

(4.00 mm) .1575"

IP5, IP5-RA SERIES

# 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)



## ALSO AVAILABLE (MOQ Required)

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

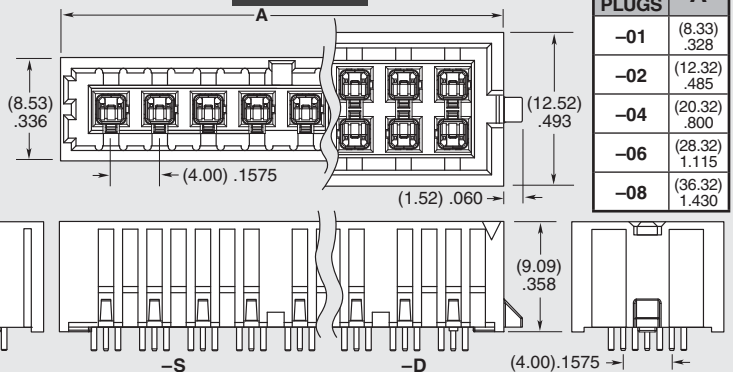
## OTHER SOLUTIONS

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

<b>IP5</b>	<b>PLUGS PER ROW</b>	<b>05.0</b>	<b>PLATING</b>	<b>ROW OPTION</b>	<b>TAIL</b>	<b>OPTION</b>	<b>TR</b>
<b>Mates with:</b> IJ5, IJ5C		<b>-01, -02, -04, -06, -08</b>	<b>-L</b> = 10μ" (0.25 μm) Gold on contact area, Matte Tin on tail	<b>-S</b> = Single Row <b>-D</b> = Double Row (Not available with -01)	<b>-1</b> = (1.60 mm) .062" board thickness	<b>-L</b> = Cable Latch (Single Row only)	<b>-TR</b> = Tape & Reel

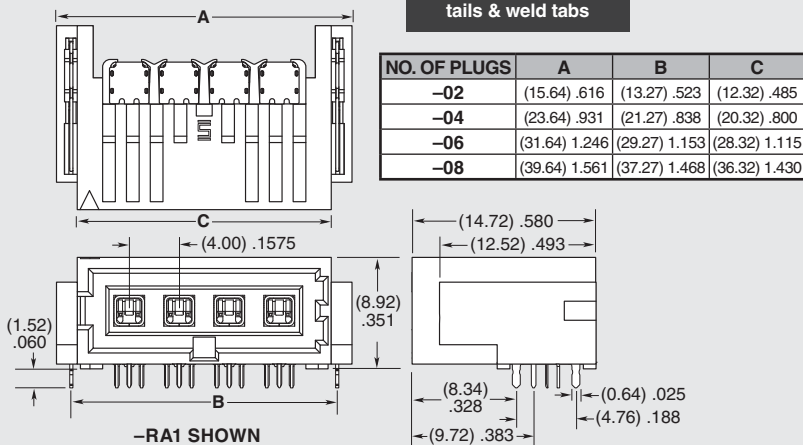
IP5/IJ5 10 mm Stack Height	Frequency
Insertion Loss = 3 dB	10.5 GHz / 21.0 Gbps
Return Loss = 15 dB	5.5 GHz / 11.0 Gbps
VSWR = 1.4	5.4 GHz / 10.8 Gbps
Isolation = 60 dB	8.8 GHz / 17.6 Gbps
Isolation = 70 dB	7.6 GHz / 15.2 Gbps
Isolation = 80 dB	1.3 GHz / 2.6 Gbps

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

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

