



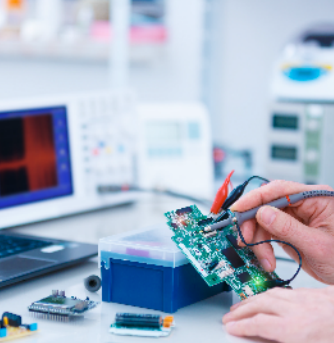
SEMICOMM Technology Co., Ltd.

RF Testing Kit

Vivaldi Antenna / Horn Antenna / RF Cable

Cost effective testing solutions for R&D lab, DVT, Production test

- ▶ RF Testing cable - DC~18GHz / DC~40GHz
- ▶ Dual Polarization Vivaldi Antenna 500MHz ~ 7.2GHz
- ▶ Dual polarized Horn Antenna - mmWave 24.5GHz ~ 40GHz



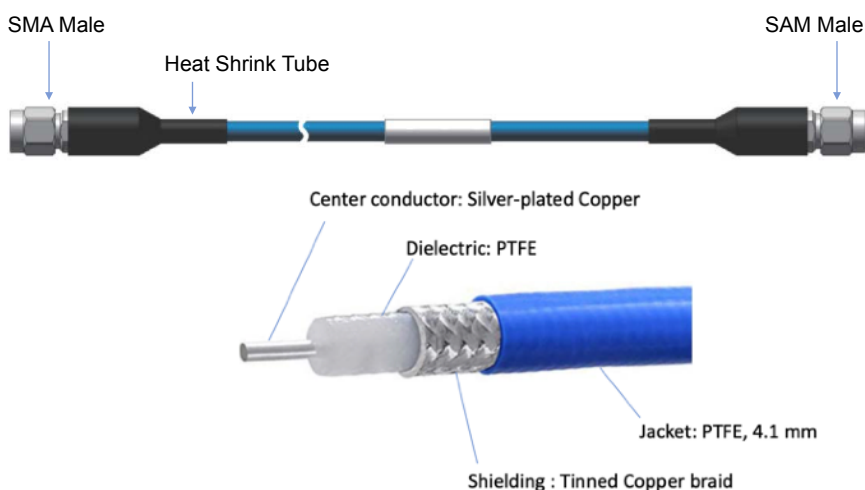
RF Cable

SEMICOMM Testing Kit

LF RF Cable DC~18GHz

