

TECHNICAL DATA SHEET

Description: Vehicular Multiband Antenna with

Magnetic Mount

PART NUMBER: ARMXXXXXMM



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
 - Magnetic mount
 - For direct mount seep/N: ARMXXXXXDM



Issue: 1842

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

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This document covers all product variants of the following product family

Product	Total Cable Leads	LTE Cable Leads	WiFi Cable Leads	GPS Cable Leads	Housing Color	Mounting
ARM62311MM	6	2	3	1	Black	Magnetic Mount; Pull force: 100N, 22lbf min. (Tested on 3mm thick steel plate.)
ARM62312MM	6	2	3	1	wille	
ARM52211MM	5	2	2	1	Black	
ARM52212MM	5	2	2	1	White	
ARM42111MM	4	2	1	1	Black	
ARM42112MM	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
0	Total Number of WiFi Cable Leads
0	Total Number of GPS Cable Leads
•	The Color of the Plastic Housing 1=Black; 2= White
(Mounting: Magnetic Mount

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

^{*} or equivalent



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RóHS



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Description: Vehicular Multiband Antenna with

6.3dBi

Vertical

Magnetic Mount

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ELECTRICAL SPECIFICATIONS				
Frequency	698-960MHz, 1710-2690MHz			
	2400-2500MHz, 5150-5925MHz			
Nominal Impedance	$50~\Omega$			
VSWR*				
698-960MHz	<2.5			
1710-2690MHz	<2.5			
2400-2500MHz	<2.5			
5150-5925MHz	<2.5			
Isolation*				
698-960MHz, 1710-2690MHz	-8dB			
2400-2500MHz, 5150-5925MHz	-12dB			
Radiation Pattern	Omni			
Average Peak Gain**				
698-960MHz	4.6dBi			
1710-2690MHz	5dBi			
2400-2500MHz	4.1dBi			

5150-5925MHz

Polarization

^{*}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 1.1 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



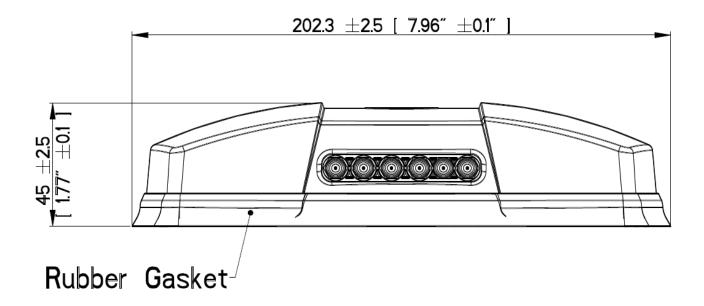
TECHNICAL DATA SHEET

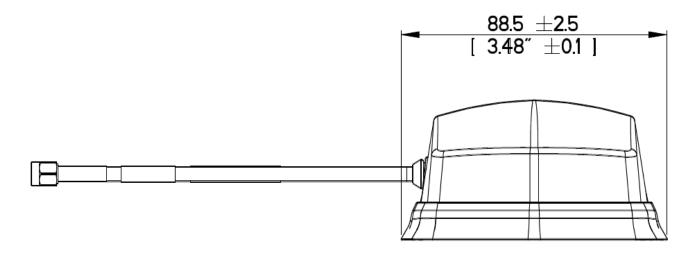
Description: Vehicular Multiband Antenna with

