

TECHNICAL DATA SHEET

Description: Vehicular Multiband Antenna with

Adhesive Mount

PART NUMBER: ARMXXXXXAM





All dimensions are in mm / inches

Issue: 1804P

Features:

- Low profile, only 1.8" tall
- Up to 6-lead Configuration
 - LTE(2x) MIMO
 - WiFi(3x) MIMO-|2.4/5.x GHz
 - GPS/GNSS (1x)
- Frequency of Operation:
 - 698-960MHz,1710-2690MHz
 - 2400-2500MHz,5150-5925MHz
 - 1559-1606MHz

Applications:

- Telematics, Navigation
- First Responders(Police, Fire, Ambulance/EMS)
- Energy, Utility, Construction
- Fleet Management
- DSRC(Dedicated Short Range Communications)
- Available Configurations:
 - · Black, White
 - Direct, Magnetic, Adhes. Mount

Preliminary

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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ELECTRICAL SPECIFICATIONS

Product	Total Cable Leads	LTE Cable Leads	WiFi Cable Leads	GPS Cable Leads	Housing Color	Mounting
ARM62311AM	6	2	3	1	Black	Adhesive Mount; 3M VHB4959 Thickness: 3mm
ARM62312AM	6	2	3	1	White	
ARM52211AM	5	2	2	1	Black	
ARM52212AM	5	2	2	1	White	
ARM42111AM	4	2	1	1	Black	
ARM42112AM	4	2	1	1	White	

Product Numbering

Vehicular Multiband Antenna with Direct Mount

(Part Number)



@	Product ID: ARMADILLO
@	Total Number of Cable leads
0	Total Number of LTE Cable Leads
4	Total Number of WiFi Cable Leads
6	Total Number of GPS Cable Leads
0	The Color of the Plastic Housing 1=Black; 2= White
•	Mounting: Adhesive Mount

	ARM62311AM	CABLE	CABLE LENGTH	CONNECTOR
1	LTE-1 Cable Assy	LAND 4051		DIM Mala
2	LTE-2 Cable Assy	LMR-195*	5181 mm / 204" / 17 FT	SMA Male
3	WiFi-1 Cable Assy			RP-SMA Male
4	WiFi-2 Cable Assy	LMR-195*		
5	WiFi-3 Cable Assy			
6	GPS Cable Assy	LMR-100*		SMA Male

* or equivalent







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ELECTRICAL SPECIFICATIONS

10-2690MHz 5150-5925MHz
5150-5925MHz

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^{*}Test on 500mm ground plane with 17ft(5.2m) LMR195 cable

^{**}Test on 500mm ground plane with 1ft(304.8) LMR195 cable



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ELECTRICAL SPECIFICATIONS

GPS Antenna

Frequency 1561.098±2.046MHz/

1575.42±1.023MHz/

1602.5625±4MHz

Nominal Impedance 50 Ω

VSWR <2

Gain (Radiating Element) 1 dBic±1 dB

Gain (LNA Gain) 30 dB± 2 dB

Polarization RHCP

Out of Band Rejection

698 MHz >70 dB

960 MHz >65 dB

1710 MHz >60 dB

2170 MHz >65 dB

2400 MHz >65 dB

2700 MHz >65 dB

Noise Figure <2.4 dB

Operating Voltage 3.3 – 5 Vdc

Current Consumption <15mA



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MECHANICAL SPECIFICATIONS

Overall Length 202.3mm X 88.5mm X 45mm

Weight 1 Kg

Antenna Color / Material

Connector type

Cable type

Cable length

Black or White

Refer to Page 2

Refer to Page 2

Refer to Page 2

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature $-40 \sim +85^{\circ}$ C Storage Temperature $-40 \sim +85^{\circ}$ C

Ingress Protection IP67
RoHS Compliant Yes

OTHER SPECIFICATIONS

Total cable assembly loss for 5.2m (17') LMR-195 @850MHz	2.1dB
Total cable assembly loss for 5.2m (17') LMR-100 @1575MHz	5.9dB
Total cable assembly loss for 5.2m (17') LMR-195 @1930MHz	3.2dB
Total cable assembly loss for 5.2m (17') LMR-195 @2450MHz	3.6dB
Total cable assembly loss for 5.2m (17') LMR-195 @2500MHz	3.7dB
Total cable assembly loss for 5.2m (17') LMR-195 @5350MHz	5.5dB





