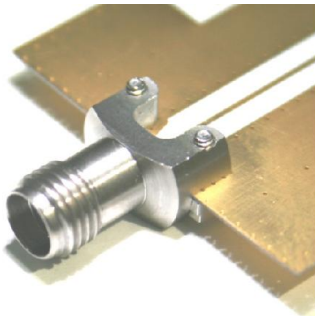


**Wave Launch<sup>TM</sup>** connectors are specially designed for well-used high frequency substrates to minimize Electromagnetic effects including impedance discontinuities from coaxial to Microstrip/CPW structure. We solve your performance and cost problems.



### ■ Features

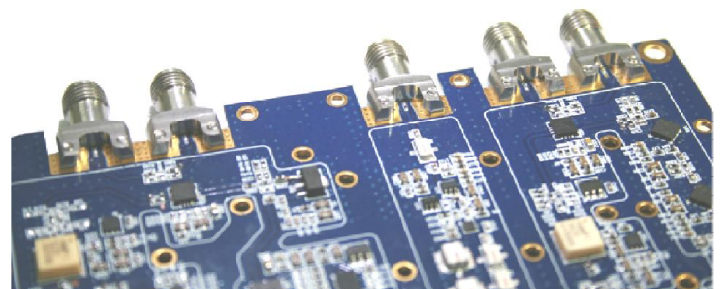
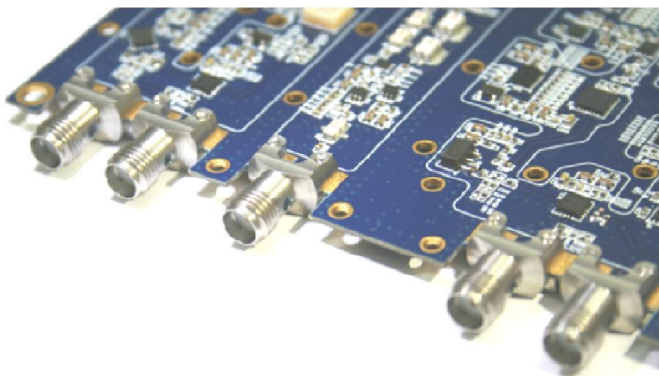
- Now available in : SMA (27 GHz), 2.92 mm (40 GHz), 2.40 mm (50 GHz)
- Optimized **well-used high frequency substrates (RO4003C, RO4350B, Du5880)**
- according to substrate thickness (5, 8, 10, 12 mil)
- Easy Installation on designed substrate



Substrate	Thickness(mil)	Dielectric Constant	Available Wave Launch Connector		
			SMA	2.92mm	2.4mm
RO4003C	8.0	3.55	O	O	O
	12.0		O	O	O
RO4350B	10.0	3.65	O	O	O
Du5880	5.0	2.20	O	O	O
	10.0		O	O	O

### ■ Application

- RFIC Chip set evaluation board
- High data rate ASIC and SoC evaluation module test
- Substrate Characterization



## ■ Specification (Board Edge Type)

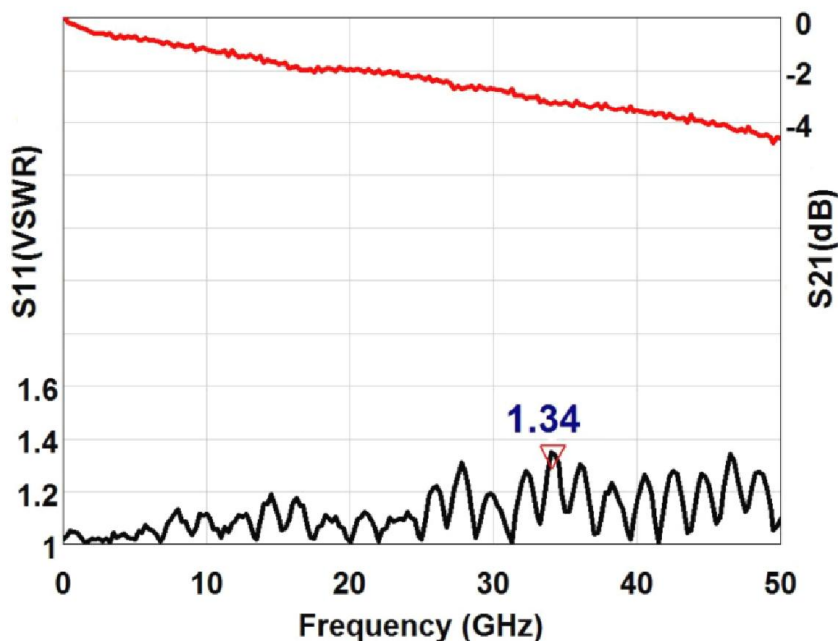
Scope	Items	Specification
Electrical	Freq. range	DC to 27 GHz (SMA type) DC to 40 GHz (2.92 mm type) DC to 50 GHz (2.4 mm type)
	Impedance	50 Ohm
	VSWR(Max)	1.34 : 1 (to 50 GHz)
Material	Connector type	SMA, 2.92 mm, 2.4 mm
	Body & Block	Stainless Steel
	PIN	BeCu with Gold Plated

\* RoHS Compliant

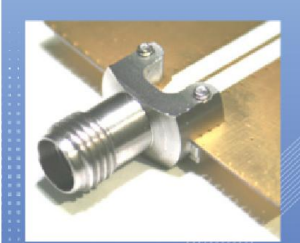
## ■ Measurement data



- Connector : 2.4 mm
- Substrate : RO4350B(10 mil)
- Trace length : 40 mm (microstrip)



