



Waterproof Circular Connectors - JB5 Series



Features: • Waterproof/Dustproof of protection class IP68 prevents penetration of water, oil and dust • Waterproof Receptacle itself • Push-pull mating structure enables easy one-handed insertion and removal • Metal outer parts and ground terminal installed in receptacle ensure shield effect
Specifications: • Rated Current: 3 position = 3A per contact; 4 - 8 position = 2A per contact • Rated Voltage: 200 VAC r.m.s. • Dielectric Withstanding Voltage: 750 VAC r.m.s. per minute • Insulation Resistance: 1000 MΩ • Contact Resistance: 50mΩ maximum • Operating Temperature: -55°C - 85°C • Applicable Wire Size: 22 - 28 AWG • Waterproof: IP68 Protection Level

Dimensions in mm

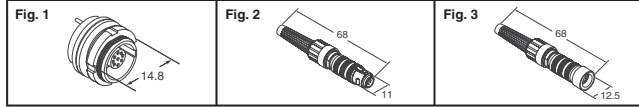


Fig.	No. of Positions	Digi-Key Part No.	Price Each			JAE Part No.
Jam Nut Receptacle - Dip						
1	3	670-1028-ND	15.38	11.54	10.77	JB5CS03AL00N
	4	670-1031-ND	15.38	11.54	10.77	JB5CS04AM00N
	5	670-1032-ND	16.13	12.10	11.30	JB5CS05AM00N
	6	670-1034-ND	16.71	12.54	11.70	JB5CS06AN00N
	8	670-1036-ND	18.96	14.23	13.28	JB5CS08AN00
Jam Nut Receptacle - Solder Cup						
1	3	670-1028-ND	15.38	11.54	10.77	JB5CS03FLOON
	4	670-1031-ND	15.38	11.54	10.77	JB5CS04FM00N
	5	670-1033-ND	16.13	12.10	11.30	JB5CS05FM00N
	6	670-1035-ND	16.71	12.54	11.70	JB5CS06FN00N
	8	670-1037-ND	18.96	14.23	13.28	JB5CS08FN00
8	670-1045-ND	24.28	18.21	17.00	JB5CT08XN0010	
Plug - Solder Cup						
2	3	670-1038-ND	24.73	18.55	17.31	JB5DS03ML11N
	4	670-1039-ND	24.73	18.55	17.31	JB5DS04MM11N
	5	670-1040-ND	25.41	19.06	17.79	JB5DS05MM11N
	6	670-1041-ND	27.04	20.28	18.93	JB5DS06MM11N
	8	670-1042-ND	27.97	21.92	21.17	JB5DS08MM11N
8	670-1046-ND	46.35	38.41	35.23	JB5DT08YX1210	
Cable Receptacle						
3	4	670-1043-ND	28.31	22.20	21.43	JB5HS04FM11N
	8	670-1044-ND	33.23	26.05	25.15	JB5HS08FN11

MX19 Series



Features: • Cable-to-cable (Relay) application • Compact, Waterproof • Mechanical lock system enabling complete mating with a click • Withstands vibration and tension • Terminals have a two-plate spring mechanism with long beam length, which results in a low force insertion and stress dispersion
Specifications: • Contact Pitch: 2.5mm • Rated Current: 5A • Dielectric withstanding voltage: 1000 VAC r.m.s. (1 minute) • Operating temperature range: -40°C - 85°C • Waterproof: Compliant with JIS D2023 S1 • Applicable wire size (cable type): CAVS: 0.3 - 0.5 mm²; AVSS: 0.5 mm²

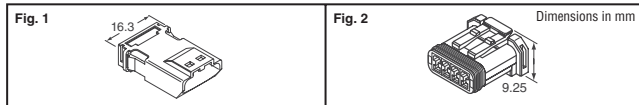


Fig.	No. of Positions	Digi-Key Part No.	Price Each			JAE Part No.
Pin Housings						
1	2	670-1673-ND	.76	.45	.37	MX19002P51
	4	670-1675-ND	.96	.54	.45	MX19004P51
Socket Housings						
2	2	670-1674-ND	1.28	.72	.60	MX19002S51
	4	670-1676-ND	1.30	.75	.65	MX19004S51
Pin Contacts						
—	—	670-1677-1-ND†	.15	.07	.06	MX19P10K451
		670-1677-2-ND‡	298.07/10,000			MX19P10K451
Socket Contacts						
—	—	670-1678-1-ND†	.12	.06	.04	MX19S10K451
		670-1678-2-ND‡	273.70/10,000			MX19S10K451
Tools						
Extraction Tool for MX19 Series	670-1672-ND	187.66	—	—	—	ET-MX19

