Absorptive and Reflective 2-4GHz Coaxial SP8T

Features

- Wide Band Operation 2-4GHz
- High Power Handle Capability up to 30W upon request.
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Temperature Range -40°C~+85°C
- Customization available upon request

Absorptive SP8T- Single Pole Eight Throw

Part Number	Frequency (GHz)	Insert. Loss (dB)	VSWR (Max:1)	Isolation min (dB)	Power (Watts)	Switching Speed (ns)
RFSP8TA0204G	2-4	2.0	1.5	80	P1dB=1W min 1W PK <200us	80

Reflective SP8T- Single Pole Eight Throw

Part Number	Frequency (GHz)	Insert. Loss (dB)	VSWR (Max:1)	Isolation min (dB)	Power (Watts)	Switching Speed (ns)
RFSP8TR0204G	2-4	1.6	1.5	80	1W~5W	80

Electrical Operation

DC Biasing:
+5.0V (300mA max.)
-5.0V (30mA max.)
High Voltage Biasing is required for high RF power model.

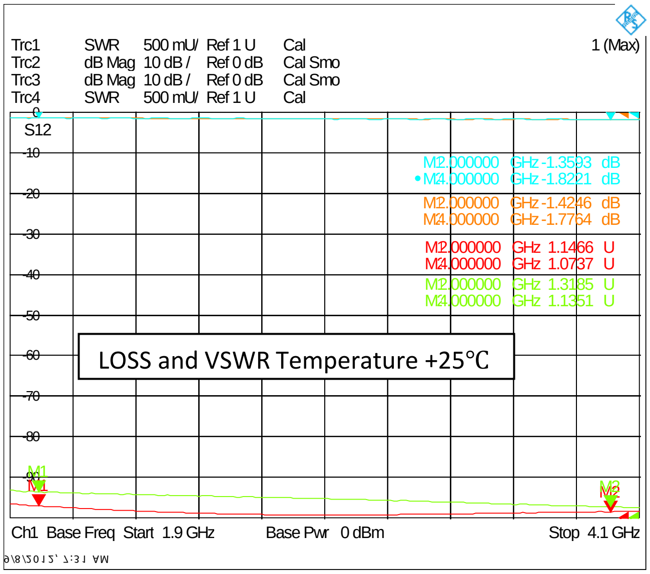
Mechanical Specification

Case Style:	As shown
Finishing:	Gold plating for brass material Other finishing available
Connector:	SMA-F Per MIL-C-39012
Seal:	Hermetically Sealed
Control PIN:	0.02" dia x 0.15" solder pins
Weight:	40 grams max.

Connector:
Micro-D 9 Pin Female
PIN 1: +5V
PIN 2: -5V
PIN 3: GND
PIN 4: C1
PIN 5: C2
PIN 6: C3
PIN 7, 8, 9 N/A

TTL Logic Control:

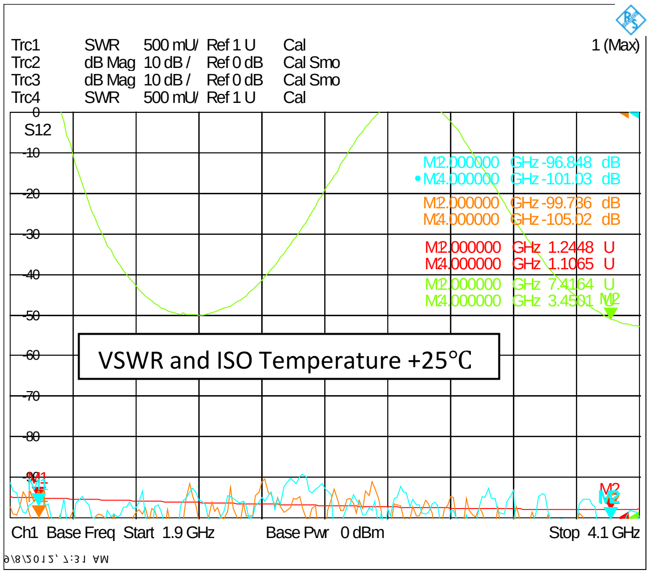
C3	C2	C1	
0	0	0	J0→J1
0	0	1	J0→J2
0	1	0	J0→J3
0	1	1	J0→J4
1	0	0	J0→J5
1	0	1	J0→J6
1	1	0	J0→J7
1	1	1	J0→J8



```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