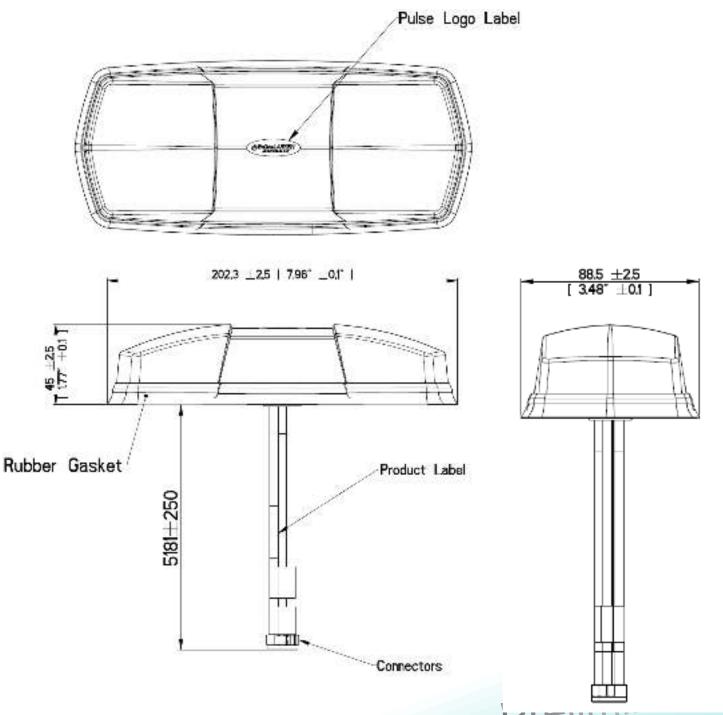
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MECHANICAL DRAWING



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MECHANICAL DRAWING Product Lable Product Lable Content 5181 ± 250mm P.N.:ARM62311AM Rev.: V01 Date: DD-MM-YYYY 2 5 CABLE CABLE LENGTH CONNECTOR ARM62311AM LTE-1 Cable Assy LMR-195* SMA Male LTE-2 Cable Assy 3 5181 mm / WiFi-1 Cable Assy Adhesive Tape 3M VIIB 4959 204" / 4 RP-SMA Male WiFi-2 Cable Assy LMR-195* 17 FT 5 WiFi-3 Cable Assy Thickness: 3mm 6 GPS Cable Assy LMR-100° SMA Male

* or equivalent

Issue: 1804P





TECHNICAL DATA SHEET

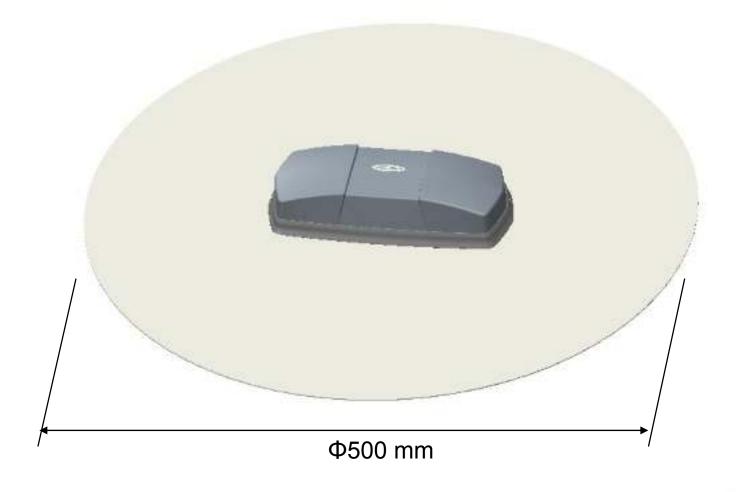
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TEST SETUP

Antenna tested on a Φ500mm ground plane.







