





# Internal Antenna

## 5G/4G 2x2 MIMO FPC Antenna

W6114xxxx – 617 to 7125 MHz



### Applications:

-  5G FR1/4G
-  Includes Band 71 (617-698MHz)
-  Foldable for tight spaces
-  Security, Video, Graphics  
Transportation, Tracking  
IoT Devices

### Electrical specifications @ 25° C – Operating Temperatures – 40°C to +80°C

Frequency Bands – 617-960/1427-2690/3300-4200/4400-5000/5150-5925/6000-7125 MHz

Antenna type <sup>2</sup>	Nominal Impedance	Polarization	Radiation pattern	Power withstanding
Dipole	50Ω	Linear	Omni	3W

Port	Frequency (MHz)	617-960	1427-2690	3300-4200	4400-5000	5150-5925	6000-7125
Port 1	Return Loss (dB)	< -5	< -6	< -5	< -6	< -5	< -4
	Peak Gain (dBi)	< 1.5	< 3.8	< 4.6	< 5.8	< 5	< 4.8
	Avg. Efficiency (%)	50	60	54	50	43	38
Port 2	Return Loss (dB)	< -6	< -6	< -5	< -6	< -5	< -4
	Peak Gain (dBi)	< 1.1	< 4.7	< 4.8	< 5.4	< 4	< 4.2
	Avg. Efficiency (%)	52	62	54	53	45	36
Isolation (dB)		< -10	< -12	< -18	< -25	< -25	< -32

### Mechanical Specifications

Orderable PN: W6114B0100

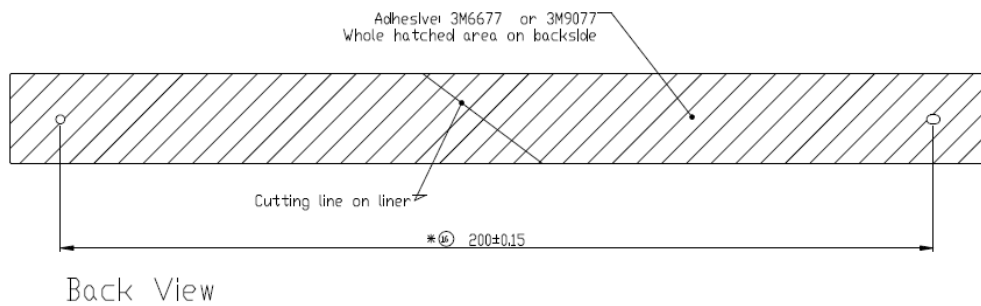
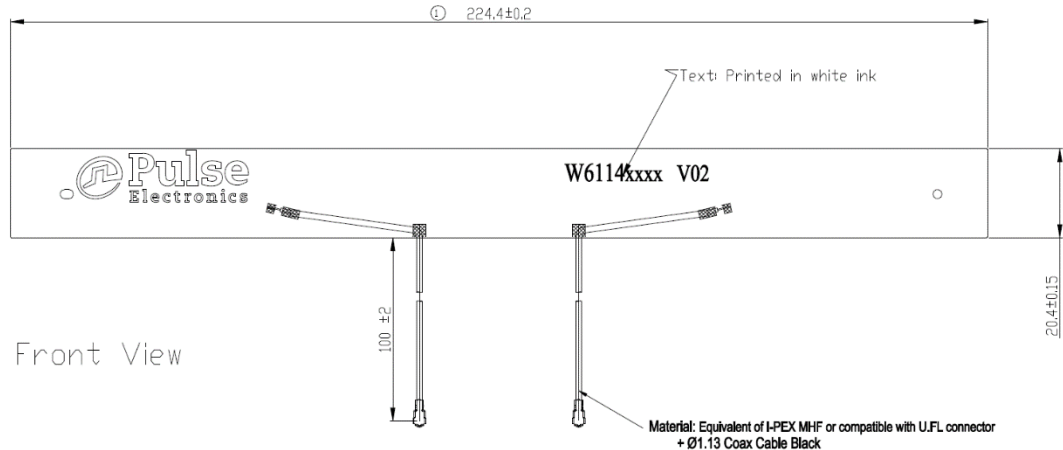
Dimension	Color	Antenna Material	Connector Type <sup>3,5</sup>	Cable Type
Length x Width x Thickness	Black	FPC + adhesive	Equivalent of I-PEX MHF	1.13mm
Cable Length <sup>4,5</sup>	Weight	RoHS-6 Compliant		
100mm	2gram	Yes		

#### Notes:

1. Storage Temperature: -40°C to 80°C
2. FPC antenna is measured on the 2mm ABS/PC plate.
3. Default Connector: Equivalent of I-PEX MHF or compatible with U.FL connector.
4. Cable length is a distance between the edge of PCB and the center of connector.
5. Contact sales for custom cable lengths and connector type.

