



**Molex's new push-pull microSD connector provides the optimum combination of space savings, strong PCB retention and reliable detect switch functionality compared to competitive versions for space-constrained applications such as smart phones and tablet PCs**

The relentless drive by mobile device makers to achieve smaller and thinner designs has in turn made this the key design consideration for micro connector manufacturers. The competition has heated up to the point where shaving even a millimeter or two off the profile height or depth can be the key factor in winning a new mobile connector design.

Molex's new 504077 microSD series meets today's demanding mobile downsizing needs. With a profile height of just 1.28mm and a compact overall size, this new push-pull microSD connector is ideal for applications such as thin smart phones, tablet PCs and other mobile devices.

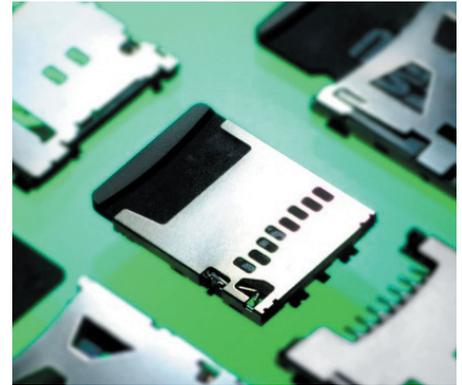
The 504077 series also provides stronger PCB retention than competitive versions, which is important in order to protect solder joints from damage when users try and extract a card in the middle of a tightly-packaged phone. The Molex design also includes beveled terminals that protect against damage during card insertion while providing secure contact forces for electrical reliability.

While card retention is not as important in push-pull versions as it is in push-push types, there is a need to make sure the card stays secure. Molex's new push-pull design contains a unique "half-lock" feature to achieve this. The shell on the 504077 series has a spring function feature built into it that provides a mild type of "half-lock" for secure card retention while still allowing smooth card insertion and extraction.

For additional information visit: [www.molex.com/product/memory.html](http://www.molex.com/product/memory.html)

**microSD\* Memory Card Connector, Push-Pull, Compact Size, Normal Mount, with Detect Switch, 1.28mm Height**

**504077 8-circuit**



Molex's new Push-Pull microSD connector offers significant space savings over Push-Push types

## Features and Benefits

Compact card sockets with low profile height and overall compact size

Optimum PCB real estate and vertical space savings

Six PCB tabs for secure hold-down

Secure PCB retention

Terminal design with gradual lead-in

Prevents terminal stubbing and provides secure electrical reliability

Unique "half-lock" card retention feature

Provides card retention assurance and easy card insertion and extraction

Card polarization features

Prevents microSD card from being inserted in the wrong direction

Open detect switch design

Provides wiping for improved contact reliability versus closed detect switch designs

## Applications

### Consumer

- Smart phones
- Standard mobile phones
- Tablet PCs
- Other mobile devices



Smart Phone



GPS Navigation Unit



Tablet PC

\* microSD is a trademark of the SD Card Association

## Specifications

### REFERENCE INFORMATION

Packaging: Embossed tape on Reel  
 Use With: microSD card  
 Designed In: mm  
 RoHS: Yes  
 Halogen Free: Yes  
 Glow Wire Compliant: No

### ELECTRICAL

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

### MECHANICAL

Card Insertion/Removal Force:  
 15N max. (Lock force)  
 1-10N (Lock release force)  
 Durability: 10,000 cycles

### PHYSICAL

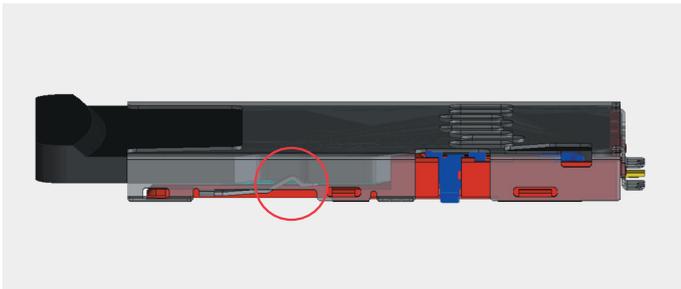
Housing: LCP; UL 94V-0, Black  
 Contact: Phosphor Bronze  
 Plating:  
 Contact Area — Gold  
 Solder Tail Area — Gold  
 Underplating — Nickel  
 Operating Temperature:  
 -25 to +85°C

**microSD Memory  
 Card Connector,  
 Push-Pull,  
 Compact Size,  
 Normal Mount,  
 with Detect  
 Switch, 1.28mm  
 Height**

**504077 8-circuit**

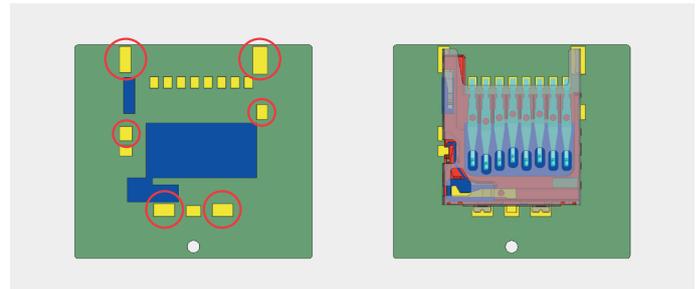
## Additional Product Features

### Unique “Half-Lock” Card Retention Feature



The shell on the 504077 series has a spring function feature built into it that provides a mild type of “half-lock” for secure card retention while still allowing smooth card insertion and extraction.

### PCB Hold-Down Features



Six grounding hold-down points help provide secure PCB retention and protection to solder tab joints, and are designed around required keep-out areas. Certain competitive versions only provide four hold-down points.

## Ordering Information

### Connector

Order No.	Type	Circuits	Profile Height
504077-1891	Socket	8	1.28mm