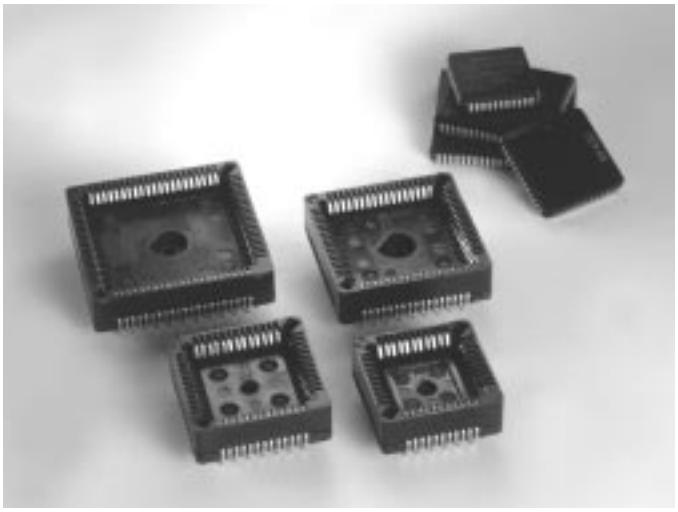
Through Board
Chip Carrier Socket



Features & Benefits

Methode has designed this socket to accept the newest post molded plastic ship carriers conforming to JEDEC specification MO-052 for rectangular configuration. The socket offers a protective package to take advantage of conventional and vapor phase soldering techniques. The insulator design provides positive ship location and ease of chip insertion. The exclusive high pressure contact system eliminates the need for gold plating while assuring a reliable, cost effective way to mount leaded chip carriers.

- Visual and mechanical polarization for proper assemble orientation
- Board standoffs to aid in cleaning procedures
- Open top design runs cooler
- Slots in insulator allow use of extraction tool for easy removal
- Converts .050” pitch chip carrier to .100” x 100” grid (through board version)
- Quality materials and workmanship assure a rugged, long lasting component
- Pin mount into standard .039” holes

Specifications

Materials

Contact Material: Phosphor Bronze
Contact Plating: Tin/Lead over Nickel
Insulator Material: PBT
Operating Temperature: -65°C to +105°C

Electrical Performance

Contact Resistance: 20 milliohms maximum
Insulation Resistance: Greater than 1 x 10^4 megohms
Dielectric Strength: 600 VAC continuous for 1 minute
Capacitance: Less than 1.0 pF at 1,000 Hz

Agency Approvals:

UL Component Recognition
Canadian Standards Association

METHODE ELECTRONICS, INC.
Connector Products

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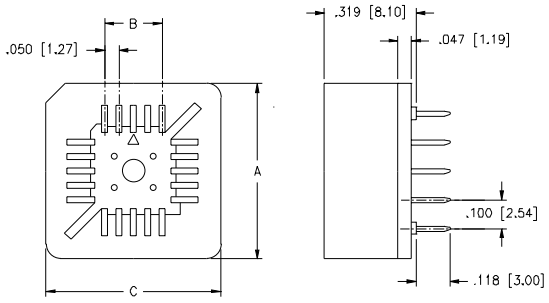


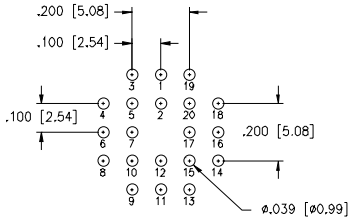
PART NUMBER	NO. OF TERM	A	B	C
ME-PLCC-20-AT	20	.610 (15.50)	.200 (5.08)	.610 (15.50)
ME-PLCC-28-AT	28	.709 (18.00)	.300 (7.62)	.709 (18.00)
ME-PLCC-32-AT	32	.808 (22.34)	.300 (7.62)	.709 (18.00)
ME-PLCC-44-AT	44	.928 (23.58)	.500 (12.70)	.928 (23.58)
ME-PLCC-52-AT	52	1.020 (25.90)	.600 (15.24)	1.020 (25.90)
ME-PLCC-68-AT	68	1.252(31.80)	.800 (20.32)	1.252 (31.80)
ME-PLCC-84-AT	84	1.445 (36.70)	1.000 (25.40)	1.445 (36.70)

