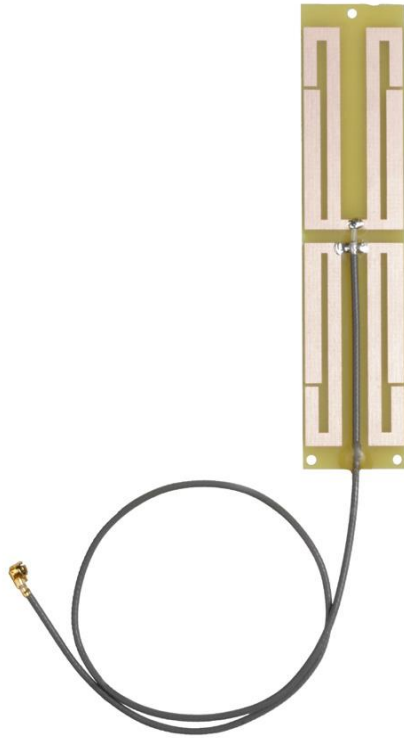


Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513



Features:

- Low profile
- Omni directional gain in XY-plane
- Size W x L x H (16 x 70 x 0.9 mm)
- Antenna feed cable length: 250mm (total) / 212mm (from radiator edge)
- Antenna feed cable: 1.13mm OD with U.FL compatible connector
- Lead free materials
- RoHS Compliant Product

Applications:

- Access point routers 802.11n
- WLAN/WiFi 802.11a/b/g/n

All dimensions are in mm / inches

Issue: 1835

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Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998



Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

ELECTRICAL SPECIFICATIONS

Antenna Type	PCB Dipole
Frequency	2.4-2.5G&4.9-5.9G
Nominal Impedance	50 Ω
VSWR	2:1
Radiation Pattern	Omni
Gain	2dBi
Efficiency(2.4-2.5G)	>65%
Efficiency(4.9-5.9G)	>55%
Polarization	Vertical

MECHANICAL SPECIFICATIONS

Size W x L x H	16 x 70 x 0.9 mm
Weight	2.57g
Connector type	U.FL compatible connector
Cable type	Ø1.13mm Coaxial Cable, Black
Cable length	250mm

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 to +85 ° C
Storage Temperature	-40 to +85 ° C
RoHS Compliant	Yes

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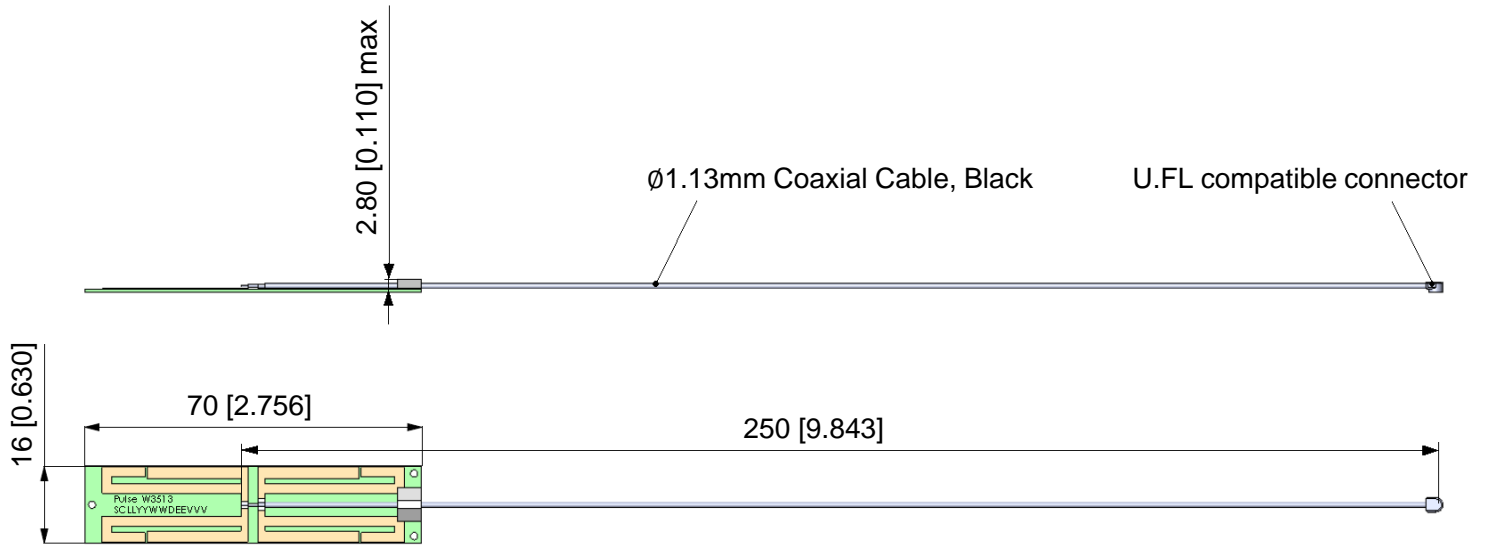
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Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