Mechanical Drawing

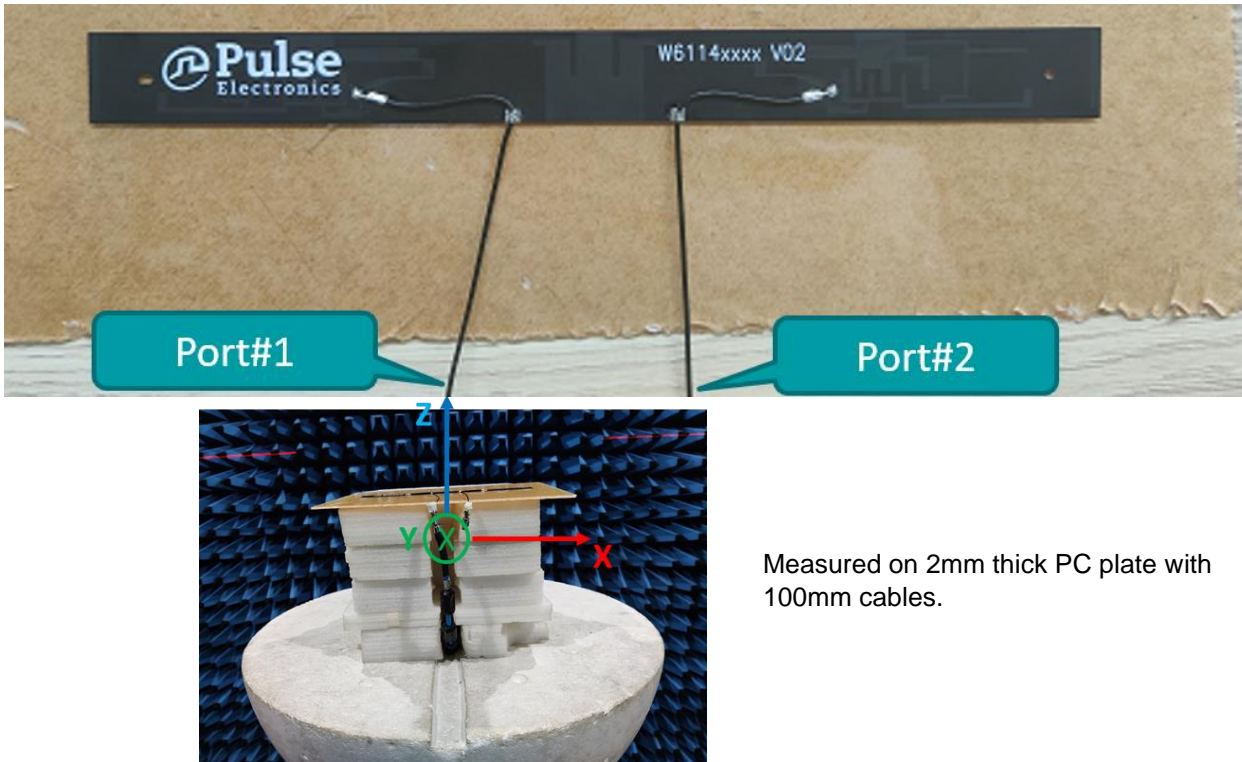
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**Dimensions: mm**  
Unless otherwise specified, all tolerances are ±0.25mm

### Testing Setup

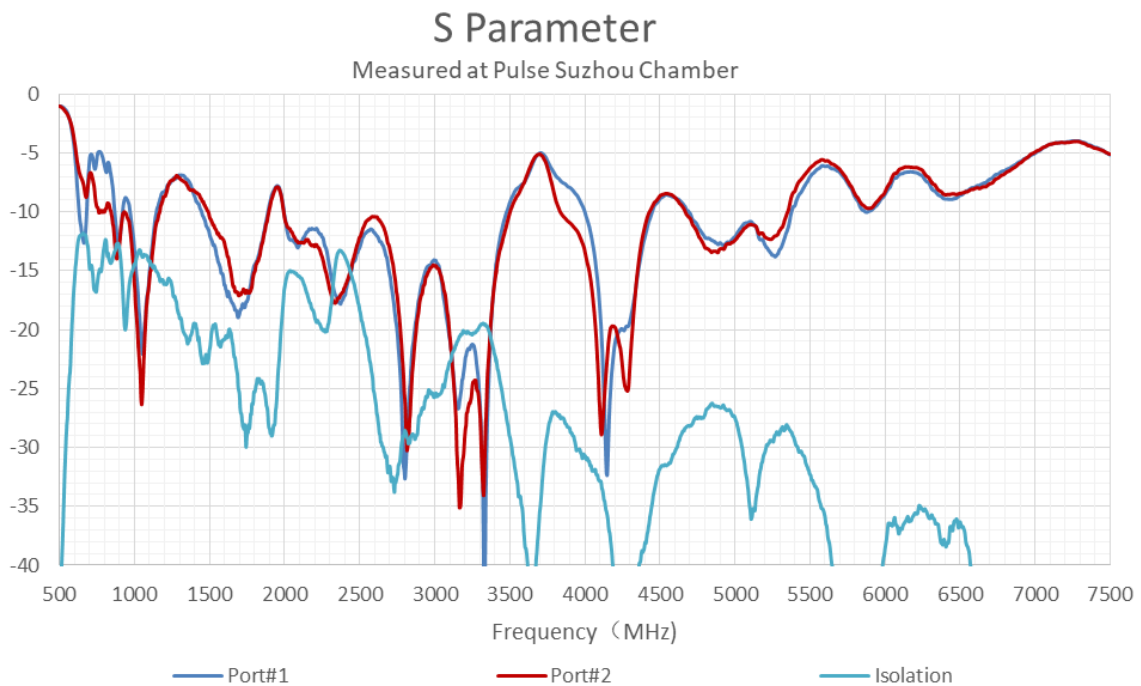
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Measured on 2mm thick PC plate with 100mm cables.