Magnetic Mount

PART NUMBER: ARMXXXXXMM

MECHANICAL DRAWING







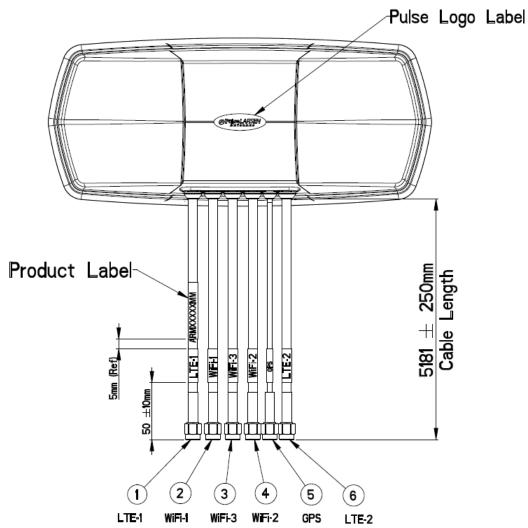
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MECHANICAL DRAWING



	ARMXXXXXMM	CABLE	CABLE LENGTH	CONNECTOR
1	LTE-1 Cable Assy		5181 mm / 204" /	SMA Male
2	WiFi-1 Cable Assy	LMR-195 *		RP-SMA Male
3	WiFi-3 Cable Assy	LIVIR-193		RP-SMA Male
4	WiFi-2 Cable Assy			RP-SMA Male
5	GPS Cable Assy	LMR-100 *	17 FT	SMA Male
6	LTE-2 Cable Assy	LMR-195 *		SMA Male

Issue: 1: * or equivale

KOHS



TECHNICAL DATA SHEET

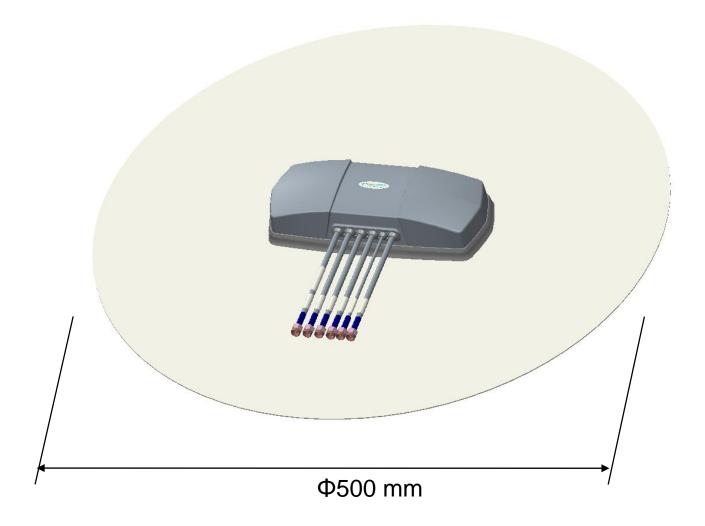
Description: Vehicular Multiband Antenna with

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PART NUMBER: ARMXXXXXMM

TEST SETUP

Antenna tested on a Φ500mm ground plane.









TECHNICAL DATA SHEET

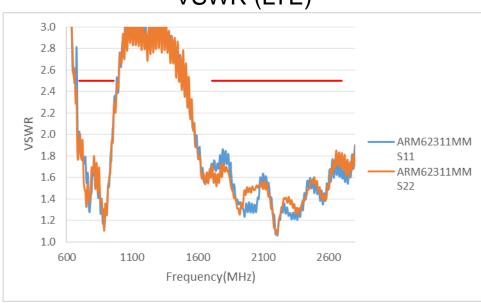
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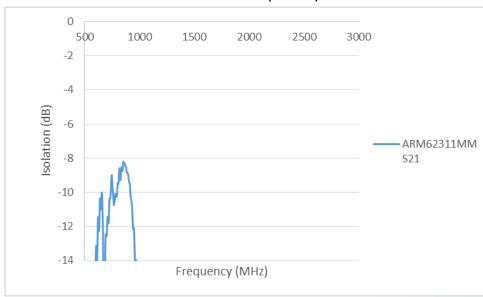
PART NUMBER: ARMXXXXXMM

CHARTS

VSWR (LTE)



Isolation (LTE)