Features

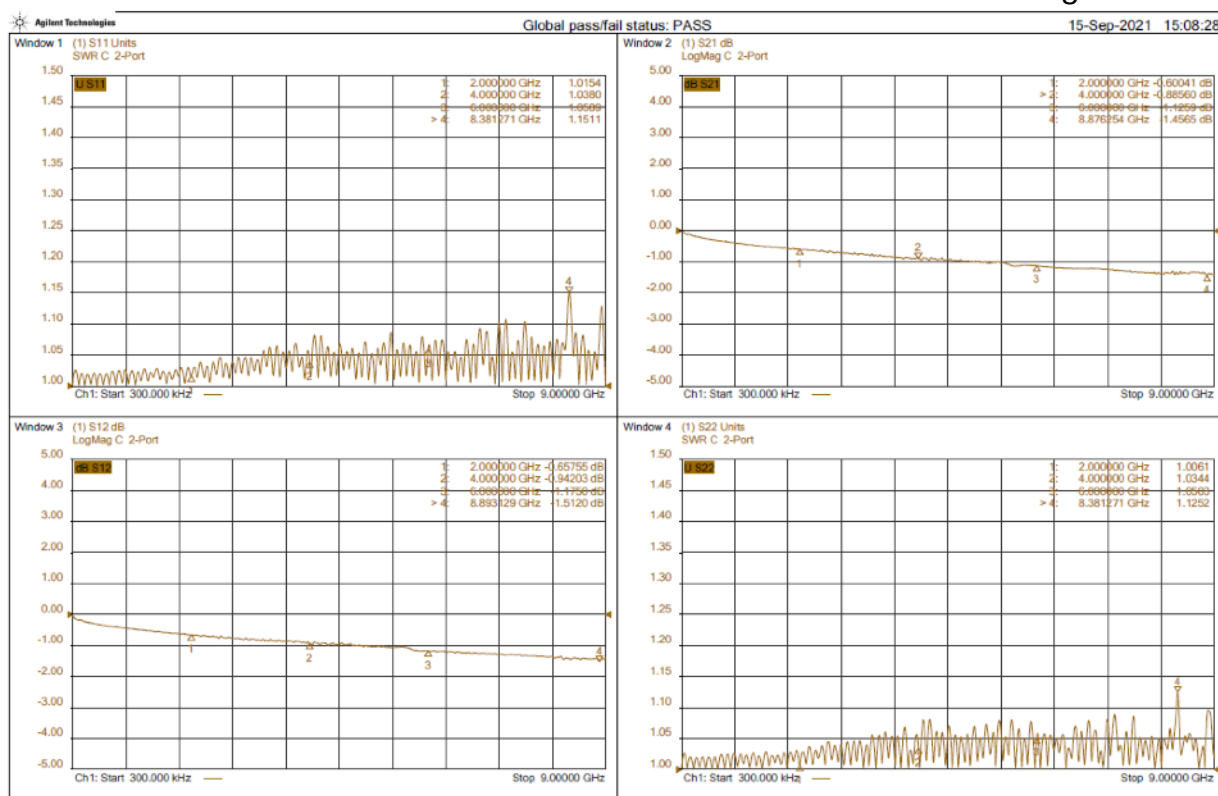
- ▶ Frequency: DC to 18GHz
- ▶ SMA Male Connector
- ▶ Impedance: 50 Ω
- ▶ Static Bending Radius: 10 mm
- ▶ Temperature: -55°C to 150°C
- ▶ Robust
- ▶ Excellent Return Loss
- ▶ Excellent Insertion Loss

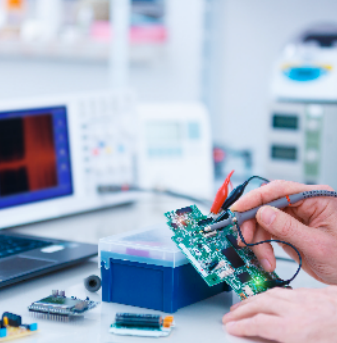


Frequency-GHz	Attenuation dB/M	Max CW Power-W
1	0.41	526
2	0.62	531
3	0.78	277

Frequency-GHz	Attenuation-dB/M	Max CW Power-Watt
5	1.05	205
10	1.58	137
18	2.22	97

