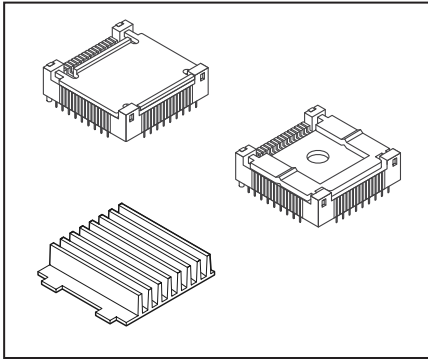


# 3M OEM Type "A" LCC Sockets



### Features:

- Accepts JEDEC leadless type "A" ceramic chip carriers
- Variety of lid options available
- "U" lid for I.C.E. adapter I/O cable egress
- Heat Sink(s) acceptable and available
- Thruster spring helps register substrate three corner notches, maintain centering
- Polarizing post on bottom of socket
- Through hole contact tails
- No tools required for package insertion/removal
- Full contact probe-ability
- High temperature PPS plastic and BeCu contacts for rugged performance

### Physical Specifications:

- Insulation: Material: Glass Filled Polyphenylene Sulfide (PPS)
- Flammability: UL94V-0
- Color: Black
- Lid Material: Aluminum
- Latch Material: Stainless Steel
- Thruster & Contact Material: Beryllium Copper (C172) Plating; Underplate: 50µ" (1.27µm) Nickel; Wiping Area: 30µ" (0.76µm) Gold; Solder Tails: 30µ" (0.76µm) Gold
- Marking: Raised Letters

### Electrical Specifications:

- Current Rating: 1 Amp
- Insulation Resistance: >1x10<sup>12</sup>Ω
- Withstanding Voltage: 1000 Vrms at Sea Level

### Environmental Specifications:

- Operating Temperature Rating: -55° - 105°C

Lid Type	No./Cont.	Digi-Key Part No.	Pricing		3M Part No.
			1	10	
<b>LCC Sockets</b>					
Full	68	3M6809A-ND	12.47	108.65	268-5401-00-1102JH
No Lid	68	3M6809B-ND	12.47	108.65	268-5401-11-1102JH
U-Shaped	68	3M6809C-ND	10.80	94.07	268-5401-50-1102JH
<b>LCC Socket Lid</b>					
Finned Heat Sink	68	3M6809D-ND	13.97	121.72	268-5401-52-1102JH
Finned Heat Sink	—	3MLLSH-ND	2.67	23.24	268-5401-52-0000

# 3M IC Test Clips

### Features:

- Simplifies prototype and production testing, field service work, and Quality Control.
- One-piece body for each DIP size. TC-14 fits 14-pin DIP, etc.
- High reliability Gold contacts.
- Proven 770 Alloy contacts.
- Rugged, engineering-grade thermoplastic body molded around contact pins
- Knife Edge contacts concentrate high normal force in a small area that break through oxides and conformal coatings



923690-08-ND Shown

No. of Pins	Row to Row (Inch)	Nail-Head Leads Digi-Key Part No.	Price Each	Headless Leads Digi-Key Part No.	Price Each
<b>Alloy 770</b>					
8	.3	923695-ND	10.79	923690-08-ND	11.54
14	.3	923698-ND	10.87	923690-14-ND	11.84
16	.3	923700-ND	10.97	923690-16-ND	11.95
16	.5/6	923702-ND	18.24	—	—
18	.3	923703-ND	15.42	923690-18-ND	16.50
20	.3	923704-ND	16.14	923690-20-ND	17.27
24	.5/6	923714-ND	21.00	923690-24-ND	22.47
24	.3	—	—	923689-24-ND	22.47
28	.5/6	923718-ND	25.21	923690-28-ND	26.97
28	.3	923717-ND	22.85	923689-28-ND	26.97
36	.5/6	923720-ND	27.97	923690-36-ND	29.94
40	.5/6	923722-ND	29.36	923690-40-ND	31.41
<b>Gold Plated</b>					
8	.3	923743-08-ND	14.00	923739-08-ND	14.00
14	.3	923743-14-ND	14.39	923739-14-ND	14.39
16	.3	923743-16-ND	14.75	923739-16-ND	14.75
18	.3	923743-18-ND	19.95	923739-18-ND	20.72
20	.3	923743-20-ND	25.57	923739-20-ND	23.80
24	.5/6	923743-24-ND	27.39	923739-24-ND	28.19
24	.3	923742-24-ND	27.39	923738-24-ND	27.39
28	.5/6	923743-28-ND	32.92	923739-28-ND	36.39
28	.3	923742-28-ND	32.92	923738-28-ND	32.92
40	.5/6	923743-40-ND	38.59	923739-40-ND	38.59
48	5/6	—	—	923739-48-ND	51.68
64	.9	—	—	923739-64-ND	59.13

