



# PSF-S01 Application Notes

*Excellence and Innovation in RF & Microwave Components*

## " Our Vision is to provide Total RF & Microwave Components and Test Solution for Wireless Communication

Have you ever heard about GigaLane? We are rapidly developing to be Total RF & Microwave Components and Test solution company.

GigaLane was founded on October 24, 2001 in KSBC (Kyonggi Small Business Center). Our main products are High performance SMA Connectors & Low loss cable assemblies which have Low Cost, High Reliability Solutions for RF & Microwave applications.

Specially, Our End-launch Connector(PSF-S01) has excellent return loss performance up to 26.5 GHz for your Test board and GigaLane recently released 2.4 mm and 2.92 mm connectors for High frequency Test applications.

Our staff is composed of design engineers with comprehensive RF backgrounds. We have 10 years experience, database, and patents on the wideband design and characterization.

Gigalane is committed to working with our customers and partners to help make our vision a reality.

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# PSF-S01 Application Notes.

## APPLICATION

DC to 26.5 GHz Evaluation Board and Test System

## FEATURES

### Electrical Ratings

- Frequency Range DC ~ 26.5 GHz
- Impedance 50 ohm
- Insulation Resistance 10000 Mohm min
- Dielectric Withstanding Voltage 1000 (Vrms min. at sea level)

### Mechanical Ratings

- Durability 500 matings
- Force to engage and disengage Not exceed 2 inch pounds
- Recommended coupling nut torque 7 – 10 inch pounds

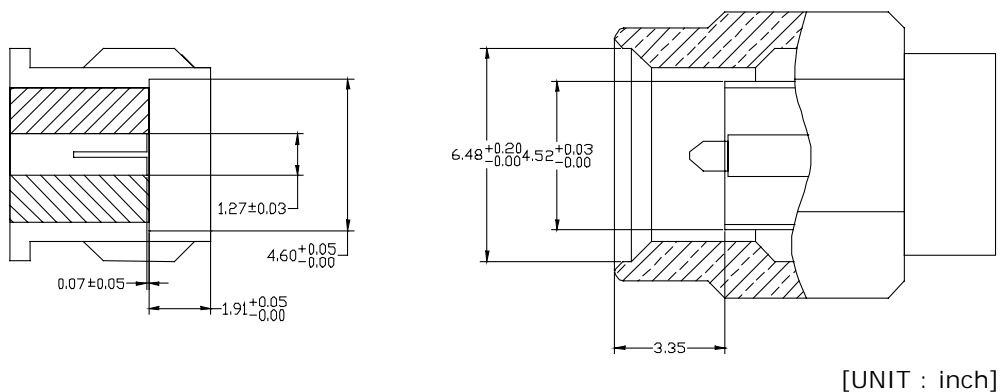
### Environmental Ratings

- Temperature range -65 C to +125 C
- Shock MIL-STD-202, Method 213
- Moisture resistance MIL-STD-202, Method 106