Testing Calbe 1m





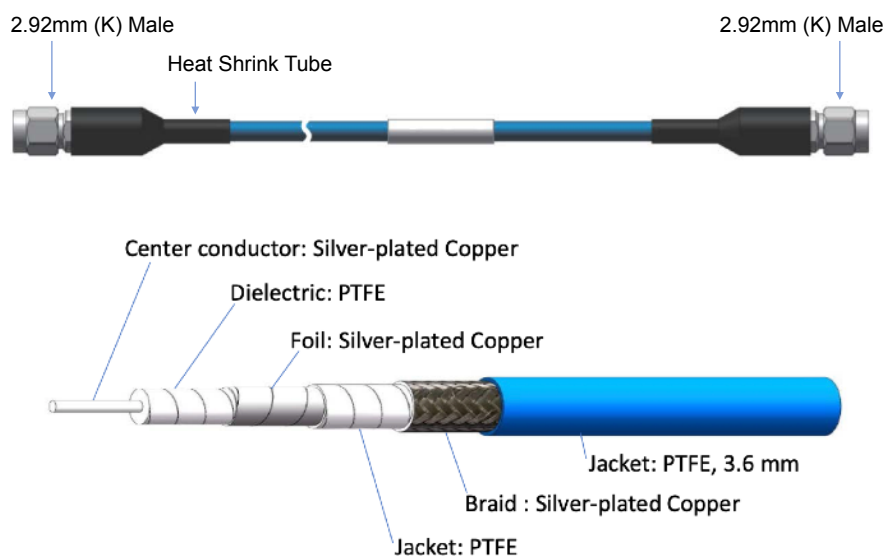
RF Cable

SEMICOMM Testing Kit

HF RF Cable DC~40GHz

Features

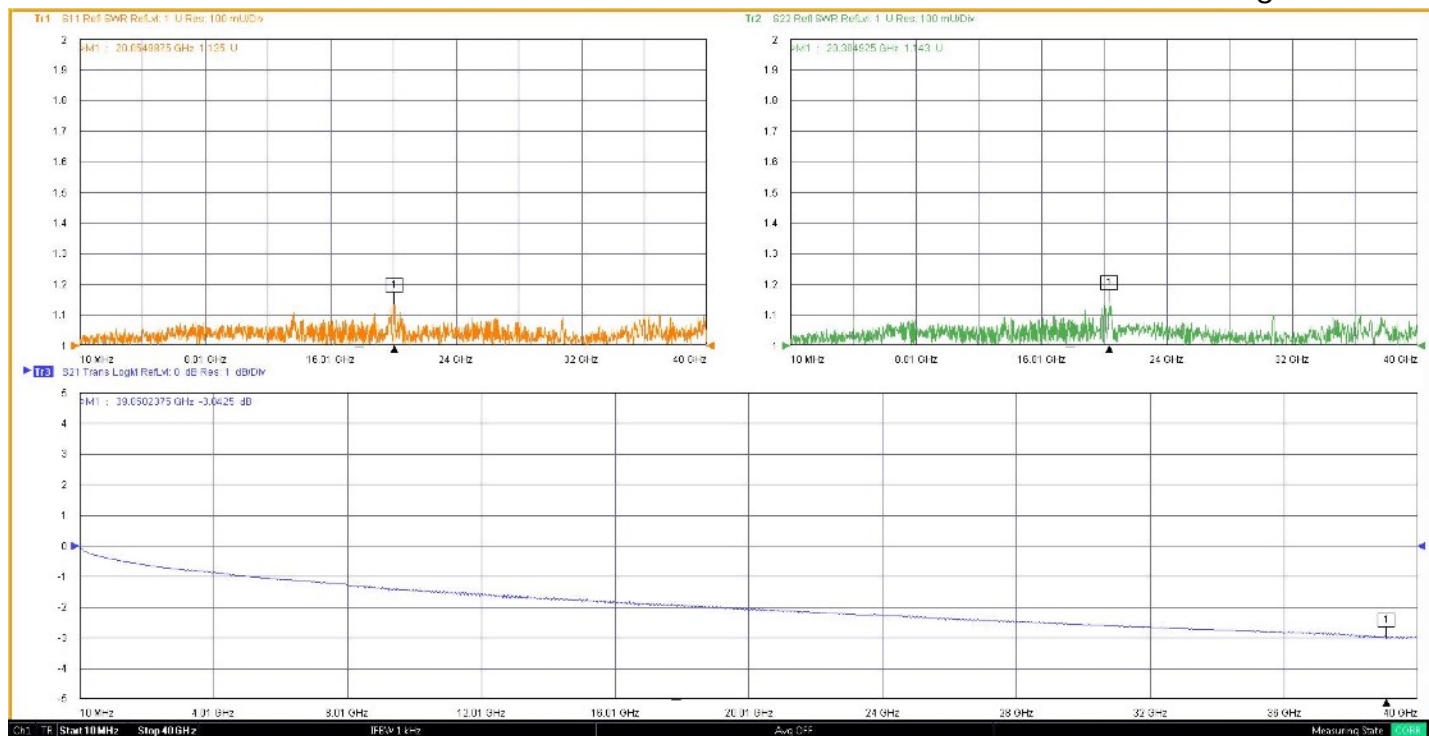
- ▶ Frequency: DC to 40GHz
- ▶ 2.92mm (K) Male Connector
- ▶ Impedance: 50 Ω
- ▶ Static Bending Radius: 18 mm
- ▶ Dynamic Bending Radius: 36 mm
- ▶ Temperature: -55°C to 165°C
- ▶ Robust
- ▶ Excellent Return Loss
- ▶ Excellent Insertion Loss



