



# Specification & Data sheet

## RF Switch **C90 Series**

Q4, 2015  
Version 1.0



# RF Switch

## C90 Series

### Description:

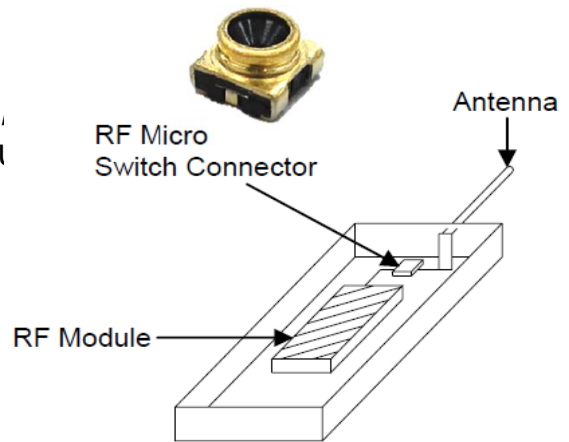
RF Micro Switch Connector which is switching from an internal antenna module to an external antenna for inspection of high frequency circuits. Though the test plug connected, the signal diverted to the measurement device to verify the circuit performance.

### Feature & Benefit:

- Compatible with mainstream and leading company
- Small size, low profile and construction
- Available high frequency and excellent performance
- Stabilized contact resistance for high durability
- Flux climbing avoid design
- Fully auto-machine production line
- Outstanding design and own patent be certificated by USA and China.

### Application:

Handheld phone, W-LAN, GPS, Bluetooth, PDA, any wireless device for measuring antenna/circuit performance.



### Patent Information:

- China patent

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.  
H01R 24/02  
H01R 13/71



[12] 实用新型专利说明书

[21] ZL 专利号 200420006410.9

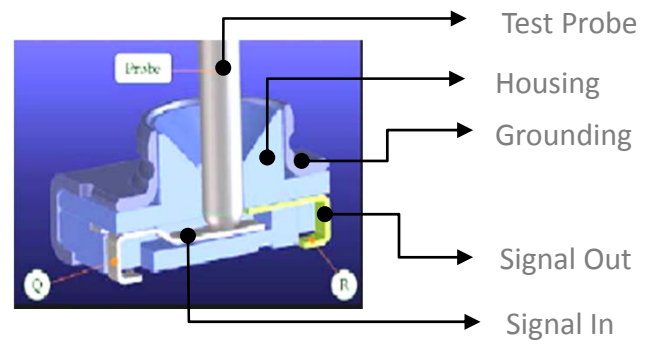
[45] 授权公告日 2005 年 3 月 30 日

[11] 授权公告号 CN 2689531Y

- USA patent

**United States Patent**  
Liu et al.

(10) Patent No.: **US 6,843,673 B1**  
(45) Date of Patent: **Jan. 18, 2005**



# RF Switch

## C90 Series

### Ordering Information:



P/N: **C90-101**                      **C90P103**                      **C90P106**                      **C90P105**

Competitor	Murata MM- 8430	Murata MM- 8130	Murata MM- 8030	Hirose MS- 180
L × W (mm)	3.0 × 3.0	2.5 × 2.5	2.0 × 2.0	1.8 × 1.8
Height (mm)	1.75	1.40	0.90	0.85
Frequency Rating	DC to 6GHz	DC to 6GHz	DC to 11GHz	DC to 11GHz