† Cut Tape ‡ Tape and Reel

MX23A Series



The MX23A connector can be used for wide range water proof equipment including automobiles, motorcycles and so on. This connector has high environmental capability with waterproof structure by sealing in its mating area and by grommet in its wire crimping area for full protection against water. Reverse type pin connector (with pins facing up) is also available in consideration of mounting space
Features: • Low profiled type with board mounting height of 18.3 mm and socket connector height of 22.2mm maximum • Double fin structure is adopted for high reliability socket contact and a large chamfer is prepared in the front-edge side to prevent grommet from damage • Full water proof grommet is used for socket contact crimping area in order to reduce size • Water protection seal ring is used in connectors mating area
Specifications: • Contact pitch: 2.5mm • Rated Current: 3A • Dielectric withstanding voltage: 1000 VAC r.m.s. (1 minute) • Operating temperature range: -40°C - 125°C • Applicable wire size (cable type): AVSS, AVS (partially): 0.5 - 1.25mm²

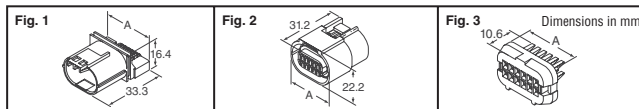


Fig.	No. of Positions	Dim. A (mm)	Digi-Key Part No.	Price Each			JAE Part No.
Pin Headers							
1	12	30.5	670-1683-ND	4.32	2.94	2.60	MX23A12NF1
	26	48	670-1686-ND	6.17	4.20	3.71	MX23A26NF1

Fig.	No. of Positions	Dim. A (mm)	Digi-Key Part No.	Price Each			JAE Part No.
Socket Housings							
2	12	29.1	670-1684-ND	4.21	2.69	2.46	MX23A12SF1
			670-1687-ND	5.92	4.03	3.56	MX23A26SF1
Front Caps							
3	12	21.7	670-1685-ND	1.45	.83	.73	MX23A12XF1
			670-1688-ND	2.08	1.20	1.05	MX23A26XF1
Socket Contacts							
—	—	—	670-1682-1-ND†	.15	.07	.06	M23S05K351
			670-1682-2-ND‡	151.01/5,000			M23S05K351
Tools							
Hand Crimp Tool	670-1679-ND	1610.90	—	—	—	—	CT160-3B-MX23
Extraction Tool	670-1680-ND	206.73	—	—	—	—	ET-MX23
Connector Dummy Pin	670-1681-ND	.30	—	—	—	—	M120-55780

† Cut Tape Pricing ‡ Tape and Reel

MX36 Series



Small size, waterproof type connector developed for car air bags
Features: • Small size, highly reliable, waterproof connector originally developed for car air bags • Grommet type waterproof of cable leading part
Specifications: • Contact pitch: 2.5mm • Dielectric withstanding voltage: 1000 VAC r.m.s. (1 minute) • Operating temperature range: -40°C - 105°C • Applicable cable: AVSS 0.5, AVSSC 0.5f, AVSSX 0.5f, TVSSX 0.5f

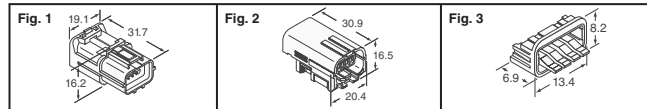


Fig.	No. of Positions	Digi-Key Part No.	Price Each			JAE Part No.	
Pin Housings							
1	2	670-1693-ND	1.68	.96	.84	MX36002PQ3	
		670-1695-ND	2.32	1.33	1.16	MX36004PQ3	
Socket Housings							
2	2	670-1694-ND	1.93	1.11	.97	MX36002SQ3	
		670-1696-ND	1.93	1.11	.97	MX36004SQ3	
Front Cap							
3	—	670-1697-ND	.40	.20	.16	MX36004XF3	
Pin Contacts							
—	—	670-1691-1-ND†	.36	.17	.13	M36P08K4Q3	
		670-1691-2-ND‡	697.40/8,000			M36P08K4Q3	
Socket Contacts							
—	—	670-1692-1-ND†	.36	.17	.13	M36S08K4Q3	
		670-1692-2-ND‡	697.40/8,000			M36S08K4Q3	
Tools							
Hand Crimp Tool	670-1689-ND	1775.50	—	—	—	—	CT160-3-MX36
Extraction Tool	670-1690-ND	173.75	—	—	—	—	ET-MX36-1