```
M1 2.000000 GHz -1.3593 dB
•M2 4.000000 GHz -1.8221 dB
M1 2.000000 GHz -1.4246 dB
M2 4.000000 GHz -1.7764 dB
M1 2.000000 GHz 1.1466 U
M2 4.000000 GHz 1.0737 U
M1 2.000000 GHz 1.3185 U
M2 4.000000 GHz 1.1351 U
```

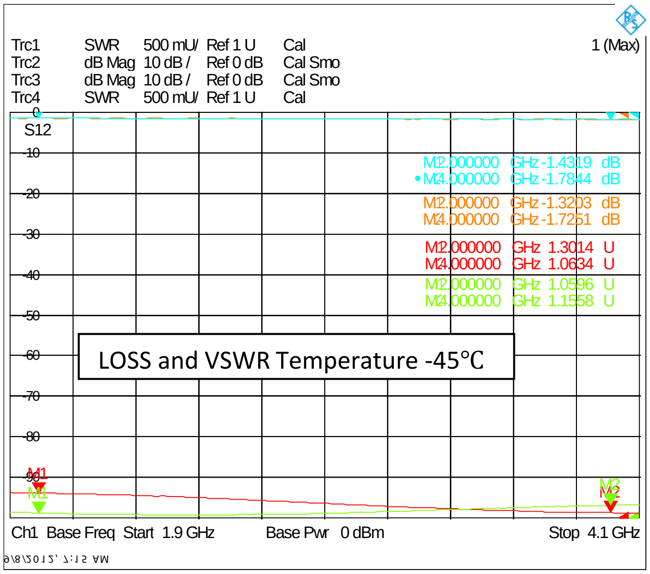
LOSS and VSWR Temperature +25°C



```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

```
M1 2.000000 GHz -96.848 dB
•M2 4.000000 GHz -101.03 dB
M1 2.000000 GHz -99.736 dB
M2 4.000000 GHz -105.02 dB
M1 2.000000 GHz 1.2448 U
M2 4.000000 GHz 1.1065 U
M1 2.000000 GHz 7.4164 U
M2 4.000000 GHz 3.4501 U
```

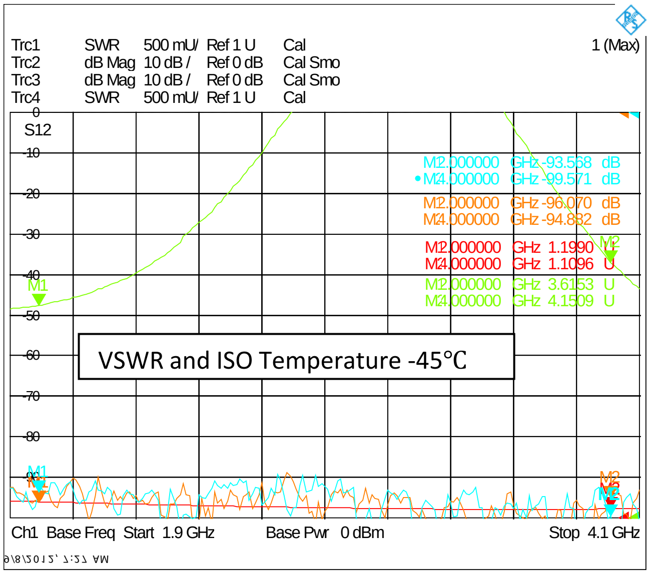
VSWR and ISO Temperature +25°C



```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

