



PSF-S03 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.

Address : Suite 703, Kyonggi Venture Bldg Suwon Center 1017

I ke-dong, Paldal-gu, Suwon,Kyonggi-do,442-833, KOREA

Tel : +82-31-233-7325

Extension : Management (100)
Domestic Marketing (200)
Overseas Marketing (300)
R&D Center (400)

Fax : +82-31-233-7317

E-mail: sales@gigalane.com Website: www.gigalane.com

PSF-S03 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

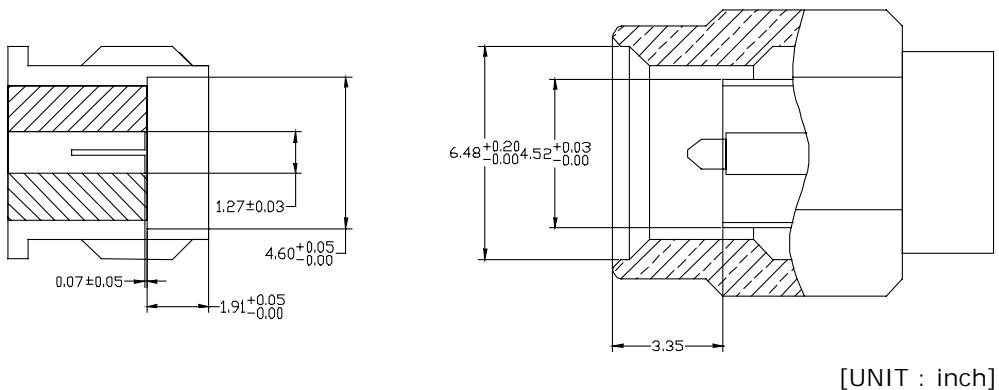
Environmental Ratings

- 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-S03 Application Notes.

PSF-S03-000 & PSF-S03-001

FEATURES

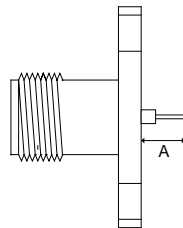
- Precision Pin Centering by Projected Dielectric
- No Sealing Hole Required
- Single Thru Hole Only
- Separable Pin and Center Conductor
- Extended Pin Diameter is 0.3mm



PSF-S03-000



PSF-S03-001



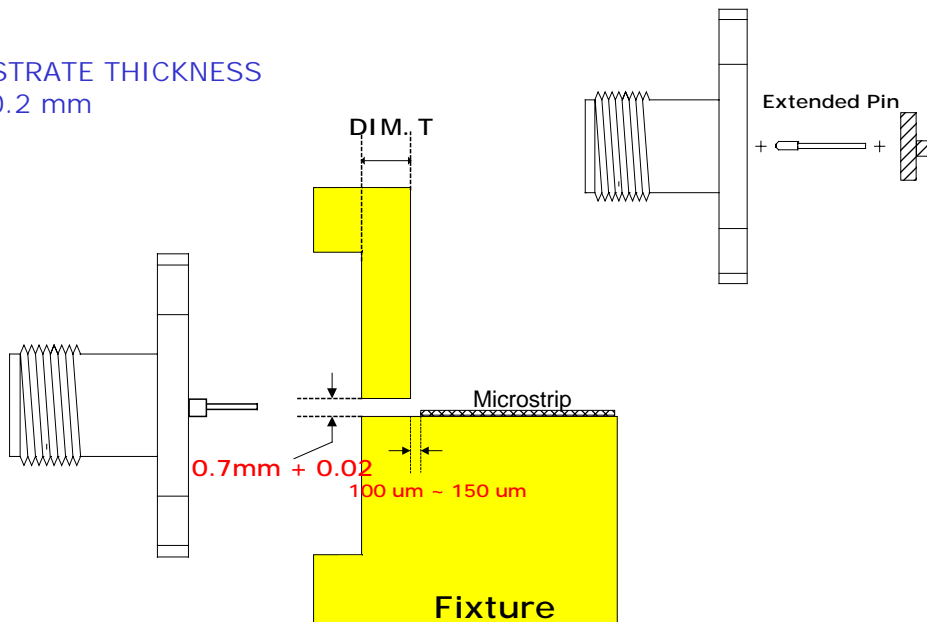
PART#	DIM.A
PSF-S03-000-1 PSF-S03-001-1	2.1 (DIM. T: 1.0-1.3)
PSF-S03-000-2 PSF-S03-001-2	4.0 (DIM. T: 2.9-3.1)

RECOMMENDED MOUNTING

- PSF-S03 is designed to thin substrates and narrow width microstrip line.
ex) $0.3\text{mm} < w < 1\text{mm}$, $0.2\text{mm} < t < 0.6\text{mm}$
- Recommended g_1 and g_2 vary to the transmission line dimensions.
- Thru hole size is $0.7 + 0.02$ mm
- Hole center position C is the height from bottom.

t = SUBSTRATE THICKNESS

$c = t + 0.2$ mm

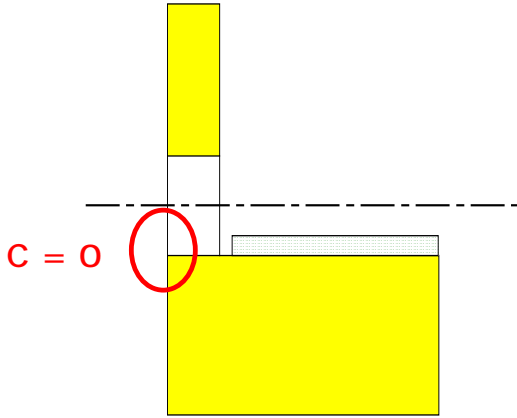


* To REALIZE OPTIMUM PERFORMANCE WITH PSF SERIES CONNECTORS, OPTIMUM MOUNTING HOLE SIZES AND MODULING METHODS ARE RECOMMENDED.