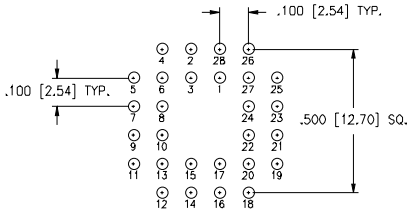
PART NO. KEY

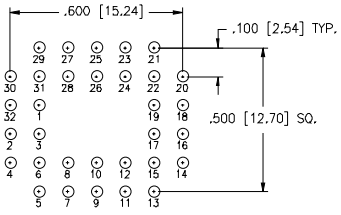
ME - PLCC - XX - AT

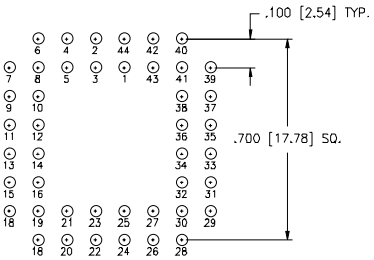
NO. OF POSITIONS

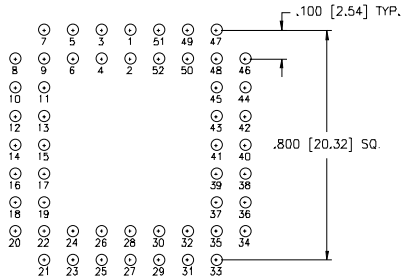
Recommended P.C. Board Layout - Component Side Shown

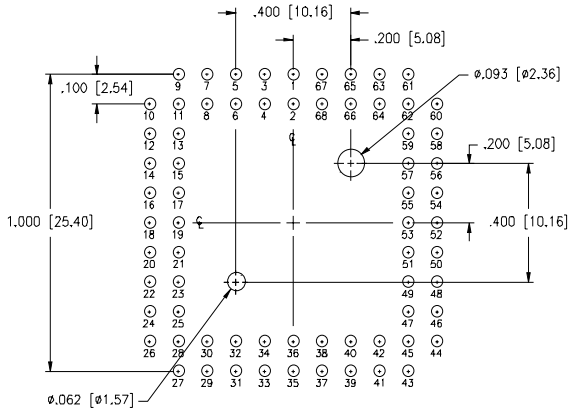


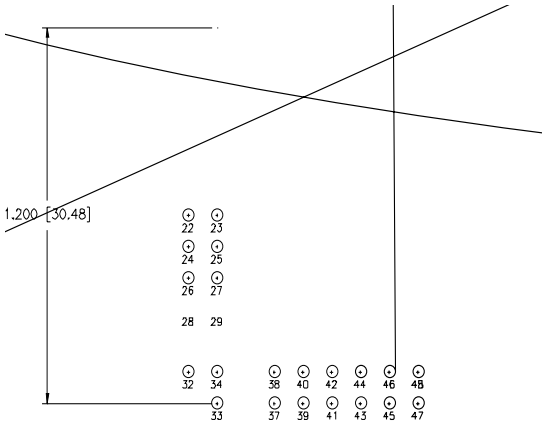












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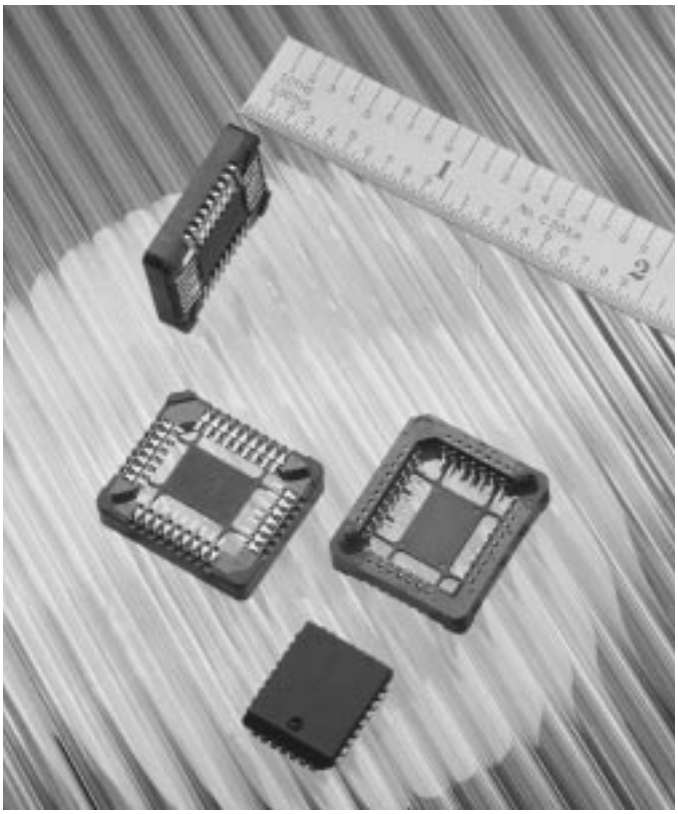
Ultra Low Profile/Surface Mount Chip Carrier Socket

