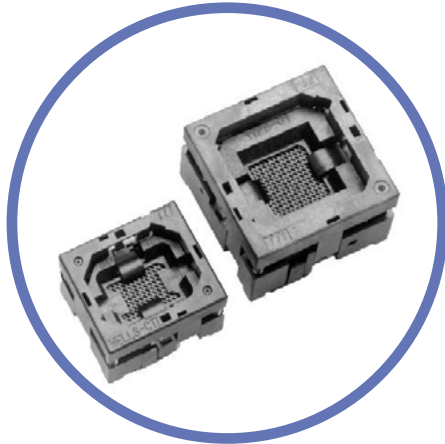


777 SERIES

CSP/FBGA



Features

- Open top chip scale package and fine pitch BGA's
- Accommodates pitch sizes of 0.65mm, 0.75mm, and 0.8mm
- Compact size and low actuation force
- 4-Point pitch contact design for enhanced electrical contact
- Unique mechanism to eliminate solder ball sticking
- Field replaceable package location plate, available in most outlines
- Thru hole design



SPECIFICATIONS

Materials and Specifications

Body Materials	PES, PEI, LCP, or Equivalent
Contact Material	Beryllium Copper Alloy
Contact Plating	NiPd or Gold
Contact Force	8~13 grams
Contact Resistance	100 mΩ
Dielectric	700V AC for 1 minute
Insulation Resistance	1,000 mΩ @ 500V DC
Temperature Rating	150°C
Durability	10,000 cycles min.

0.65mm and 0.75mm Pitch

Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.65	128	12X12	18X18	0.45	0.37	Au	777B3128-201	26X26
	152	14X14	21X21	0.42	0.37	Au	777B3152-201	26X26
	160	15X15	22x22	0.50	0.44	Au	777B3160-201	26X26
0.75	28	6X8	6X8	0.37	0.23	Au	777D2028-201	16.8X22
	29	6X8	6X9	0.37	0.23	Au	777D2029-201	16.8X22
	36	7.01X8.54	6X8	0.476	0.42	Au	777D2036-202	16.8X22
	44	7X7	7X7	0.33	0.20min.	Au	777D2044-201	16.8X22
	46	6.5X7	6X8	0.33	0.40max.	NiPd	777D2046-101	16.8X22
	48	6.5X6.5	6X8	0.35	0.25	NiPd	777C2048-101	20X26
	48	6.5X9.8	6X8	0.35	0.25	NiPd	777C2048-102	20X26
	48	6X9	6X8	0.35	0.25	NiPd	777D2048-103	16.8X22
	48	6X8	6X8	0.40	0.26	NiPd	777D2048-104	16.8X22
	48	6X8	6X8	0.37	0.23	Au	777D2048-204	16.8X22
	48	7X8	6X8	0.40	0.26	NiPd	777D2048-105	16.8X22
	48	8X10	6X8	0.40	0.30	NiPd	777D2048-106	16.8X22
	48	9X7.7	6X8	0.375	0.27	NiPd	777D2048-107	16.8X22
	48	9X11	6X8	0.36	0.27	NiPd	777D2048-108	16.8X22
	48	6.5X10	6X8	0.40	0.35	NiPd	777D2048-109	16.8X22
	48	6X7	6X8	0.40	0.32	NiPd	777D2048-110	16.8X22
	54	6X8	6x9	0.37	0.23	NiPd	777D2054-101	16.8X22
	54	6X8	6X9	0.37	0.23	Au	777D2054-201	16.8X22
	56	7.7X9.3	8X7	0.35	0.25	Au	777D2056-101	16.8X22
	56	9X11	7X8	0.35	0.25	Au	777D2056-102	16.8X22
	56	8.5X10	8X7	0.35	0.27	NiPd	777D2056-103	16.8X22
56	7.7X9	8X7	0.375	0.23	Au	777D2056H105C	16.8X22	

Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.80	25	5X5	5X5	0.50	0.25min.	NiPd	777A1025-101	18.5X21
	30	5X5	6X6	0.40	0.20min.	NiPd	777A1030-101	18.5X21
	48	6X11	6X8	0.40	0.35	NiPd	777A1048-101	18.5X21
	48	6X8	6X8	0.40	0.30	NiPd	777A1048-102	18.5X21
	48	6X9	6X8	0.45	0.32	NiPd	777A1048-103	18.5X21
	48	6.15X8.15	6X8	0.38	0.23	Au	777A1048H111C	18.5X21
	48	6X10	6X8	0.40	0.23	Au	777A1048H112C	18.5X21
	48	10.95X11.95	6X8	0.45	0.40	Au	777B1048-101	26X26
	48	11X12	6X8	0.30	0.20min.	NiPd	777B1048-102	26X26
	48	10.95X11.95	6X8	0.35	0.30	Au	777B1048-103	26X26
	48	11X12	6X8	0.30	0.20min.	Au	777B1048-104	26X26
	48	8.5X15	6X8	0.45	0.25min.	Au	777E1048-202	19.5X26
	48	8.5X15	6X8	0.45	0.25min.	Au	777E1048H202	19.5X26
	48	8X10	6X8	0.45	0.25min.	Au	777E1048H203	19.5X26
	48	9.5X12	6X8	0.45	0.25min.	Au	777E1048H204	19.5X26
	48	9X11	6X8	0.45	0.25min.	Au	777E1048H205	19.5X26
	54	8X8	9X9	0.45	0.35	Au	777E1054-101	19.5X26
	56	7X9	8X8	0.40	0.22	Au	777A1056H102C	18.5X21
	56	8X11.6	8X8	0.35	0.30	Au	777E1056H101C	19.5X26
	56	8X13	8X8	0.35	0.30	Au	777E1056-102	19.5X26
	56	8X10	8X8	0.38	0.25	Au	777E1056-103	19.5X26
	56	8X11.6	8X8	0.38	0.25	Au	777E1056-105	19.5X26
	59	8X11.6	8X8	0.38	0.25	Au	777E1059-101	19.5X26
	60	8X16/11x13	8X15	0.45	0.35	NiPd	777E1060-101	19.5X26
	60	8X11.6	8X8	0.35	0.30	Au	777E1060-103	19.5X26
	60	9X12	8X10	0.40	0.15	Au	777E1060-106	19.5X26
	60	8X11.6	8X10	0.38/0.40	0.22/0.23/0.25	Au	777E1060H107C	19.5X26
	63	7X11	8X12	0.40	0.30	NiPd	777A1063-101	18.5X21
	64	8X11	8X8	0.45	0.35	NiPd	777A1064-101	18.5X21
	64	8.1X11.1	8X8	0.45	0.35	NiPd	777A1064-102	18.5X21
	64	7X7	8X8	0.40	0.32	Au	777A1064-203	18.5X21

Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.80	64	7.95X8.95	8X8	0.35	0.25	Au	777A1064-105	18.5X21
	64	7X7	8X8	0.50	0.25min.	NiPd	777A1064-106	18.5X21
	64	7X7	8X8	0.50	0.25min.	Au	777A1064-206	18.5X21
	64	9X9	8X8	0.45	0.39	NiPd	777B1064-101	26X26
	64	10.95X11.95	8X8	0.30	0.20min.	Au	777B1064-102	26X26
	64	9X11.5	8X8	0.35	0.25	Au	777B1064-103	26X26
	64	9X13	10X10	0.35	0.30	Au	777E1064-104	19.5X26
	64	7.95X8.95	8X8	0.38	0.23	Au	777E1064-106	19.5X26
	66	7.47X11.02	7X10	0.46	0.42	Au	777A1066-201	18.5X21
	72	10X10	9X9	0.50	0.27min.	Au	777E1072H201	19.5X26
	80	8X8	9X9	0.40	0.21 min.	NiPd	777A1080-101	18.5X21
	80	8X11	8X10	0.38	0.25	Au	777A1080-104	18.5X21
	80	8X11	8X11	0.38	0.23	Au	777A1080H105C	18.5X21
	80	7X9	8X10	0.40	0.22	Au	777A1080H106C	18.5X21
	80	8X10	8X10	0.38	0.25	Au	777A1080H108C	18.5X21
	80	8X14	8X14	0.40	0.30min.	NiPd	777B1080-101	26X26
	80	9.65X11.95	8x10	0.35	0.25	Au	777B1080-102	26x26
	80	9X11.5	8X10	0.35	0.20min.	Au	777B1080-103	26X26
	80	9.65X11.95	8X10	0.38	0.23	Au	777B1080H105	26X26
	80	8X11.6	8X10	0.35	0.30	Au	777E1080-101	19.5X26
	80	10X10	8X10	0.35	0.25/0.30	Au	777E1080-103	19.5X26
	80	8x11.6	10x12	0.35	0.30	Au	777E1080-104	19.5X26
	80	10.5X10.5	8X10	0.34	0.23	Au	777E1080-105	19.5X26
	80	9X13	8X10	0.34	0.23	Au	777E1080-106	19.5X26
	80	10X13	8X10	0.35	0.30	Au	777E1080-107	19.5X26
	80	8X10	8X10	0.38	0.25	Au	777E1080-108	19.5X26
	80	8X11.6	8X10	0.40	0.22/0.23	Au	777E1080H112C	19.5X26
	80	9.65X11.95	8X10	0.38	0.23	Au	777E1080H115C	19.5X26
	80	9X12	8X10	0.40	0.22	Au	777E1080-113	19.5X26
	81	8X8	9X9	0.40	0.35	NiPd	777A1081-101	18.5X21
	81	10.4X10.8	12X12	0.45	0.33	NiPd	777B1081-101	26X26

Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.80	81	9X9	9X9	0.33	0.23	Au	777E1081-101	19.5X26
	84	9.5X14.5	9X10	0.45	0.36	Au	777E1084-101	19.5X26
	84	8X11	9X10	0.45	0.36	Au	777E1084-102	19.5X26
	84	8X11.6	10X12	0.38	0.23	Au	777E1084H103C	19.5X26
	88	8X11	8X12	0.35	0.25	Au	777E1088-101	19.5X26
	88	9.6X12	8X12	0.38	0.20min.	Au	777E1088-202	19.5X26
	89	8X11.6	10X10	0.38	0.25	Au	777E1089-101	19.5X26
	89	8X11.6	10X10	0.35-0.40	0.17min.	Au	777E1089H102U	19.5X26
	90	11X13	9X15	0.40	0.32	NiPd	777E1090-102	19.5X26
	90	8.5X15	9X15	0.42	0.30	Au	777E1090-201	19.5X26
	90	9X13	9X15	0.45	0.33	NiPd	777E1090HX03	19.5X26
	90	8X13	9X15	0.45	0.325	Au	777E1090-204	19.5X26
	92	10.5X18	10X18	0.45	0.35	Au	777E1092-101	19.5X26
	92	9.3X15.1	10X18	0.45	0.35	Au	777E1092-102	19.5X26
	93	11X14	12X17	0.46	0.37	Au	777F1093-201	22X26
	96	5.5X13.5	6X16	0.50	0.40	Au	777E1096H201	19.5X26
	96	7X10	8X12	0.40	0.30	Au	777E1096H202C	19.5X26
	100	10X10	10X10	0.40	0.20min.	NiPd	777B1100-101	26X26
	100	9X9	10X10	0.43	0.33	NiPd	777B1100-102	26X26
	100	9X14	10X10	0.45	0.35	Au	777E1100-101	19.5X26
	100	9X13	10X10	0.34	0.25	Au	777E1100-103	19.5X26
	100	9X14	10X10	0.45	0.35	Au	777E1100-104	19.5X26
	100	9X12	10X10	0.34	0.25	Au	777E1100-105	19.5X26
	100	9X12	10X10	0.37-0.40	0.17min.	Au	777E1100H106U	19.5X26
	104	7X11	8X13	0.40	0.21min.	Au	777E1104H201	19.5X26
	106	12X12	14X14	0.40	0.30	Au	777B1106H201	26X26
	107	11X13	10X14	0.47	0.35	Au	777E1107H202C	19.5X26
	107	10.5X13	10X14	0.40	0.22	Au	777E1107H103C	19.5X26
	107	8X11	9X12	0.35	0.20min.	Au	777E1107H204	19.5X26
	107	8X10	9X12	0.38	0.25	Au	777E1107H205C	19.5X26
	108	14X14	9X12	0.35/0.375	0.19/0.27	Au	777B1108-201	26X26
	108	9X11	9X12	0.38	0.25	Au	777E1108-101	19.5X26