MECHANICAL DRAWING



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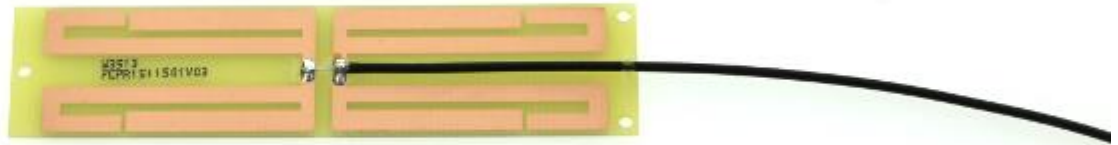
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Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

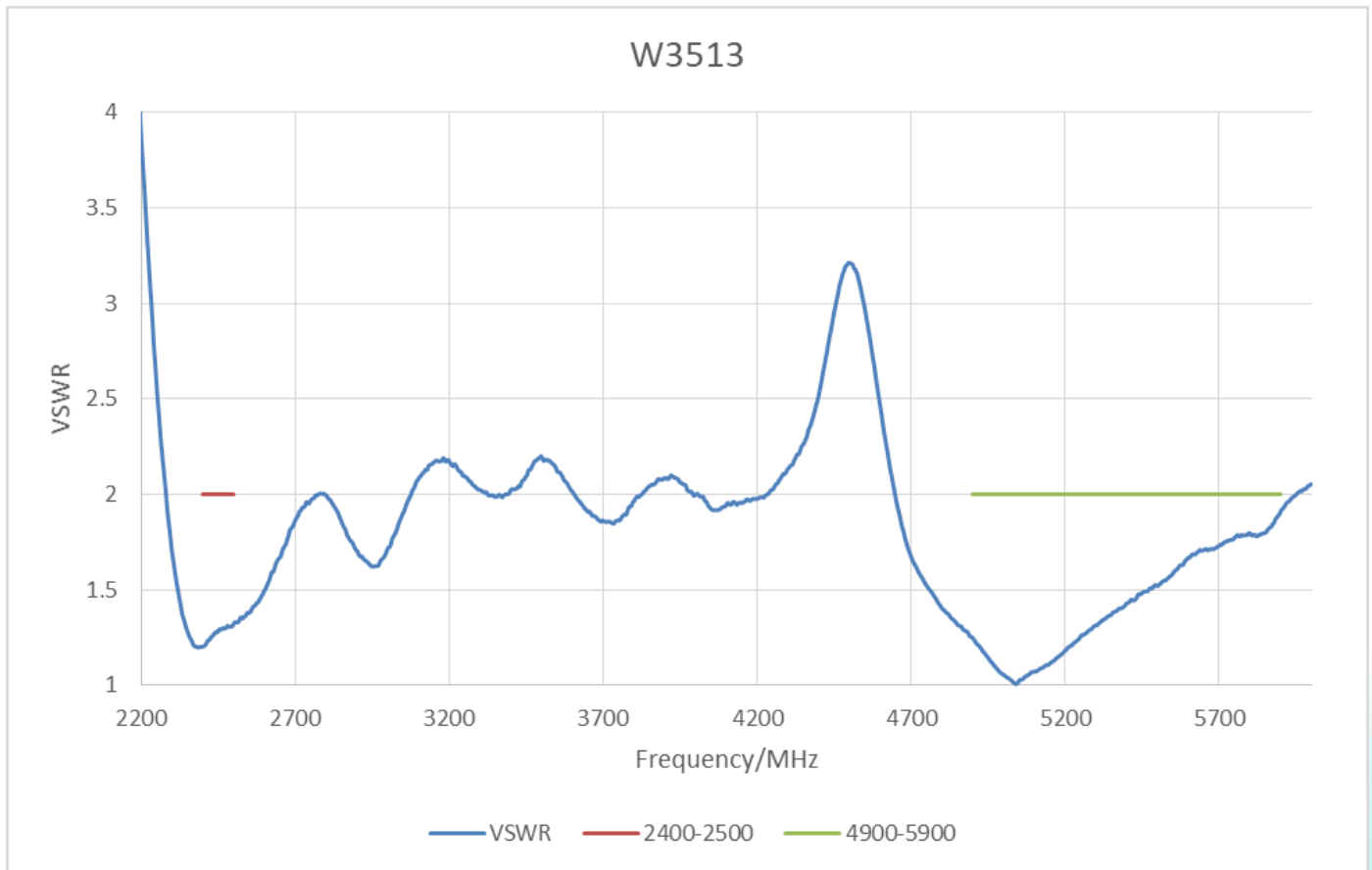