Rated Voltage	250V rms.(AC)	250V rms(AC)	250V rms(AC)	100V rms(AC)
Characteristic Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Temperature Range	-40°C to +90°C	-40°C to +90°C	-40°C to +85°C	-40°C to +85°C
Insulation Resistance	500 MΩ	500 MΩ	500 MΩ	1000 MΩ
Withstand Voltage	300 Vrms(AC)	300 Vrms(AC)	300 Vrms(AC)	100 Vrms(AC)
Contact Resistance (max.)	50 mΩ	50 mΩ	70 mΩ	100 mΩ
Durability	500 cycles	100 cycles	100 cycles	100 cycles
V.S.W.R	DC to 3GHz	1.2 max.	1.2 max.	1.2 max.
	3GHz to 6GHz	1.3 max.	1.3 max.	1.3 max.
	6GHz to 11GHz			1.5 max.
Insertion Loss	DC to 3GHz	0.1dB max.	0.1dB max.	0.1dB max.
	3GHz to 6GHz	0.2dB max.	0.2dB max.	0.2dB max.
	6GHz to 11GHz			0.5dB max.
Isolation	DC to 3GHz	20dB	20dB	25dB
	3GHz to 6GHz	15dB	15dB	20dB
	6GHz to 11GHz			10dB

**P/N: C90PXXX-X000XXH**

4 : Gold Flash  
5 : Nickel  
M : Tin Plating

101: Compatible with Murata MM-8430  
103: Compatible with Murata MM-8130  
106: Compatible with Murata MM-8030  
105: Compatible with Hirose MS-180

**P/N: C90-101-0004**

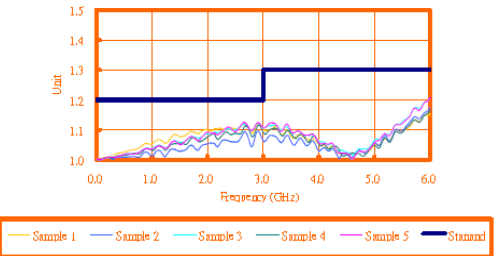
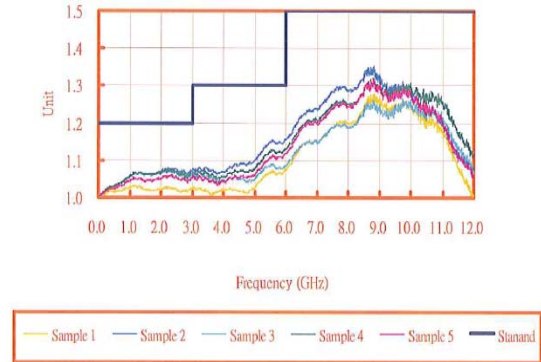
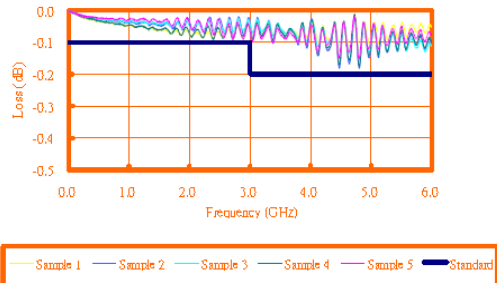
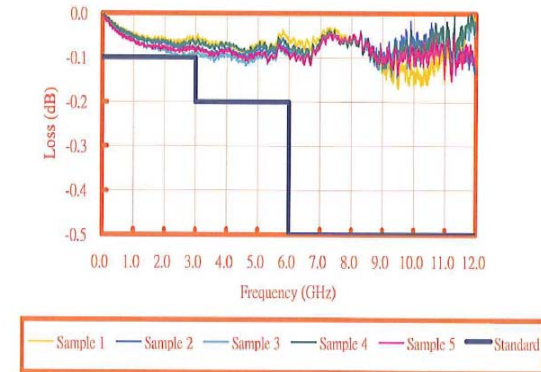
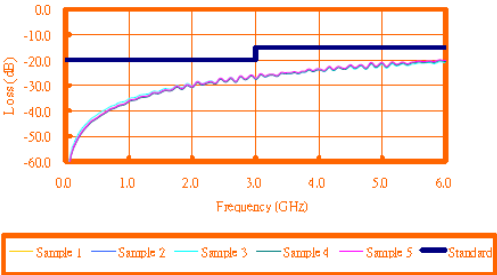
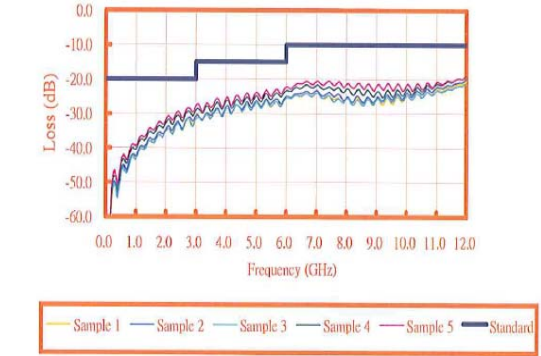
Compatible with Murata MM-8430