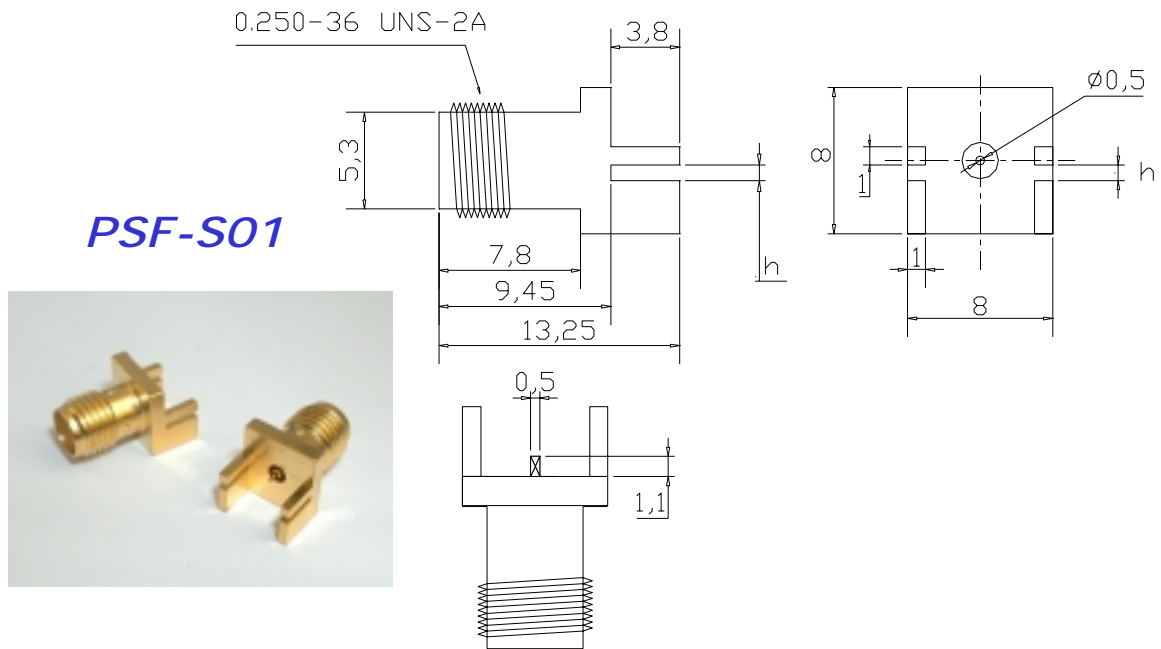
### Materials Specifications

- Bodies
- Contacts BeCu per QQ-C-530, gold plated
- Dielectric PTFE fluorocarbon

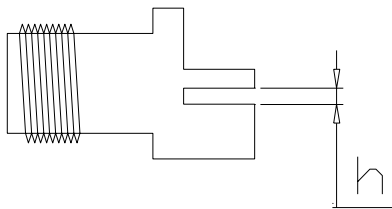
## Dimensions



# PSF-S01 Application Notes.



## Several Version of PSF-S01



h is different according to board clearance

h= 0.6, 0.8, 1, 1.1, 1.2, 1.3, 1.5, 1.62, 1.7, 1.76, 2.1, 2.25, 3.6 mm

Part No. : **PSF-S01-h-MM**

Board Clearance



Unit (millimeter)