Frequency-GHz	Attenuation dB/M	Max CW Power-W
6	1.13	204
12.4	1.63	140
18	1.96	116

Frequency-GHz	Attenuation-dB/M	Max CW Power-Watt
26.5	2.41	94
40	2.97	76
50	3.34	67

Testing Calbe 1m



DPVA

Dual Polarization Vivaldi Antenna

DPVA–Dual Polarization Vivaldi Antenna

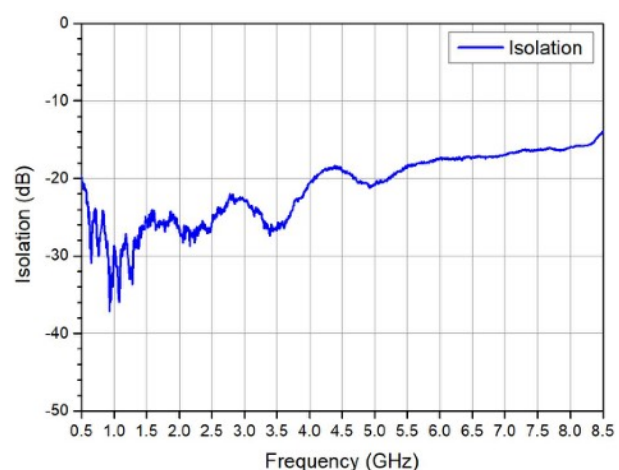
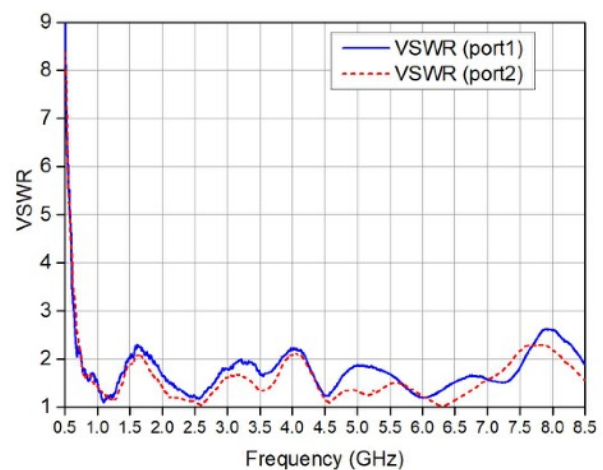
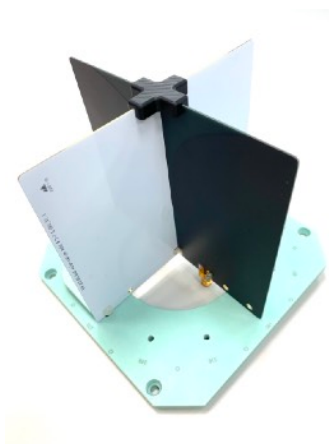
Description

DPVA Vivaldi Antenna is a dual-polarized antenna features 0.5~7.2GHz operating frequency with a wide bandwidth, high port isolation, good directional radiation performance, and a compact size.

The 2x2 MIMO can be presented by exciting two sets of elements, two orthogonally polarized radiations. DPVA transmit and receive the signal from the air. To achieve the TX power testing and RX sensitivity testing or the throughput testing. The frequency range cover 0.5~7.2GHz wireless standard application.

Features

- Frequency: 500MHz to 7.2GHz
- VSWR < 2 @ 3.5GHz
- Impedance: 50 Ω
- Vertical and Horizontal Dual Polarization
- Isolation 20dB @500MHz ~ 6GHz
15dB @ 6GHz ~ 7.2GHz
- Dimension 100mm x 120mm (LxW)



Frequency Mhz	Port 1		Port 2	
	Gain dBi	Efficiency %	Gain dBi	Efficiency %
700	2.37	70.4	2.20	68.6
800	1.83	65.0	1.88	64.8
950	1.91	68.6	1.84	67.8
1700	3.85	56.6	3.44	59.9
2100	4.12	70.7	4.42	70.2
2700	6.11	63.7	6.28	64.9
3300	5.33	52.8	5.32	59.8
5500	5.35	49.9	5.33	46.0
7200	4.01	42.8	4.42	42.4