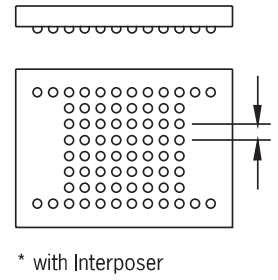
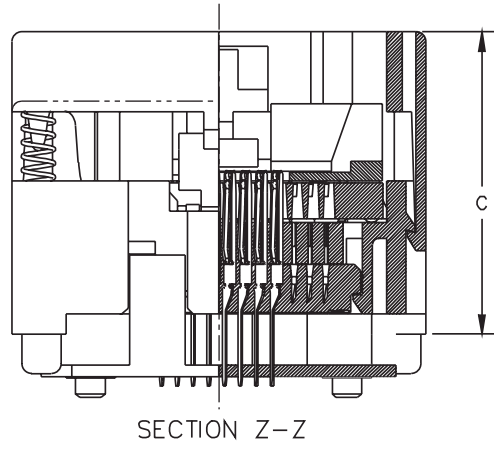
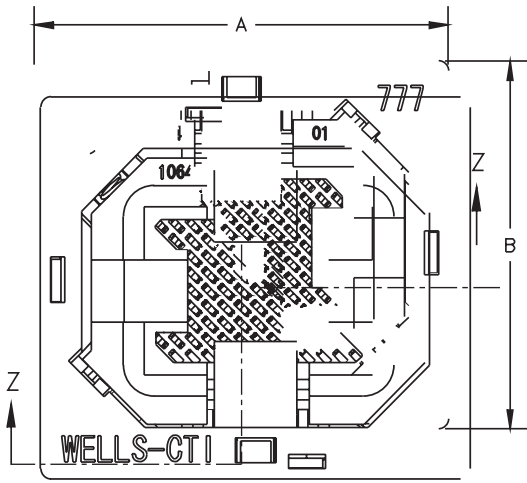
Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.80	108	9X11	9X12	0.35	0.20min.	Au	777E1108H202	19.5X26
	108	9X11	9X12	0.38	0.25	Au	777E1108H103C	19.5X26
	115	11.3X10.8	13X13	0.46	0.42	Au	777B1115-201	26X26
	115	9X14	10X14	0.45	0.35	Au	777E1115-101	19.5X26
	115	9X12	10X14	0.40	0.15	Au	777E1115H102C	19.5X26
	115	9X12	10X14	0.43/0.46	0.22min.	Au	777E1115H203C	19.5X26
	115	12X18	10X14	0.46	0.26	Au	777F1115H201C	22X26
	119	15.09X11.13	15X11	0.46	0.42	Au	777B1119-201	26X26
	120	9X14	10X12	0.45	0.35	Au	777E1120-102	19.5X26
	128	11X11	12X12	0.45	0.35	NiPd	777B1128-101	26X26
	136	11X14	12X17	0.46	0.37	Au	777F1136-201	22X26
	136	9.5X12.5	11X15	0.46	0.36	Au	777F1136-204	22X26
	137	11X13	10X14	0.40	0.22	Au	777E1137H101C	19.5X26
	137	9X11.5	10X14	0.40	0.22	Au	777E1137H102C	19.5X26
	139	8X11.6	10X14	0.35	0.20min.	Au	777E1139-201	19.5X26
	140	9X12	10X14	0.40	0.22	Au	777E1140H101C	19.5X26
	144	11X11	12X12	0.45	0.35	NiPd	777B1144-101	26X26
	144	10X10	12X12	0.40	0.20min.	NiPd	777B1144-102	26X26
	144	12X12	12X12	0.45	0.35	NiPd	777B1144-103	26X26
	144	12X12	12X12	0.45	0.35	NiPd	777B1144H103	26X26
	144	12X12	13X13	0.45	0.20 min	Au	777F1144H201C	22X26
	144	10X10	12X12	0.42	0.3	Au	777F1144H202C	22X26
	150	10.6X16.1	10X17	0.40	0.30	Au	777E1150-201	19.5X26
	151	9X13	10X14	0.40	0.22	Au	777E1151-101	19.5X26
	151	12.8X14.6	13X14	0.42	0.3	Au	777F1151H101C	22X26
	160	12X12	14X14	0.50	0.4	Au	777F1160H201	22X26
	168	11X11	13X13	0.37	0.27	Au	777B1168-201	26X26
	175	13X13	15X15	0.45	0.35	NiPd	777B1175-101	26X26
	176	13X13	15X15	0.46	0.36	NiPd	777B1176-101	26X26
	180	12X12	14X14	0.40	0.21 min	Au	777F1180H201	22X26
181	12X12	14X14	0.40	0.22	Au	777F1181H101C	22X26	
196	12X12	14X14	0.50	0.27min.	Au	777B1196-201	26X26	