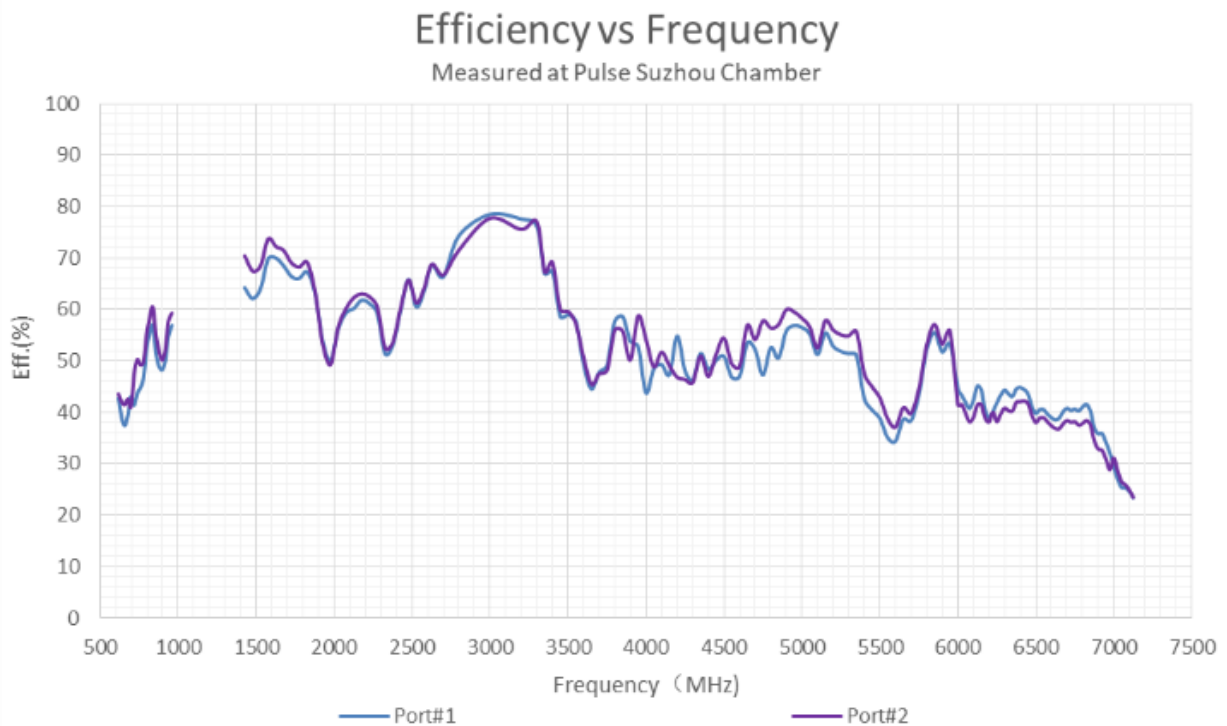
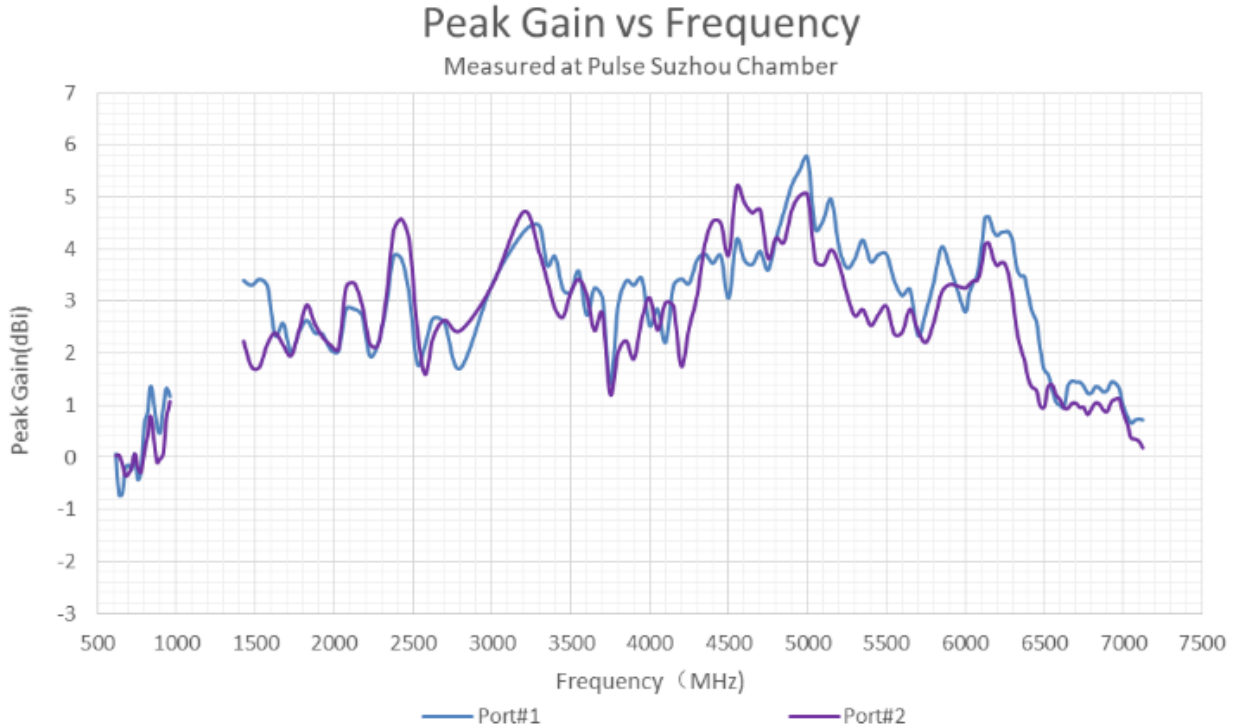
### Charts- Return Loss

