

## MEMORY CARD CONNECTORS

M

|                                |            |
|--------------------------------|------------|
| ExpressCard* .....             | M-2        |
| MicroSD .....                  | M-3 to M-4 |
| PC Card Headers .....          | M-4 to M-5 |
| One Slot Cardbus Headers ..... | M-5        |
| SD Memory Card Connector.....  | M-6        |

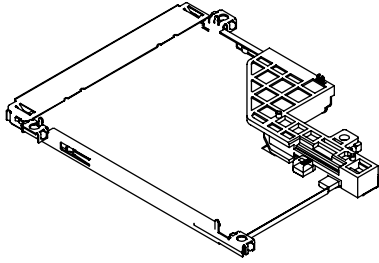
\*ExpressCard is a trademark of PCMCIA

Visit [www.molex.com](http://www.molex.com) to access more part numbers and product information, download sales drawings, product specifications, 3D models, place sample requests, and more.

# 1.00mm (.039") Pitch ExpressCard\* Ejector Assembly

## 47150

### Push-Push Type Screw Mount



| Order No.                  | Description          | Lead-free |
|----------------------------|----------------------|-----------|
| <a href="#">47150-0003</a> | Without Bottom Shell | Yes       |
| <a href="#">47150-0004</a> | With Bottom Shell    |           |

\*ExpressCard is a trademark of PCMCIA

#### Features and Benefits

- Smooth guide rail design enables modules to be easily inserted and ejected
- Clip grounding design provides lower contact resistance
- Plastic heart cam slider with push-out function prevents scratches from modules
- The use of plastic material on universal guidance feature enhanced lead-in of modules
- Nut plate design in metal shell provides space saving on PCB

#### Reference Information

Product Specification: PS-47202-001  
Packaging: Tray  
Use With: 47150-0002 header  
Designed In: Millimeters

#### Mechanical

Durability: 10,000 cycles

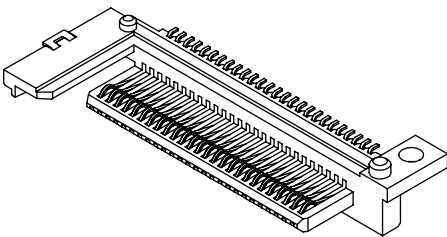
#### Physical

Housing: High-temperature thermoplastic, UL 94V-0

# 1.00mm (.039") Pitch ExpressCard\* Header

## 47150

### Top Mount, SMT



| Order No.                  | Lead-free |
|----------------------------|-----------|
| <a href="#">47150-0002</a> | Yes       |

\*ExpressCard is a trademark of PCMCIA

#### Features and Benefits

- Compatible with ExpressCard™ standard
- Beveled spring contact design provides secure contact force and mating retention
- Polarization shape prevents from mismatching of PCB
- Fitting nail design reinforce hold-on to PCB

#### Reference Information

Product Specification: PS-47202-001  
Packaging: Tray  
Use With: 47150-0003 or 47150-0004 ejector assembly  
Designed In: Millimeters

#### Electrical

Voltage: 3.3V DC

Current: 0.75A

Contact Resistance: 40 milliohms max.

Dielectric Withstanding Voltage: 500V AC

Insulation Resistance: 100 Megohms min.

#### Mechanical

Mating Force: 39N max.

Unmating Force: 3.7N min. and 18.5N max.

Durability: 10,000 cycles

#### Physical

Housing: High-temperature thermoplastic, UL 94V-0

Terminal: Contact Area—Gold plating

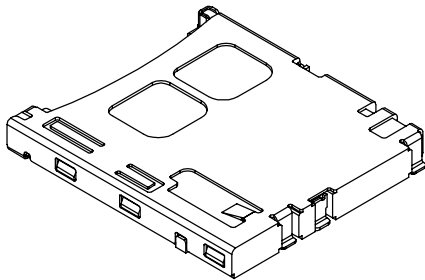
Solder Tail Area—Tin

Underplating—Nickel

# 1.10mm (.043") Pitch microSD Memory Card Connector

**502570**

**Normal Mount, SMT  
Push-Push Type  
With Detect Switch**



| Circuits | Order No.                   | Lead-free |
|----------|-----------------------------|-----------|
| 8        | <a href="#">502570-0893</a> | Yes       |