# RF Switch Connector

C90 Series

## Performance:

<p>P/N:</p>	<p><b>C90P101</b> <b>C90P103</b></p>	<p><b>C90P106</b> <b>C90P105</b></p>
<p>Frequency Rating</p>	<p>DC to 6GHz</p>	<p>DC to 11GHz</p>
<p>V.S.W.R</p>	 <p>Unit</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>	 <p>Unit</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>
<p>Insertion Loss</p>	 <p>Loss (dB)</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>	 <p>Loss (dB)</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>
<p>Isolation</p>	 <p>Loss (dB)</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>	 <p>Loss (dB)</p> <p>Frequency (GHz)</p> <p>Legend: Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Standard</p>

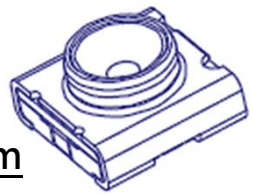
# RF Switch Connector

## C90 Series

### Test Probe:

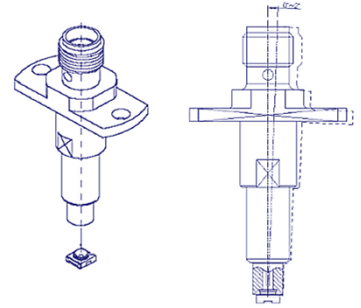
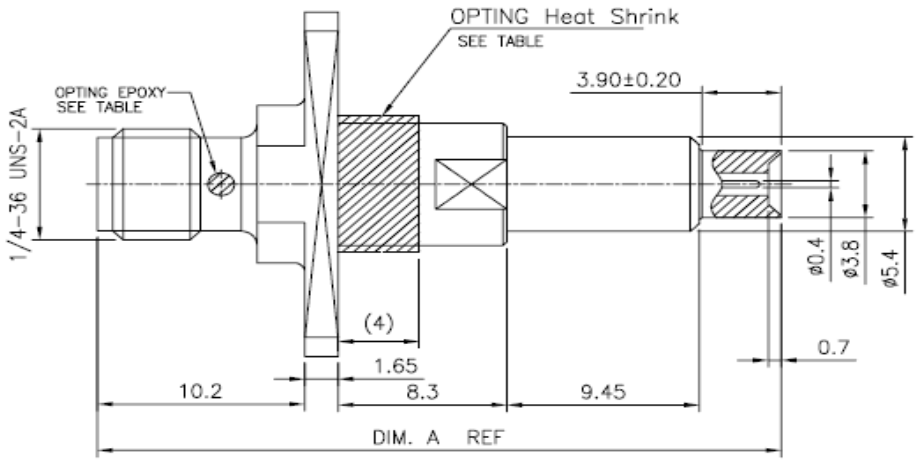
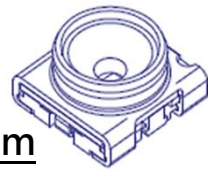
#### C90P101