† Cut Tape Pricing ‡ Tape and Reel

Waterproof, Miniature Connectors JN1 and JN2 Series



JN1 Series (4 Pos): Specifications: • Rated Current: 5A/pin (#20 size contact) • Rated Voltage: 200VAC • Withstanding Voltage: 2000VAC per minute • Insulation Resistance: Minimum 1000MΩ (DC500V energized) • Waterproof: IP67 • Operating Temperature: -20°C - 125°C
JN1 Series (10 Pos): Specifications: • Rated Current: 3A/pin (#22 size contact) • Rated Voltage: 200VAC • Withstanding Voltage: 900VAC per minute • Insulation Resistance: Minimum 1000MΩ (DC500V energized) • Waterproof: IP67 • Operating Temperature: -20°C - 125°C
JN2 Series (4 Pos): Specifications: • Rated Current: 5A/pin (#20 size contact) • Rated Voltage: 200VAC • Withstanding Voltage: 2000VAC per minute • Insulation Resistance: Minimum 1000MΩ (DC500V energized) • Waterproof: IP67 • Operating Temperature: -20°C - 125°C
JN2 Series (10 Pos): Specifications: • Rated Current: 3A/pin (#22 size contact) • Rated Voltage: 200VAC • Withstanding Voltage: 900VAC per minute • Insulation Resistance: Minimum 1000MΩ (DC 500V energized) • Waterproof: IP67 • Operating Temperature: -20°C - 125°C

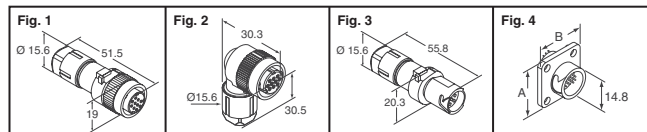


Fig.	No. of Positions	Dimensions (mm) A B	Digi-Key Part No.	Price Each			JAE Part No.			
Plug, Female - Solder Type										
1	4	—	670-1057-ND	8.30	5.91	5.35	JN1DS04FK1			
			670-1058-ND	12.12	8.62	7.82	JN1DS04FK2			
			670-1059-ND	12.12	8.62	7.82	JN1DS04FK2X			
2	4	—	670-1072-ND	12.22	8.69	7.88	JN2DS04FK1-R			
			670-1073-ND	12.22	8.69	7.88	JN2DS04FK2-R			
			670-1074-ND	10.83	7.71	6.98	JN2DS04FK2X-R			
2	4	—	670-1062-ND	8.30	5.91	5.35	JN1FS04FK1			
			670-1063-ND	12.12	8.62	7.82	JN1FS04FK2			
			670-1064-ND	12.12	8.62	7.82	JN1FS04FK2X			
2	4	—	670-1077-ND	12.22	8.69	7.88	JN2FS04FK2-R			
			Plug, Female - Crimp Type - Contacts Sold Separately							
			1	10	—	670-1060-ND	8.97	5.74	5.38	JN1DS10SL1
670-1061-ND	8.97	5.74				5.38	JN1DS10SL2			
670-1075-ND	12.09	8.60				7.79	JN2DS10SL1-R			
2	10	—	670-1076-ND	12.09	8.60	7.79	JN2DS10SL2-R			
			670-1065-ND	8.97	5.74	5.38	JN1FS10SL1			
			670-1066-ND	8.97	5.74	5.38	JN1FS10SL2			
2	10	—	670-1078-ND	12.09	8.60	7.79	JN2FS10SL1-R			
			670-1079-ND	12.09	8.60	7.79	JN2FS10SL2-R			

• Panel Mount † PCB Type

(Continued)

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Waterproof, Miniature Connectors JN1 and JN2 Series (Cont.)