### Features and Benefits

- 1.80mm height (nominal)
- Inner housing rib wall protects terminal tips during card insertion
- Reliable detect switch assures card detection
- Smoothly beveled terminal to prevent terminal damage when card is inserted
- Card polarization feature to prevents card from being improperly inserted

### Reference Information

Product Specification: PS-502570-001  
Packaging: Embossed tape  
Designed In: Millimeters

### Electrical

Voltage: 10V max.  
Current: 0.5A max.  
Contact Resistance: 100 milliohms max.  
Dielectric Withstanding Voltage: 500V AC/1 min.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Durability: 10,000 cycles

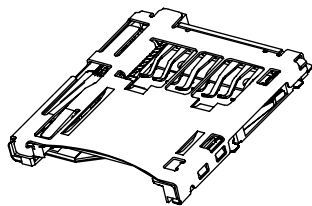
### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—Gold over Nickel  
Solder Tail Area—Tin over Nickel

# 1.10mm (.043") Pitch microSD Memory Card Connector

**502774**

**Reverse Mount, SMT  
Push-Push Type  
With Detect Switch**



| Circuits | Order No.                   | Lead-free |
|----------|-----------------------------|-----------|
| 8        | <a href="#">502774-0891</a> | Yes       |

### Features and Benefits

- 1.80mm height (nominal)
- Card ejection support features on housing and shell to prevent card fly-out, sticking
- Inner housing rib wall protects terminal tips during card insertion
- Reliable detect switch assures card detection
- Smoothly beveled terminal to prevent terminal damage when card is inserted
- Card polarization feature prevents card from being improperly inserted

### Reference Information

Product Specification: PD-502774-001  
Packaging: Embossed tape  
Designed In: Millimeters

### Electrical

Voltage: 10V max.  
Current: 0.5A max.  
Contact Resistance: 100 milliohms max.  
Dielectric Withstanding Voltage: 500V AC/1 min.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Durability: 10,000 cycles

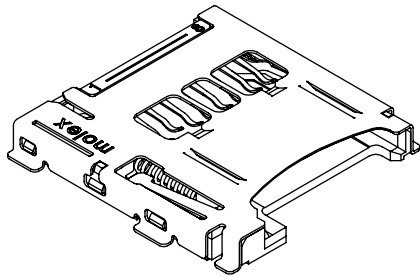
### Physical

Housing: LCP, UL 94V-0  
Contact: Copper Alloy  
Plating: Contact Area—Gold over Nickel  
Solder Tail Area—Tin over Nickel

# 1.10mm (.043") Pitch microSD Memory Card

## 49225

### Reverse With Detect Switch



| Circuits | Order No.                  | Lead-free |
|----------|----------------------------|-----------|
| 8        | <a href="#">49225-0821</a> | Yes       |

#### Features and Benefits

- Ultra-small size for space savings
- Push-pull card eject enables easy extraction
- Metal shielding with shell tabs provides ESD protection and grounding support
- Gold-plated beveled spring contacts provide secure contact force and mating retention
- Wide open area on shells accommodates pick-and-place

#### Reference Information

Product Specification: PS-49225-001  
Packaging: Embossed tape  
Use With: microSD card and T-Flash card  
Designed In: Millimeters

#### Electrical

Voltage: 100V max.  
Current: 0.5A max.  
Contact Resistance: 100 milliohms max.  
Dielectric Withstanding Voltage: 500V AC/1 min.  
Insulation Resistance: 1000 Megohms min.