No. of Pins	Description	Digi-Key Part No.	Price Each
<b>Knife Edge Gold Plated — RoHS Compliant</b>			
8	.300 Knife Edge Test Clip	927739-08-ND	22.14
16	.300 Knife Edge Test Clip	927739-16-ND	25.14
18	.300 Knife Edge Test Clip	927739-18-ND	34.02
20	.300 Knife Edge Test Clip	927739-20-ND	39.69
22	.300 Knife Edge Test Clip	927738-22-ND	43.38
24	.300 Knife Edge Test Clip	927738-24-ND	45.73
28	.300 Knife Edge Test Clip	927738-28-ND	55.43
22	.600 Knife Edge Test Clip	927739-22-ND	43.38
24	.600 Knife Edge Test Clip	927739-24-ND	47.86
28	.600 Knife Edge Test Clip	927739-28-ND	55.43
40	.600 Knife Edge Test Clip	927739-40-ND	65.45

# 3M Surface Mount Test Clips by 3M Electronic Specialty Products

### Features:

- Allow safe, convenient, fast and easy testing of normally hard-to-access. Small Outline Integrated Circuits (SOICs)
- Eight sizes available for .30" (7.62mm) and .15" (3.81mm) package sizes
- Helical compression springs and insulating contact combs ensure contact integrity during testing
- Permits devices stacked as close as .0505" (1.28mm) end-to-end to be tested simultaneously
- Standard .025" (.64mm) square contacts on .10" (2.54mm) centers at the probe end of the clip easily accept test probes or single row female socket connectors
- Steel hinge pin and glass filled polyester body provide long service life
- Available with alloy 764 unplated and gold plated leads
- Allows safe, convenient testing of Plastic Leaded Chip Carrier (PLCC) style ICs
- All four sides of test clip open simultaneously for fast and easy attachment to PLCC being tested
- Stays securely clamped to PLCC until removed
- Helical compression springs and insulating contact combs ensure contact integrity during testing
- Permits testing of ICs with as little as .200" (5.08mm) row to row spacing between devices
- Staggered contact rows on .100" (2.54mm) centers
- Industry standard .025" (.64mm) square contact pins on .100" (2.54mm) centers
- Available with alloy 764 leads and gold plated leads.



No. of Pins	Description	Narrow Digi-Key Part No.	Price Each	Wide Digi-Key Part No.	Price Each
<b>.150" SOIC</b>					
8	Alloy 764	923650-08-ND	12.87	—	—
14	Alloy 764	923650-14-ND	13.02	—	—
16	Alloy 764	923650-16-ND	13.39	923660-16-ND	13.55
18	Alloy 764	—	—	923660-18-ND	14.34
20	Alloy 764	—	—	923660-20-ND	15.74
24	Alloy 764	—	—	923660-24-ND	16.24
28	Alloy 764	—	—	923660-28-ND	17.40
<b>.300" SOIC</b>					
8	Gold Plated	923655-08-ND	13.39	—	—
14	Gold Plated	923655-14-ND	14.82	—	—
16	Gold Plated	923655-16-ND	14.69	923665-16-ND	15.55
18	Gold Plated	—	—	923665-18-ND	15.69
20	Gold Plated	—	—	923665-20-ND	16.22
24	Gold Plated	—	—	923665-24-ND	17.90
28	Gold Plated	—	—	923665-28-ND	19.22

No. of Pins	Description	PLCC Digi-Key Part No.	Price Each
<b>PLCC</b>			
20	Alloy 764	923670-20-ND	35.67
28	Alloy 764	923670-28-ND	37.82
44	Alloy 764	923670-44-ND	47.99
68	Alloy 764	923670-68-ND	64.90
20	Gold Plated	923675-20-ND	39.32
28	Gold Plated	923675-28-ND	46.54
44	Gold Plated	923675-44-ND	51.46
68	Gold Plated	923675-68-ND	60.63
84	Gold Plated	923675-84-1-ND	65.31

# 3M PLCC Chip Carrier Sockets



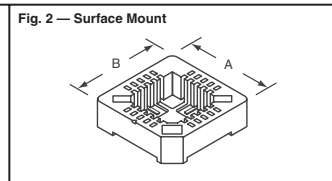
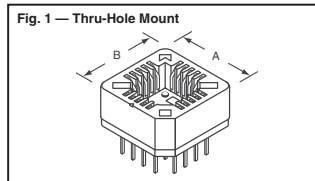
### Features:

- Accepts chip carriers conforming to JEDEC outline MO-047 for square and MO-052 for rectangular
- High temperature insulator compatible with IR reflow and wave soldering
- Compatible with automated loading equipment
- Open top design allows unrestricted air flow
- Molded slots for ease of device extraction.

