

# LPWA: 915 MHz Board Antenna

**ABR3407I9**

Request Samples



Check Inventory



34 x 7 x 0.8 mm

RoHS/RoHS II Compliant

MSL Level = 1

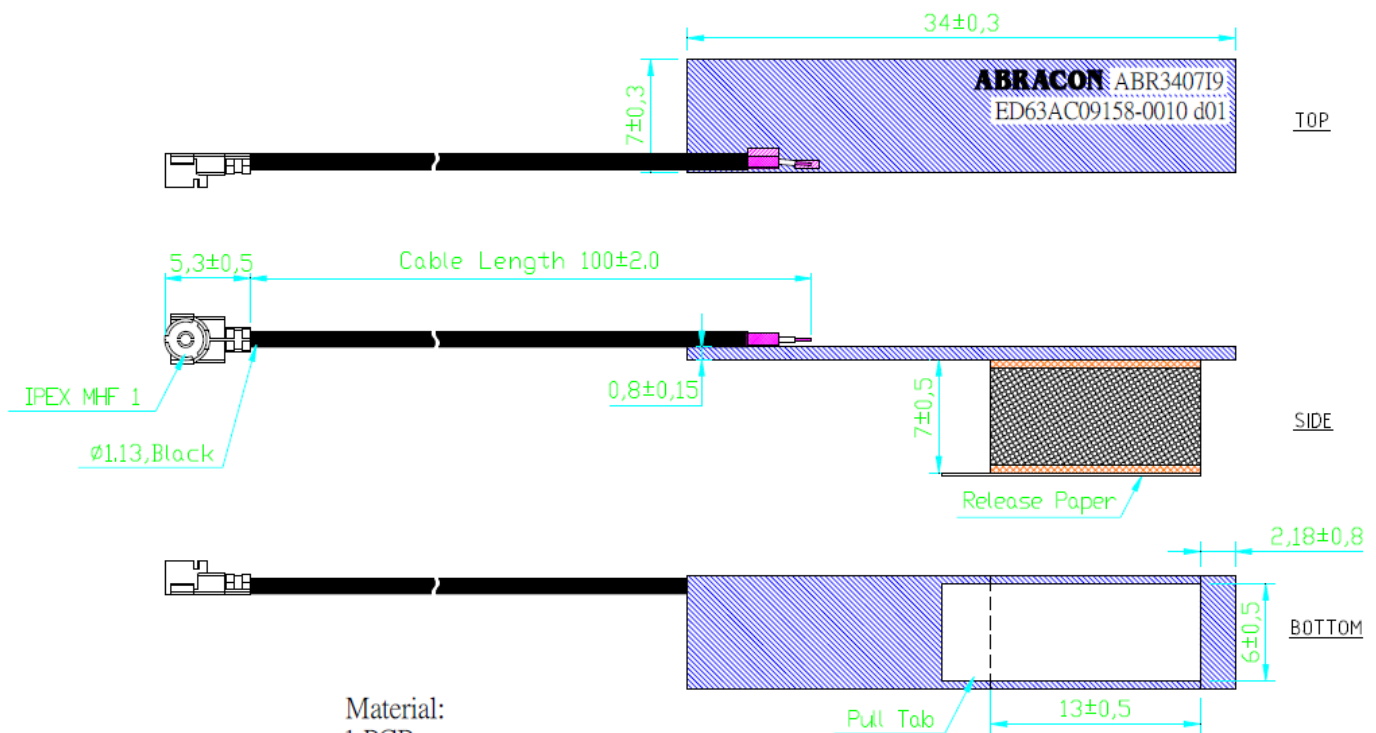
## Features

- Low Profile PCB Antenna
- Compact Design
- Peak Gain of 1.84 dBi
- Linear Polarization
- Adhesive Mount
- Customizable RF cable ad connector options

## Applications

- LPWA/LoRA/SigFox/ISM Applications
- Remote Technology / Monitoring
- Network Devices
- Smart Home
- Consumer Tracking

## Product Dimensions



Material:

1.PCB:

FR-4 Thickness=0.8mm

2.Double Sided Adhesive+Foam:

3M 9472+CR4305

3.IPEX MHF 1  $\phi$  1.13 Coaxial Cable:

PBT - Copper Alloy

Cover Area

Plating Area

Adhesive Area

Unit: mm



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## Part Number Builder

ABR3407I9 -

Cable length in 'mm'	
Cable length supported : Ø1.13 mm (50 mm to 500 mm)	
Code	Description
0100 (Standard)	100 mm
Other Examples :	
0050	50 mm
0200	200 mm

Cable Type & Connector Type		
Code	Cable Type	Connector Type
S (Standard)	Ø1.13 mm	IPEX-1 (F)
A		IPEX-4 (F)
B		MMCX (F)
C		MMCX (M)
D		MCX (F)
E		MCX (M)
F		SMA (F)
G		SMA (M)
H		RP-SMA (F)
I		RP-SMA (M)
J		SMB (F)
K		SMB (M)
L		FAKRA-D (F)

### Example Configurations:

Part Number	Cable length	Cable Type / Connector Type
ABR3407I9-0100S	0100 mm	Ø1.13 mm with IPEX-1 (F) (Standard)
ABR3407I9-0050A	0050 mm	Ø1.13 mm with IPEX-4 (F)

### Note:

- For the standard part number (ABR3407I9-0100S), please refer to the packaging at the end of the document.
- For custom configurations (ABR3407I9-     ), MOQs, pricing and packaging changes may be applicable.