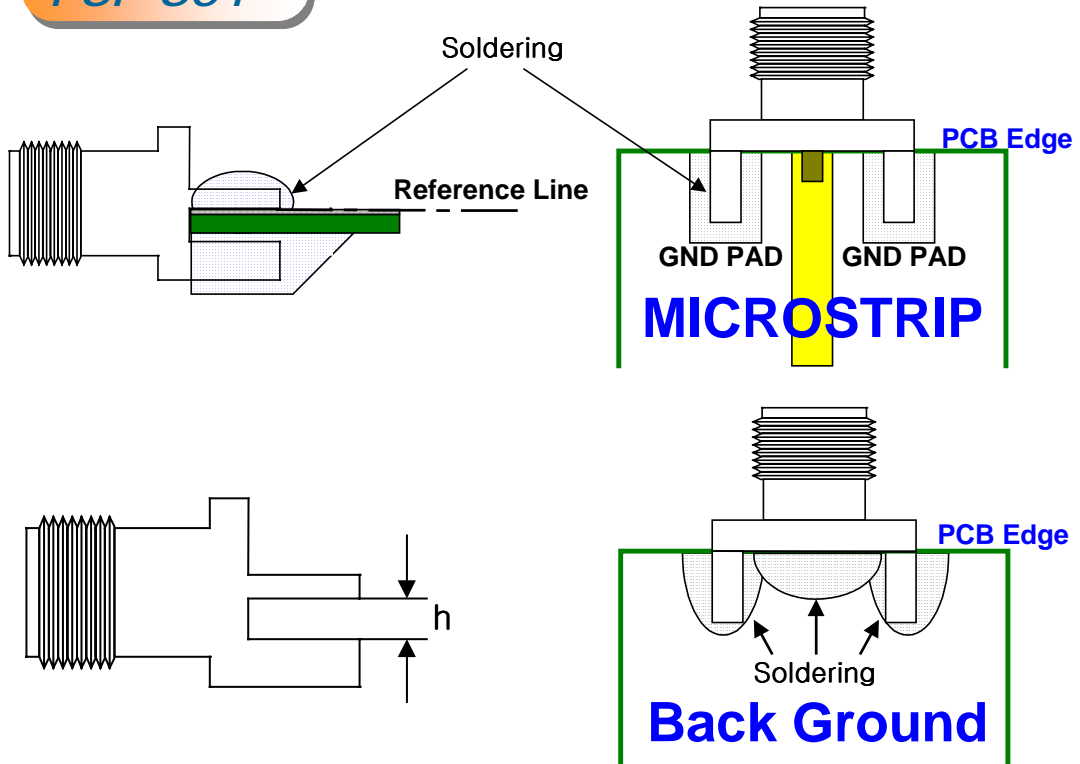
## Ordering Information

EX) In case you want to buy PSF-S01 with h=1.62 mm,

The part no. is **PSF-S01-1.62MM**

# PSF-S01 Application Notes.

## PSF-S01



## FEATURES

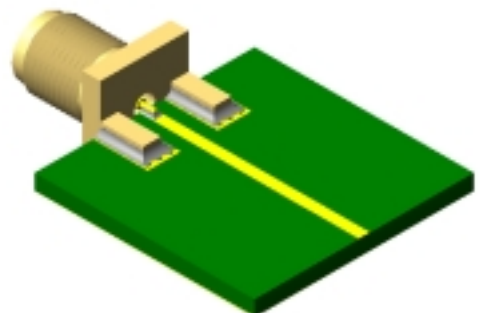
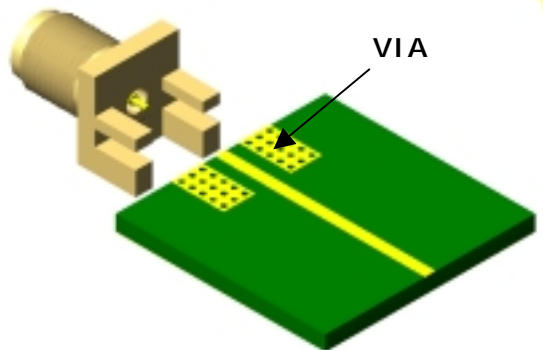
- Easy and fast to launch.
- Substrate supported by connector.
- Useful on multi-layer board.  
(Ground connection on a multi-layer board is typically on top of the microwave board instead of on the bottom)
- Body : Brass and Gold plated

## RECOMMENDED MOUNTING

PSF-S01 is designed to thin substrate and narrow Width microstrip Line.

ex)  $0.5\text{mm} < w < 1.4\text{mm}$  ,  $0.3\text{mm} < t < 1.2\text{mm}$

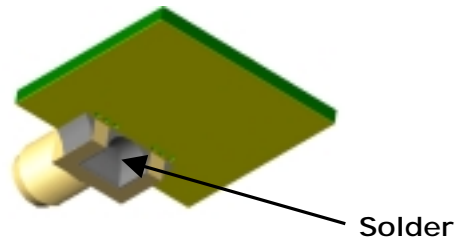
- $h$  is different according to substrate thickness  
ex)  $h = 0.6, 0.8, 1, 1.1, 1.76, 2.1, 2.25, 3.6$  mm



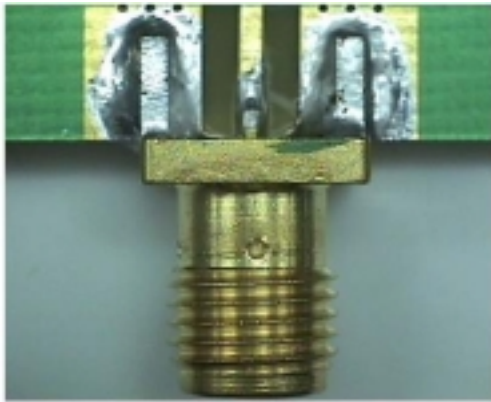
# PSF-S01 Application Notes.