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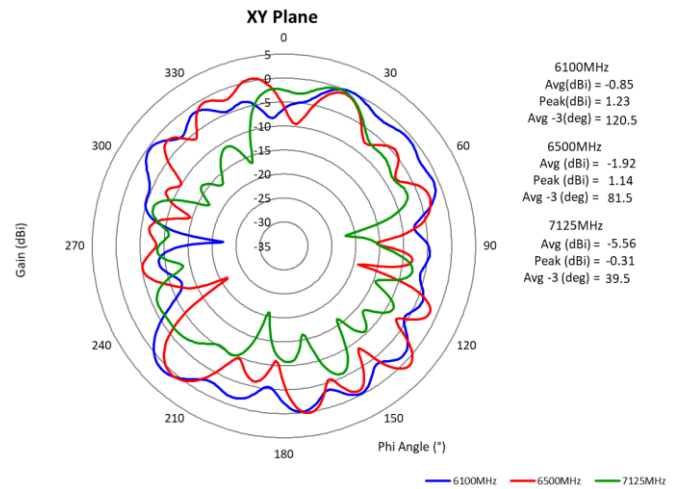
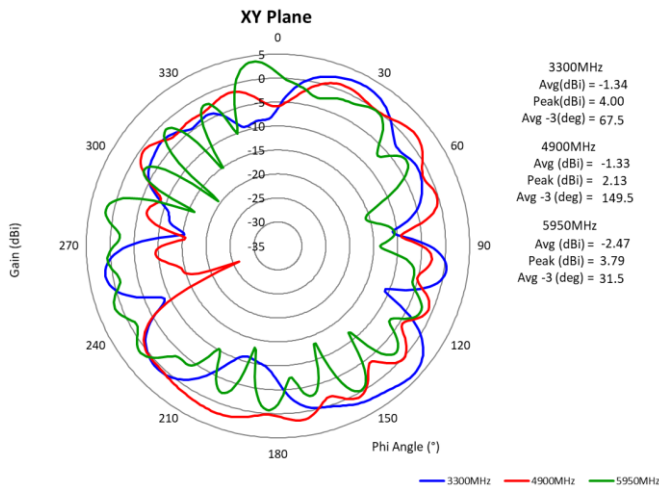
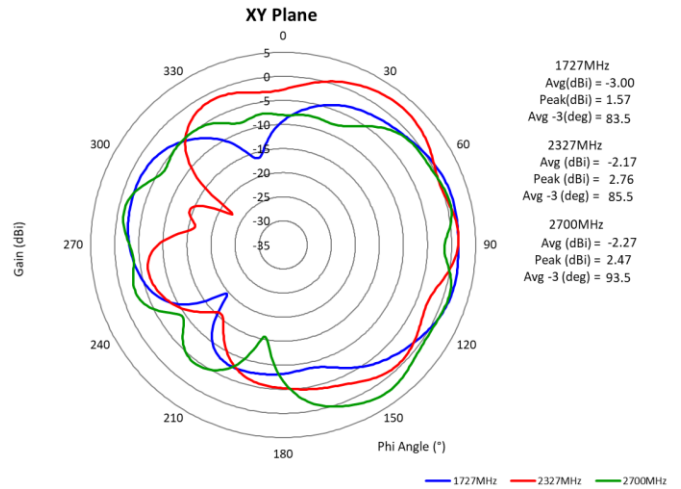
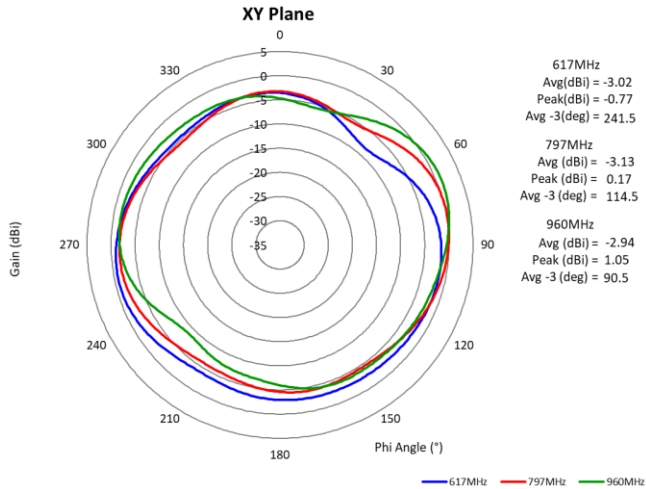
Charts- Peak Gain and Efficiency