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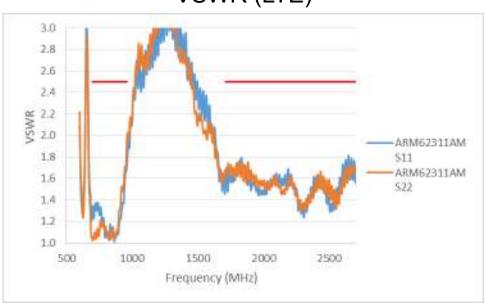
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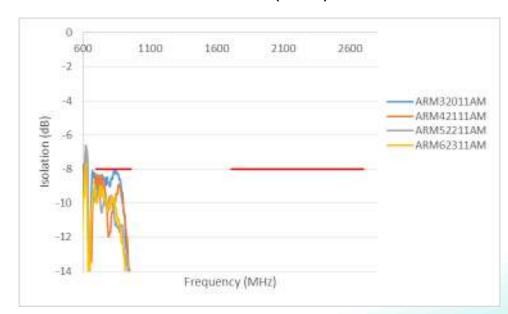
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CHARTS

VSWR (LTE)



Isolation (LTE)



Note: Antenna tested with 5m cable on 500mm (dia) ground plane

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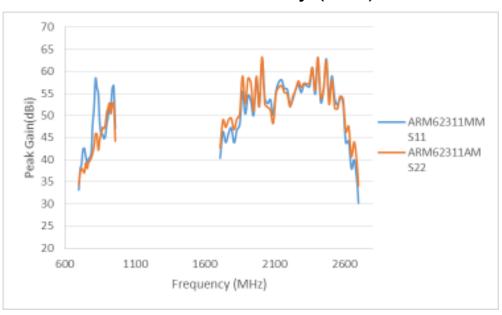
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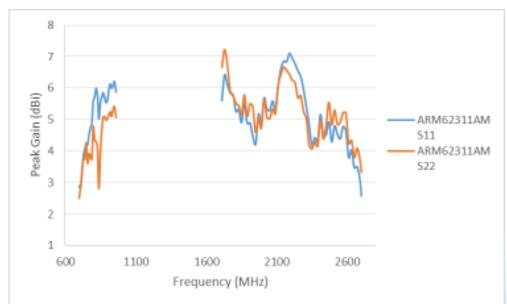
PART NUMBER: ARMXXXXXAM

CHARTS

Radiation Efficiency (LTE)



Peak Gain (LTE)



Note: Antenna tested with 1ft(304.8mm) cable on 500mm (dia) ground plane

Issue: 1804P





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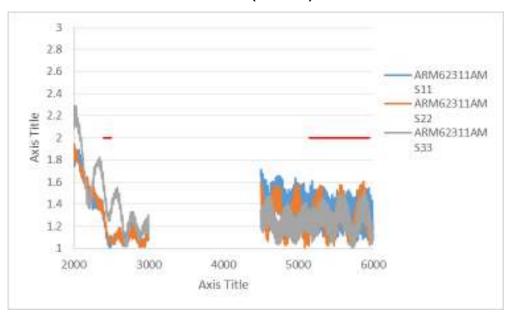
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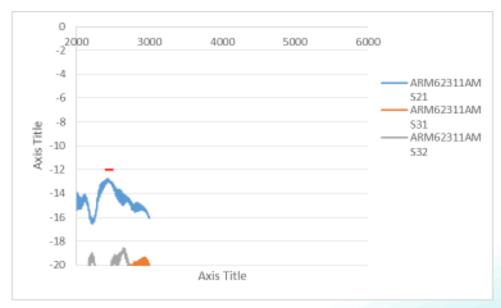
PART NUMBER: ARMXXXXXAM

CHARTS

VSWR (WIFI)



Isolation (WIFI)