### Ordering Information



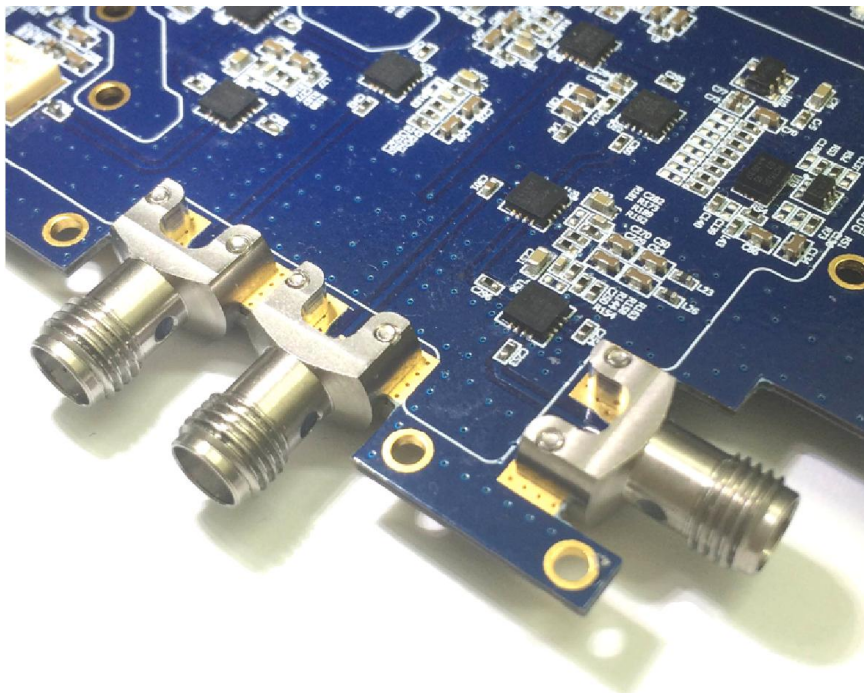
- Board Edge Type
- No need of ground soldering
- Easy installation

Substrate	Thickness(mil)	Wave Launch Connector		
		SMA	2.92mm	2.4mm
RO4003C	8.0	<b>SM06FS001</b>	<b>SM03FS001</b>	<b>SM02FS001</b>
	12.0	<b>SM06FS002</b>	<b>SM03FS002</b>	<b>SM02FS002</b>
RO4350B	10.0	<b>SM06FS003</b>	<b>SM03FS003</b>	<b>SM02FS003</b>
Du5880	5.0	<b>SM06FS004</b>	<b>SM03FS004</b>	<b>SM02FS004</b>
	10.0	<b>SM06FS005</b>	<b>SM03FS005</b>	<b>SM02FS005</b>



- Panel Mount Type
- No need of glass bead
- Simple circuit housing design

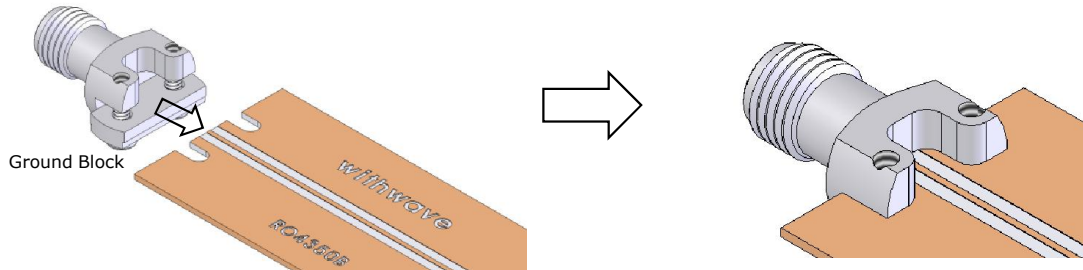
Substrate	Thickness(mil)	Part Number		
		SMA	2.92mm	2.4mm
RO4003C	8.0	<b>PM06FS001</b>	<b>PM03FS001</b>	<b>PM02FS001</b>
	12.0	<b>PM06FS002</b>	<b>PM03FS002</b>	<b>PM02FS002</b>
RO4350B	10.0	<b>PM06FS003</b>	<b>PM03FS003</b>	<b>PM02FS003</b>
Du5880	5.0	<b>PM06FS004</b>	<b>PM03FS004</b>	<b>PM02FS004</b>
	10.0	<b>PM06FS005</b>	<b>PM03FS005</b>	<b>PM02FS005</b>



### ■ Installation Procedure

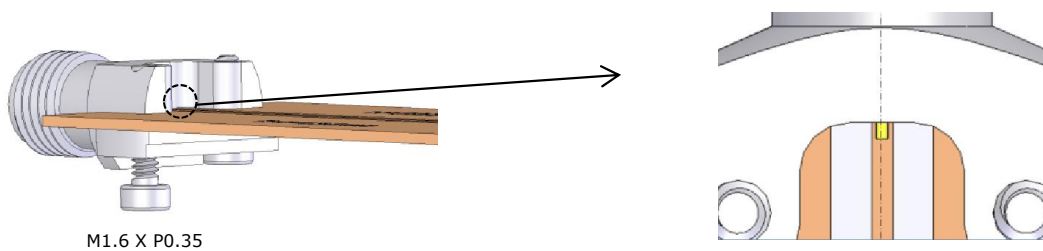
#### STEP 1 :

Insert wave launch connector (including ground block & screws) in the edge position of substrate.