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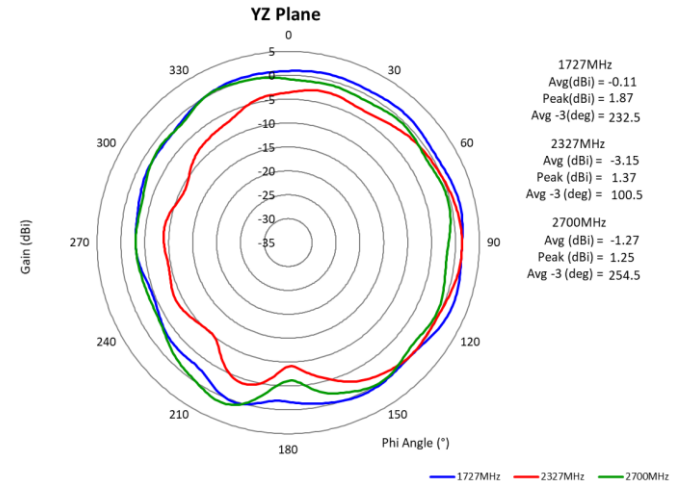
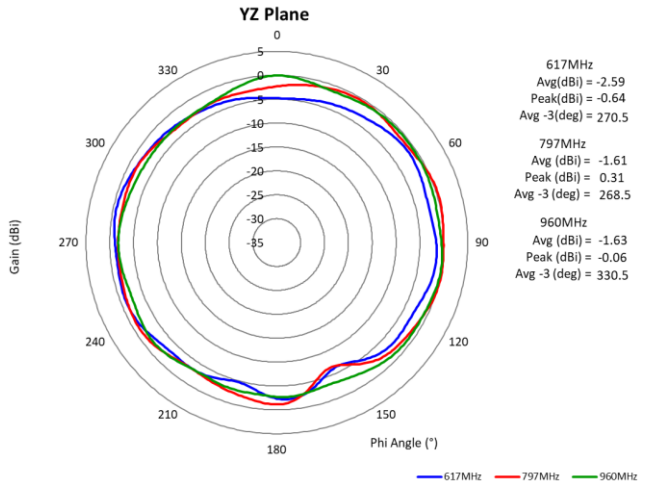
Charts- XY Gain Plots, Port 1