PART NUMBER: W3513

TEST SETUP



Test in free space.

VSWR vs Frequency



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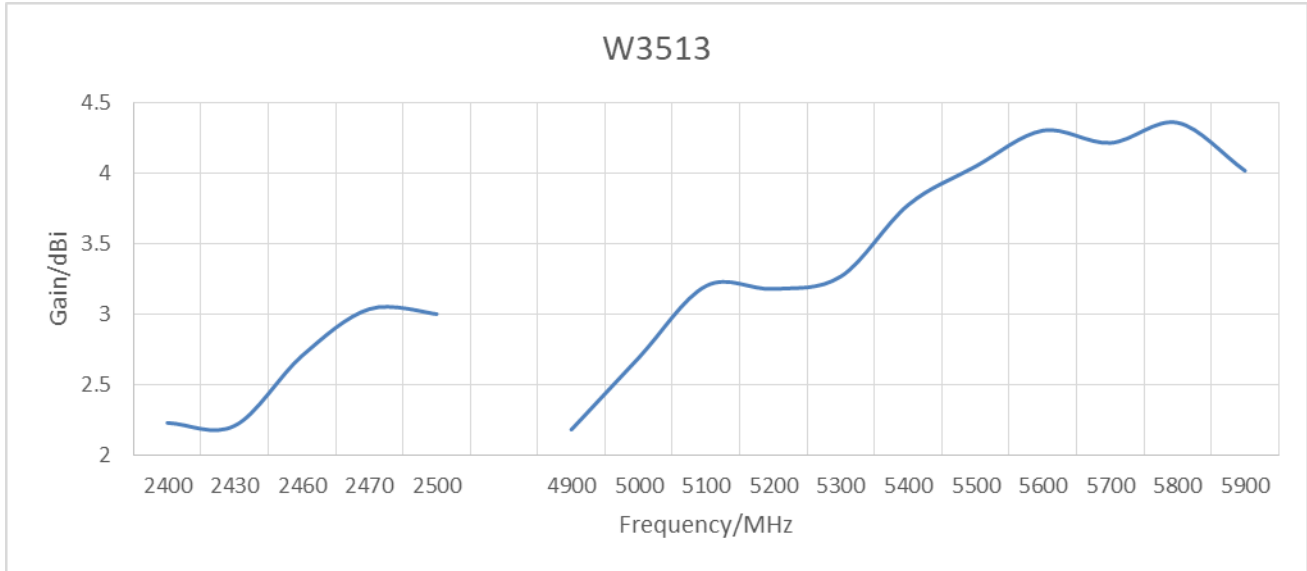
Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