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





TECHNICAL DATA SHEET

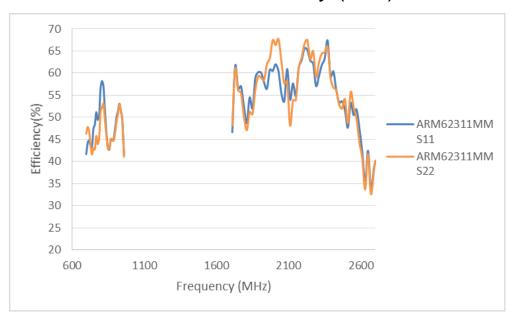
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Magnetic Mount

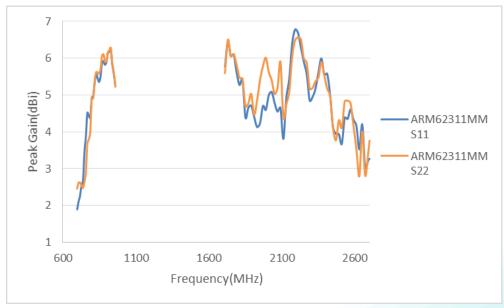
PART NUMBER: ARMXXXXXMM

CHARTS

Radiation Efficiency (LTE)



Peak Gain (LTE)



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

Issue: 1842

ROHS



TECHNICAL DATA SHEET

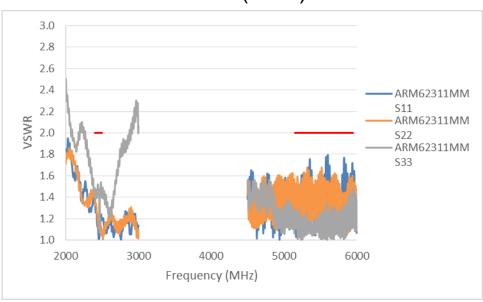
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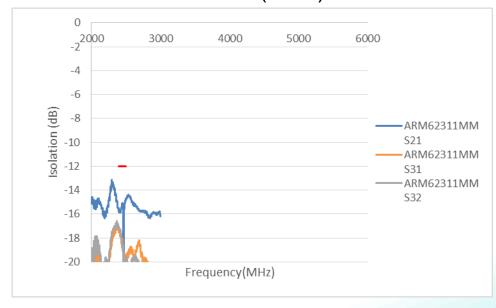
PART NUMBER: ARMXXXXXMM

CHARTS

VSWR (WIFI)



Isolation (WIFI)



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

Issue: 1842



TECHNICAL DATA SHEET

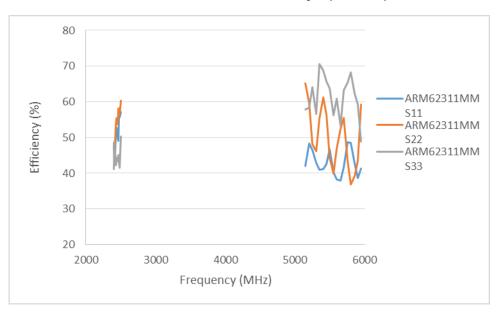
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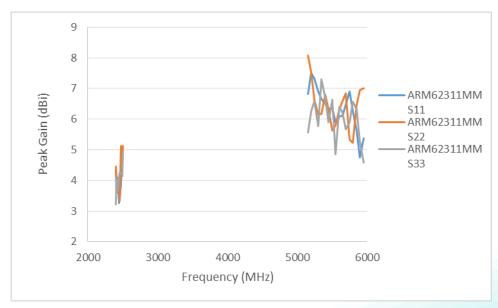
PART NUMBER: ARMXXXXXMM

CHARTS

Radiation Efficiency (WIFI)



Peak Gain (WIFI)



