

# External / In-building 5G/4G Stick Monopole Antenna

W1696/W1697/W1696-M/W1696-MW - 617 to 3800 MHz (Several 5G FR1 bands)



## Applications:

- ② Small form factor monopole
- ② 4G LTE/LTE-A, 5G NR/
- ② LTE CAT 1M
- ② NB IoT
- ② CBRS US B48
- ② Gateways, Set Top boxes
- ② Telemetry, High speed data
- ② IoT and M2M solutions

Electrical Specifications @ 25°C - Operating Temperature -30°C to +85°C<sup>1</sup>

Frequency Bands: 617-960/1710-2690/3400-3800 MHz

Antenna <sup>2</sup> Type	Nominal Impedance	Return Loss	Radiation Pattern	Polarization	Power Withstanding
Monopole	50Ω	per below	Omni	Linear	5W

Frequency	617-960 MHz	1710-2690 MHz	3400-3800 MHz
Return Loss	<-5 dB	<-5 dB	<-4 dB
Peak Gain	>-0.5 dBi	>1 dBi	>0 dBi
Efficiency	40%	45%	30%

## Mechanical Specifications

Orderable PN: W1696, W1696-M, W1697, W1696-MW

Part Number	Size (Length * Dia)	Color	Wind-loading	Weight	Connector Type	Ingress Protection
W1696	49.6 * 10	Black	100 km/h	7.5grms	SMA Male	IP42
W1697	49.6 * 10	Black	100 km/h	7.5grms	RP - SMA Male	IP42
W1696-M	50 * 12	Black	100 km/h	7.8grms	SMA Male	IP65
W1696-MW	50 * 12	Black	100 km/h	7.8grms	SMA Male	IP68 (24H 1MWater)

Notes:

1. Storage Temperature: -30°C to 85°C
2. Measured on 120 x 40mm ground plane

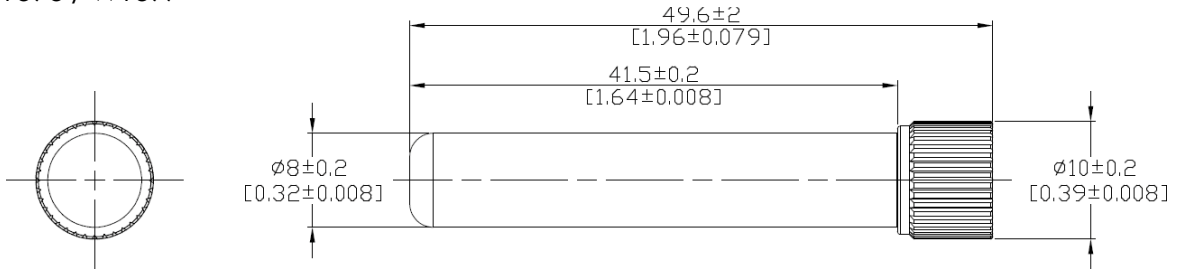
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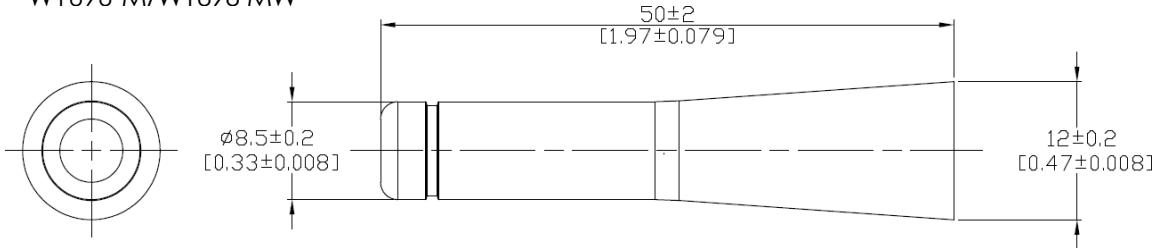
## Mechanical