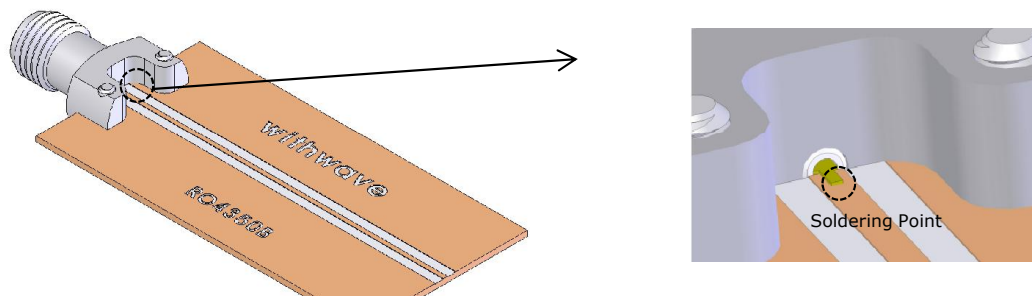
#### STEP 2:

Ensure ground block should be tighten against the substrate using two screws while ensuring flat pin should be centered on the trace.



#### STEP 3:

Solder the flat pin to center trace on substrate while ensuring the connector is held in the correct position. (Note: solder should flow along the length of the exposed flat pin for good electrical performance)



#### STEP 4:

Remove any excess solder and clean all flux and other residues from the trace.