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



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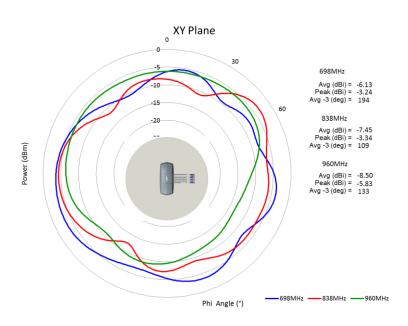
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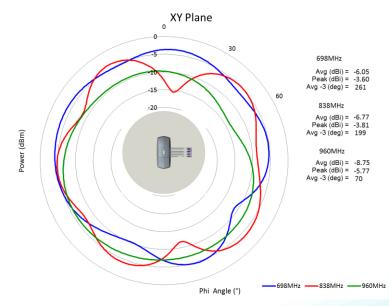
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 XY plane radiation pattern



LTE2 XY plane radiation pattern



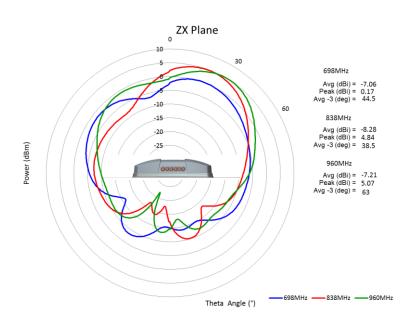
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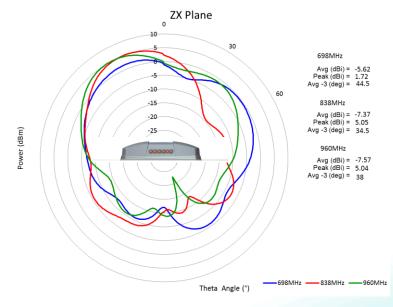
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 ZX plane radiation pattern



LTE2 ZX plane radiation pattern





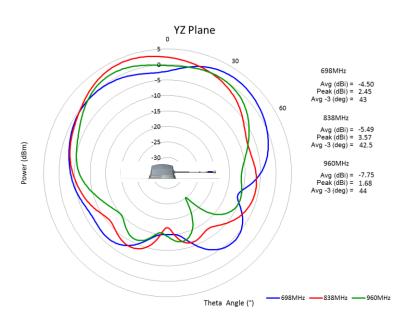
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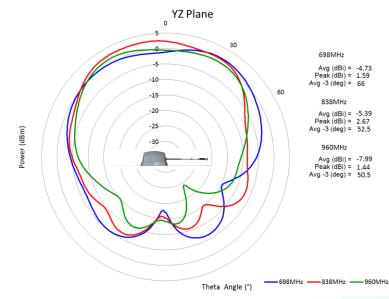
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 YZ plane radiation pattern



LTE2 YZ plane radiation pattern



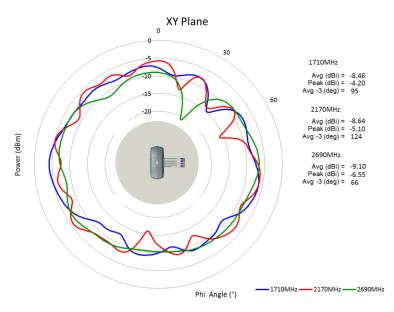
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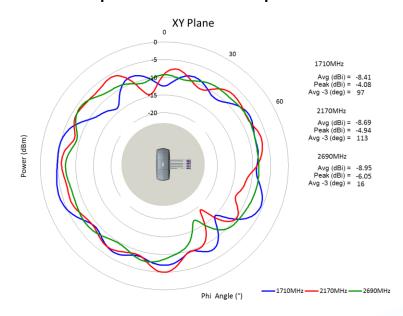
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 XY plane radiation pattern