W1696/W1697/1696-M/W1696-MW

W1696 / W1697



W1696-M/W1696-MW



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

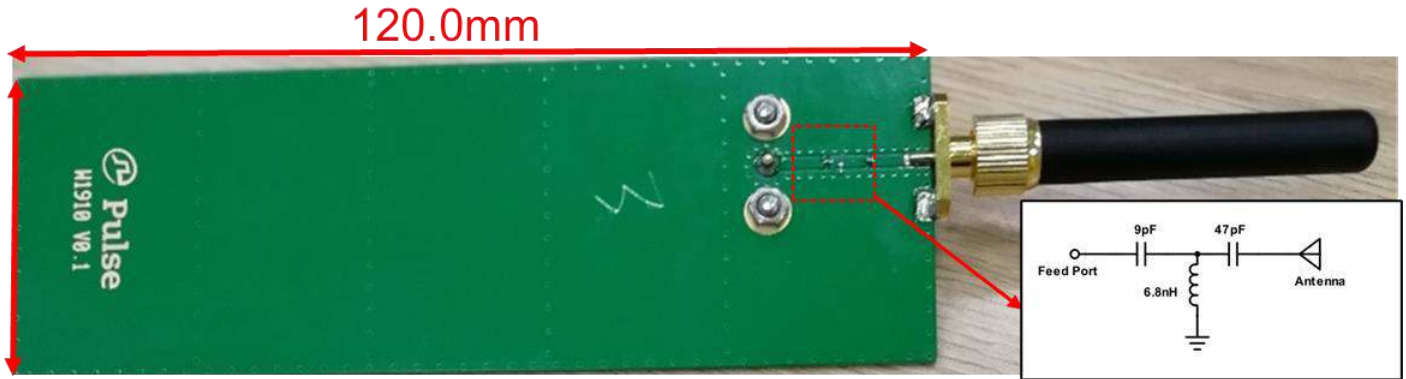
Unless otherwise specified,  
all tolerances are  $\pm \frac{0.10}{0.25}$

# External / In-building 5G/4G Stick Monopole Antenna

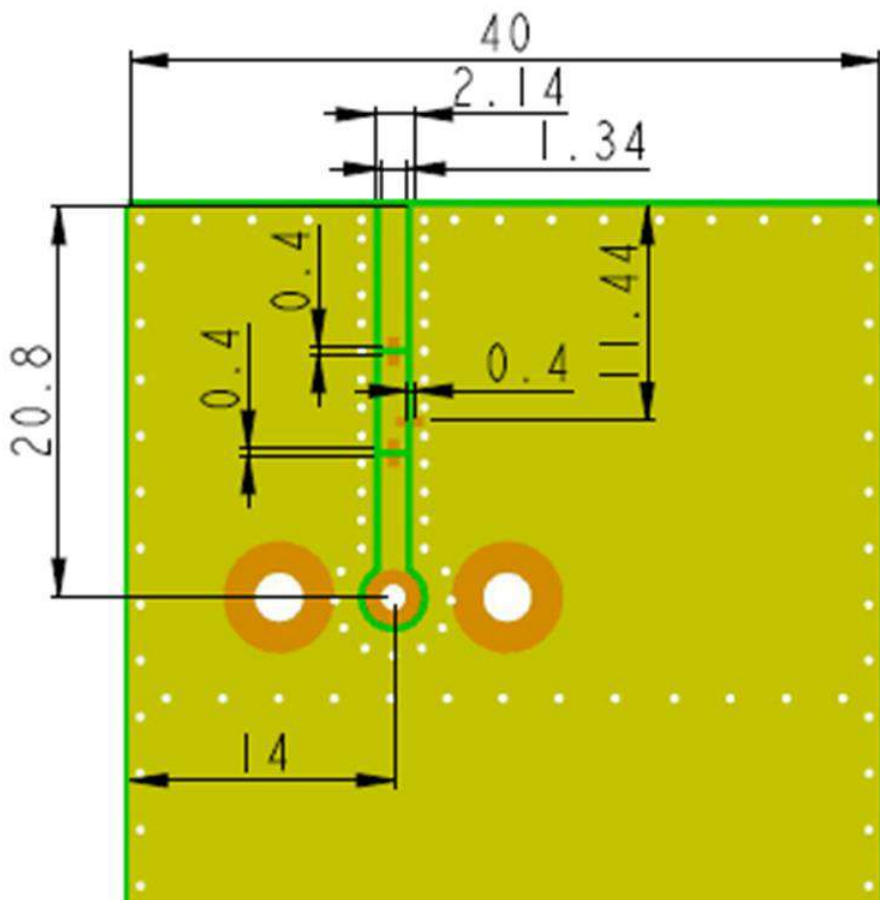
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## Test setup

W1696/W1697/1696-M/W1696-MW



#Test on 40.0\*120.0mm ground plane with matching circuit.