Frequency VS. Gain and Efficiency

Frequency Mhz	Wavelength mm	Aperture Size mm	Far Field Distance cm	OTA Path Loss dB	Antenna Gain dBi	Antenna Gain +OTA Path Loss
700	428.2	85	3.35	-0.93	2.37	1.44
800	374.7	85	3.80	-2.09	1.83	-0.26
950	315.5	85	4.55	-5.15	1.91	-3.24
1700	176.3	85	8.15	-15.27	3.85	-11.42
2100	142.7	85	10.05	-18.93	4.12	-14.81
2700	111.0	85	12.95	-23.31	6.11	-17.20
3300	90.8	85	15.85	-26.81	5.33	-21.48
5500	54.5	85	26.40	-35.68	5.35	-30.33
7200	41.6	85	34.55	-40.36	4.01	-36.35

Far Field Distance and OTA path loss

DPHA 5G NR FR2

Dual Polarization Horn Antenna

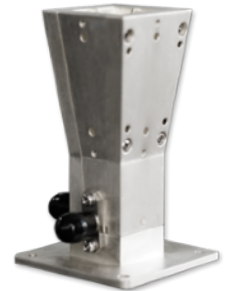
DPHA 5G NR FR2

Dual Polarization Horn Antenna

Description

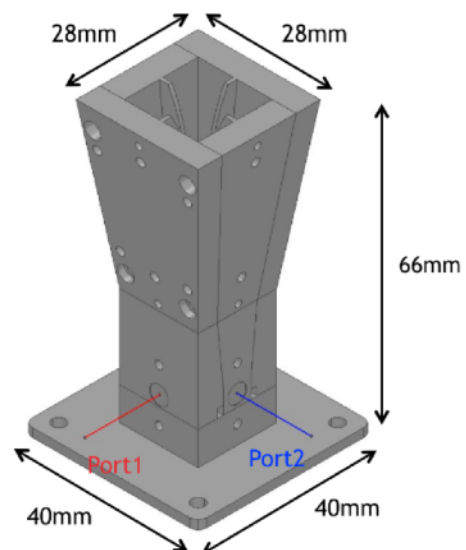
DPHA Horn Antenna is a dual-polarized antenna features 24.25~43.5GHz operating frequency with a wide bandwidth, high port isolation, good directional radiation performance, and a compact size.

The 2x2 MIMO can be presented by two orthogonally polarized radiations. DPHA transmit and receive the signal from the air. To achieve the TX power testing and RX sensitivity testing or the throughput testing. The frequency range cover 24.25~43.5GHz 5G NR FR2 application.



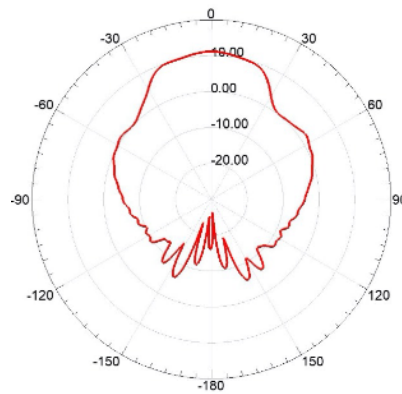
Features

- ▶ Frequency: 24.25GHz to 40GHz
- ▶ VSWR < 2
- ▶ Impedance: 50 Ω
- ▶ Far Field Distance 16.7cm @43GHz
- ▶ Gain 9.4dBi @24.25GHz
16.1dB @43.50GHzFar Field Distance
- ▶ Vertical and Horizontal Dual Polarization
- ▶ Isolation >30dB
- ▶ Connector 2.92mm