LTE2 XY plane radiation pattern



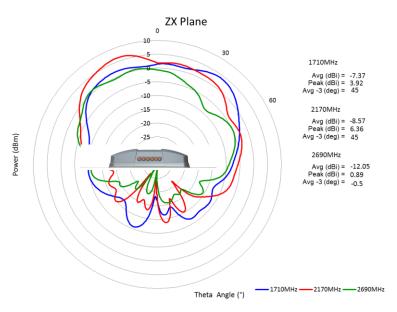
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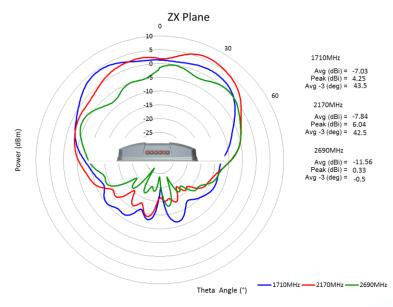
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 ZX plane radiation pattern



LTE2 ZX plane radiation pattern



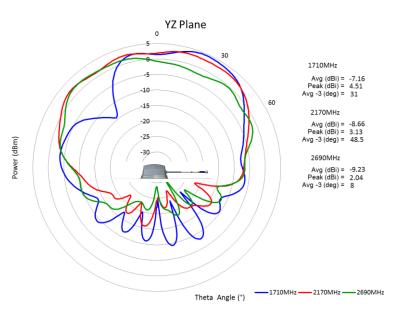
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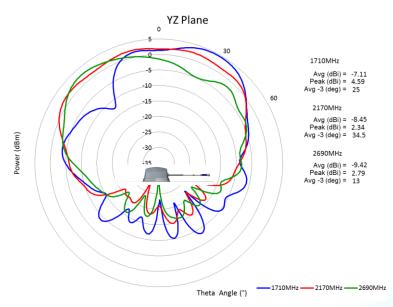
Magnetic Mount

