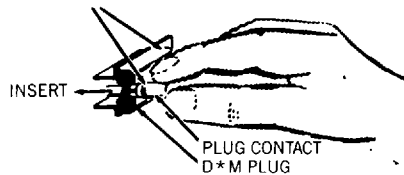
## Insertion/Extraction Instructions

Coaxial, High Power and High Voltage Contacts

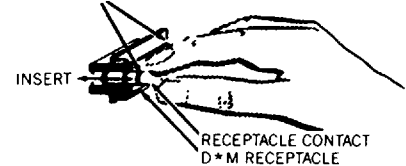
### Insertion

No insertion tool is required. The contact is easily snapped in from the rear of the connector.

RED COLOR CODED CONNECTOR  
ACCEPTS PLUG CONTACTS



BLUE COLOR CODED CONNECTORS ACCEPTS RECEPTACLE  
CONTACTS INSERT FROM TERMINAL END AS SHOWN BELOW



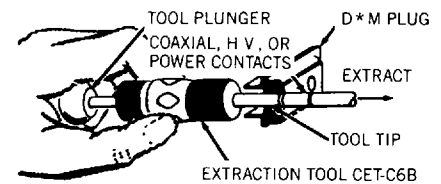
### Extraction

#### CET-C6B

The CET-C6B tool extracts coaxial, high power and high voltage contacts (plug and receptacle). Part number 070064-0000.

### Operating Instructions:

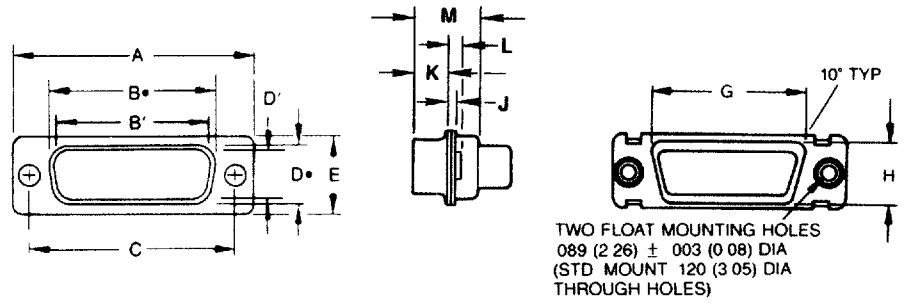
To extract the coax contact, hold the tool by the body and insert the tip into the front of the contact cavity until it bottoms and closes the coax retaining ring. Holding the body in this position securely enough to keep coax retaining ring closed, push the plunger; contact will be pushed out of the rear of the assembly.



Hand Tool with integral die set for all coax straight crimp braid. Part Number: 070051-0000 (CCT-DM)

# D Subminiature

## Standard D Shell Dimensions



Shell Size	A ±.015 (0.38)	B <sup>•</sup> ±.010 (0.25)	B' <sup>•</sup> ±.010 (0.25)	C ±.008 (0.2)	D <sup>•</sup> ±.010 (0.25)	D' <sup>•</sup> ±.010 (0.25)	E ±.016 (0.4)	G Max.	H Max.	J ±.010 (0.25)	K ±.010 (0.25)	L Max.	M Max.
DE-9P	1.213 (30.81)	—	.667 (16.94)	.984 (24.99)	—	.329 (8.36)	.494 (12.55)	.765 (19.41)	.430 (10.92)	.032 (0.81)	.236 (5.99)	.075 (1.90)	.438 (11.12)
DE-9S	1.213 (30.81)	.642 (16.31)	—	.984 (24.99)	.310 (7.87)	—	.494 (12.55)	.765 (19.41)	.430 (10.92)	.032 (0.81)	.242 (6.15)	.075 (1.90)	.438 (11.12)
DA-15P	1.539 (39.14)	—	.995 (25.27)	1.311 (33.32)	—	.329 (8.36)	.494 (12.55)	1.088 (27.64)	.430 (10.92)	.032 (0.81)	.236 (5.99)	.075 (1.90)	.438 (11.12)
DA-15S	1.539 (39.14)	.970 (24.64)	—	1.311 (33.32)	.310 (7.87)	—	.494 (12.55)	1.088 (27.64)	.430 (10.92)	.032 (0.81)	.242 (6.15)	.075 (1.90)	.438 (11.12)
DB-25P	2.087 (53.03)	—	1.535 (38.99)	1.850 (47.04)	—	.329 (8.36)	.494 (12.55)	1.630 (41.40)	.430 (10.92)	.036 (0.91)	.232 (5.99)	.075 (1.90)	.438 (11.12)
DB-25S	2.087 (53.03)	1.510 (38.35)	—	1.850 (47.04)	.310 (7.87)	—	.494 (12.55)	1.630 (41.40)	.430 (10.92)	.032 (0.81)	.242 (6.15)	.075 (1.90)	.438 (11.12)
DC-37P	2.728 (69.31)	—	2.183 (55.45)	2.500 (63.50)	—	.329 (8.36)	.494 (12.55)	2.278 (57.86)	.430 (10.92)	.036 (0.91)	.232 (5.99)	.075 (1.90)	.438 (11.12)
DC-37S	2.728 (69.31)	2.158 (54.81)	—	2.500 (63.50)	.310 (7.87)	—	.494 (12.55)	2.278 (57.86)	.430 (10.92)	.032 (0.81)	.242 (6.15)	.075 (1.90)	.438 (11.12)
DD-50P	2.634 (66.92)	—	2.080 (52.83)	2.406 (61.11)	—	.436 (11.07)	.605 (15.37)	2.183 (55.45)	.542 (13.77)	.036 (0.91)	.232 (5.99)	.075 (1.90)	.438 (11.12)
DD-50S	2.634 (66.92)	2.063 (52.40)	—	2.406 (61.11)	.422 (10.72)	—	.605 (15.37)	2.183 (55.45)	.542 (13.77)	.032 (0.81)	.242 (6.15)	.075 (1.90)	.438 (11.12)

NOTE: Dimensions B<sup>•</sup>, D<sup>•</sup>, G and H are measured as outside dimensions at the bottom of the draw. B<sup>•</sup> and D<sup>•</sup> are the O D dims. for socket side, B' and D' are the inside dims. for pin side