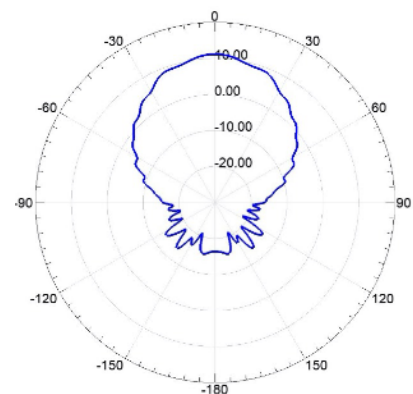


28GHz

Port 1

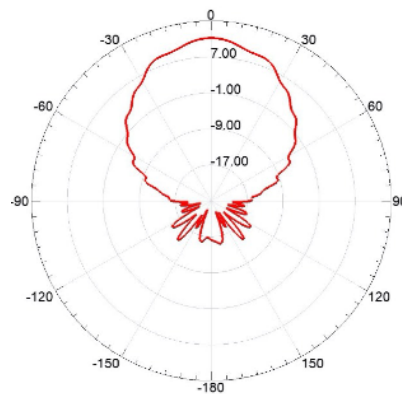


E - plane

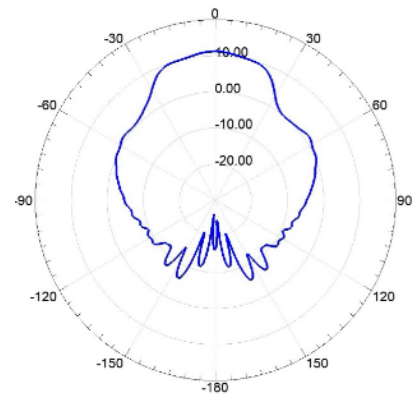


H - plane

Port 2



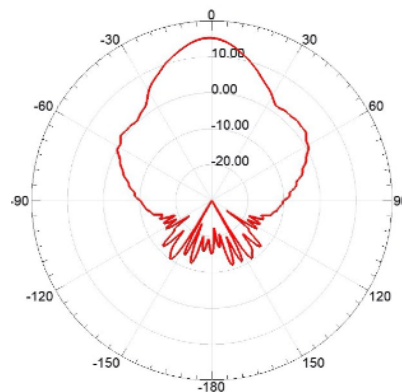
H - plane



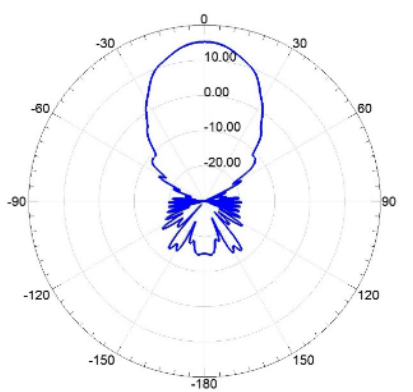
E - plane

39GHz

Port 1

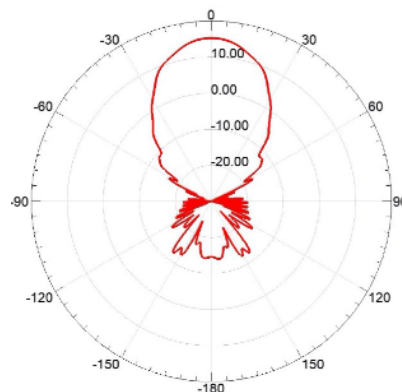


E - plane

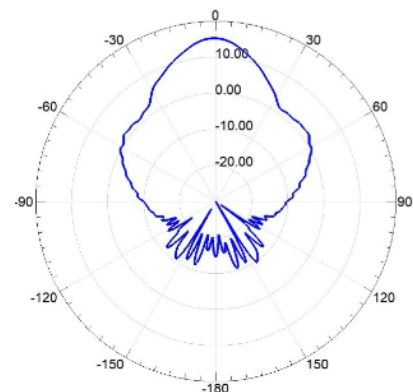


H - plane

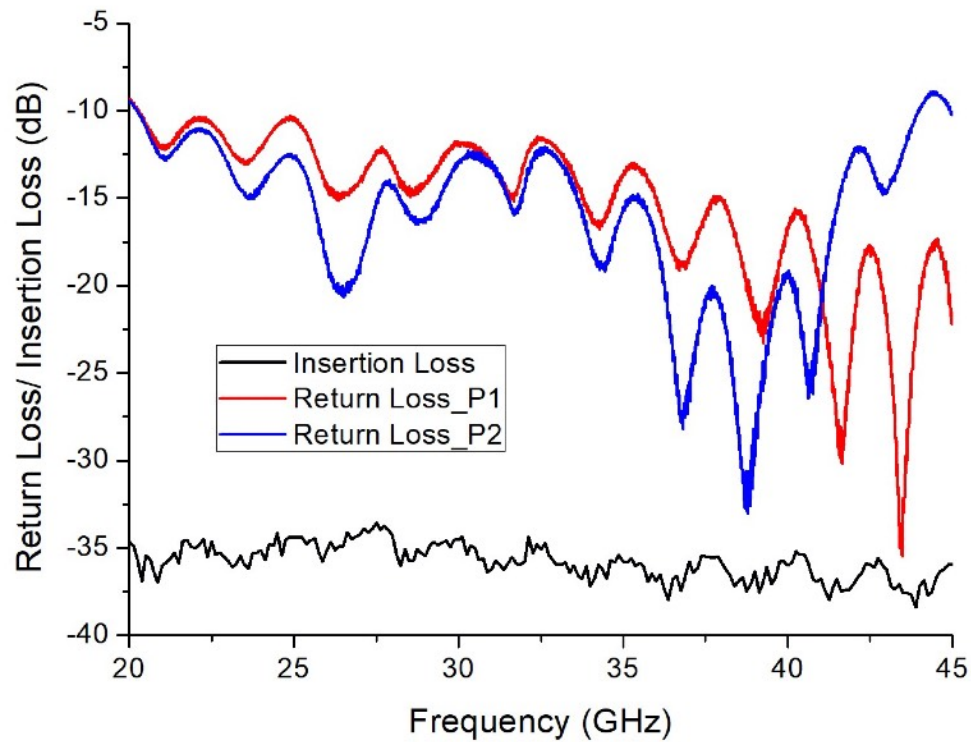
Port 2



H - plane



E - plane



Frequency GHz	Wavelength mm	Aperture Size mm	Far Field Distance cm	OTA Path Loss dB	Antenna Gain dBi