PART NUMBER: ARMXXXXXMM

CHARTS



LTE1 YZ plane radiation pattern



LTE2 YZ plane radiation pattern





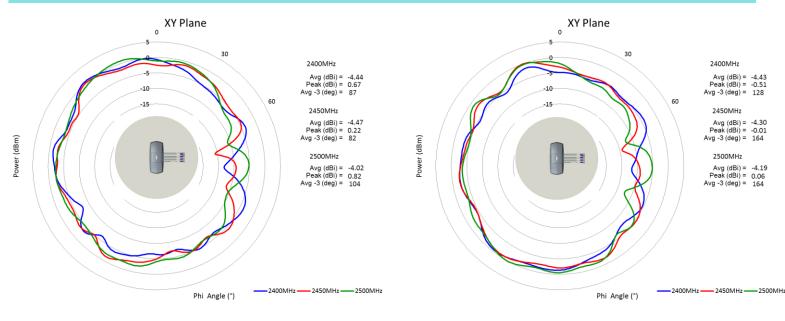
TECHNICAL DATA SHEET

Description: Vehicular Multiband Antenna with

Magnetic Mount

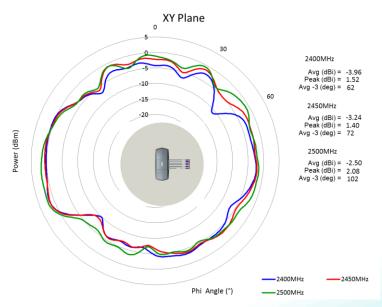
PART NUMBER: ARMXXXXXMM





WiFi1 XY plane radiation pattern

WiFi2 XY plane radiation pattern



WiFi3 XY plane radiation pattern





2400MHz

2450MHz

2500MHz

Avg (dBi) = -4.43 Peak (dBi) = -0.51 Avg -3 (deg) = 128

Avg (dBi) = -4.30 Peak (dBi) = -0.01 Avg -3 (deg) = 164

Avg (dBi) = -4.19 Peak (dBi) = 0.06 Avg -3 (deg) = 164

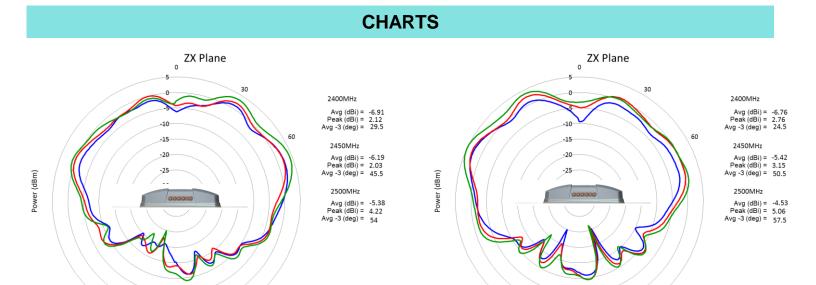


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Magnetic Mount

PART NUMBER: ARMXXXXXMM



WiFi1 ZX plane radiation pattern

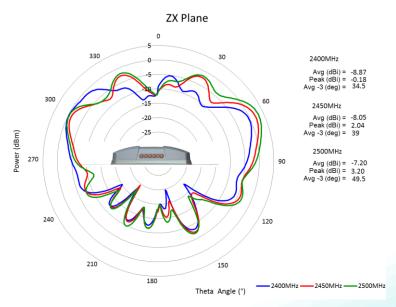
Theta Angle (°)

2400MHz

-2450MHz --- 2500MH:

WiFi2 ZX plane radiation pattern

Theta Angle (°)



WiFi3 ZX plane radiation pattern





2400MHz -

-2450MHz --- 2500MH:



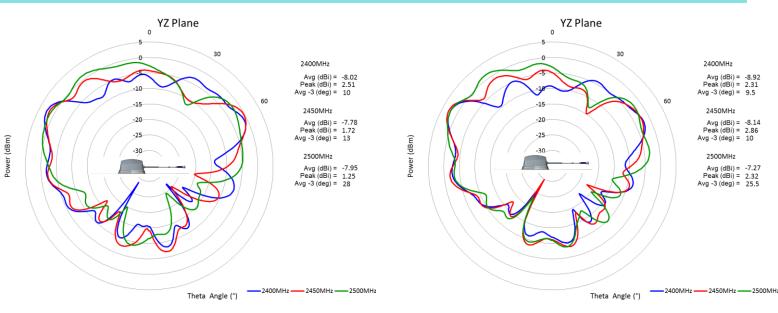
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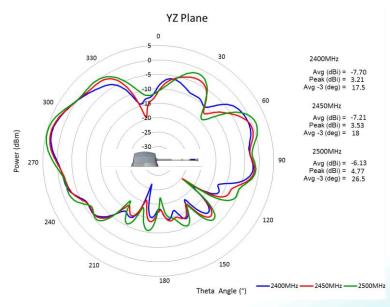
PART NUMBER: ARMXXXXXMM





WiFi1 YZ plane radiation pattern

WiFi2 YZ plane radiation pattern



WiFi3 YZ plane radiation pattern







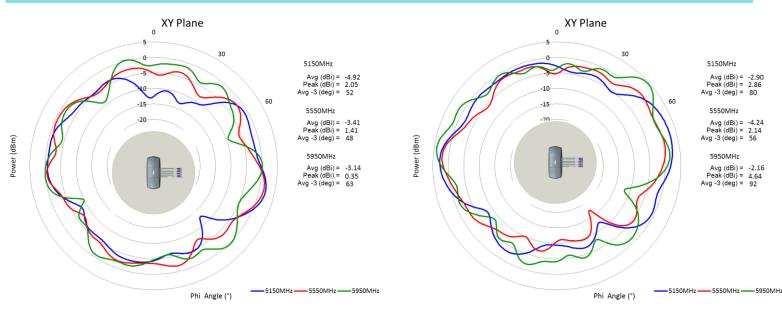
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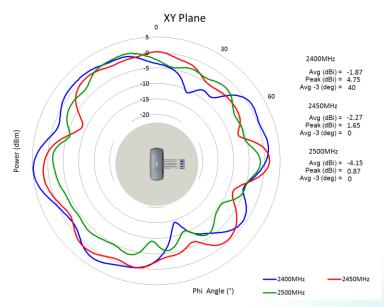
PART NUMBER: ARMXXXXXMM