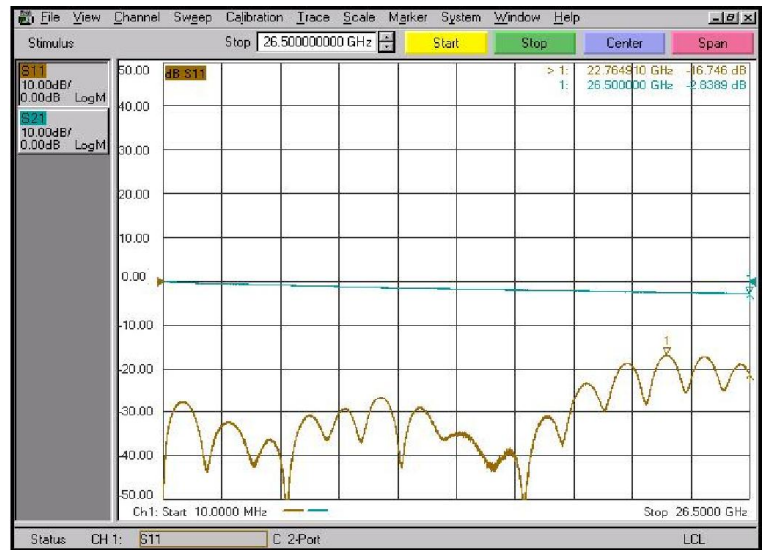
### Test Result

### SMA Type

Freq. : 10 MHz to 26.5 GHz

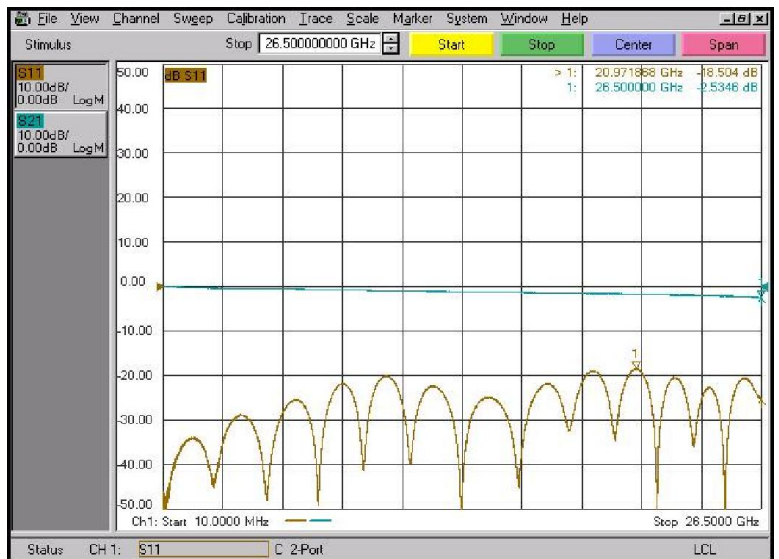
**Substrate : RO4003C (8 mil)**

**Part No. : SM06FS001**



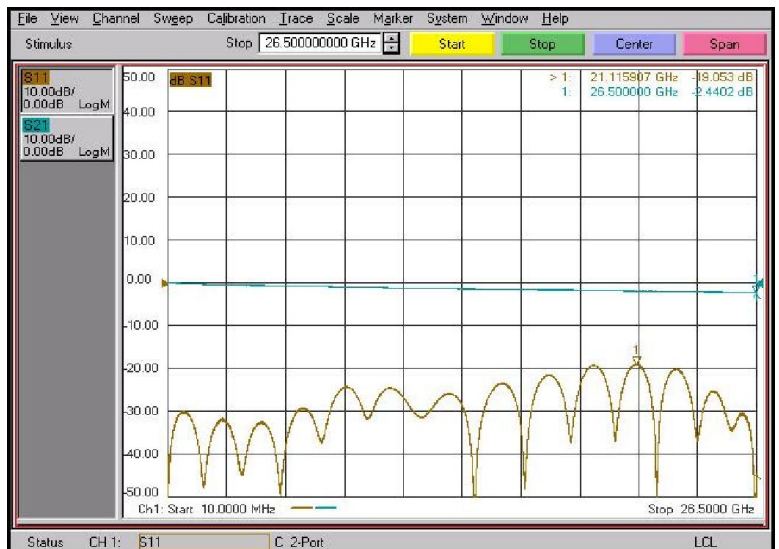
**Substrate :RO4003C (12 mil)**

**Part No. : SM06FS002**



**Substrate :RO4350B (10 mil)**

**Part No. : SM06FS003**



\*\* Trace length : 40 mm (Microstrip) \*\*

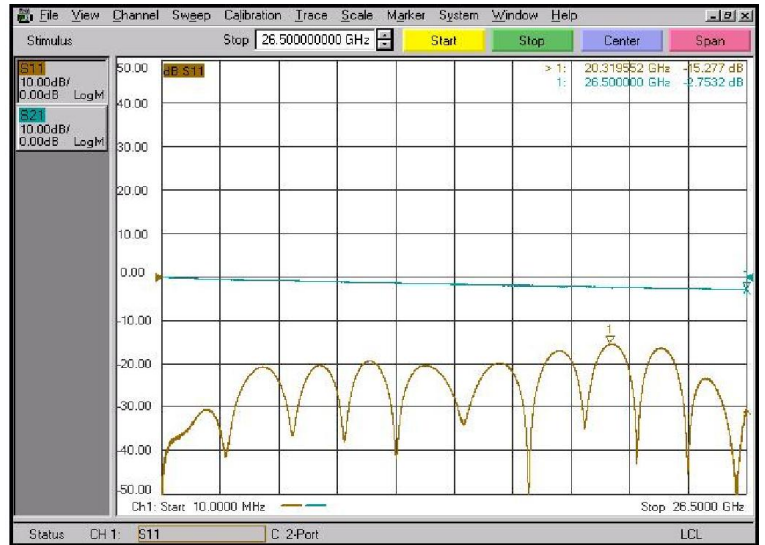
### Test Result

### SMA Type

Freq. : 10 MHz to 26.5 GHz

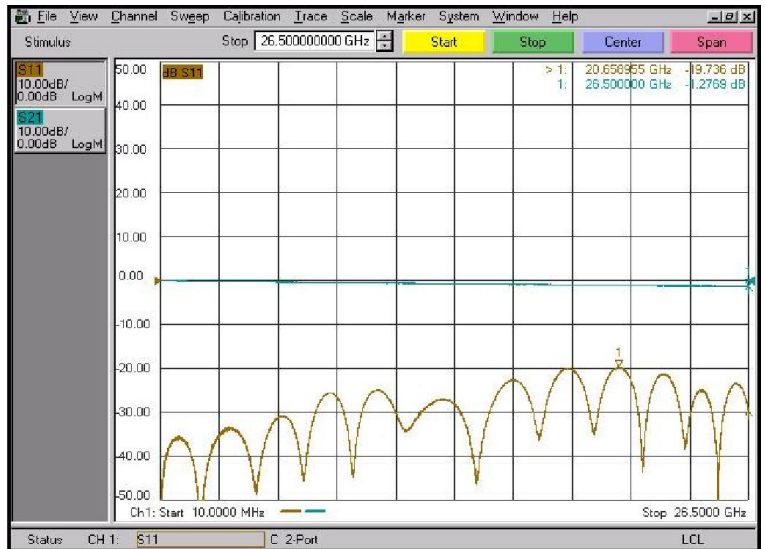
**Substrate : Du5880 (5 mil)**

**Part No. : SM06FS004**



**Substrate : Du5880 (10 mil)**

**Part No. : SM06FS005**



\*\* Trace length : 40 mm (Microstrip) \*\*



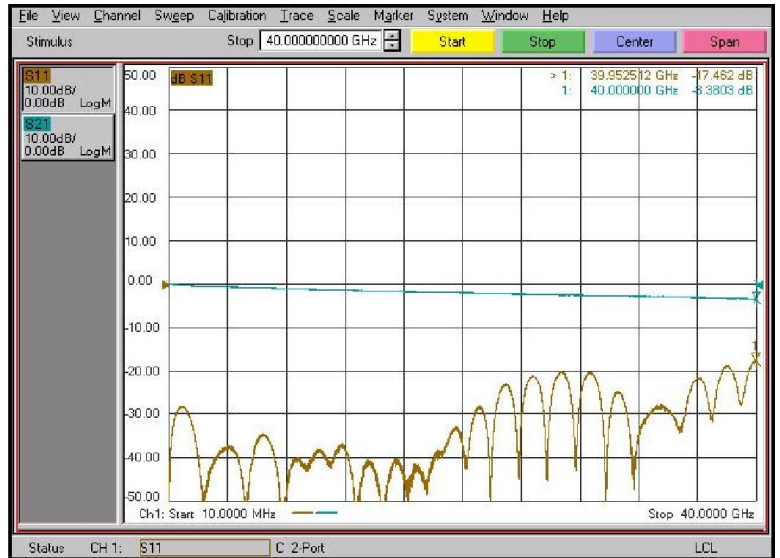
### Test Result

## 2.92mm Type

Freq. : 10 MHz to 40 GHz