Fig.	No. of Positions	Dimensions (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
Relay Receptacle, Male — Crimp Type — Contacts Sold Separately								
3	10	—	—	670-1067-ND 670-1068-ND*	9.41 10.06	6.70 7.16	6.07 6.49	JN1HS10PL2 JN1KS10PL1
Panel Mount Receptacle, Male — Solder Type								
4	4	25.4	25.4	670-1053-ND	5.23	2.97	2.79	JN1AS04MK1
	4	25.4	25.4	670-1054-ND	6.43	4.37	3.86	JN1AS04MK2
	10	23.4	23.4	670-1055-ND	4.74	3.23	2.85	JN1AS10ML2
	4	25.4	25.4	670-1069-ND	9.28	6.60	5.98	JN2AS04MK2-R
	10	23.4	23.4	670-1070-ND	22.07	16.56	15.45	JN2AS10ML2-R
	10	20.0	39.0	670-1056-ND†	3.64	2.13	1.94	JN1AS10UL1
10	20.0	39.0	670-1071-ND†	6.79	4.62	4.08	JN2AS10UL1-R	

* Panel Mount † PCB Type

Contacts/Tools

Description	Wire Size	Digi-Key Part No.	Price Each			JAE Part No.
			1	25	100	
Connecting Pin, Gold Crimp	21 – 25 AWG	670-1047-1-ND†	.34	.18	.15	JN1-22-22P-10000
		670-1047-2-ND‡	.36	.19	.15	JN1-22-22P-10000
		670-1048-ND	.36	.19	.15	JN1-22-22P-PKG100
Connecting Socket, Gold Crimp	21 – 25 AWG	670-1049-1-ND†	.32	.17	.14	JN1-22-22S-10000
		670-1049-2-ND‡	.37	.19	.15	JN1-22-22S-10000
		670-1050-ND	.37	.19	.15	JN1-22-22S-PKG100
Connecting Socket, Gold Crimp	26 – 28 AWG	670-1051-1-ND†	.32	.17	.14	JN1-22-26S-10000
		670-1051-2-ND‡	.37	.19	.15	JN1-22-26S-10000
		670-1052-ND	.37	.19	.15	JN1-22-26S-PKG100
Crimp Tool 22 – 28 AWG	—	670-1183-ND	817.05	—	—	CT150-2-JN1-B
Crimp Tool 20 – 25 AWG	—	670-1184-ND	695.18	—	—	CT150-2-JN1-D
Crimp Tool 21 – 25 AWG	—	670-1185-ND	624.48	—	—	CT150-2-JN1-E

† Cut Tape Pricing ‡ Tape and Reel

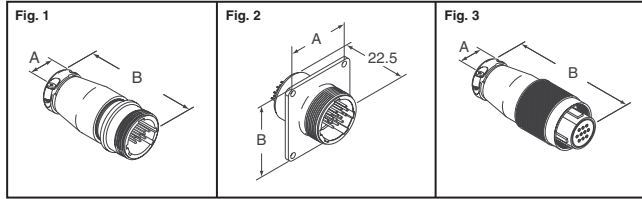
Miniature Circular Connectors SRCN Series



Features: Product approved by UL standard: File No. E-67741(s)

Specifications: • Current Rating: 5A maximum for #20 contact, 10A maximum for #16 contact • Operating Voltage: 250 VAC r.m.s. maximum, 350 VDC maximum • Operating Temperature: -25°C – 85°C • Dielectric Withstanding Voltage: 1000 VAC r.m.s. per minute • Insulation Resistance: 1000MΩ minimum (with 500 VDC) Contact Resistance: 5mΩ maximum

Materials and Finishes: Shell, Barrel, Endbell, Coupling Nut and Clamp: Aluminum Alloy, Nickel plated (satin) • Insulator: Synthetic resin, UL94V-0 (Green) • Contact: Copper Alloy, Silver Plated • Retaining Ring: Copper Alloy, Nickel Plated • Set Screw, Clamp Screw: Steel, Nickel Plated



No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
Fig. 1 — Cable Connecting Receptacles with Male Pins								
3	M18 x 1	8.5	46	670-1110-ND	5.43	3.70	3.26	SRCN1A13-3P
5	M18 x 1	8.5	46	670-1112-ND	7.79	4.99	4.68	SRCN1A13-5P
7	M22 x 1	11.5	49	670-1116-ND	6.81	4.63	4.09	SRCN1A16-7P
10	M22 x 1	11.5	49	670-1114-ND	8.44	6.01	5.45	SRCN1A16-10P
10	M26 x 1	14	53	670-1118-ND	6.93	4.72	4.16	SRCN1A21-10P
16	M26 x 1	14	53	670-1120-ND	8.82	6.28	5.69	SRCN1A21-16P
16	M30 x 1	17	56	670-1122-ND	8.64	5.53	5.19	SRCN1A25-16P
24	M30 x 1	17	56	670-1124-ND	9.12	6.49	5.88	SRCN1A25-24P