WiFi1 XY plane radiation pattern

WiFi2 XY plane radiation pattern



WiFi3 XY plane radiation pattern

5150MHz

5550MHz

5950MHz

Avg (dBi) = -2.90 Peak (dBi) = 2.86 Avg -3 (deg) = 80

Avg (dBi) = -4.24 Peak (dBi) = 2.14 Avg -3 (deg) = 56

Avg (dBi) = -2.16 Peak (dBi) = 4.64 Avg -3 (deg) = 92

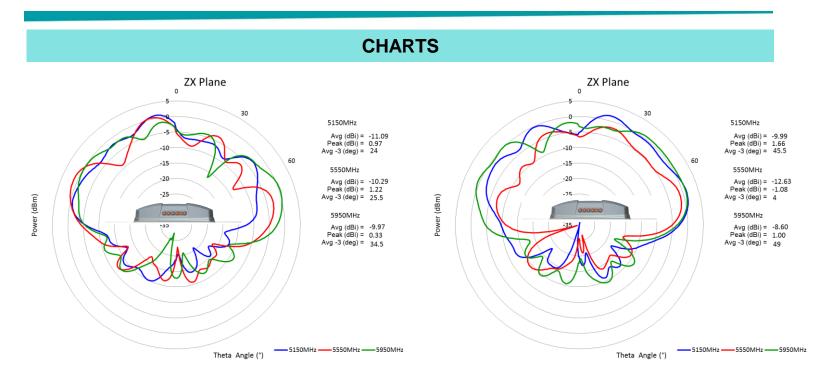


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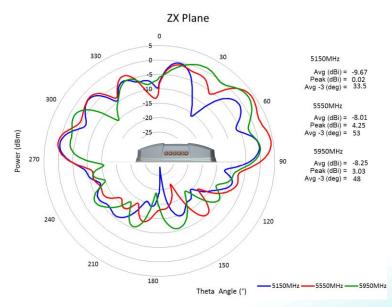
Magnetic Mount

PART NUMBER: ARMXXXXXMM



WiFi1 ZX plane radiation pattern

WiFi2 ZX plane radiation pattern



WiFi3 ZX plane radiation pattern







TECHNICAL DATA SHEET

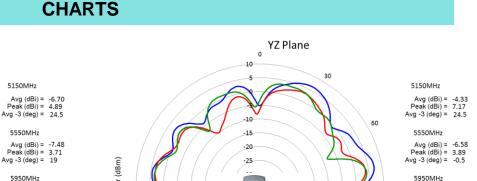
Description: Vehicular Multiband Antenna with

Magnetic Mount

Avg (dBi) = -7.08 Peak (dBi) = 4.51 Avg -3 (deg) = 19

5150MHz - 5550MHz - 5950MHz

PART NUMBER: ARMXXXXXMM



5950MHz Avg (dBi) = -5.87 Peak (dBi) = 4.20 Avg -3 (deg) = 0.5

- 5550MHz -

-5950MHz

5150MHz -

Theta Angle (°)

WiFi1 YZ plane radiation pattern

Theta Angle (°)

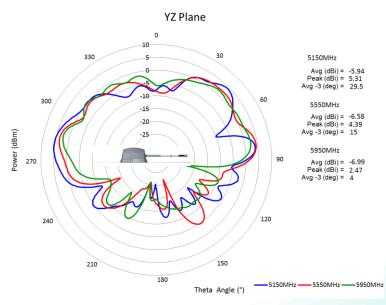
YZ Plane

-25

-30

ower (dBm)

WiFi2 YZ plane radiation pattern



WiFi3 YZ plane radiation pattern



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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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов:
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001:
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина,

дом 2, корпус 4, литера А.