## RECOMMENDED MOUNTING

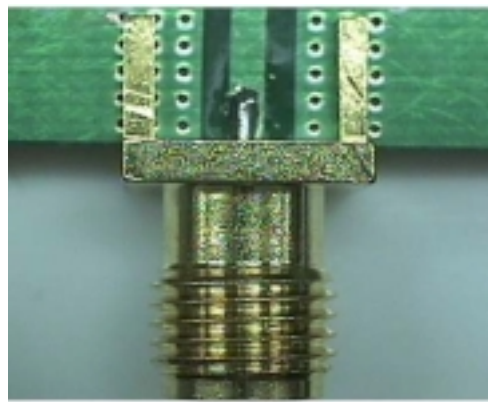
- PSF-S01 need a ground pad with via.
- Top ground pad and back ground are connected though VIA HOLES.



## Top Ground

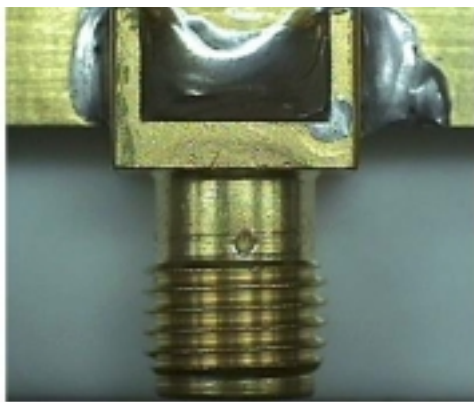


GOOD



BAD

## Bottom Ground



GOOD

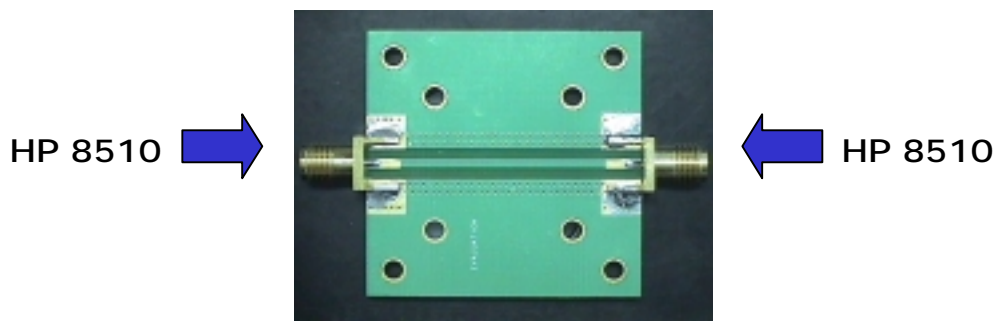
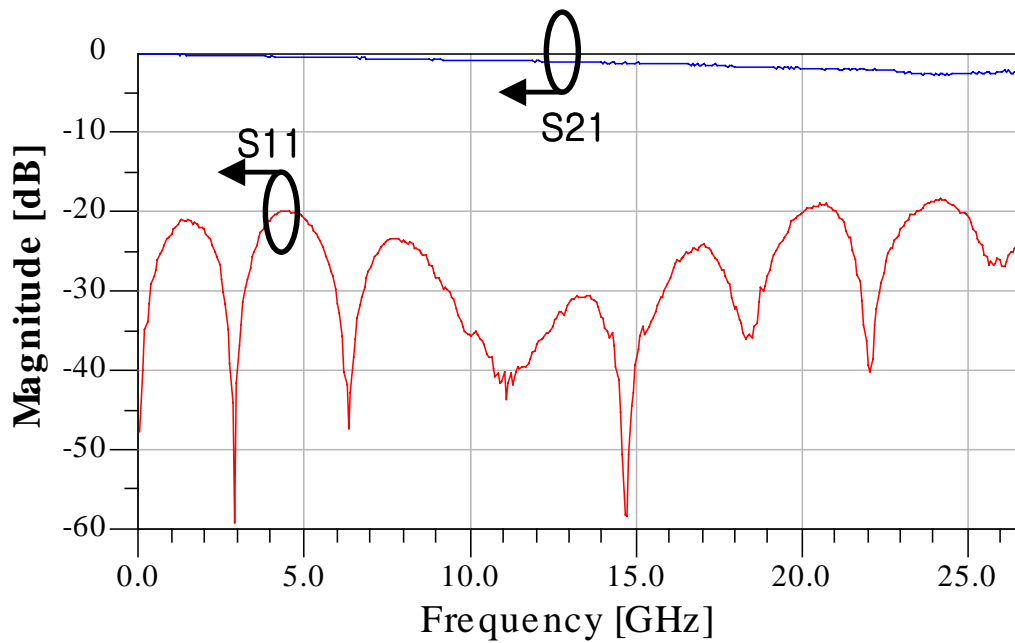