24.25	12.37	24	9.3	-37.04	9.4
26	11.54	24	10.0	-38.21	10.8
28	10.71	24	10.8	-39.5	10.5
29.5	10.17	24	11.3	-40.4	10.5
37	8.11	24	14.2	-44.33	14.7
39	7.69	24	15.0	-45.25	15.1
40	7.5	24	15.4	-45.7	14.8
41	7.32	24	15.8	-46.12	14.4
43.5	7.90	24	16.7	-47.15	16.1

Far Field Distance and OTA path loss

DPVA

Dual Polarization Vivaldi Antenna

DPVA–Dual Polarization Vivaldi Antenna

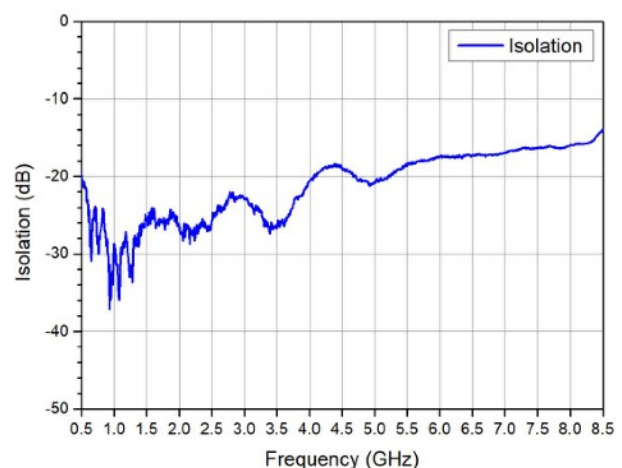
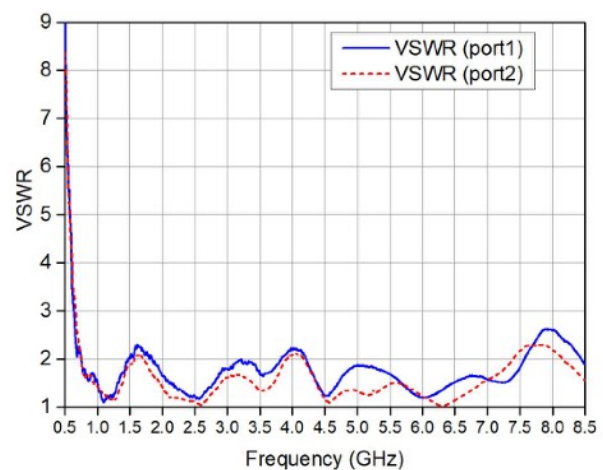
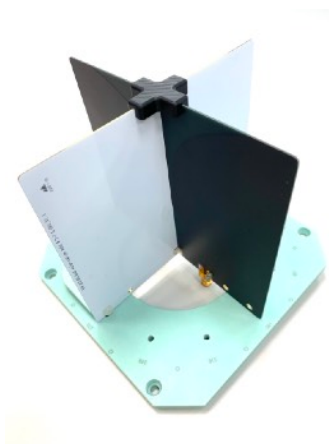
Description