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
Fig. 1 — Cable Connecting Receptacles with Female Sockets								
3	M18 x 1	8.5	46	670-1111-ND	5.95	4.05	3.58	SRCN1A13-3S
5	M18 x 1	8.5	46	670-1113-ND	8.01	5.13	4.81	SRCN1A13-5S
7	M22 x 1	11.5	49	670-1117-ND	7.37	4.72	4.43	SRCN1A16-7S
10	M22 x 1	11.5	49	670-1115-ND	9.12	6.49	5.88	SRCN1A16-10S
10	M26 x 1	14	53	670-1119-ND	8.75	5.60	5.25	SRCN1A21-10S
16	M26 x 1	14	53	670-1121-ND	9.12	6.49	5.88	SRCN1A21-16S
16	M30 x 1	17	56	670-1123-ND	9.06	5.80	5.44	SRCN1A25-16S
24	M30 x 1	17	56	670-1125-ND	9.98	7.10	6.44	SRCN1A25-24S

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
Fig. 2 — Box Mounting Receptacles with Male Pins								
3	M18 x 1	20	26	670-1126-ND	3.16	2.01	1.84	SRCN2A13-3P
5	M18 x 1	20	26	670-1128-ND	3.40	2.16	1.98	SRCN2A13-5P
7	M22 x 1	23	29	670-1132-ND	3.97	2.53	2.32	SRCN2A16-7P
10	M22 x 1	23	29	670-1130-ND	4.92	3.04	2.86	SRCN2A16-10P
10	M26 x 1	26	32	670-1134-ND	4.57	3.11	2.75	SRCN2A21-10P
16	M26 x 1	26	32	670-1136-ND	4.68	3.19	2.81	SRCN2A21-16P
24	M30 x 1	29	35	670-1139-ND	6.81	4.63	4.09	SRCN2A25-24P

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
Fig. 2 — Box Mounting Receptacles with Female Sockets								
3	M18 x 1	20	26	670-1127-ND	3.27	2.09	1.91	SRCN2A13-3S
5	M18 x 1	20	26	670-1129-ND	3.64	2.32	2.12	SRCN2A13-5S
7	M22 x 1	23	29	670-1133-ND	4.21	2.61	2.46	SRCN2A16-7S
10	M22 x 1	23	29	670-1131-ND	4.92	3.35	2.96	SRCN2A16-10S

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
10	M26 x 1	26	32	670-1135-ND	4.92	3.35	2.96	SRCN2A21-10S
16	M26 x 1	26	32	670-1137-ND	5.03	3.42	3.02	SRCN2A21-16S
16	M30 x 1	29	35	670-1138-ND	5.55	3.78	3.34	SRCN2A25-16S
24	M30 x 1	29	35	670-1140-ND	7.44	4.77	4.47	SRCN2A25-24S

Fig. 3 — Straight Plug with Male Pins

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
3	M18 x 1	8.5	47	670-1141-ND	6.41	4.36	3.85	SRCN6A13-3P
5	M18 x 1	8.5	47	670-1143-ND	6.30	4.29	3.78	SRCN6A13-5P
7	M22 x 1	11.5	50	670-1147-ND	7.55	4.84	4.54	SRCN6A16-7P
7	M22 x 1	11.5	50	670-1148-ND	12.19	8.67	7.86	SRCN6A16-7P-J2
10	M22 x 1	11.5	50	670-1145-ND	8.01	5.13	4.81	SRCN6A16-10P
10	M26 x 1	14	54	670-1151-ND	8.75	5.60	5.25	SRCN6A21-10P
16	M26 x 1	14	54	670-1153-ND	8.44	6.01	5.45	SRCN6A21-16P
16	M30 x 1	17	57	670-1157-ND	8.64	6.15	5.57	SRCN6A25-16P
18	M26 x 1	14	54	670-1155-ND	9.41	6.70	6.07	SRCN6A21-18P
24	M30 x 1	17	57	670-1159-ND	9.98	7.10	6.44	SRCN6A25-24P