#### Physical

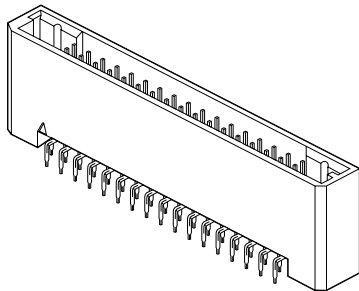
Housing: LCP  
Contact: Phosphor Bronze  
Plating: Gold over Nickel

[www.molex.com/product/memory/microsd.html](http://www.molex.com/product/memory/microsd.html)

# 1.27mm (.050") Pitch PC Card Header

## 94208

### Single Port, Flush Profile Vertical, Top Mount Through Hole



| Circuits | Order No.                  | Board Mount | Lead-free |
|----------|----------------------------|-------------|-----------|
| 68       | <a href="#">94208-0011</a> | Vertical    | Yes       |

#### Features and Benefits

- Compatible with PCMCIA and JEIDA standards
- Screw holes inside the shrouded housing (no mounting ears)
- Accepts any PCMCIA Type I, II or III cards

#### Reference Information

Product Specification: PS-94208  
Packaging: Tube  
Designed In: Millimeters

#### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 40 milliohms max.  
Dielectric Withstanding Voltage: 500V AC  
Insulation Resistance: 1000 Megohms min.

#### Mechanical

Contact Retention to Housing: 9.8N min.  
Mating Force: 39.2N max.  
Unmating Force: 6.67N min.  
Durability: 10,000 cycles

#### Physical

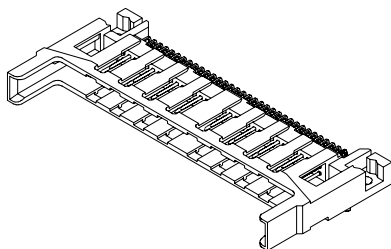
Housing: Black nylon 6/6, UL 94V-0  
Terminal: Contact Area—Gold plating  
Solder Tail Area—Tin  
Underplating—Nickel

| Pin No.                  | Dimension L |
|--------------------------|-------------|
| 36 and 67                | 3.50 (.138) |
| All other pins           | 4.25 (.167) |
| 1, 17, 34, 35, 51 and 68 | 5.00 (.197) |

## 1.27mm (.050") Pitch PC Card Header

**67130**

**Single Slot, Flush Profile  
Top Mount, Right Angle, SMT**



### Features and Benefits

- Low voltage: 3.3V key
- Low Profile: 5.45mm (.215") height
- Single inline surface mount tails: 0.635mm (.025") pitch
- High temperature housing for IR process
- Top mounting version
- Accepts any PCMCIA Type I, II and III cards and any
- Type I or II cards with ejector mechanism

### Reference Information

Product Specification: PS-67160-011  
Packaging: Tray  
Designed In: Millimeters

### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 40 milliohms max.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Contact Retention to Housing: 9.8N (2.205 lb) min.  
Mating Force: 39.2N (8.82 lb) max.  
Unmating Force: 6.67N (1.50 lb) min.  
Durability: 10,000 cycles

### Physical

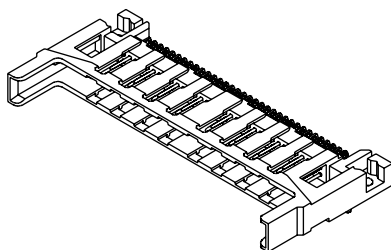
Housing: White Glass-filled LCP, UL 94V-0  
Terminal: Contact Area—Gold plating  
Solder Tail Area—Tin  
Underplating—Nickel

| Circuits | Order No.                  | Voltage Key | Lead-free |
|----------|----------------------------|-------------|-----------|
| 68       | <a href="#">67130-0802</a> | 3.3V Key    | Yes       |

## 1.27mm (.050") Pitch One Slot Carbus Header

**67130**

**Flush Profile, Top Mount  
Right Angle, SMT**



### Features and Benefits

- Low voltage: 3.3V key
- Low Profile: 5.45mm (.215") height
- Compatible with PCMCIA standard
- Single inline surface mount tails: 0.635mm (.025") pitch
- High temperature housing for IR process
- 8 grounding plates reinforce the ground bounce performance
- Top mounting version
- Accepts any PCMCIA Type I, II and III cards and Carbus cards and any Type I or II cards with ejector mechanism