Note: Antenna tested with 5m cable on 500mm (dia) ground plane

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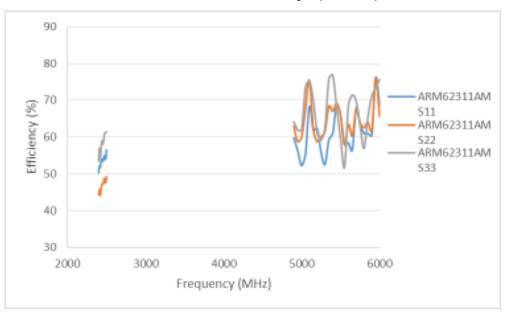
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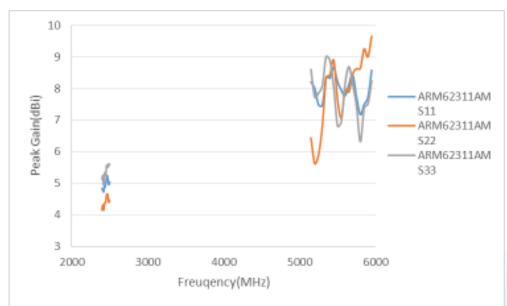
PART NUMBER: ARMXXXXXAM

CHARTS

Radiation Efficiency (WIFI)



Peak Gain (WIFI)



Note: Antenna tested with 1ft(304.8mm) cable on 500mm (dia) ground plane

Issue: 1804P





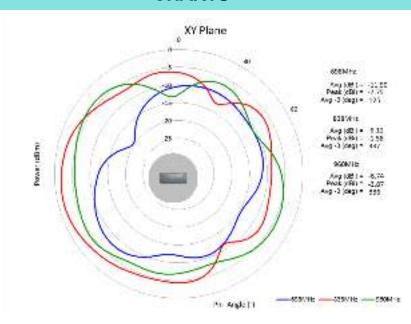
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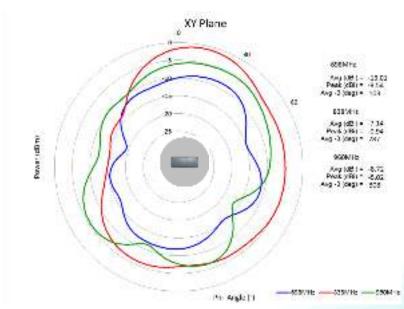
Adhesive Mount

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CHARTS



LTE1 XY plane radiation pattern



LTE2 XY plane radiation patterninary

Issue: 1804P



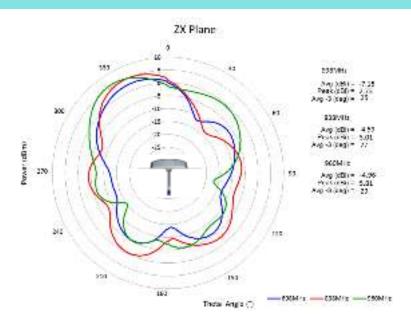
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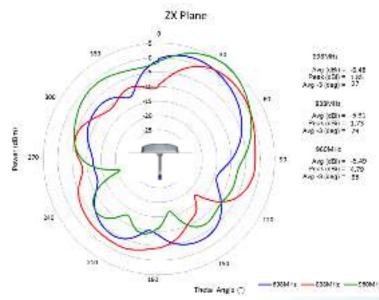
Adhesive Mount

PART NUMBER: ARMXXXXXAM

CHARTS



LTE1 ZX plane radiation pattern



LTE2 ZX plane radiation patterninary

Issue: 1804P



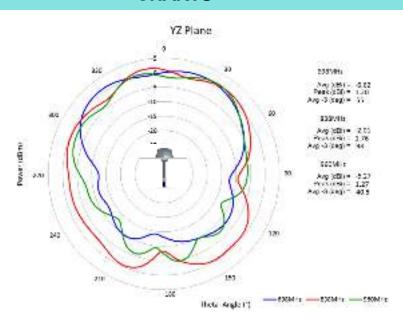
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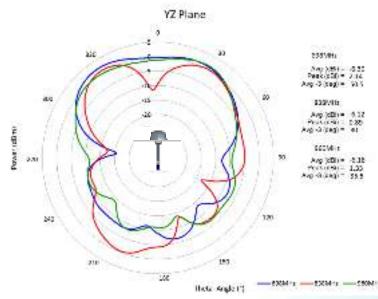
Adhesive Mount