**Substrate : RO4003C (8 mil)**

**Part No. : SM03FS001**



**Substrate :RO4003C (12 mil)**

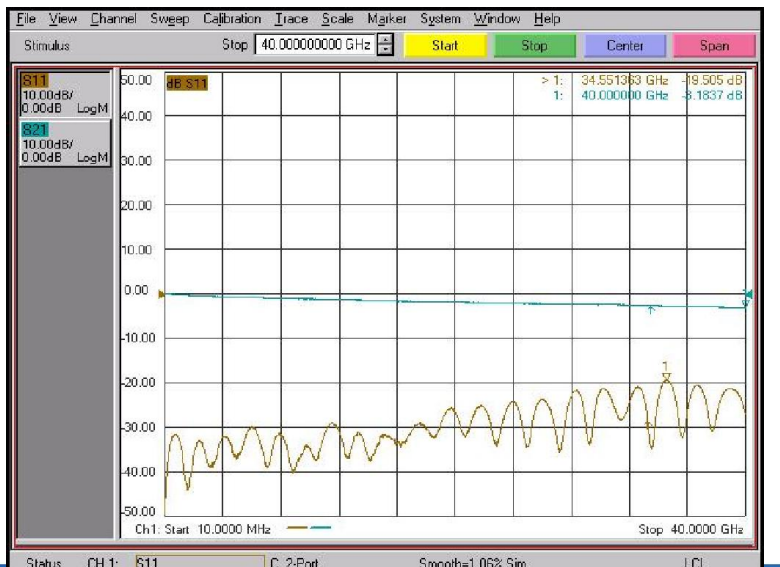
**Part No. : SM03FS002**



\*\* Trace length : 40 mm (Microstrip) \*\*

**Substrate :RO4350B (10 mil)**

**Part No. : SM03FS003**



\*\* Trace length : 40 mm (Microstrip) \*\*



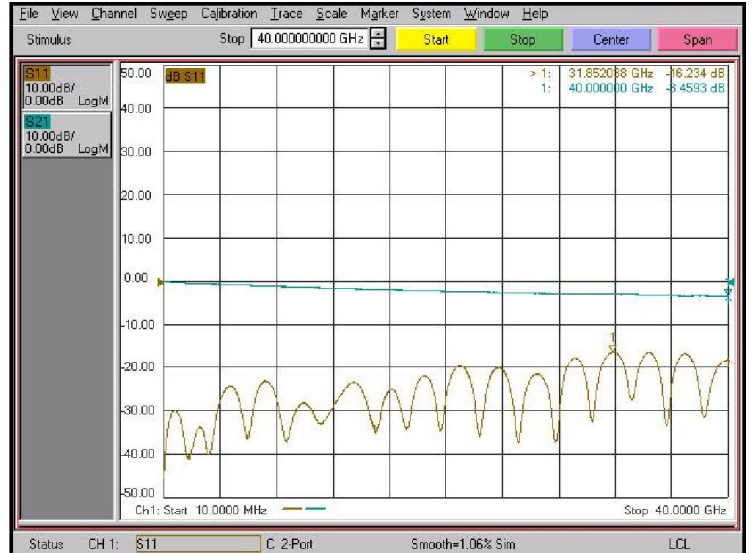
### Test Result

### 2.92mm Type

Freq. : 10 MHz to 40 GHz

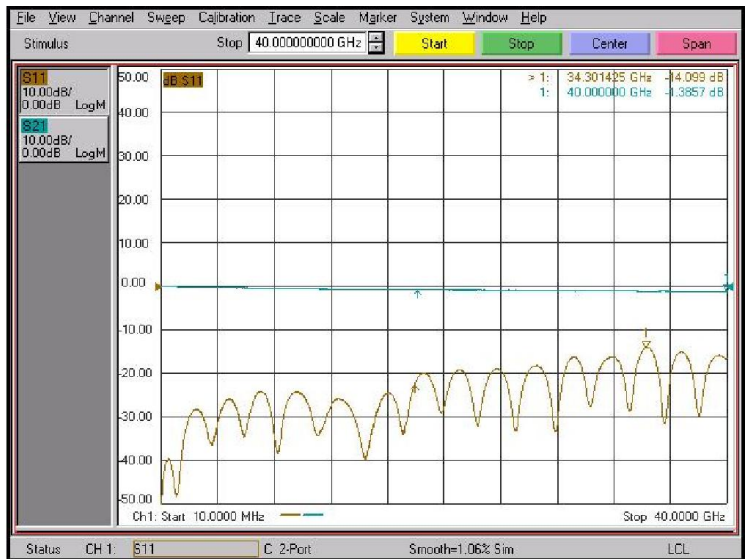
**Substrate : Du5880 (5 mil)**

**Part No. : SM03FS004**



**Substrate : Du5880 (10 mil)**

**Part No. : SM03FS005**



\*\* Trace length : 40 mm (Microstrip) \*\*





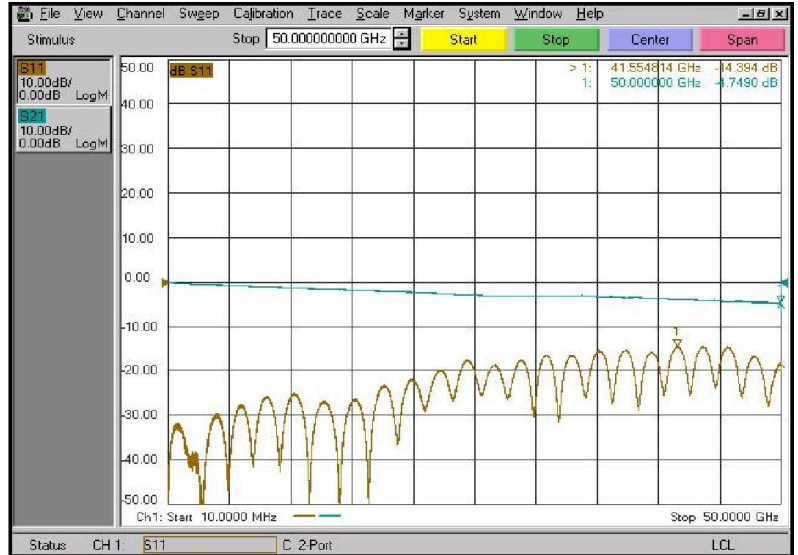
### Test Result

### 2.4mm Type

Freq. : 10 MHz to 50 GHz

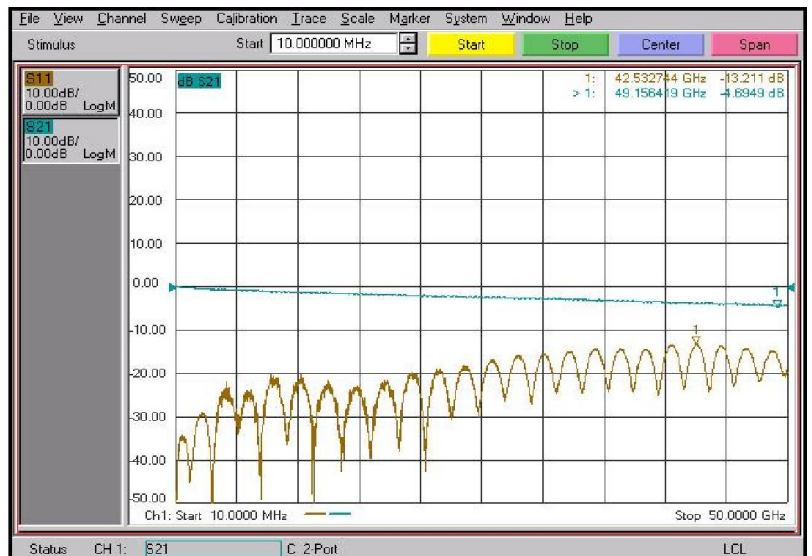
Substrate : RO4003C (8 mil)