Patent No. 4,934,944



Methode has designed this PLCC socket to take full advantage of surface mount technology. The exclusive visible internal solder tails along with the use of quality high temperature materials assure compatibility with all common reflow processes. This unique configuration combines the handling and real estate advantages of the J-lead with the processing, inspection and repair advantages of the gull wing. The small overall package dimensions allow the use of sockets with minimum sacrifice in space. A center pad is provided in insure structural integrity and provide a surface for vacuum pick up or adhesive bonding. The socket uses the same board pattern as the standard chip conforming to JEDEC specification MO-052 and the exposed tails insure full cleaning with maximum drainage. The exclusive high pressure contact system eliminates the need for gold plating while assuring a reliable, cost effective way to provide a surface mount socket for leaded chip carriers.

Features

- Patented design allows for inspection and repair of surface mount connections
- .150 (3.81) overall height
- Uses the same mounting pattern as mating chip
- Fully compatible with all surface mount processing
- Exposed solder tails for cleaning and maximum drainage
- Center pad for vacuum pick and place robotic assemble and/or adhesive bonding
- Optional polarizing pegs available
- Visual and mechanical polarization
- Extraction tool slots
- Contact design provides constant downward force on chip to prevent disengagement
- Preloaded contact provides low insertion force while maintaining high normal force
- Available in 32 positions

Specifications

Materials

Contact Material: Beryllium Copper

Contact Plating: Tin/Lead over Nickel

Insulator Material: Polyphenylene Sulfide, UL 94V-0

Operating Temperature: -50°C to +125°C

Mechanical Performance

Durability: Per MIL-STD-1344, method 2016, 100 cycles

Vibration: Per MIL-STD-810C, method 514.2,10-20,000 Hz, 5 Gs

Shock: Per MIL-STD-810C, method 513.2, 15 Gs

Acceleration: Per MIL-STD-810C, method 513.2, 15 Gs

Electrical Performance

Contact Interface Resistance:

Initial: 6.5 milliohms average

Final: 15.0 milliohms maximum after testing

Insulation Resistance: Greater than 1×10^4 megohms

Dielectric Strength: 1000 VAC continuous for 1 minute

Capacitance: Less than 1.0 pF at 1,000 Hz

Inductance:

Self: 5.0 nH, maximum at 500 KHz

Mutual: 1.0 nH, maximum at 500 KHz

Environmental Performance

Thermal Shock: Per MIL-STD-1344, method 1003, condition A, cycled form -55°C to +85°C no discontinuity or physical damage

Temperature/Humidity: Per MIL-STD-1344, method 1002, 85°C/85% relative humidity

Agency Approvals:

UL Component Recognition File E-48567

Canadian Standards Association File 52212

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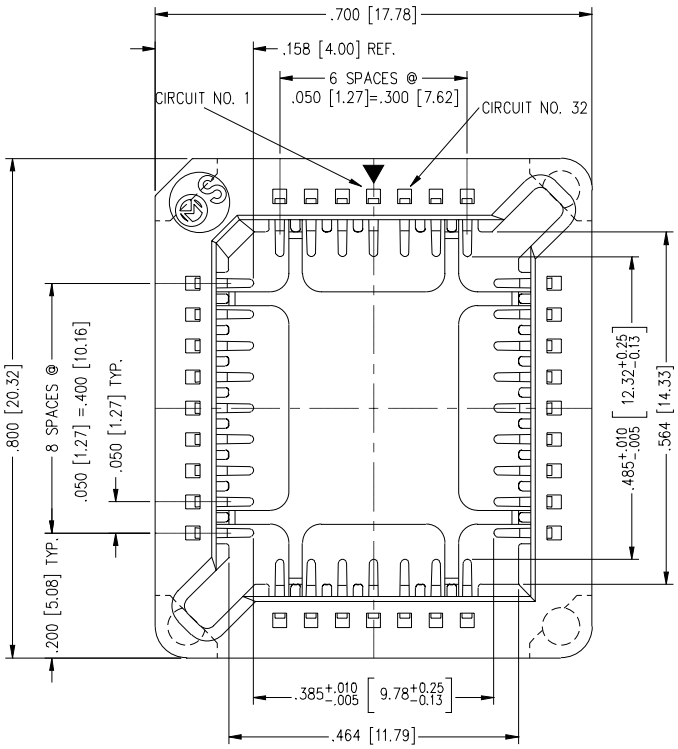
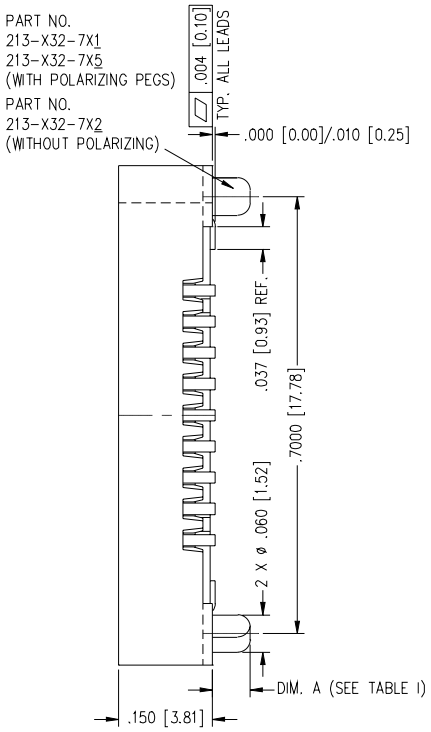
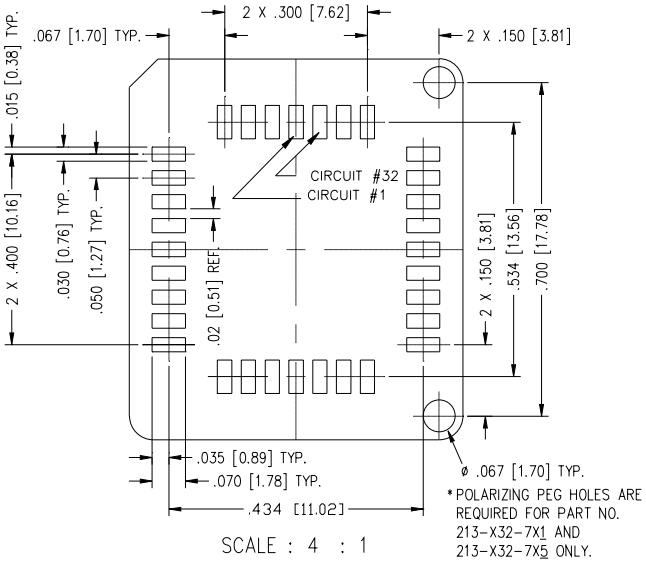
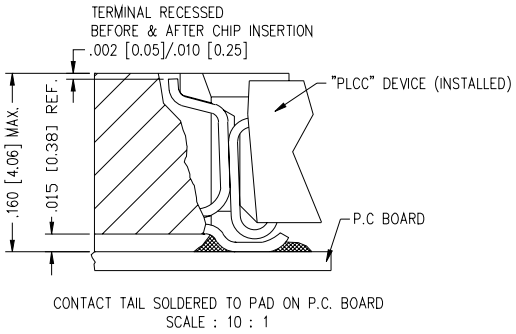
Ultra Low Profile/Surface Mount Chip Carrier Socket

Patent No. 4,934,944









PART NO. KEY

213 - 032- 70X

CASTING STYLE
1 = W/POLARIZING PEGS
2 = W/O POLARIZING PEGS

Extraction tool CT-2101 fits all socket sizes.

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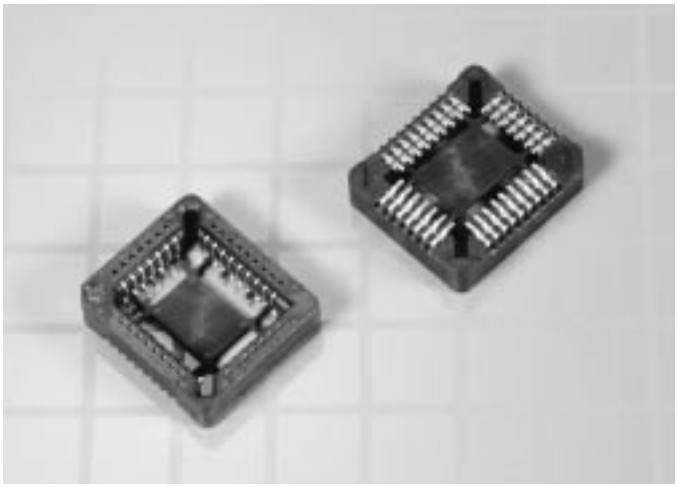
Low Profile/Surface Mount Chip Carrier Socket