Unit: mm



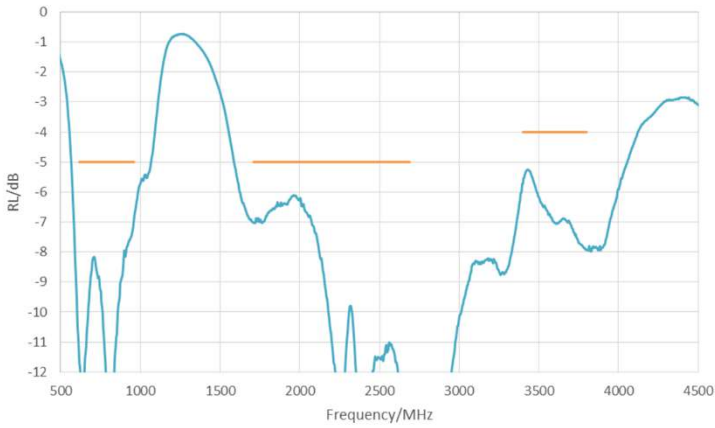
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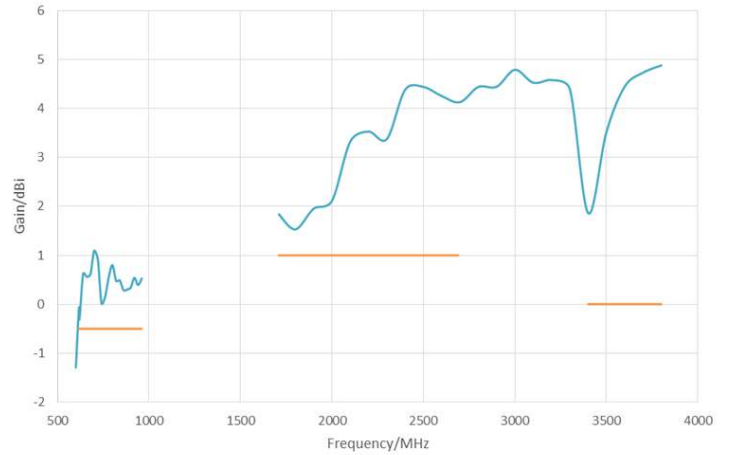
## Charts