Part No. : SM02FS001



Substrate :RO4350B (10 mil)

Part No. : SM02FS003



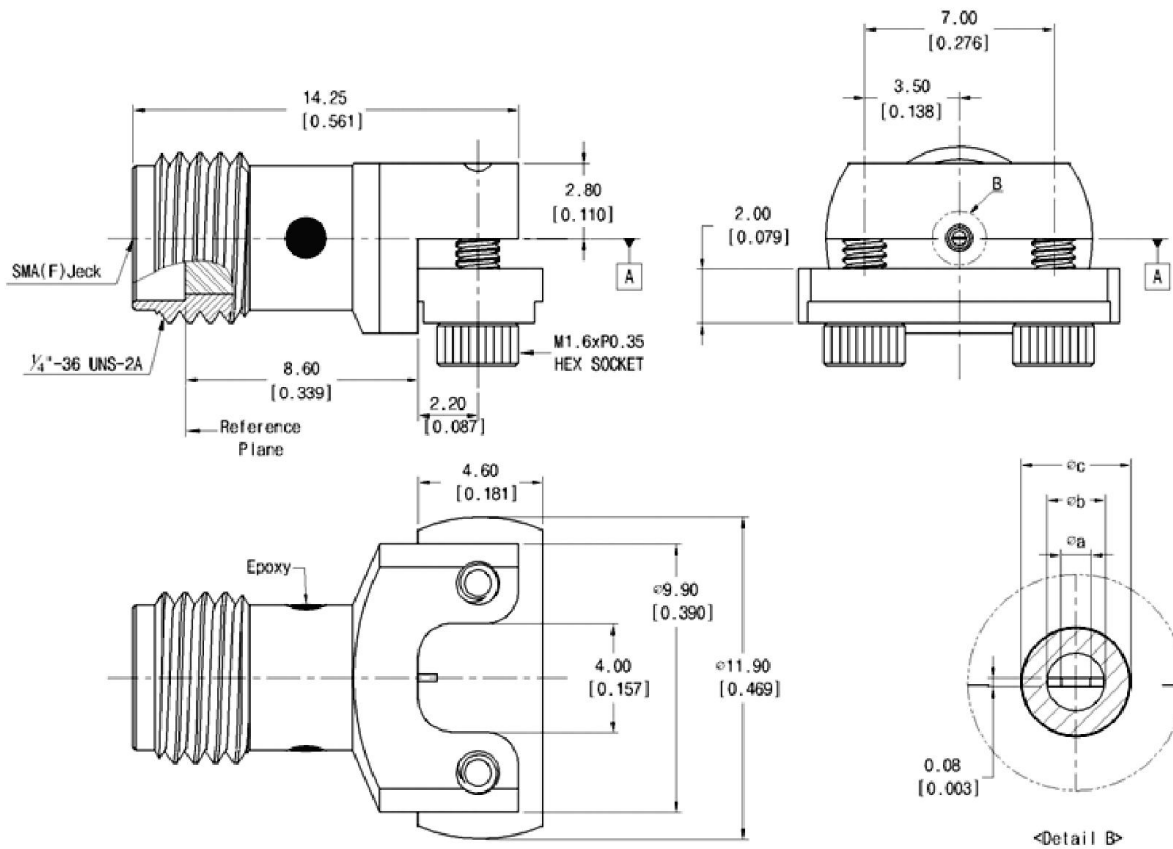
\*\* Trace length : 40 mm (Microstrip) \*\*