W6114, Port 1



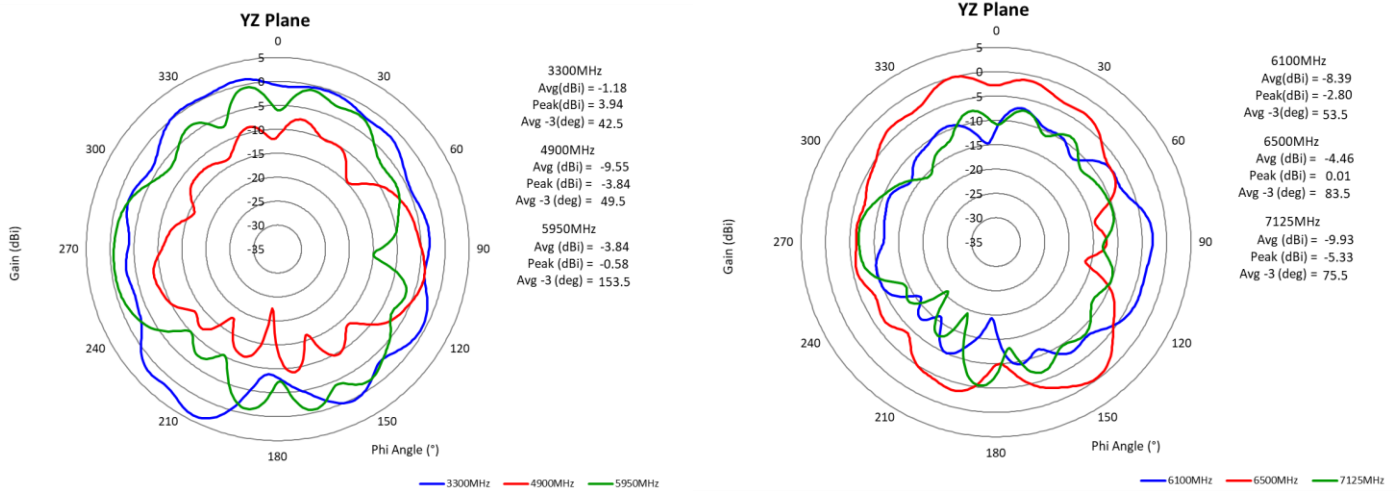
Charts – YZ Gain Plots, Port 1

W6114, Port 1



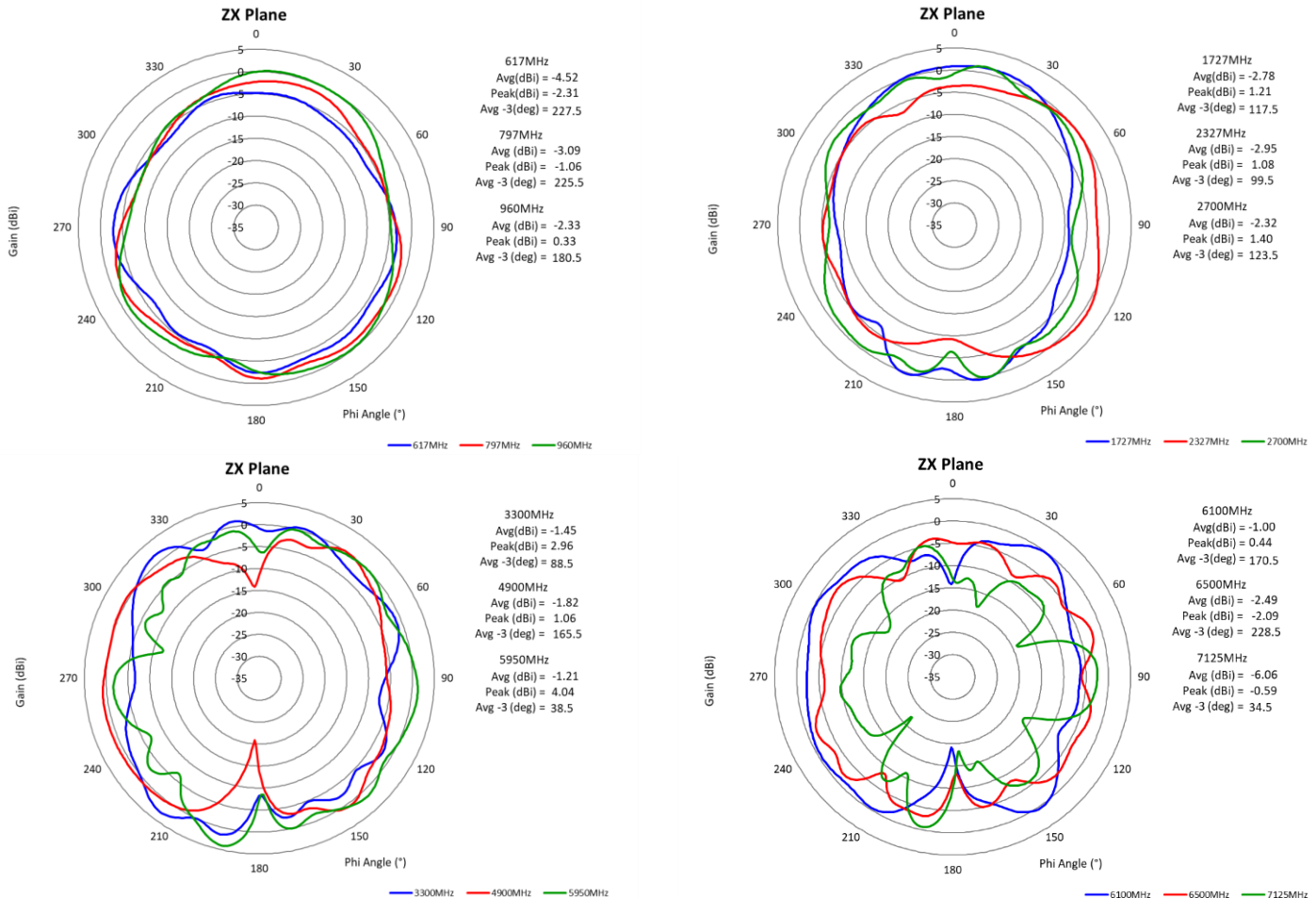
Charts – YZ Gain Plots, Port 1 (Cont.)