3.0 x 3.0 x 1.75 mm



#### C90P103

2.5 x 2.5 x 1.40 mm

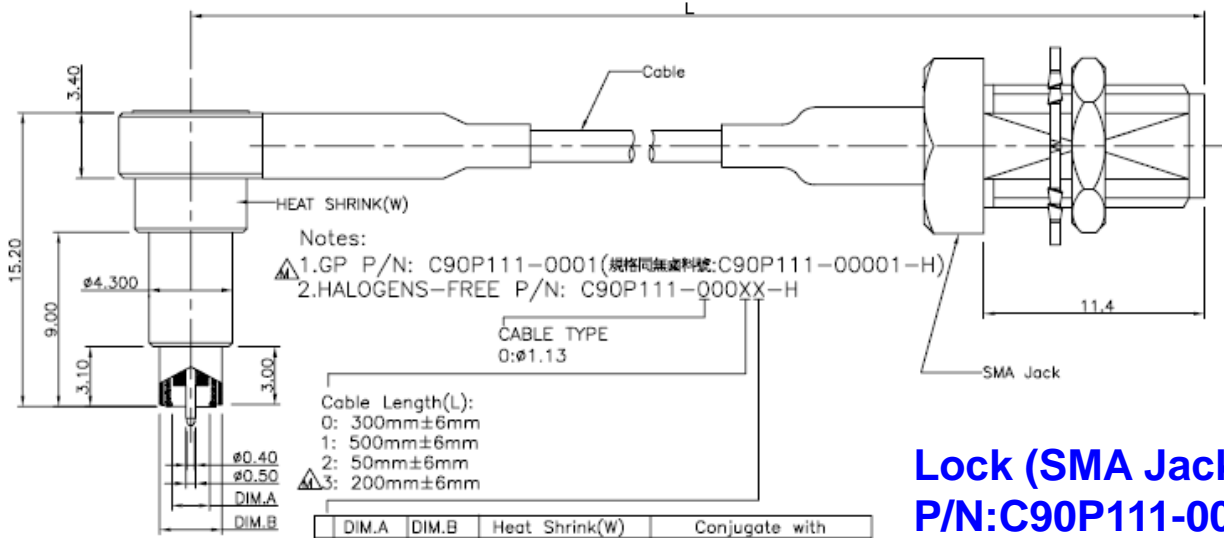


4. HALOGENS-FREE P/N: C90P115-000XX-H

CODE	重量/材種	DIM B	OPTING Heat Shrink(Black)	OPTING EPOXY
0	1.8Kg	Ø2.6	WITHOUT	WITH
1	0.8Kg	Ø3.2	WITH	WITHOUT

DIM. A  
1: 33.65mm  
2: 45.60mm

**Press Down:**  
**P/N: C90P115-00011-H**



DIM.A	DIM.B	Heat Shrink(W)	Conjugate with
1 Ø1.940	Ø3.200	Black Heat Shrink	C90-101&C90-103
2 Ø1.840	Ø3.100	N/A	C90-102

**Lock (SMA Jack)**  
**P/N: C90P111-00001-H**

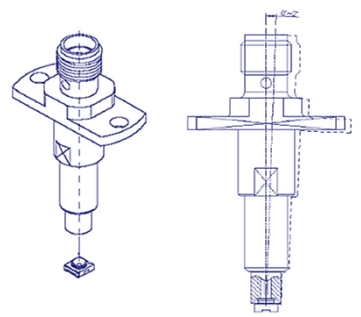
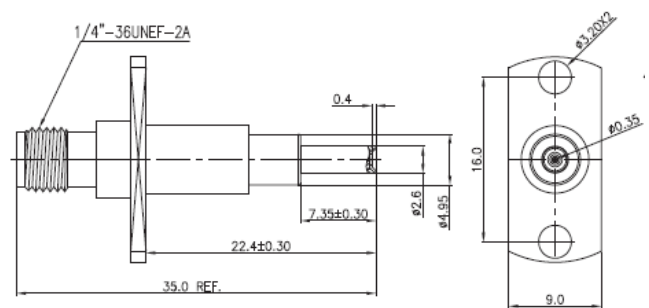
# RF Switch Connector