```
M1 2.000000 GHz -1.4319 dB
•M2 4.000000 GHz -1.7844 dB
M1 2.000000 GHz -1.3203 dB
M2 4.000000 GHz -1.7251 dB
M1 2.000000 GHz 1.3014 U
M2 4.000000 GHz 1.0634 U
M1 2.000000 GHz 1.0596 U
M2 4.000000 GHz 1.1558 U
```

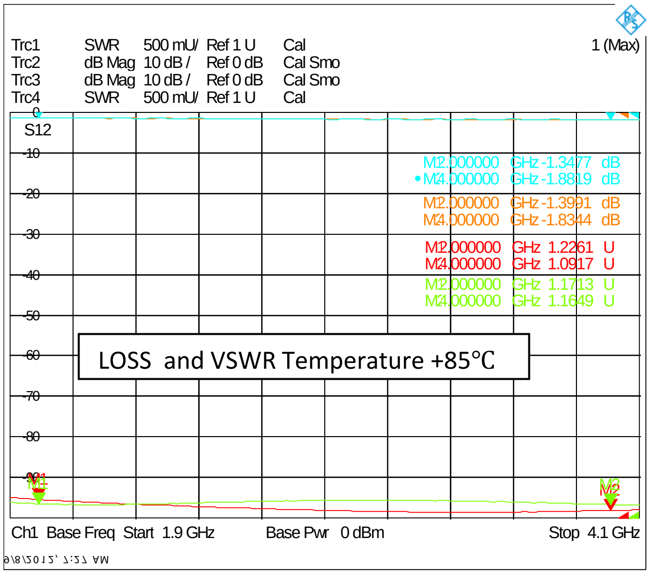
LOSS and VSWR Temperature -45°C



```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

```
M1 2.000000 GHz -93.568 dB
•M2 4.000000 GHz -99.571 dB
M1 2.000000 GHz -96.070 dB
M2 4.000000 GHz -94.882 dB
M1 2.000000 GHz 1.1990 U
M2 4.000000 GHz 1.1096 U
M1 2.000000 GHz 3.6153 U
M2 4.000000 GHz 4.1509 U
```

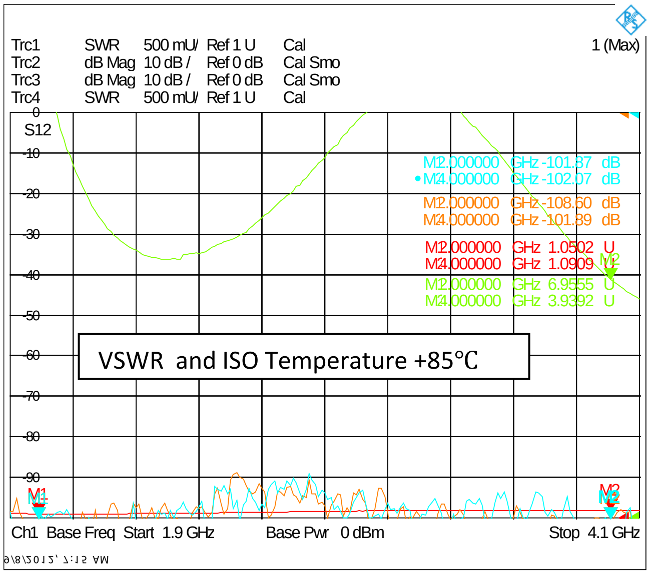
VSWR and ISO Temperature -45°C



```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

```
M1 2.000000 GHz -1.3477 dB
•M2 4.000000 GHz -1.8819 dB
M1 2.000000 GHz -1.3991 dB
M2 4.000000 GHz -1.8344 dB
M1 2.000000 GHz 1.2261 U
M2 4.000000 GHz 1.0917 U
M1 2.000000 GHz 1.1713 U
M2 4.000000 GHz 1.1649 U
```

LOSS and VSWR Temperature +85°C

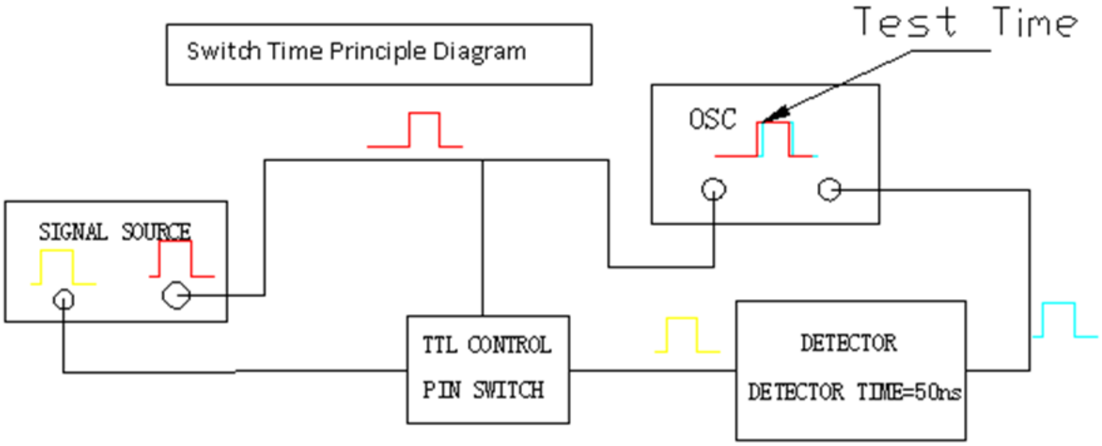