BAD

# PSF-S01 Application Notes.

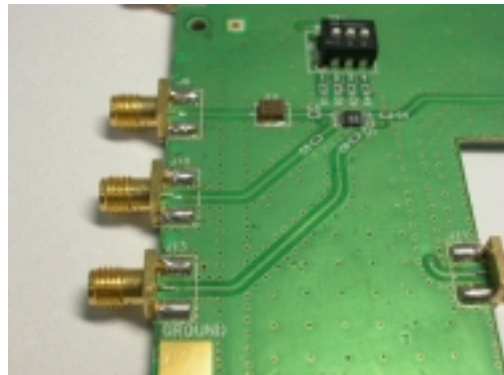
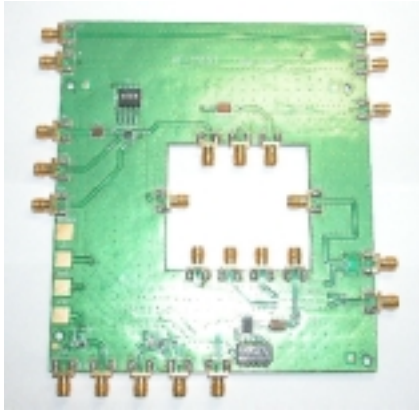
## Test Condition

- Substrate : FR4
- Board Thickness : 0.6 mm
- Line Length : 20 mm
- Line Width : 1.2 mm

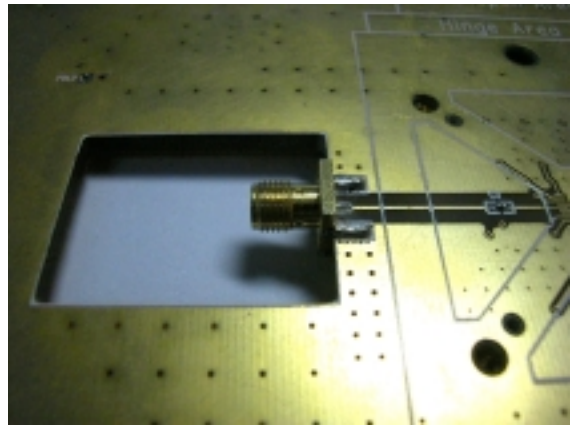


DUT

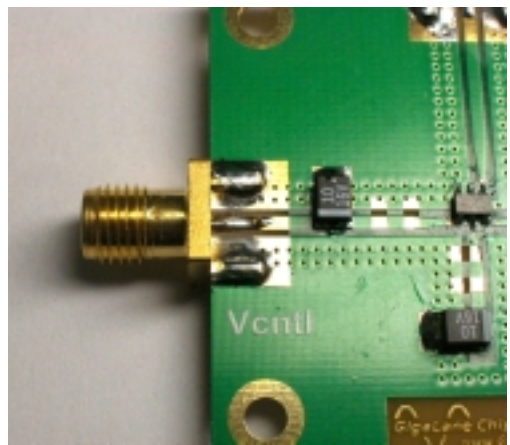
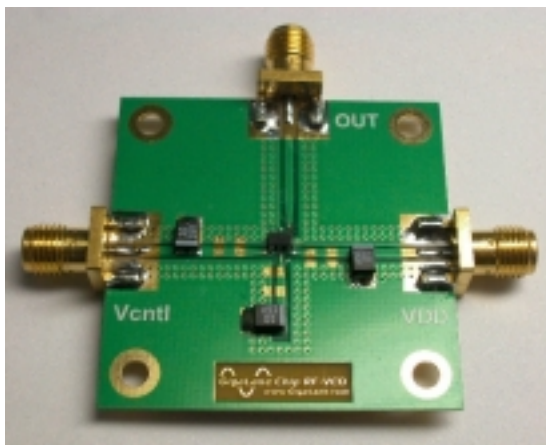
# PSF-S01 Application Notes.



PCB Board for RF Test



DUT Board for ATE Test System



PCB Board for RFIC Test