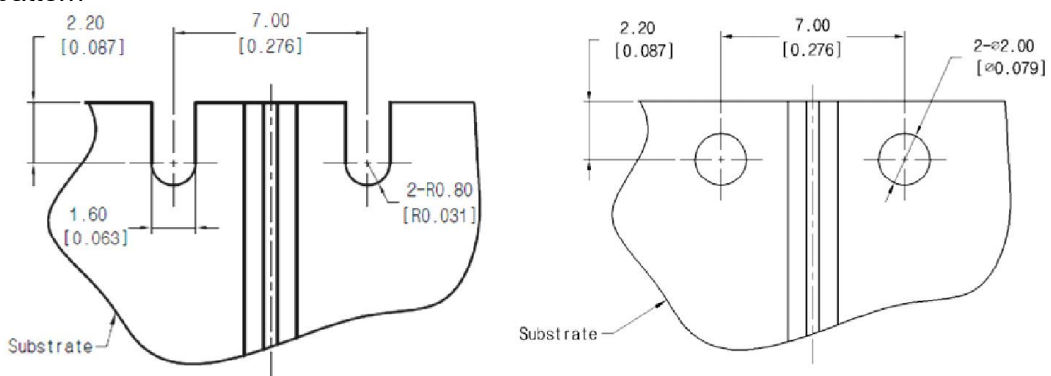
■ Drawing

### SMA Type

Unit : mm



<Recommended pattern>



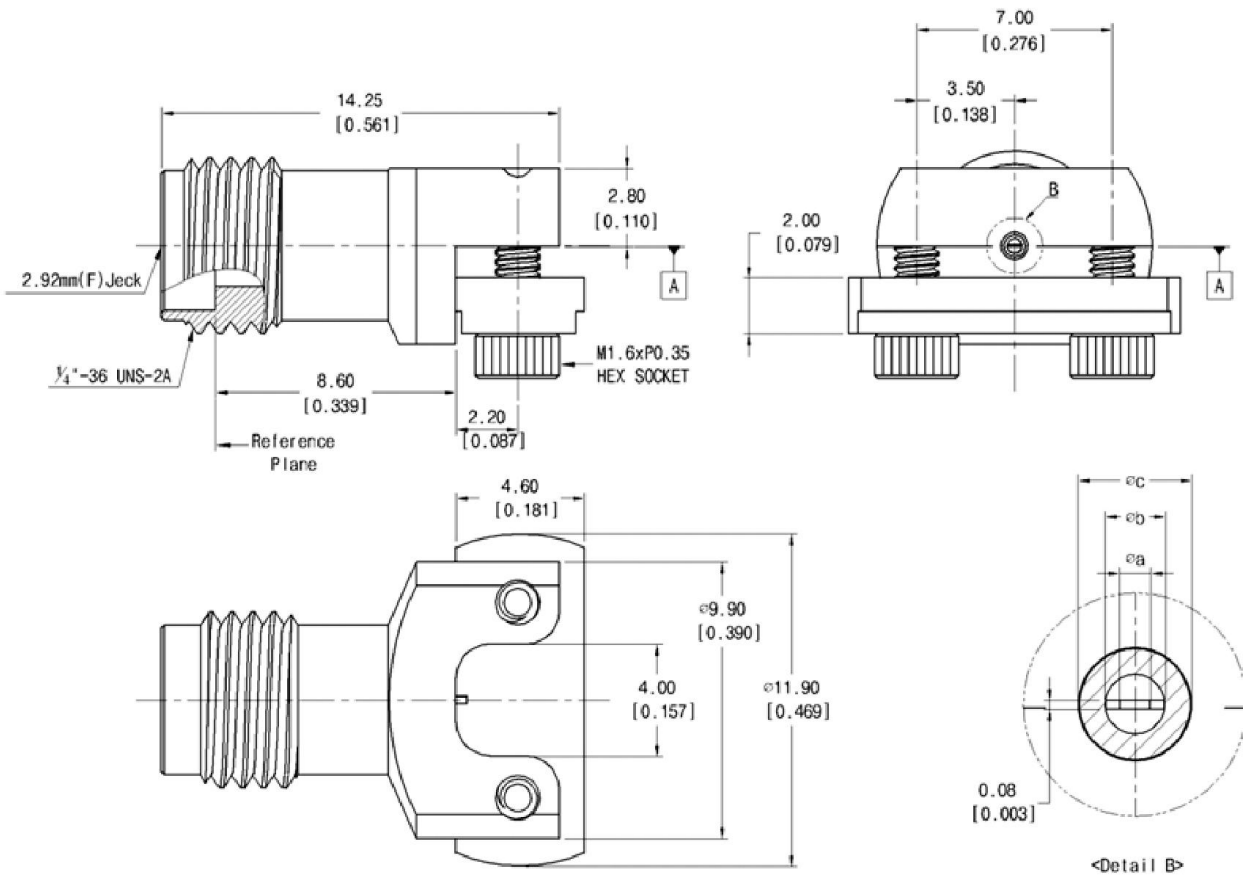
SMA(26.5GHz)

Type	PCB		Pin Diameter		Dielectric Dia.	Part No.
	Substrate Thick.	Pattern Width	$\phi a$	$\phi b$	$\phi c$	
	mil	mm	mm			
RO4003C	8.0	0.436	0.28	0.42	0.82	SM06FS001
	12.0	0.677	0.40	0.64	1.14	SM06FS002
RO4350B	10.0	0.545	0.28	0.54	1.00	SM06FS003
Du5880	5.0	0.366	0.28	0.34	0.70	SM06FS004
	10.0	0.765	0.40	0.72	1.24	SM06FS005