C90 Series

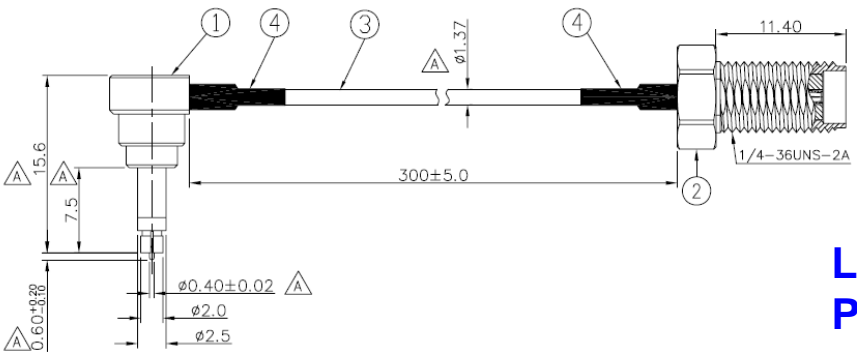
## Test Probe:

**C90P106**

**2.0 x 2.0 x 0.90 mm**



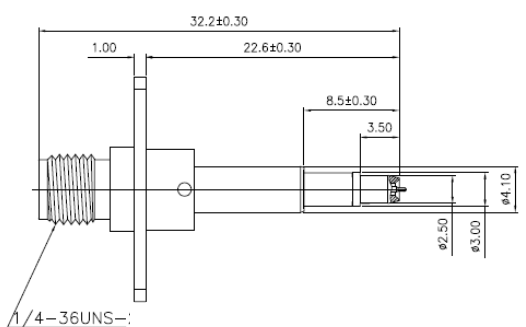
**Press Down:**  
**P/N: Y88P117-00001-H**



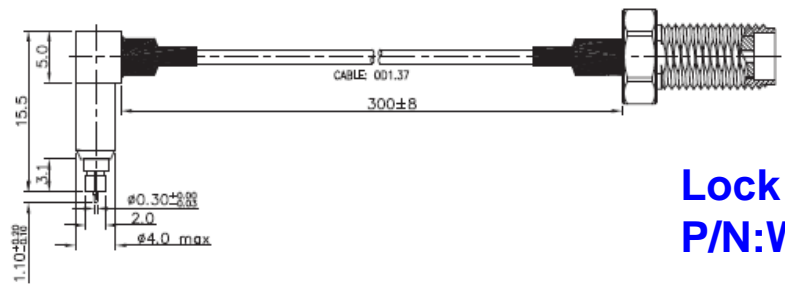
**Lock (SMA Jack)**  
**P/N: Y88P110-00001-H**

**C90P105**

**1.8 x 1.8 x 0.85 mm**



**Press Down:**  
**P/N: PTB000-0041-Y09-0H**



**Lock (SMA Jack)**  
**P/N: WTB000-0041-Y093-3H**

# RF Switch

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## Mass Production Capacity:

The whole process can be completed within one machine.

- All process by auto assembly machine
- 100% CCD Inspection

**Step1: (Assembly)**  
 Assembly of the long-pin  
 And the plastic



**Step2: (Assembly)**  
 Assembly of the short-pin  
 and the plastic



**Step3: (Assembly)**  
 Housing Cover



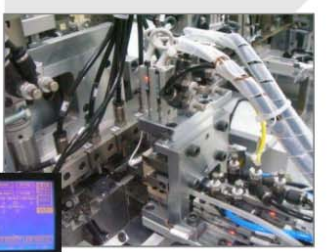
**Step4: (Assembly)**  
 Copper Cover



**Step5: (QC)**  
 Signal Open/Close Test



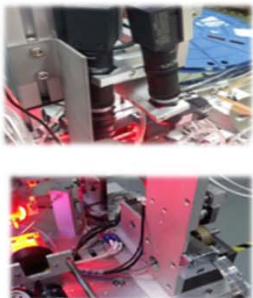
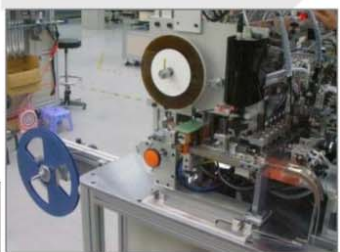
**Step6: (QC)**  
 Inspection for Normal Force



**Step7: (QC)**  
 Inspection for the  
 Orientation & Coplanarity



**Step8: (Packing)**  
 Final products packed into T&R





# RF Switch

C90 Series

## Contact Us:



**Headquarter**

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