W1696/W1697/1696-M/W1696-MW

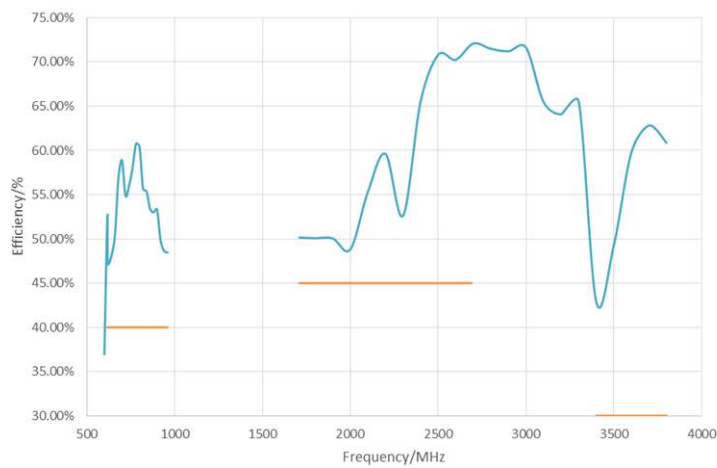
### Return Loss vs Frequency



### Peak Gain vs Frequency



### Radiation Efficiency vs Frequency

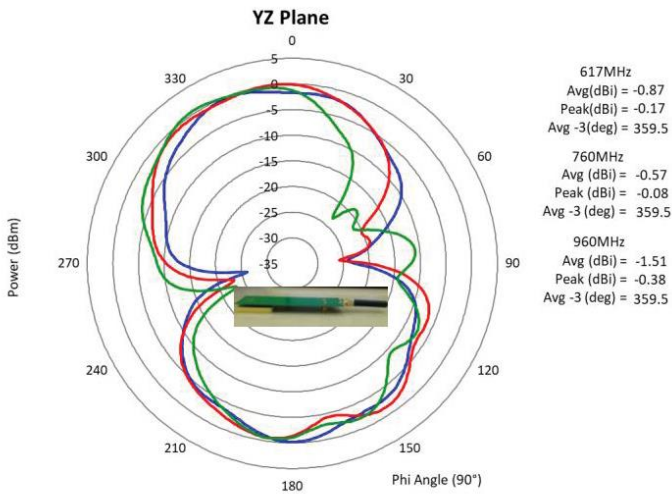
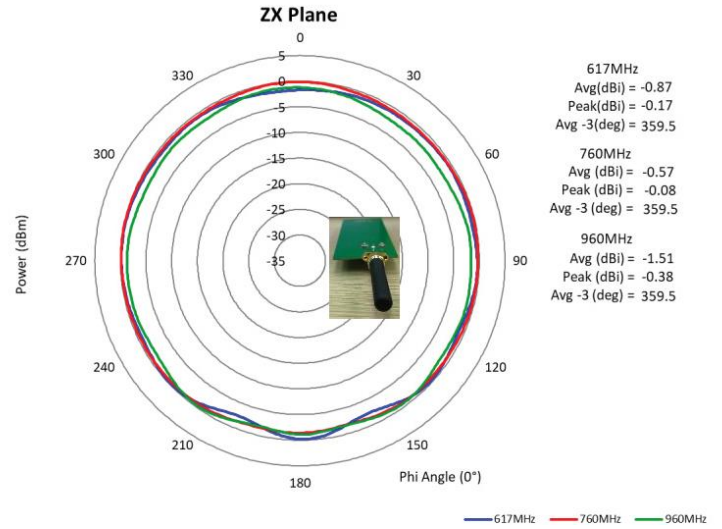
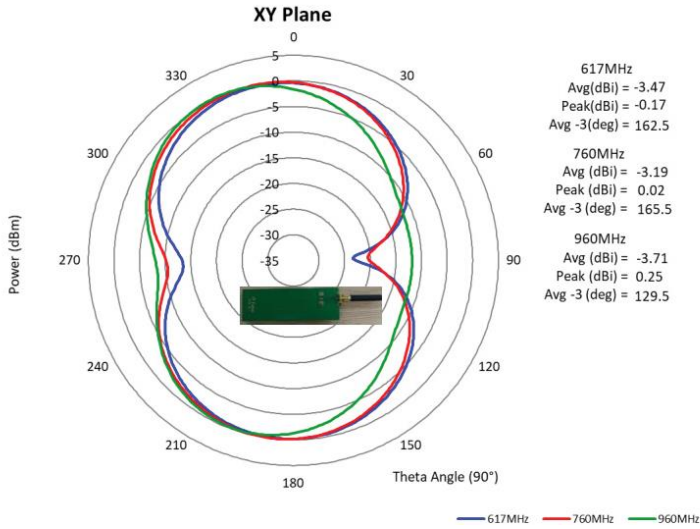


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W1696/W1697/W1696-M/W1696-MW - 617 to 3800 MHz (Several 5G FR1 bands)