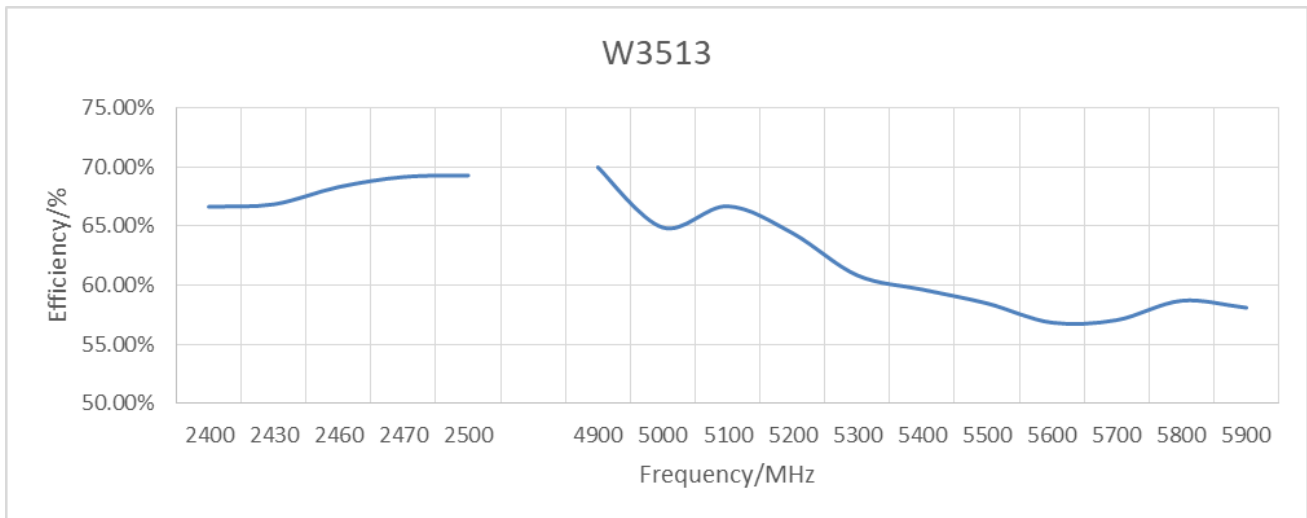
PART NUMBER: W3513

CHARTS

Peaking Gain



Radiation Efficiency



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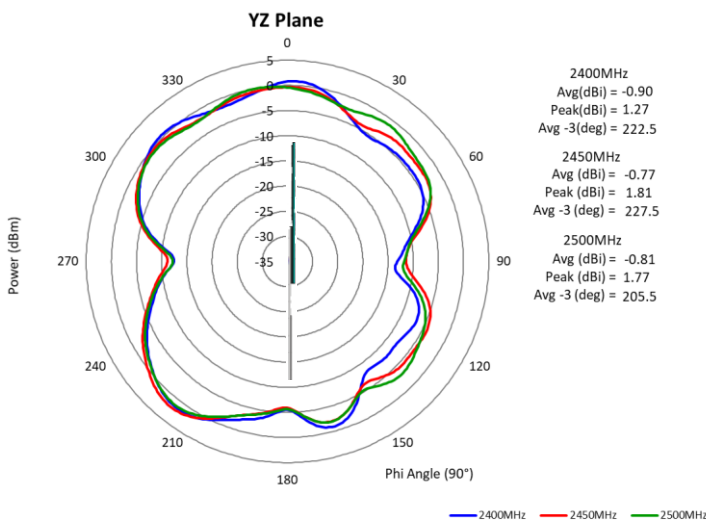