PART NUMBER: ARMXXXXXAM

CHARTS



LTE1 YZ plane radiation pattern



LTE2 YZ plane radiation patternimary

Issue: 1804P



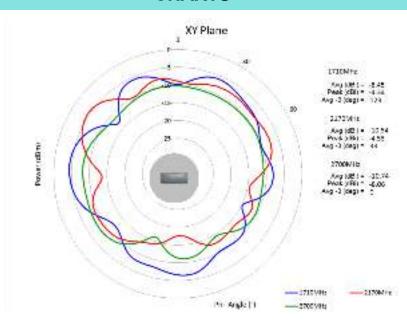
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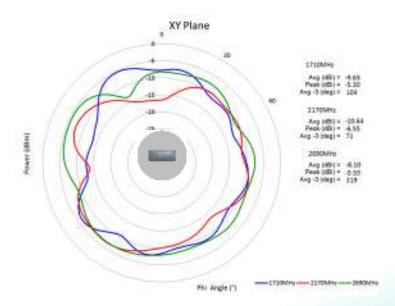
Adhesive Mount

PART NUMBER: ARMXXXXXAM

CHARTS



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LTE2 XY plane radiation patterninary

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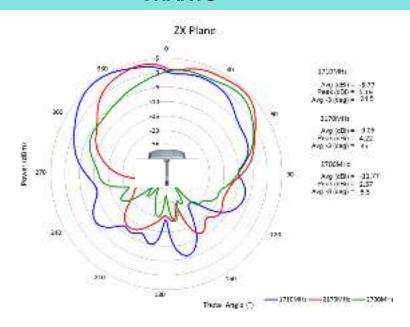
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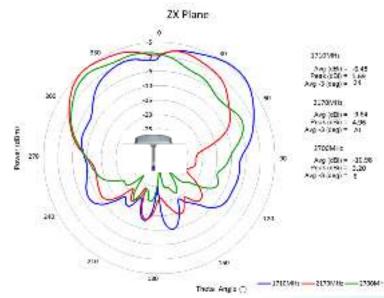
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CHARTS



LTE1 ZX plane radiation pattern



LTE2 ZX plane radiation patterninary

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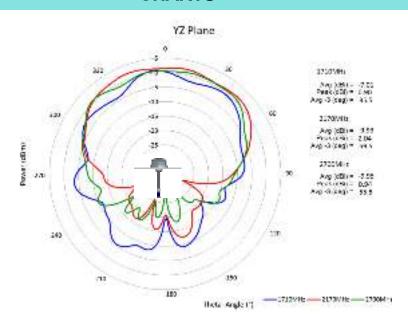
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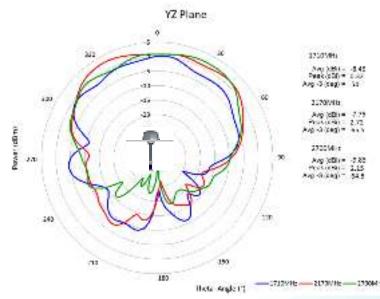
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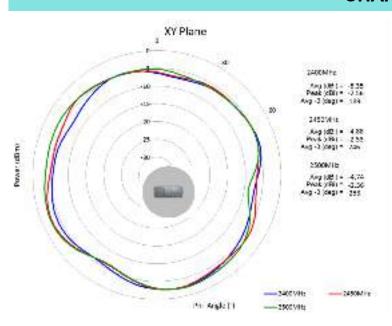
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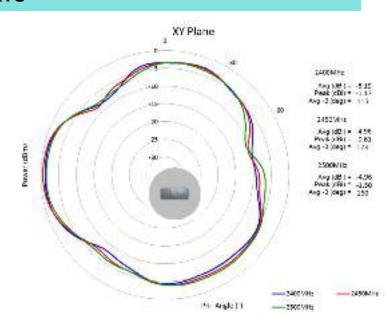
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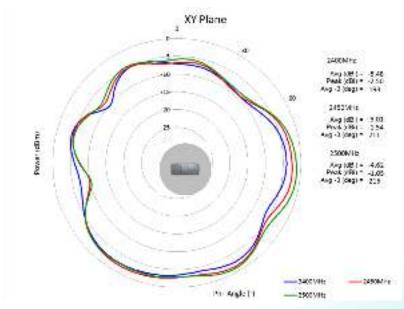
CHARTS