Patent No. 4,934,944



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Specifications

Materials

Contact Material: Beryllium Copper

Contact Plating: Tin/Lead over Nickel

Insulator Material: Polyphenylene Sulfide, UL 94V-0

Operating Temperature: -50°C to +125°C

Mechanical Performance

Durability: Per MIL-STD-1344, method 2016, 100 cycles

Vibration: Per MIL-STD-810C, method 514.2, 10-20,000 Hz, 5 Gs

Shock: Per MIL-STD-810C, method 516.2, 35 Gs

Acceleration: Per MIL-STD-810C, method 513.2, 15 Gs

Electrical Performance

Contact Interface Resistance:

Initial: 6.5 milliohms average

Final: 15.0 milliohms maximum after testing

Insulation Resistance: Greater than 1 x 10^4 megohms

Dielectric Strength: 1000 VAC continuous for 1 minute

Capacitance: Less than 1.0 pF at 1,000 Hz

Inductance:

Self: 5.0 nH, maximum at 500 KHz

Mutual: 1.0 nH, maximum at 500 KHz

Environmental Performance

Thermal Shock: Per MIL-STD-1344, method 1002, condition A, cycled form -55°C to +85°C no discontinuity or physical damage

Temperature/Humidity: Per MIL-STD-1344, method 1002, 85°C/85% relative humidity

Agency Approvals:

UL Component Recognition File E-48567

Canadian Standards Association File 52212

Features

- Patented design allows for inspection and repair of surface mount connections
- .200 (5.08) total mated height
- Uses the same mounting pattern as mating chip
- Fully compatible with all surface mount processing
- Exposed solder tails for cleaning and maximum drainage
- Center pad for vacuum pick and place robotic assemble and/or adhesive bonding
- Optional polarizing pegs available
- Visual and mechanical polarization
- Extraction tool slots
- Contact design provides constant downward force on chip to prevent disengagement
- Preloaded contact provides low insertion force while maintaining high normal force
- Available in 20, 28, 32, 44, 52, 68 and 84 positions

Extraction Tool CT-2102

Designed specifically for chip extraction from populated P.C. boards

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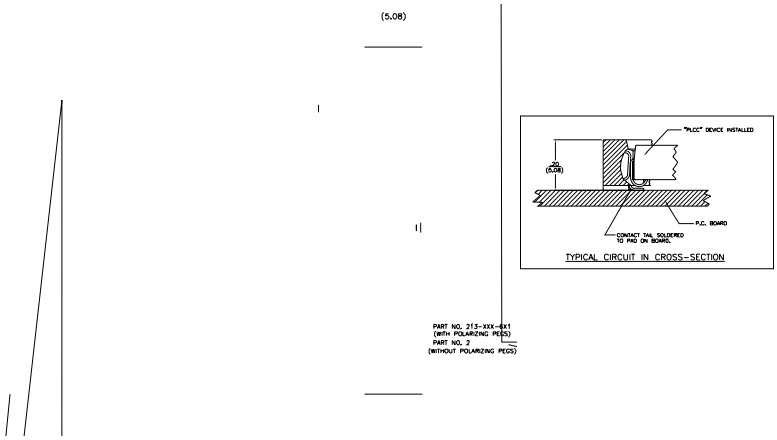

PART NUMBER	NO. OF TERM	A	B
213-020-60X	20	.60 (15.50)	.60 (15.24)
213-028-60X	28	.70 (18.00)	.70 (17.78)
213-128-60X	28	.80 (22.34)	.60 (15.24)
213-032-60X	32	.80 (23.58)	.70 (17.78)
213-044-60X	44	.90 (25.90)	.90 (22.86)
213-052-60X	52	1.00 (31.80)	1.00 (25.40)
213-068-60X	68	1.20 (36.70)	1.20 (30.48)
213-084-60X	84	1.40 (35.56)	1.40 (35.56)

Recommended P.C. Board Layout - Component Side Shown

20 POSITION

28 POSITION

128 POSITION

32 POSITION

44 POSITION

52 POSITION

68 POSITION

84 POSITION

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