Pitch e (mm)	Ball Count	Package Size	Contact Matrix	Ball Dia. (mm)	Ball Height (mm)	Contact Plating	Part Number	Socket Outline (mm)
0.80	225	13X13	15X15	0.40	0.20min.	NiPd	777B1225-102	26X26
	225	13X13	15X15	0.40	0.20min.	Au	777B1225-202	26X26
	225	13X13	15X15	0.40	0.20min.	Ni-B	777B1225-302	26X26



DIMENSIONS AND DIAGRAMS

Dimensions in mm (inches)

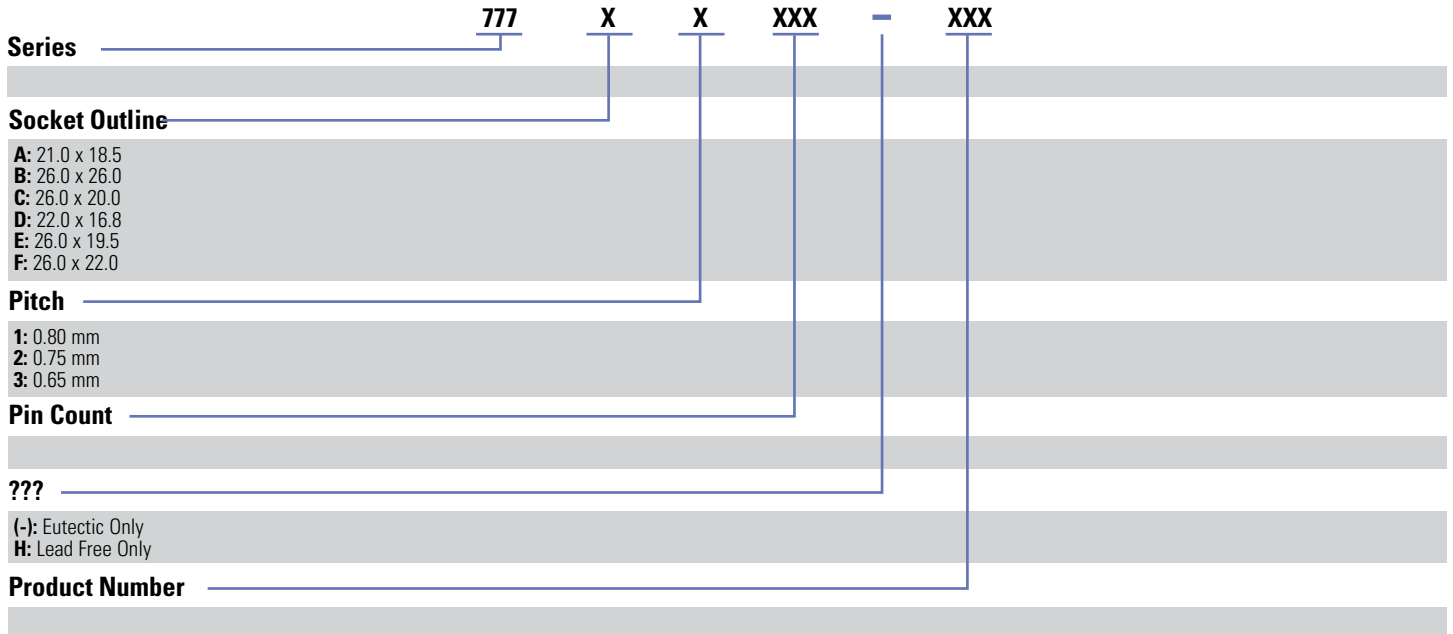


* with Interposer



DESCRIPTION & ORDERING INFO

Example : 777 X X XXX-XXX



Revised 02/06/18

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