WiFi1 XY plane radiation pattern

WiFi2 XY plane radiation pattern



WiFi3 XY plane radiation pattern

Issue: 1804P



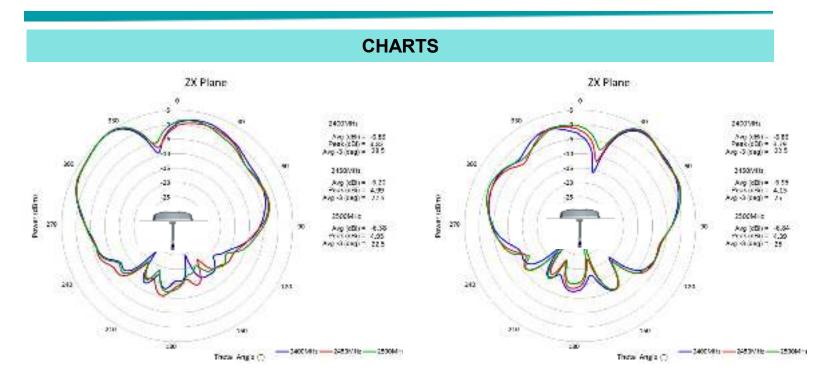


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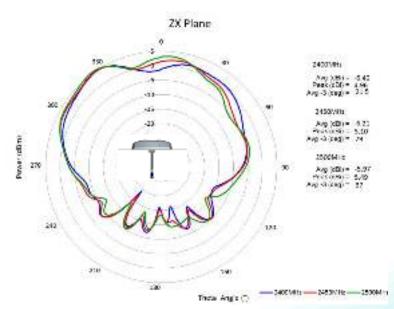
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WiFi1 ZX plane radiation pattern

WiFi2 ZX plane radiation pattern



WiFi3 ZX plane radiation pattern minary

Issue: 1804P



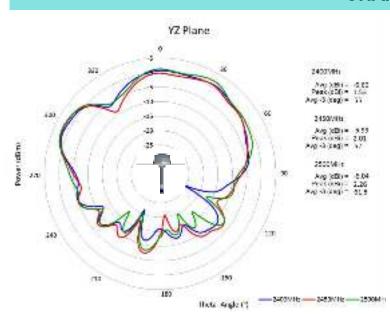
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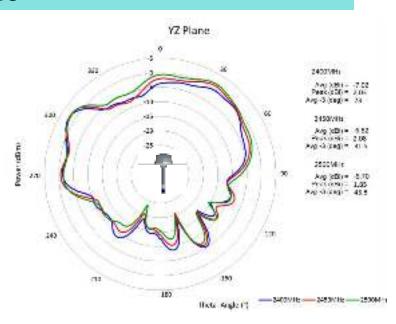
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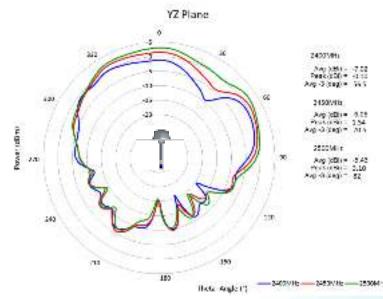
CHARTS





WiFi1 YZ plane radiation pattern

WiFi2 YZ plane radiation pattern



WiFi3 YZ plane radiation pattern minary

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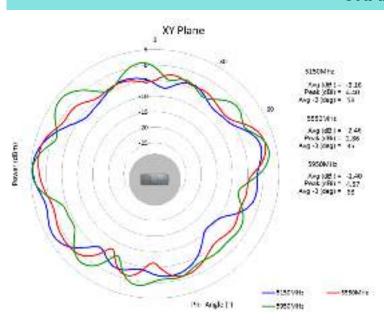
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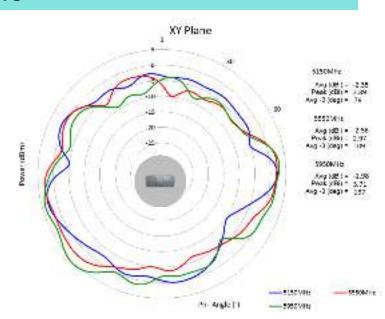
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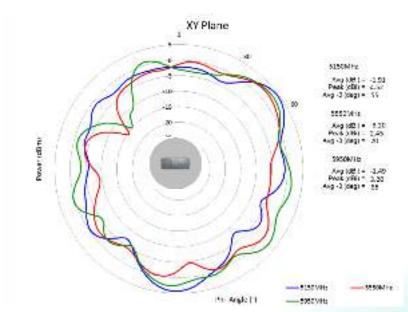
CHARTS