## Free Space Radiation Pattern

617MHz - 960MHz

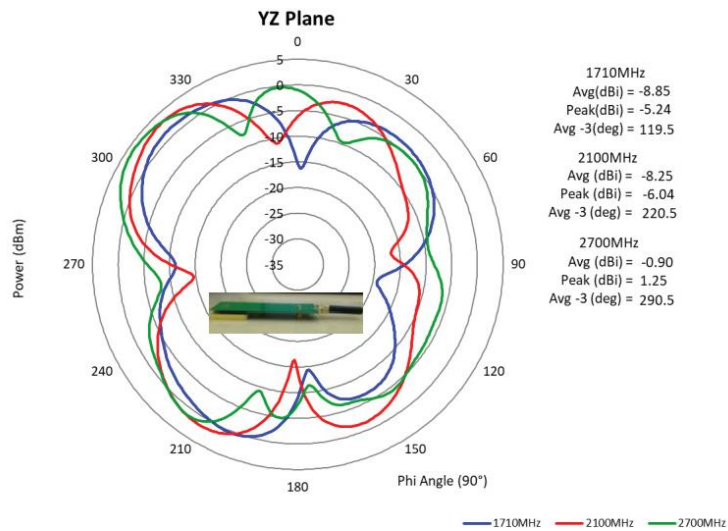
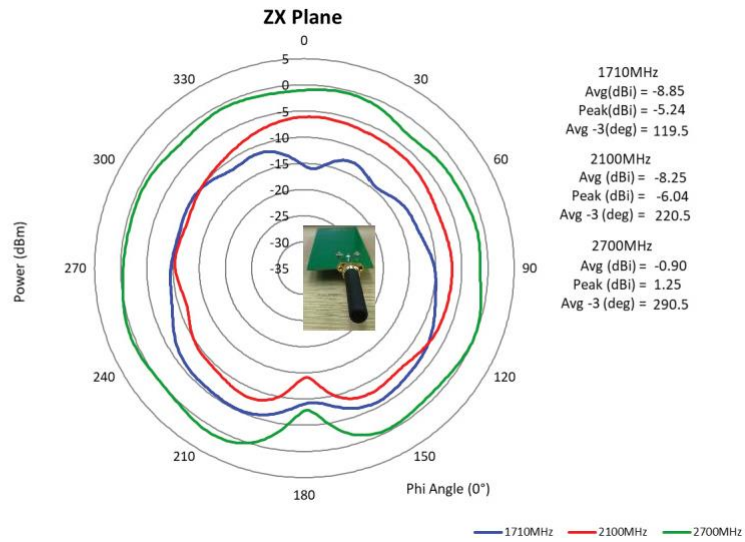
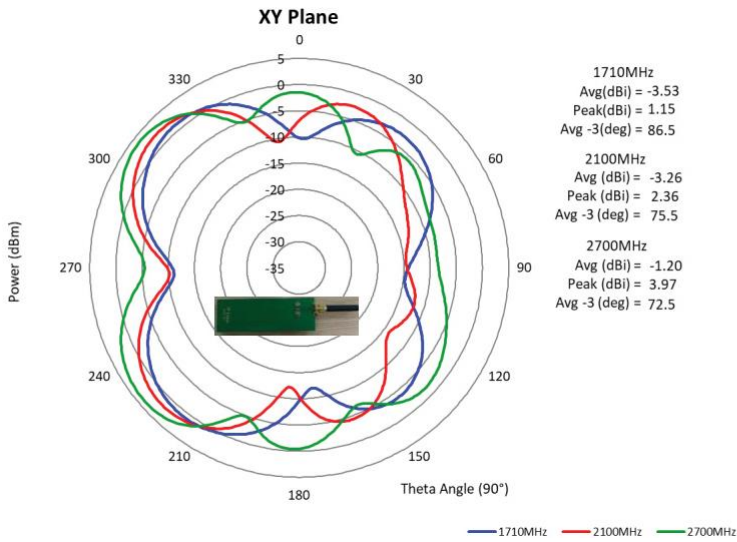


# External / In-building 5G/4G Stick Monopole Antenna

W1696/W1697/W1696-M/W1696-MW - 617 to 3800 MHz (Several 5G FR1 bands)