### Physical Specifications:

- Insulation: Material: Glass Filled Polyphenylene Sulfide (PPS)
- Flammability: UL 94V-0
- Color: Black
- Contact Material: Phosphor Bronze
- Plating: Underplating: 50µ" (1.27µm) Nickel - Overall: Wiping Area: 160µ" ( ) Matte Tin

No. of Pins	Dimensions - Inch (mm)		Digi-Key Part No.	Price Each			3M Part No.
	A	B		1	10	100	
<b>Fig. 1 — Low Profile, 4 Row, PLCC Thru-Hole Mount</b>							
20	0.611 (15.50)	0.611 (15.50)	3M2011B1-ND	.90	.78	.63	8420-21A1-RK-TP
28	0.711 (18.05)	0.711 (18.05)	3M2811B1-ND	1.02	.89	.72	8428-21A1-RK-TP
32	0.711 (18.05)	0.812 (20.60)	3M3211B1-ND	1.08	.94	.76	8432-21A1-RK-TP
44	0.926 (23.50)	0.926 (23.50)	3M4411B1-ND	1.29	1.12	.91	8444-21A1-RK-TP
52	1.020 (25.88)	1.020 (25.88)	3M5211B1-ND	1.41	1.23	.99	8452-21A1-RK-TP
68	1.223 (31.05)	1.223 (31.05)	3M6811B1-ND	1.74	1.51	1.22	8468-21A1-RK-TP
84	1.420 (36.05)	1.420 (36.05)	3M8411B1-ND	2.04	1.77	1.43	8484-21A1-RK-TP
<b>Fig. 2 — 4 Row, PLCC Surface Mount</b>							
20	0.617 (15.65)	0.617 (15.65)	3M2021B1-ND	.93	.81	.66	8420-21B1-RK-TP
28	0.716 (18.18)	0.716 (18.18)	3M2821B1-ND	.96	.84	.68	8428-21B1-RK-TP
32	0.716 (18.18)	0.818 (20.75)	3M3221B1-ND	1.05	.91	.74	8432-21B1-RK-TP
44	0.917 (23.28)	0.917 (23.28)	3M4421B1-ND	1.26	1.10	.89	8444-21B1-RK-TP
52	1.018 (25.84)	1.018 (25.84)	3M5221B1-ND	1.38	1.20	.97	8452-21B1-RK-TP
68	1.219 (30.95)	1.219 (30.95)	3M6821B1-ND	1.68	1.46	1.18	8468-21B1-RK-TP
84	1.418 (36.00)	1.418 (36.00)	3M8421B1-ND	1.83	1.59	1.29	8484-21B1-RK-TP



No. of Pins	Dimensions - Inch (mm)		Digi-Key Part No.	Price Each			Tape & Reel* 3M Part No.
	A	B		1	10	100	Qty.   Pricing
<b>Fig. 2 — 4 Row, PLCC Surface Mount with Location Post</b>							
20	0.617 (15.65)	0.617 (15.65)	3M2021A1-ND	.93	.81	.66	8420-21A1-RK-TP
28	0.716 (18.18)	0.716 (18.18)	3M2821A1-ND	.96	.84	.68	8428-21A1-RK-TP
32	0.716 (18.18)	0.818 (20.75)	3M3221A1-ND	1.05	.91	.74	8432-21A1-RK-TP
44	0.917 (23.28)	0.917 (23.28)	3M4421A1-ND	1.26	1.10	.89	8444-21A1-RK-TP
52	1.018 (25.84)	1.018 (25.84)	3M5221A1-ND	1.38	1.20	.97	8452-21A1-RK-TP
68	1.219 (30.95)	1.219 (30.95)	3M6821A1-ND	1.68	1.46	1.18	8468-21A1-RK-TP
84	1.418 (36.00)	1.418 (36.00)	3M8421A1-ND	1.83	1.59	1.29	8484-21A1-RK-TP
<b>Fig. 2 — 4 Row, PLCC Surface Mount</b>							
20	0.617 (15.65)	0.617 (15.65)	3M2021B1CT-ND	1.08	.94	.76	500 360.00 8420-21B1-RK-TR
28	0.716 (18.18)	0.716 (18.18)	3M2821B1CT-ND	1.08	.94	.76	450 324.00 8428-21B1-RK-TR
32	0.716 (18.18)	0.818 (20.75)	3M3221B1CT-ND	1.14	.99	.80	450 340.20 8432-21B1-RK-TR
44	0.917 (23.28)	0.917 (23.28)	3M4421B1CT-ND	1.38	1.20	.97	360 330.48 8444-21B1-RK-TR
52	1.018 (25.84)	1.018 (25.84)	3M5221B1CT-ND	1.56	1.36	1.10	350 359.10 8452-21B1-RK-TR
68	1.219 (30.95)	1.219 (30.95)	3M6821B1CT-ND	1.86	1.62	1.31	280 342.72 8468-21B1-RK-TR

\* For Tape and Reel part number, change CT-ND to TR-ND.

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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