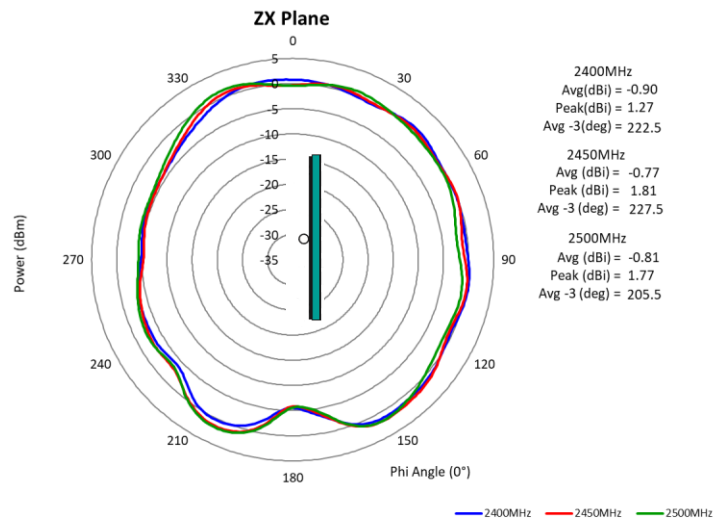
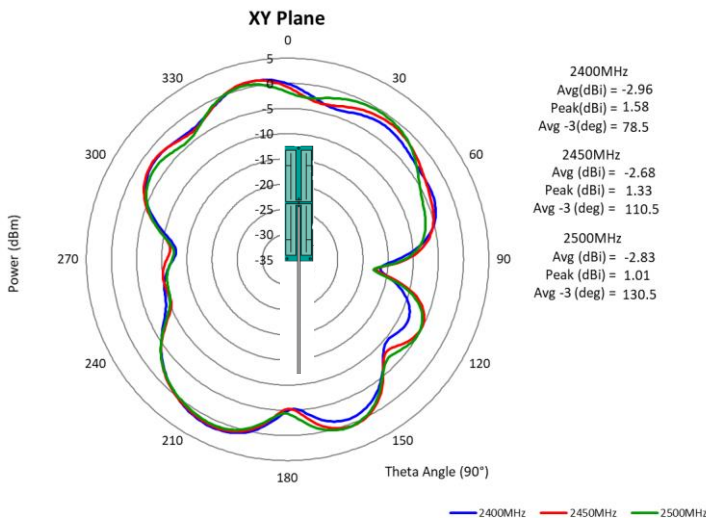
Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

CHARTS

Radiation Pattern 2D(2.4G-2.5G)