## Free Space Radiation Pattern

1710MHz 2690MHz

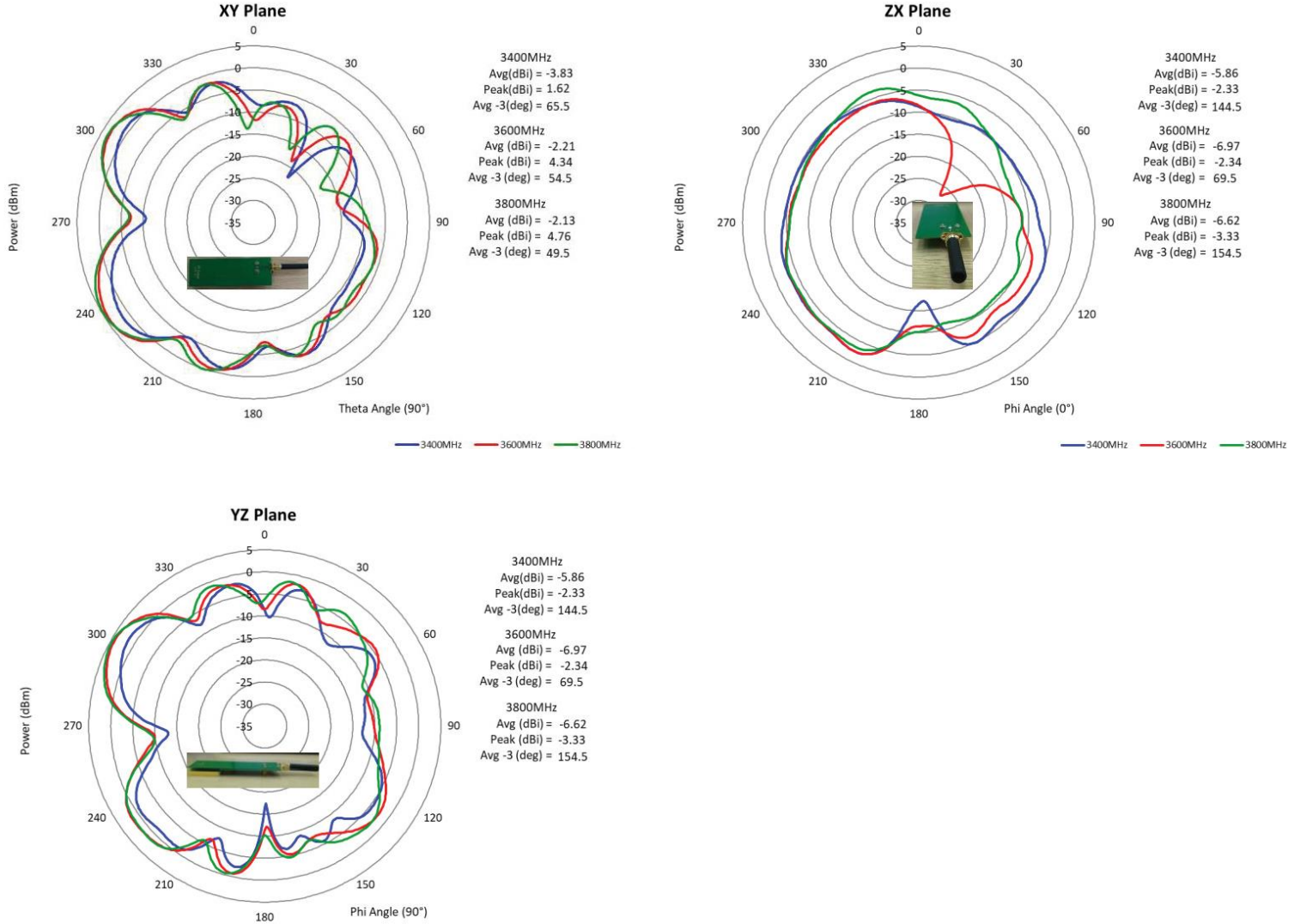


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## Free Space Radiation Pattern

3400MHz-3800MHz



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### Packing Info

W1696/W1697/1696-M/W1696-MW

1 pcs antenna per PE bag 24pcs PE bags per tray  
14pcs trays per package box(2 pcs empty tray) 288pcs antenna per package  
Package box: 460mm\*235mm\*140mm

#### For More Information:

Americas - [antennas.us@pulseelectronics.com](mailto:antennas.us@pulseelectronics.com) | Europe – [antennas.eu@pulseelectronics.com](mailto:antennas.eu@pulseelectronics.com) | Asia – [antennas.as@pulseelectronics.com](mailto:antennas.as@pulseelectronics.com) | Questions? +1-800-ANTENNA  
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