

IP5-04-05.0-L-S-1-TR

IP5-08-05.0-L-S-1-TR

# 50Ω HIGH ISOLATION RF PLUGS

## SPECIFICATIONS

For complete specifications and recommended PCB layouts see [www.samtec.com?IP5](http://www.samtec.com?IP5)

### Shell Material:

Copper Alloy

### Insulator Material:

Black LCP

### Contact Material:

Copper Alloy

### Dielectric Material:

Black LCP

### Plating:

Au or Sn over

50μ" (1.27 μm) Ni

### Current Rating (Vertical):

Signals: 2.36 A per pin

(2 adjacent pins powered)

Grounds: 4.4 A per pin

(2 adjacent pins powered)

### Operating Temp Range:

-55°C to +125°C

### Insulation Resistance:

IP5 = >35,000 MΩ

IP5-RA = 25,000 MΩ

### Contact Resistance:

IP5 = Center: <34 mΩ

IP5 = Outer: <7 mΩ

IP5-RA = Center: 20 mΩ

IP5-RA = Outer: 5 mΩ

### Dielectric Withstanding Voltage:

IP5 = 600 VAC

IP5-RA = 190 VAC

### Working Voltage:

IP5 = 200 VAC

IP5-RA = 190 VAC

### RoHS Compliant:

Yes

## Processing:

Lead-Free Solderable:

Yes

## RECOGNITIONS

For complete scope

of recognitions see

[www.samtec.com/quality](http://www.samtec.com/quality)



FILE NO. E111594

## ALSO AVAILABLE (MOQ Required)

- Other stack heights
  - Other PCB thicknesses
- Contact Samtec.

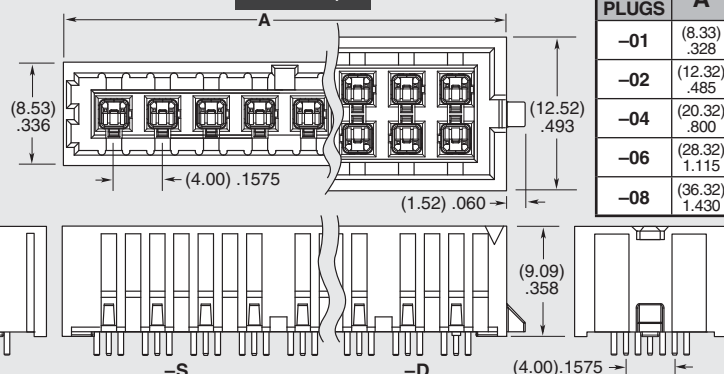
## OTHER SOLUTIONS

- 75Ω Board-to-Board system (see IJ7 & IP7 Series)

| IP5                      | PLUGS PER ROW                 | 05.0                                                                 | PLATING                                                                  | ROW OPTION                                 | TAIL                                     | OPTION               | TR |
|--------------------------|-------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------|------------------------------------------|----------------------|----|
| Mates with:<br>IJ5, IJ5C | -01,<br>-02, -04,<br>-06, -08 | -L<br>= 10μ" (0.25 μm)<br>Gold on contact area,<br>Matte Tin on tail | -S<br>= Single Row<br><br>-D<br>= Double Row<br>(Not available with -01) | -1<br>= (1.60 mm)<br>.062" board thickness | -L<br>= Cable Latch<br>(Single Row only) | -TR<br>= Tape & Reel |    |
|                          |                               |                                                                      |                                                                          |                                            |                                          | NO. OF               | Λ  |

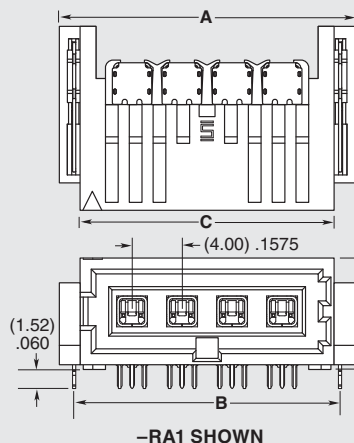
| IP5/IJ5<br>10 mm Stack Height | Frequency            |
|-------------------------------|----------------------|
| Insertion Loss = 3 dB         | 10.5 GHz / 21.0 Gbps |
| Return Loss = 15 dB           | 5.5 GHz / 11.0 Gbps  |
| VSWR = 1.4                    | 5.4 GHz / 10.8 Gbps  |
| Isolation = 60 dB             | 8.8 GHz / 17.6 Gbps  |
| Isolation = 70 dB             | 7.6 GHz / 15.2 Gbps  |
| Isolation = 80 dB             | 1.3 GHz / 2.6 Gbps   |

Complete test data available at [www.samtec.com?IP5](http://www.samtec.com?IP5) or contact [sig@samtec.com](mailto:sig@samtec.com)



| NO. OF PLUGS | A             |
|--------------|---------------|
| -01          | (8.33) .328   |
| -02          | (12.32) .485  |
| -04          | (20.32) .800  |
| -06          | (28.32) 1.115 |
| -08          | (36.32) 1.430 |

|                          |                       |                                                                                               |                                                    |                                                            |                         |        |    |
|--------------------------|-----------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------|-------------------------|--------|----|
| IP5                      | PLUGS<br>PER ROW      | 01                                                                                            | PLATING                                            | S                                                          | TAIL<br>OPTION          | OPTION | TR |
| Mates with:<br>IJ5, IJ5C | -02, -04,<br>-06, -08 | -L<br>= 10μ" (0.25 μm)<br>Gold on contact area,<br>Matte Tin on grounds,<br>tails & weld tabs | -RA1<br>= (1.60 mm)<br>.062"<br>board<br>thickness | (Leave blank for no Cable<br>Latch)<br>-L<br>= Cable Latch | -TR<br>= Tape<br>& Reel |        |    |



| NO. OF PLUGS | A             | B             | C             |
|--------------|---------------|---------------|---------------|
| -02          | (15.64) .616  | (13.27) .523  | (12.32) .485  |
| -04          | (23.64) .931  | (21.27) .838  | (20.32) .800  |
| -06          | (31.64) 1.246 | (29.27) 1.153 | (28.32) 1.115 |
| -08          | (39.64) 1.561 | (37.27) 1.468 | (36.32) 1.430 |

## APPLICATION