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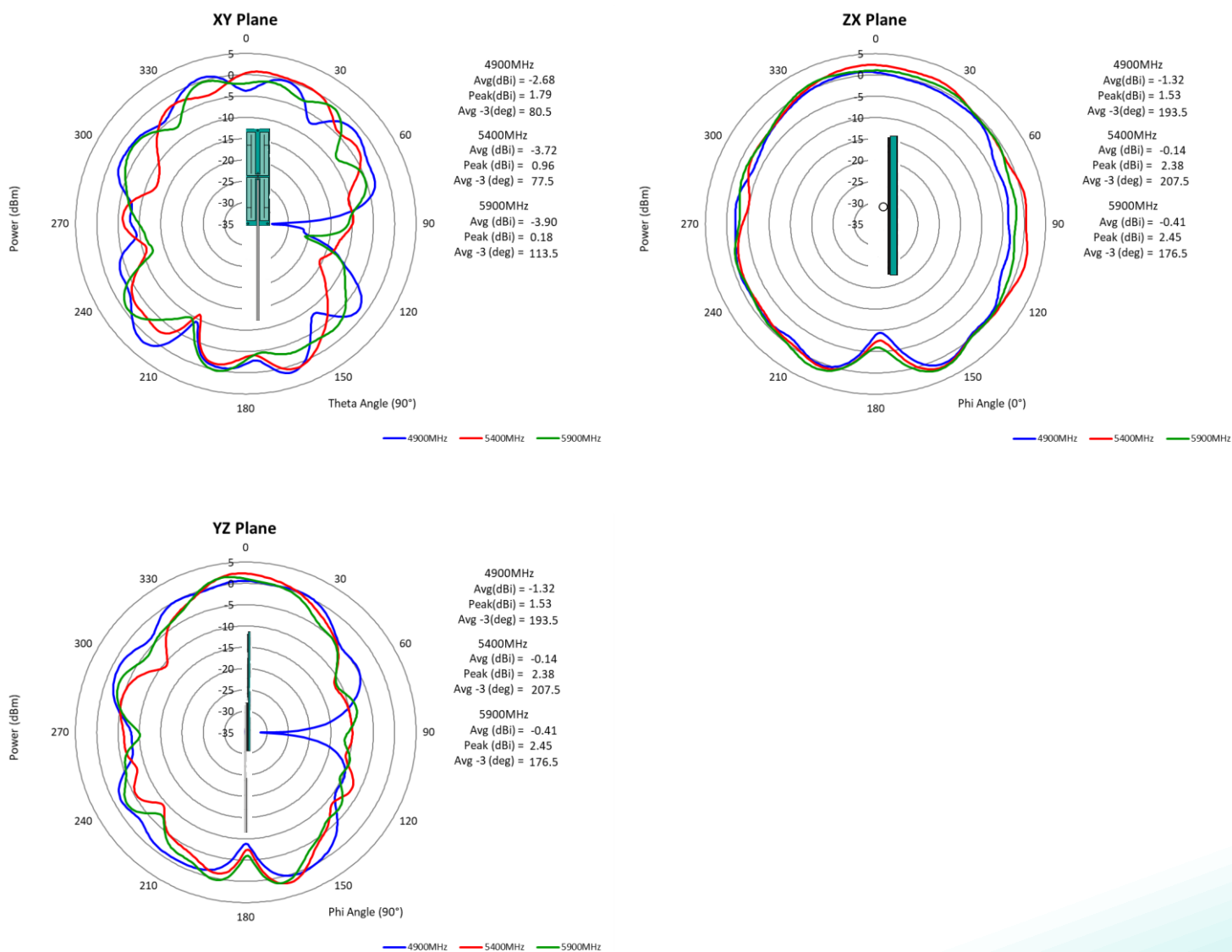
Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

CHARTS

Radiation Pattern 2D (4.9G-5.9G)



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Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

CHARTS

The VSWR when placed on different materials.

SETUP	Frequency/GHz	VSWR	
		Min	Max
Space	2.4-2.5	1.20	1.36
	4.9-5.9	1.00	1.90
ABS	2.4-2.5	1.36	1.55
	4.9-5.9	1.20	2.40
glass	2.4-2.5	1.43	1.57
	4.9-5.9	1.38	2.49
Metal_0cm	2.4-2.5	7.80	8.00
	4.9-5.9	5.16	6.00
Metal_0.5cm	2.4-2.5	4.75	4.96
	4.9-5.9	1.50	2.50
Metal_1cm	2.4-2.5	2.88	3.19
	4.9-5.9	1.4	2.21
Metal_2cm	2.4-2.5	1.69	2.03
	4.9-5.9	1.09	1.95
Metal_3cm	2.4-2.5	1.30	1.54
	4.9-5.9	1.10	1.79