WiFi1 XY plane radiation pattern

WiFi2 XY plane radiation pattern



WiFi3 XY plane radiation patternminal

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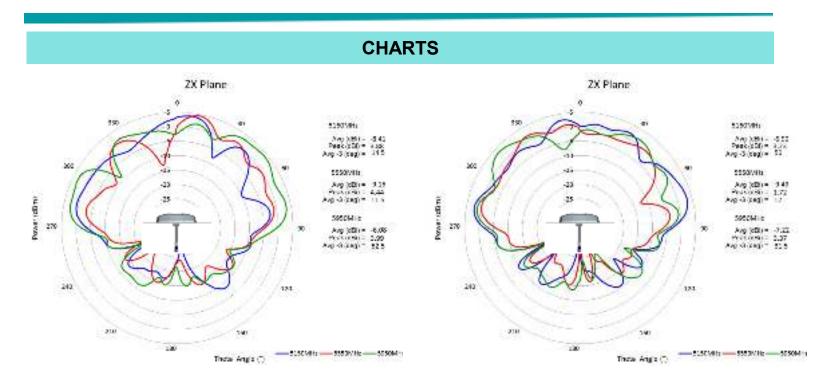


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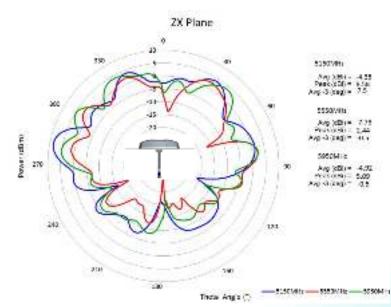
Adhesive Mount

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WiFi1 ZX plane radiation pattern

WiFi2 ZX plane radiation pattern



WiFi3 ZX plane radiation pattern minary

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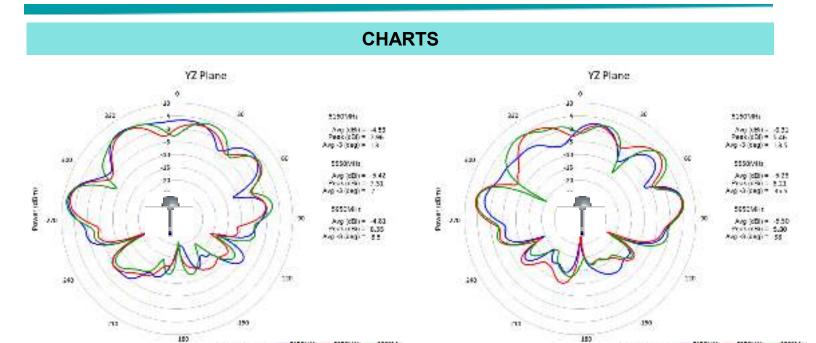


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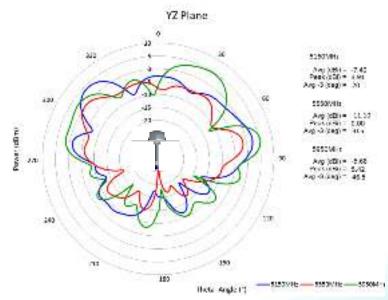
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WiFi1 YZ plane radiation pattern

Theta Angle 11

WiFi2 YZ plane radiation pattern



WiFi3 YZ plane radiation pattern minary

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PACKAGING

Each antennas packed in Bubble Bag

6 bags of antennas (Total 6pcs) packed in a cardboard box

1 label on each box with quantity, part number, date code.

Preliminary