W6114, Port 1



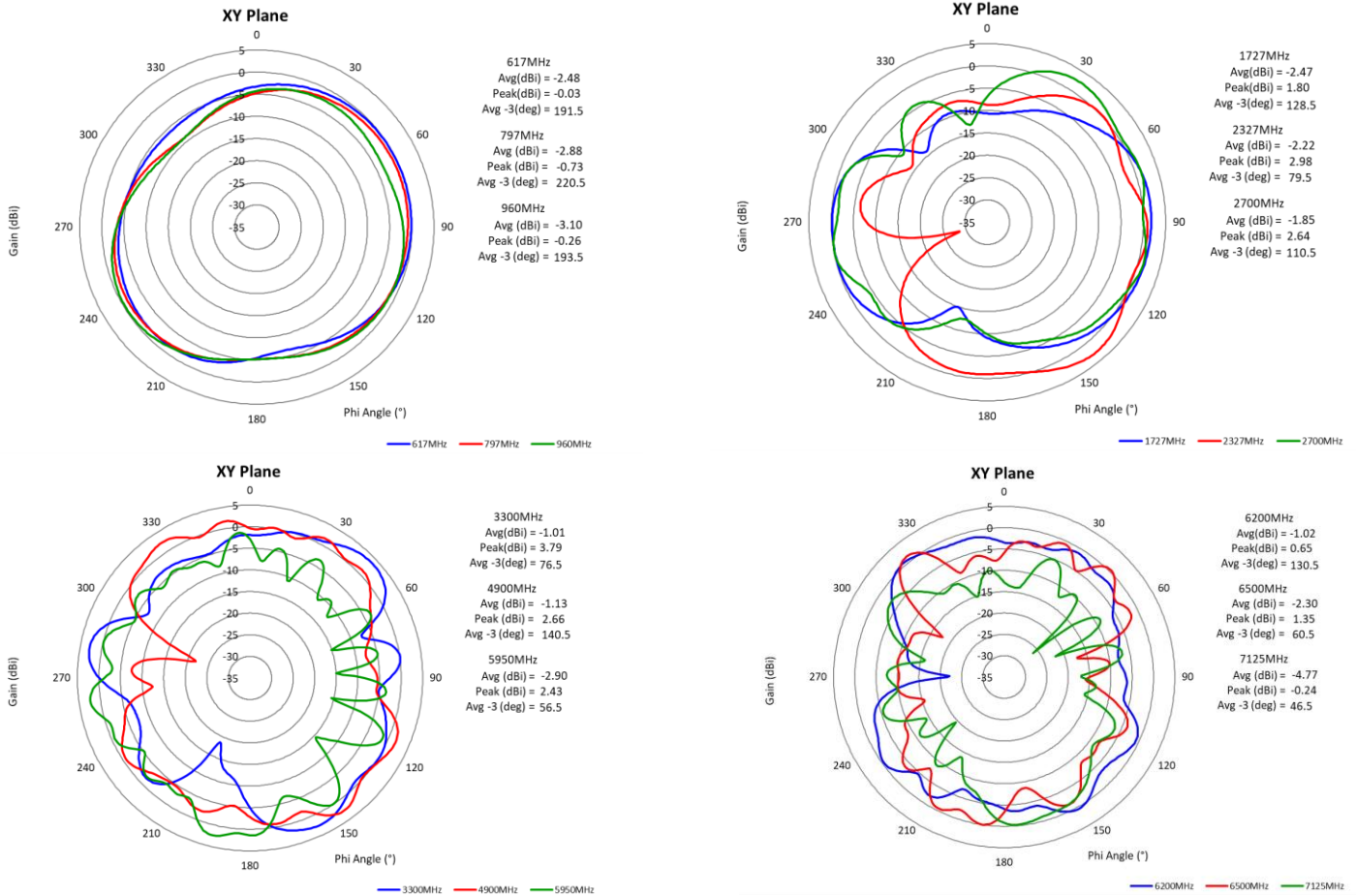
Charts – ZX Gain Plots, Port 1

W6114, Port 1



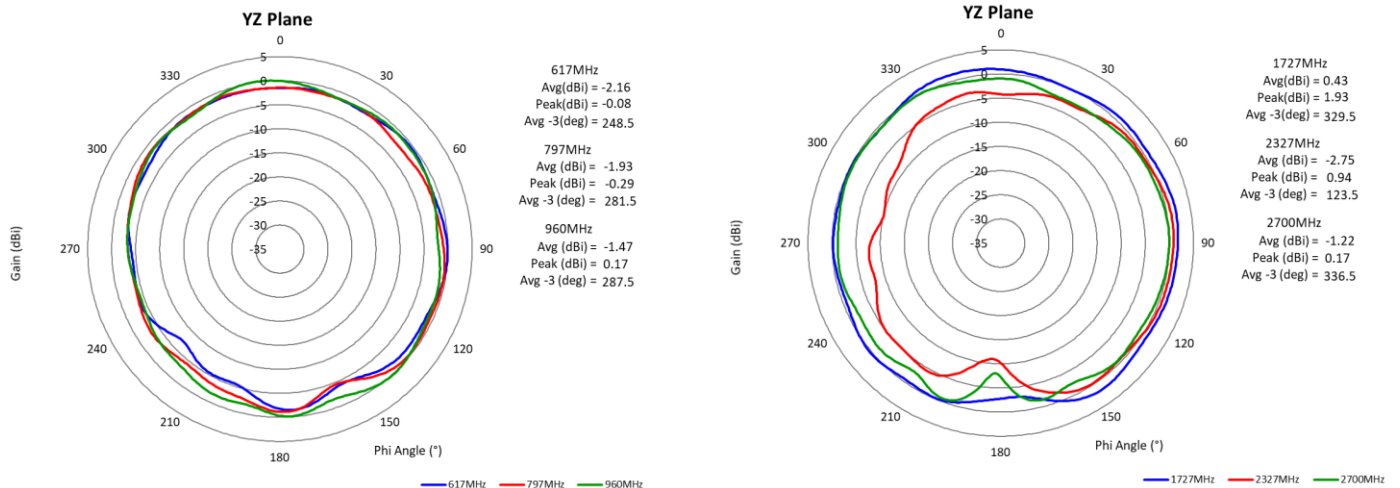
### Charts- XY Gain Plots, Port 2

W6114, Port 2



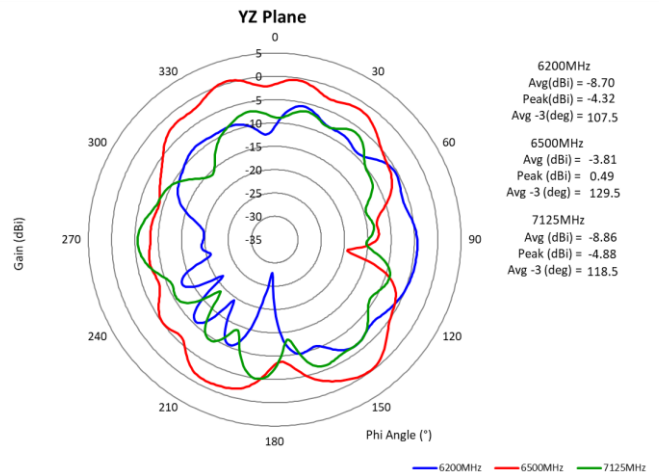
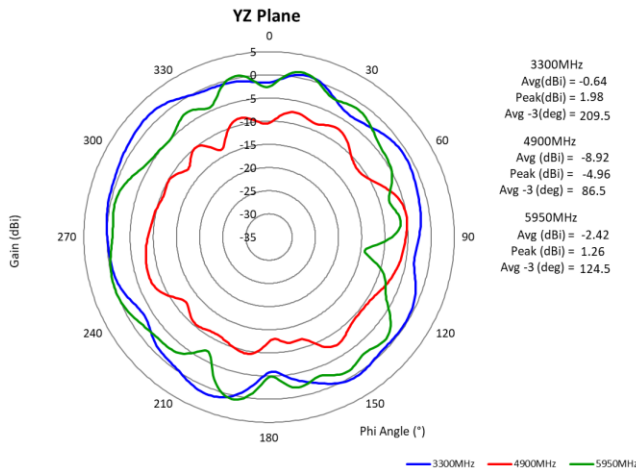
### Charts – YZ Gain Plots, Port 2