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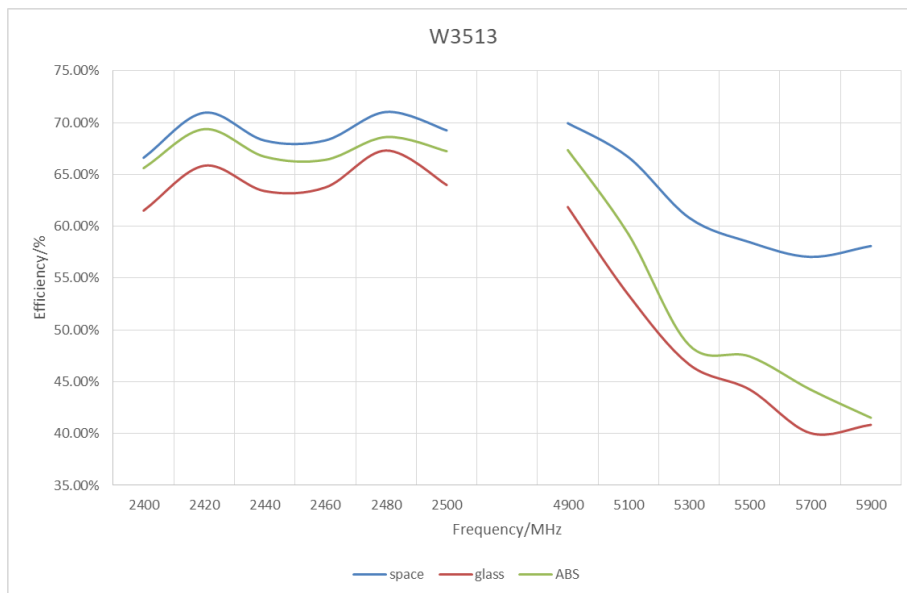
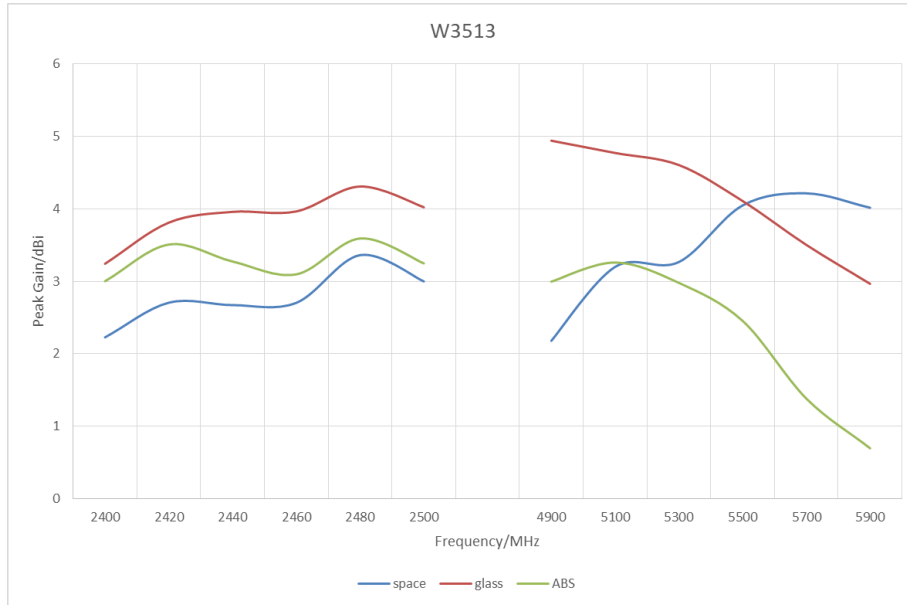
Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

CHARTS

Antenna is placed on ABS & glass.



When placed on ABS or glass, mainly difference is in high frequency band(4.9G-5.9G).Which performance will decline.