```
Trc1  SWR     500 mU/  Ref 1 U   Cal
Trc2  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc3  dB Mag  10 dB /  Ref 0 dB  Cal Smo
Trc4  SWR     500 mU/  Ref 1 U   Cal
```

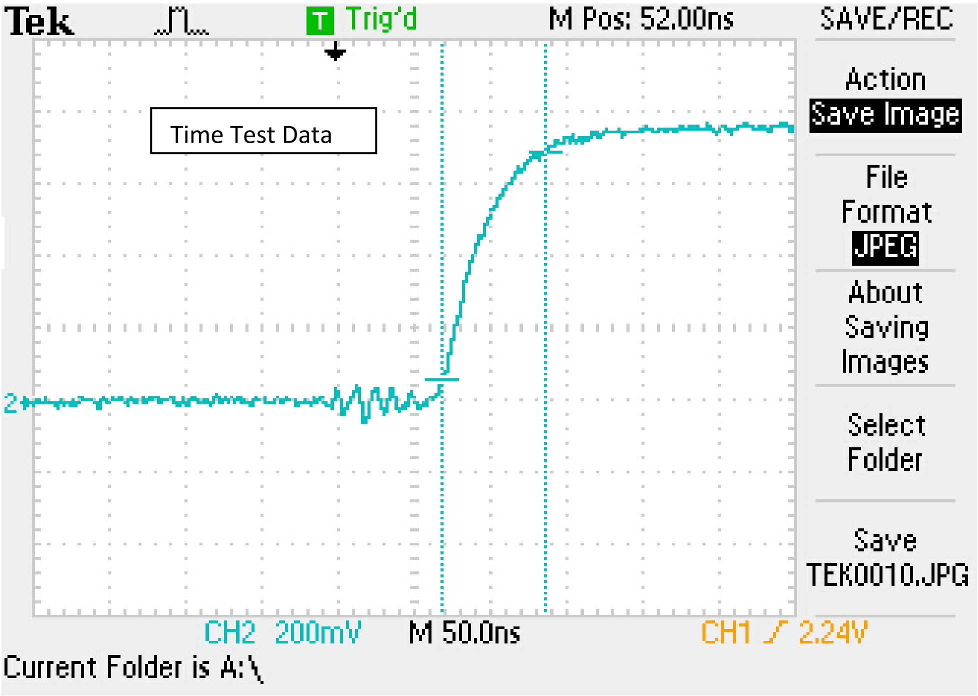
```
M1 2.000000 GHz -101.87 dB
•M2 4.000000 GHz -102.07 dB
M1 2.000000 GHz -108.60 dB
M2 4.000000 GHz -101.89 dB
M1 2.000000 GHz 1.0502 U
M2 4.000000 GHz 1.0909 U
M1 2.000000 GHz 6.9555 U
M2 4.000000 GHz 3.9392 U
```

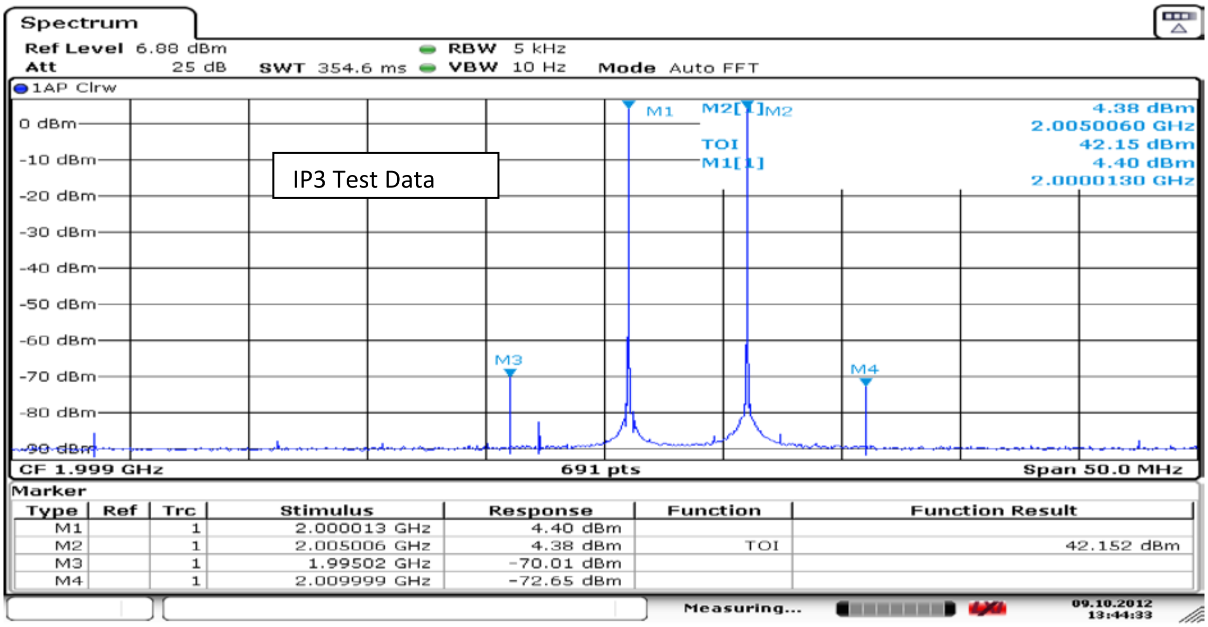
VSWR and ISO Temperature +85°C

Absorptive / Reflective Coaxial Single Pole Eight Throw Switch 2-4GHz