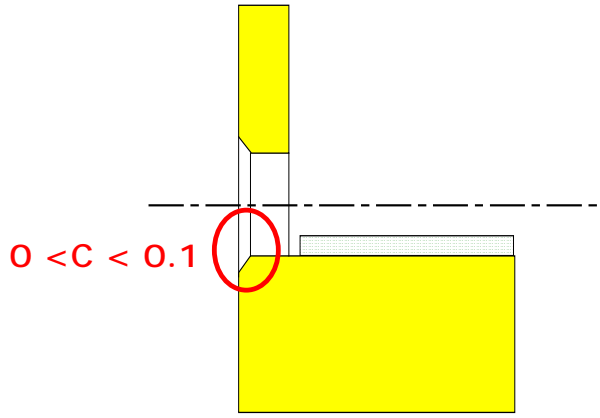
PSF-S03 Application Notes.

A. Required Hole Condition

- Thru hole must not have C if possible



Best Condition

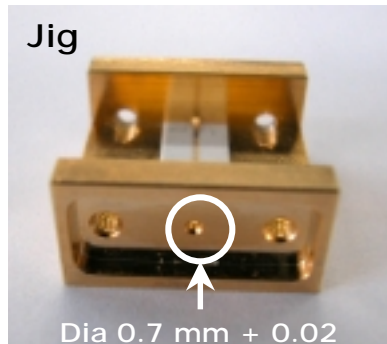


Required Condition

B. Installation Process

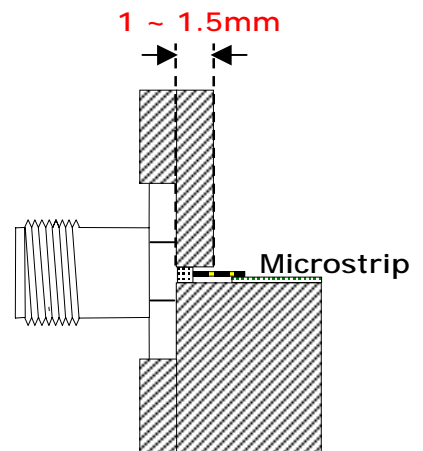


PSF-S03 Connector



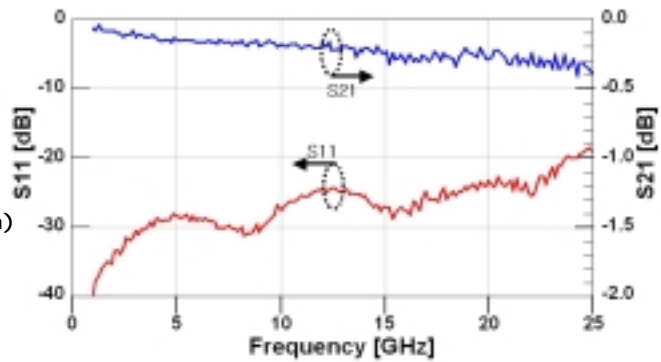
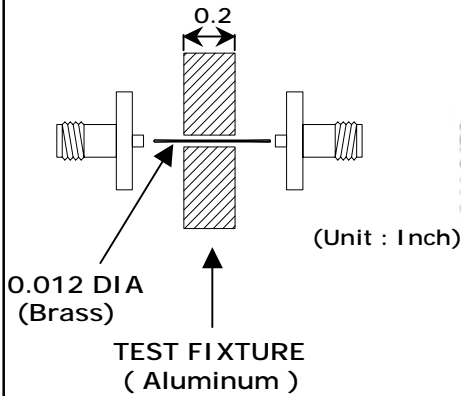
Jig

Dia 0.7 mm + 0.02

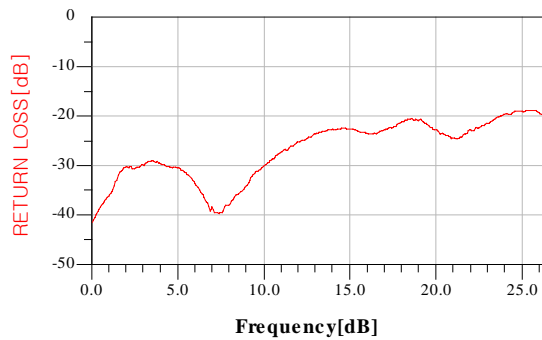
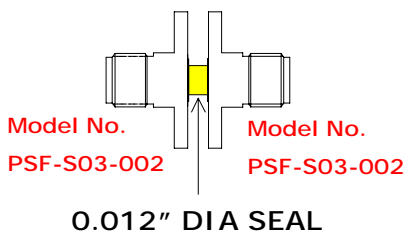


PSF-S03 Application Notes.

PSF-S03-000 Back-to-Back Testing



PSF-S03-002 Back-to-Back Testing



- The frequency response is excellent in all measured frequency range.
- This data is for two connectors.
- In case of a single launch, the performance will be nearly 3 dB (s11) better.

PSF-S03-001 Assemblies Mounted on Thin Microstrip



- Substrate : RO4003
- Board Thickness : 0.35 mm
- Line Length : 15 mm
- Line Width : 0.56 mm

- Low VSWR
- DC to 27.0 GHz..... 1.15 :1 Max_{m2}