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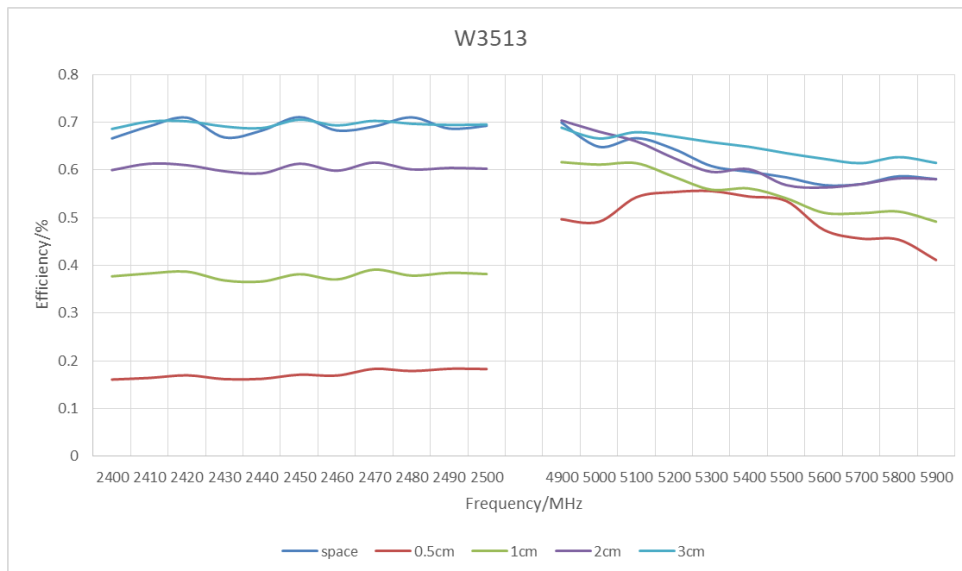
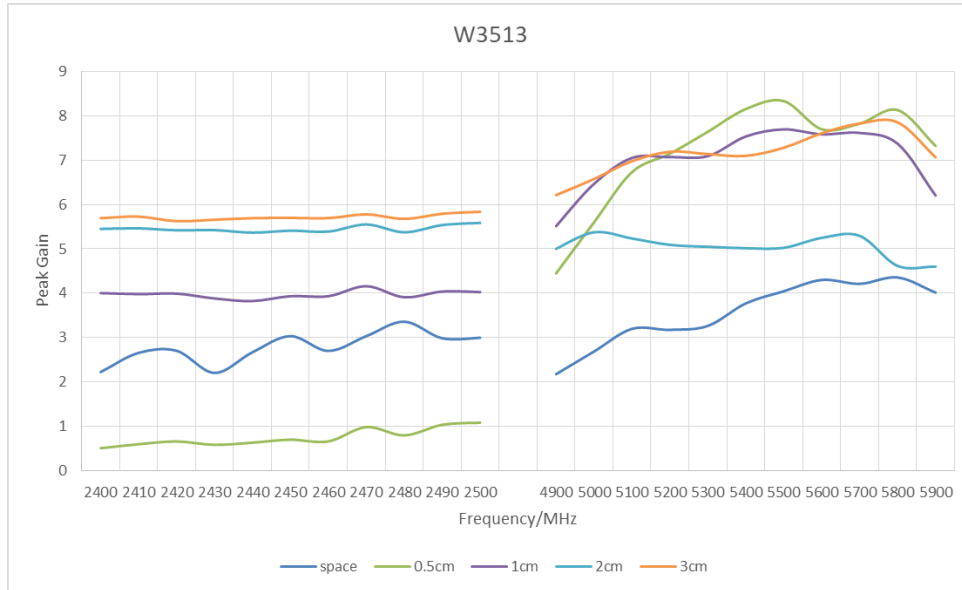
Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

CHARTS

Placed on metal with different distance.



When the distance is 0.5-2cm, the metal mainly affect the performance of low frequency band(2.4G-2.5G). When the distance is above 2cm,the metal will have a little influence in two band.

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Description: 2.4/5GHz Dual Band Pigtail PCB Dipole

Series: Internal PCB antenna

PART NUMBER: W3513

PACKAGING

5 pcs per PE bag, 250 pcs per foam bag, 6 foam bags per box,
1500 pcs per box.

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