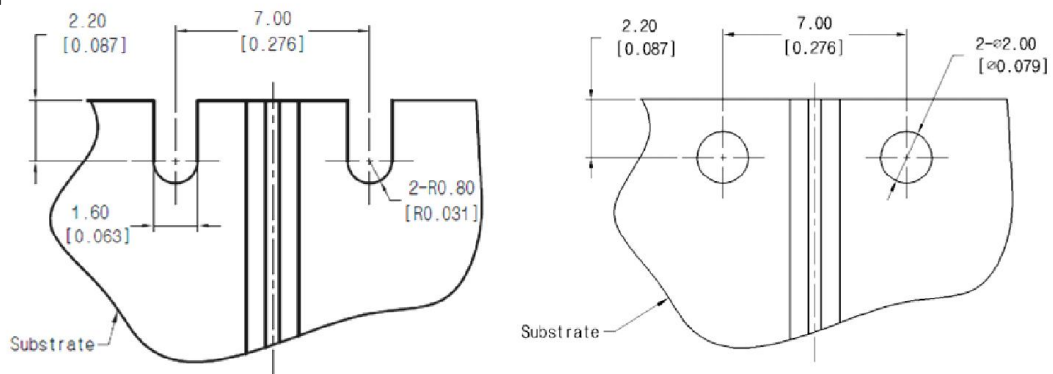
### ■ Drawing

## 2.92 mm Type

Unit : mm



### <Recommended pattern>



### 2.92mm(40GHz)

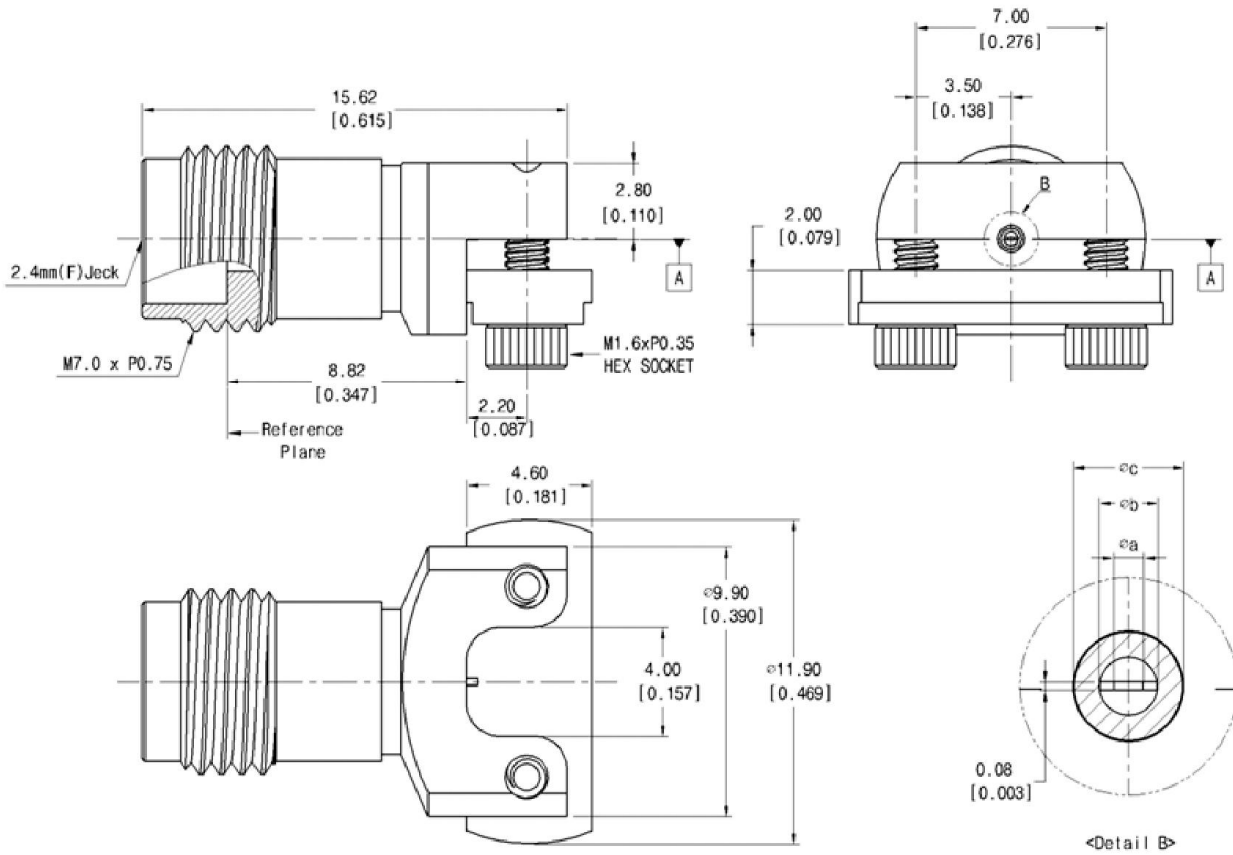
Type	PCB		Pin Diameter		Dielectric Dia.	Part No.
	Substrate Thick.	Pattern Width	$\phi a$	$\phi b$	$\phi c$	
	mil		mm			
RO4003C	8.0	0.436	0.28	0.42	0.82	SM03FS001
	12.0	0.677	0.40	0.64	1.14	SM03FS002
RO4350B	10.0	0.545	0.28	0.54	1.00	SM03FS003
Du5880	5.0	0.366	0.28	0.34	0.70	SM03FS004
	10.0	0.765	0.40	0.72	1.24	SM03FS005



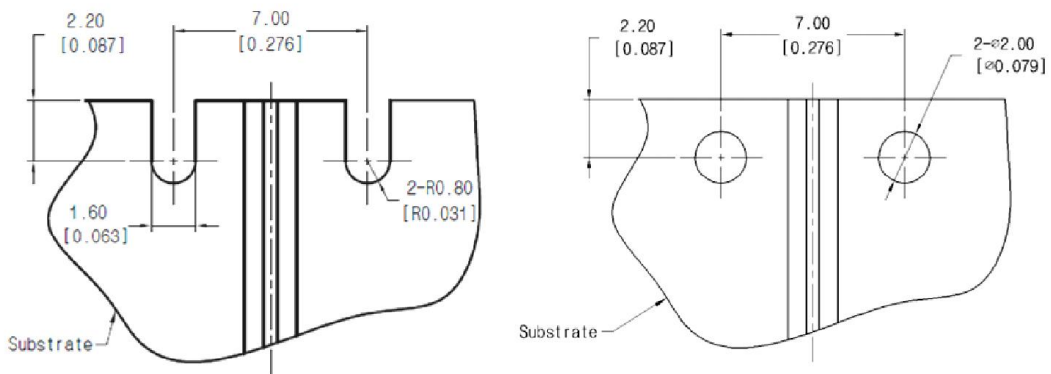
### ■ Drawing

## 2.4 mm Type

Unit : mm



### <Recommended pattern>



### 2.4mm(50GHz)

Type	PCB		Pin Diameter		Dielectric Dia.	Part No.
	Substrate Thick.	Pattern Width	$\phi a$	$\phi b$	$\phi c$	
	mil	mm	mm			
RO4003C	8.0	0.436	0.28	0.42	0.82	SM02FS001
	12.0	0.677	0.40	0.64	1.14	SM02FS002
RO4350B	10.0	0.545	0.28	0.54	1.00	SM02FS003
Du5880	5.0	0.366	0.28	0.34	0.70	SM02FS004
	10.0	0.765	0.40	0.72	1.24	SM02FS005