W6114, Port 2



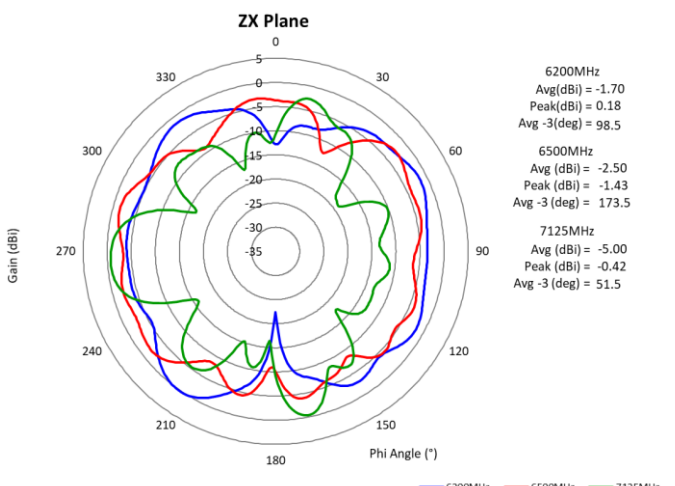
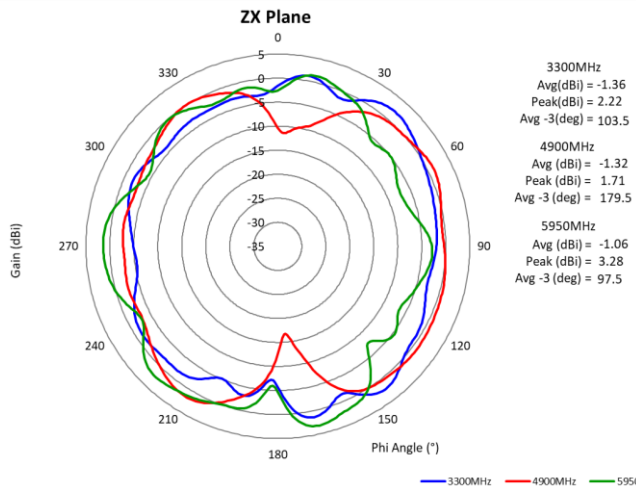
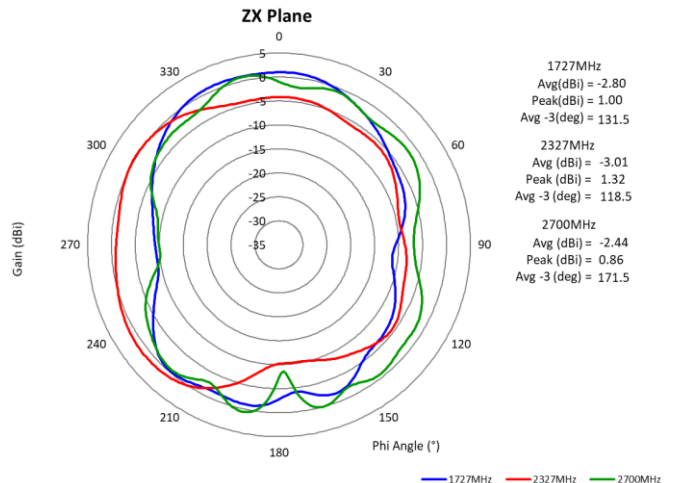
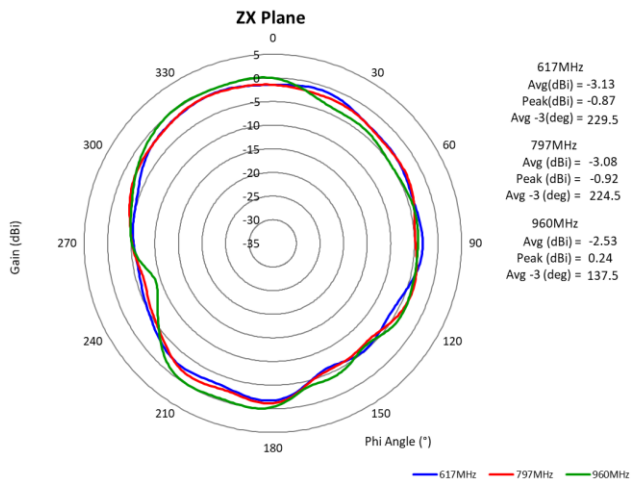
Charts – YZ Gain Plots, Port 2 (Cont.)

W6114, Port 2



Charts – ZX Gain Plots, Port 2

W6114, Port 2





## Package

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### Packaging info:

10 antennas put into a PE bag, every 10 PE bag into a bubble bag and sealing it.  
 12 bubble bags into 1 out box.  
 Total 1200pcs antenna in 1 out box.

## Additional Product Info

### Family Products – 5G FR1 FPC

#### 5G / 4G FPC Antennas

Orderable PN	Frequency (MHz)	Connector Type	Cable Length	Cable Type
W3435B0100	617-960/1710-6000	Equivalent of I-PEX MHF	100mm	1.13mm (AWG#32)
W3929B0100	617-960/1710-3900	Equivalent of I-PEX MHF	100mm	1.13mm (AWG#32)

### For More Information:

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