Switch Time=Test Time-Detector Time





Ref Level 6.88 dBm **RBW** 5 kHz
Att 25 dB **SWT** 354.6 ms **VBW** 10 Hz **Mode** Auto FFT

M2[1] 4.38 dBm
2.0050060 GHz
TOI 42.15 dBm
M1[1] 4.40 dBm
2.0000130 GHz

CF 1.999 GHz 691 pts Span 50.0 MHz

Marker

Type	Ref	Trc	Stimulus	Response	Function	Function Result
M1		1	2.000013 GHz	4.40 dBm		
M2		1	2.005006 GHz	4.38 dBm	TOI	42.152 dBm
M3		1	1.99502 GHz	-70.01 dBm		
M4		1	2.009999 GHz	-72.65 dBm		

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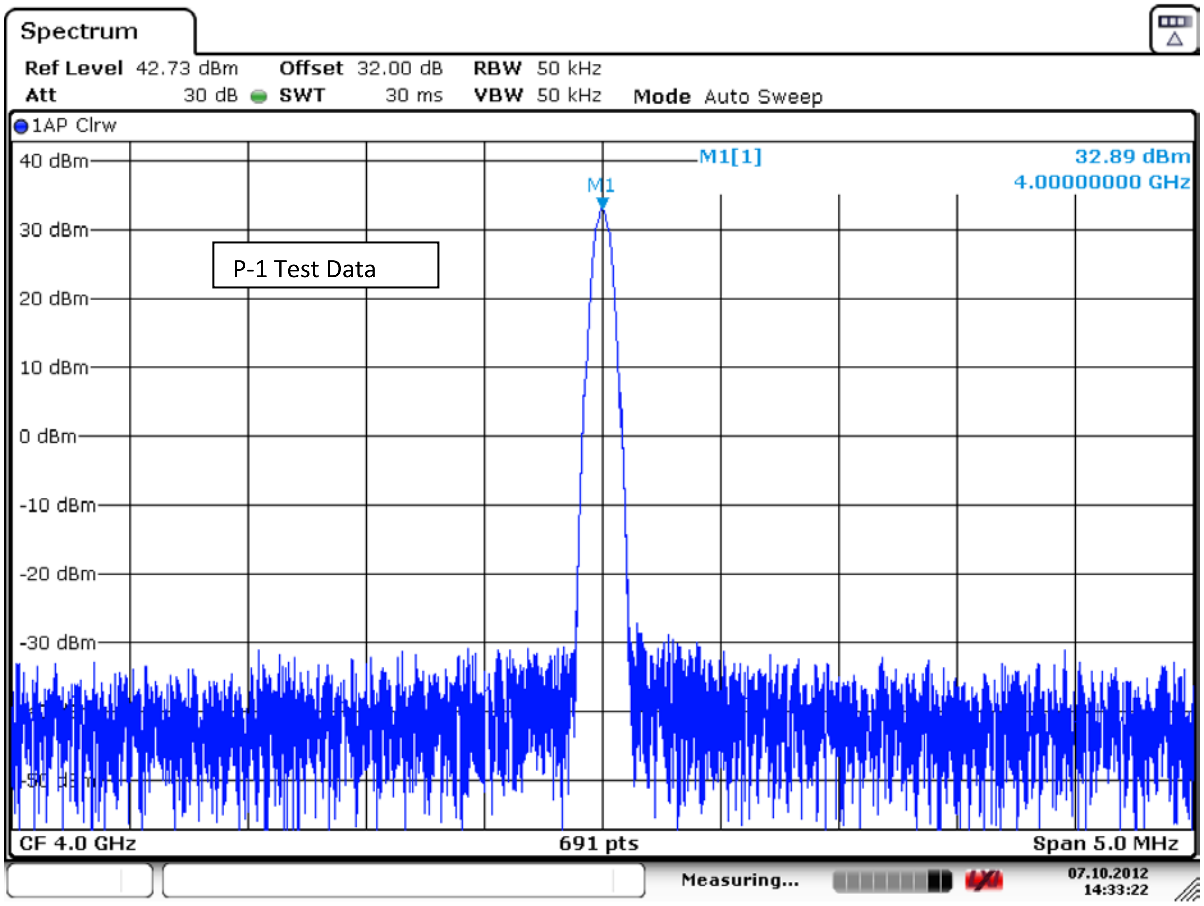