DPVA Vivaldi Antenna is a dual-polarized antenna features 0.5~7.2GHz operating frequency with a wide bandwidth, high port isolation, good directional radiation performance, and a compact size.

The 2x2 MIMO can be presented by exciting two sets of elements, two orthogonally polarized radiations. DPVA transmit and receive the signal from the air. To achieve the TX power testing and RX sensitivity testing or the throughput testing. The frequency range cover 0.5~7.2GHz wireless standard application.

Features

- Frequency: 500MHz to 7.2GHz
- VSWR < 2 @ 3.5GHz
- Impedance: 50 Ω
- Vertical and Horizontal Dual Polarization
- Isolation 20dB @500MHz ~ 6GHz
15dB @ 6GHz ~ 7.2GHz
- Dimension 100mm x 120mm (LxW)



Order Option

TYPE	Description	Model
RFC	RF Cable DC ~ 18GHz , SMA male connector , 1 meter length	LFRFC - 1018
RFC	RF Cable DC ~ 40GHz , 2.92mm K male connector , 1 meter length	HFRFC - 1040
Antenna	Vivaldi Antenna dual polarization, 0.5GHz to 7.2GHz , 100x120 (mm) , VSWR < 2 @ 3.5GHz, Isolation > 15~20dB ,dual polarization , SMA female connector	DPVA - 7
Antenna	Horn Antenna dual polarization, 24.25GHz to 43.5GHz , 40x40x66 (mm) , Return loss < -10dB, VSWR < 2 , Isolation > 30dB ,dual polarization , 2.92mm K female connector ,gain 9.4dBi@24.25GHz / 16.1dBi@43.5GHz	DPHA - 43
Shielding Box	Shielding Box ,Outer dimension W420 x D603 x H344 (mm) Inner dimension W348.6 x D378.6 x H173.6 (mm) Door size W340 x H150(mm) Shielding performance 24GHz to 44GHz > 75dB Include filter , RJ45 connector x 2 , RS232 connector x 1	TRXSB 120
Shielding Box	Shielding Box ,Outer dimension W572 x D565.5 x H727.5 (mm) Inner dimension W465 x D350 x H525 (mm) Door size W340 x H150(mm) Shielding performance 24GHz to 44GHz > 75dB Include filter , RJ45 connector x 2 , RS232 connector x 1	TRXSB 130
Shielding Box	Shielding Box ,Outer dimension W708.2 x D681.1 x H477.8 (mm) Inner dimension W596.2 x D468.3 x H315.3 (mm) Door size W340 x H150(mm) Shielding performance 24GHz to 44GHz > 75dB Include filter , RJ45 connector x 2 , RS232 connector x 1	TRXSB 140

SEMICOMM Technology Co., Ltd.

晟曜科技股份有限公司

1F.,No.27, Ln.434, Zhongxiao Rd., East Dist.,

Hshinchu City 300, Taiwan

info@semi-comm.com