Fig. 3 — Straight Plug with Female Sockets

No. of Positions	Thread	Dimension (mm)		Digi-Key Part No.	Price Each			JAE Part No.
		A	B		1	25	100	
3	M18 x 1	8.5	47	670-1142-ND	6.52	4.44	3.91	SRCN6A13-3S
5	M18 x 1	8.5	47	670-1144-ND	6.41	4.36	3.85	SRCN6A13-5S
7	M22 x 1	11.5	50	670-1149-ND	7.79	4.99	4.68	SRCN6A16-7S
7	M22 x 1	11.5	50	670-1150-ND	12.66	9.01	8.16	SRCN6A16-7S-J1
10	M22 x 1	11.5	50	670-1146-ND	8.23	5.27	4.94	SRCN6A16-10S
10	M26 x 1	14	54	670-1152-ND	9.06	5.80	5.44	SRCN6A21-10S
16	M26 x 1	14	54	670-1154-ND	8.64	6.15	5.47	SRCN6A21-16S
16	M30 x 1	17	57	670-1158-ND	9.12	6.49	5.88	SRCN6A25-16S
18	M26 x 1	14	54	670-1156-ND	9.51	6.77	6.13	SRCN6A21-18S
25	M30 x 1	17	57	670-1160-ND	10.75	7.65	6.93	SRCN6A25-24S

Tyco Electronics AMP Micro CPC

Authorized Distributor

Electrical: • Current carrying capacity: 2-3A • Operating voltage: 250VAC minimum • Dielectric withstanding voltage: 1500VAC minimum

Mechanical: • 5000 minimum mating cycles (Spring probe contact system) • 500 mating cycles (Screw machine pin and socket contacts) • Housing: Single piece design, nylon • Environmental sealing: Splash proof IP65 • Wire size: 24-30AWG

Materials: • Spring probe pin: Brass, 10 µm (25 µm) gold finish over nickel on mating end, tin-lead over nickel on solder cup/solder tail • Spring probe pad: Brass, 30 µm (.76 µm) gold finish over nickel on entire contact • Screw machine pin: Brass, 30 µm (.76 µm) gold finish over nickel on entire contact • Screw machine socket: Brass body, beryllium copper clip, 30 µm (.76 µm) gold finish over nickel, clip tin-lead over nickel body • Contact Type: • X = Spring Probe Contacts • Y = Pin and Socket Contacts

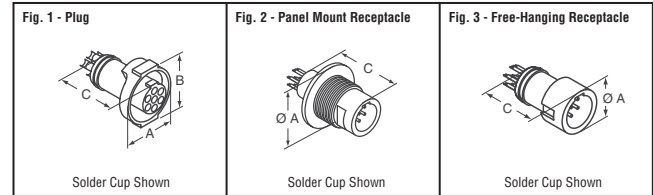


Fig.	No. of Pos.	Shell Size	Solder Type	Contact Type	Dimensions - mm			Digi-Key Part No.	Price Each			AMP Part No.
					A	B	C		1	25	50	
1	7	M9.5	Cup	X	11.1	13.6	12.65	A29954-ND◆	6.05	5.62	4.91	1445322-1
				Y	11.1	13.6	12.65	A29964-ND◆	4.41	4.09	3.57	1445642-1
				Y	11.1	13.6	12.65	A97411-ND◆	5.50	5.10	4.46	2-1445642-0
1	19	M13.5	Cup	X	15.6	18.6	12.65	A29955-ND◆	10.45	9.70	8.47	1445777-1
				Y	15.6	18.6	12.65	A29965-ND◆	8.33	7.73	6.75	1445782-1
2	7	M9.5	Cup	X	16	—	15.45	A29956-ND	9.36	8.68	7.59	1445718-1
				X	16	—	15.45	A33737-ND◆	13.31	12.34	10.78	2-1445718-0
				Tail	16	—	15.45	A34587-ND◆	9.88	9.16	8.01	2-1445719-1
				Y	16	—	15.45	A29966-ND◆	8.17	7.58	6.63	1445721-1
				Y	16	—	15.45	A29967-ND◆	8.10	7.51	6.56	1445720-1
				Y	16	—	15.45	A29968-ND◆	8.10	7.51	6.56	1445720-1
19	M13.5	Cup	X	20.75	—	15.45	A29960-ND	21.33	19.77	17.27	1445759-1	
			X	20.75	—	15.45	A34590-ND◆	20.79	19.28	16.84	2-1445758-1	
			Y	20.75	—	15.45	A29970-ND◆	13.00	12.06	10.53	1445779-1	
			Y	20.75	—	15.45	A29971-ND◆	10.79	10.00	8.74	1445778-1	
			Y	20.75	—	15.45	A29969-ND◆	8.33	7.73	6.75	1445782-1	
			Y	20.75	—	15.45	A29972-ND◆	8.33	7.73	6.75	1445782-1	
7												