Ref Level 42.73 dBm **Offset** 32.00 dB **RBW** 50 kHz
Att 30 dB **SWT** 30 ms **VBW** 50 kHz **Mode** Auto Sweep

M1[1] 32.89 dBm
4.00000000 GHz

CF 4.0 GHz 691 pts Span 5.0 MHz

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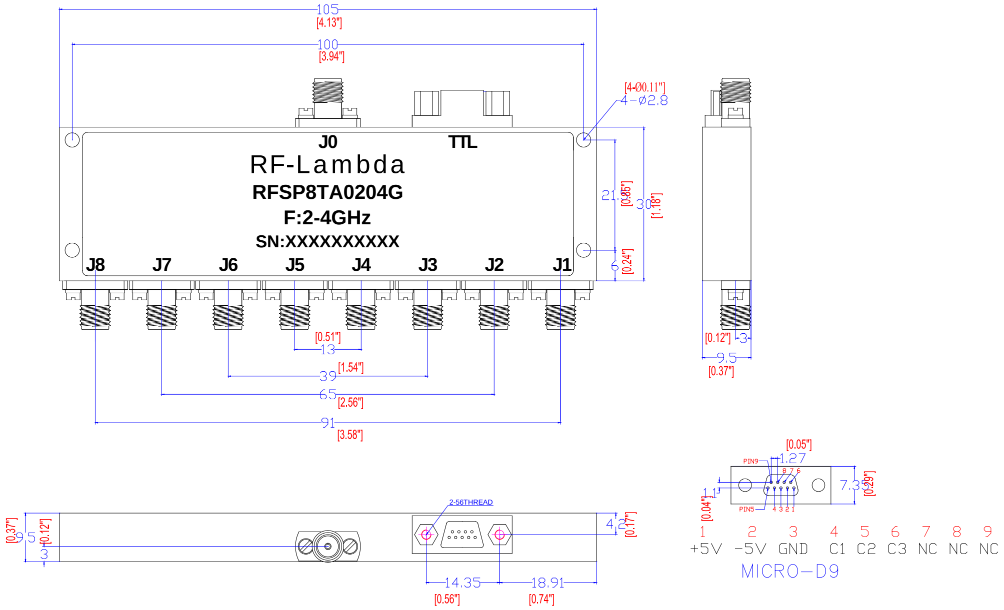
Outline Drawing:

All Dimensions in mm



Note: Contact RF-Lambda for faster switching speed, higher power handle, higher isolation

1.Higher power handle capability will give lower isolation , higher biasing current and slower switching speed.

2.Narrower frequency band will improve insertion loss and isolation.