### Reference Information

Product Specification: PS-67160-011  
Packaging: Tray  
Designed In: Millimeters

### Electrical

Voltage: 100V  
Current: 0.5A  
Contact Resistance: 40 milliohms max.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Contact Retention to Housing: 9.8N min.  
Mating Force: 39.2N max.  
Unmating Force: 6.67N min.  
Durability: 10,000 cycles

### Physical

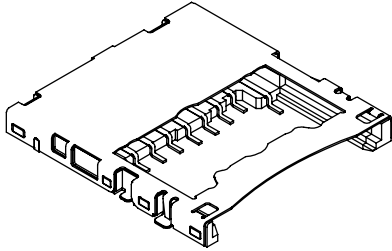
Housing: White glass-filled LCP, UL 94V-0  
Terminal: Contact Area—Gold plating  
Solder Tail Area—Tin  
Underplating—Nickel

| Circuits | Order No.                  | Voltage Key | Lead-free |
|----------|----------------------------|-------------|-----------|
| 68       | <a href="#">67130-0801</a> | 3.3V Key    | Yes       |

## 2.50mm (.098") Pitch SD Memory Card Connector

**500998**

Normal-Mount, SMT, Shielded  
3.10mm (.122") Mounted Height



| Circuits | Order No.                   | Lead-free |
|----------|-----------------------------|-----------|
| 9        | <a href="#">500998-0900</a> | Yes       |

### Features and Benefits

- Beveled spring contacts provide secure contact force and mating retention
- Low-profile design provides space savings
- Push-push ejector offers easy card extraction and tactile feel
- Metal shielding and integral solder tabs provide ESD protection
- Top window provides card visibility
- Robust shell provides card protection

### Reference Information

Product Specification: PS-500998-003  
Packaging: Embossed tape  
Designed In: Millimeters

### Electrical

Voltage: 100V max.  
Current: 0.5A max.  
Contact Resistance: 80 milliohms max.  
Dielectric Withstanding Voltage: 500V AC/1 min.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Mating Force: 13.8N max.  
Unmating Force: 13.8N max.  
Durability: 10,000 cycles

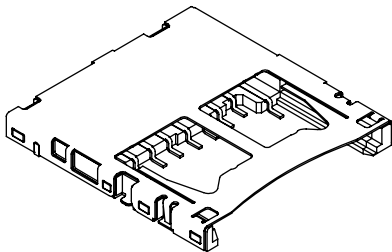
### Physical

Housing: Black heat resistant Polymer, UL 94V-0  
Contact: Copper Alloy  
Plating: Gold

## 2.50mm (.098") Pitch SD Memory Card Connector

**500999**

Normal-Mount, SMT, Shielded  
3.10mm (.122") Mounted Height  
Ultra-Short Solder Tabs



| Circuits | Order No.                   | Lead-free |
|----------|-----------------------------|-----------|
| 9        | <a href="#">500999-0900</a> | Yes       |

### Features and Benefits

- Beveled spring contacts provide secure contact force and mating retention
- Low profile design provides space savings
- Push-push ejector offers easy card extraction and tactile feel
- Metal shielding and integral solder tabs provide ESD protection
- Top window provides card visibility
- Robust shell provides card protection

### Reference Information

Product Specification: PS-500999-001  
Packaging: Embossed tape  
Designed In: Millimeters

### Electrical

Voltage: 100V max.  
Current: 0.5A max.  
Contact Resistance: 80 milliohms max.  
Dielectric Withstanding Voltage: 500V AC/1 min.  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Mating Force: 13.8N max.  
Unmating Force: 13.8N max.  
Durability: 10,000 cycles

### Physical

Housing: Black heat resistant Polymer, UL 94V-0  
Contact: Copper Alloy  
Plating: Gold