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## Electrical Specification

Parameter	Specification			Unit
	Min	Typ	Max	
Operating Frequency	902		928	MHz
Return Loss			-12	dB
Peak gain			1.84	dBi
Impedance		50		$\Omega$
Polarization		Linear		

## Mechanical Specification

Parameter	Specification
Antenna Dimensions	34 x 7 x 0.8 mm
Antenna Type	PCB
Mounting Type	Adhesive
RF Connector	IPEX MHF 1
RF Cable Type	$\text{\O}1.13$ mm
Cable Length	110 mm

## Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	Up to 95%
ROHS Complaint	Yes
PB Free	No
MSL Level	1

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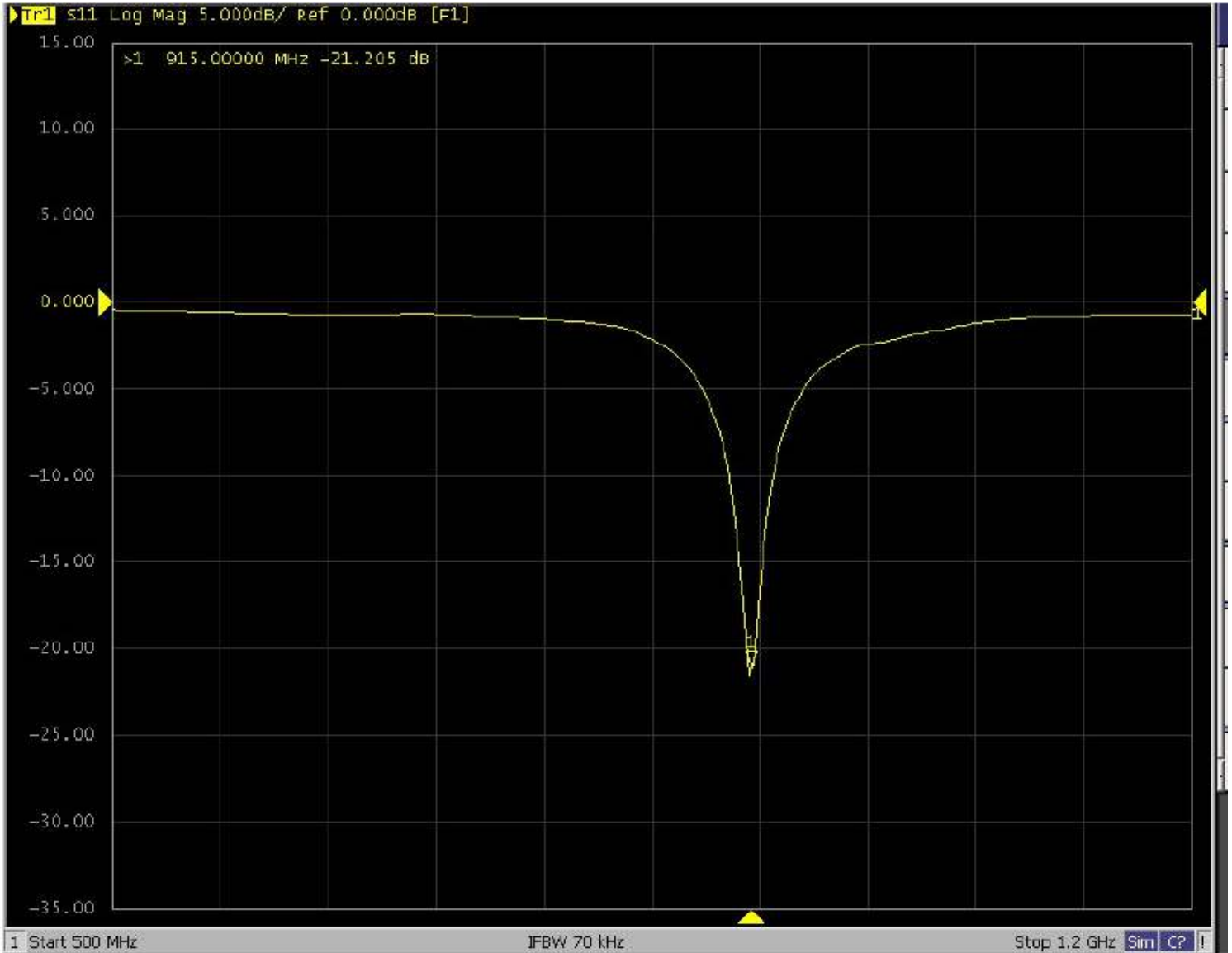


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## Frequency Response Chart



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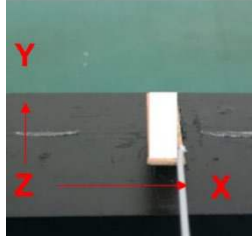


34 x 7 x 0.8 mm

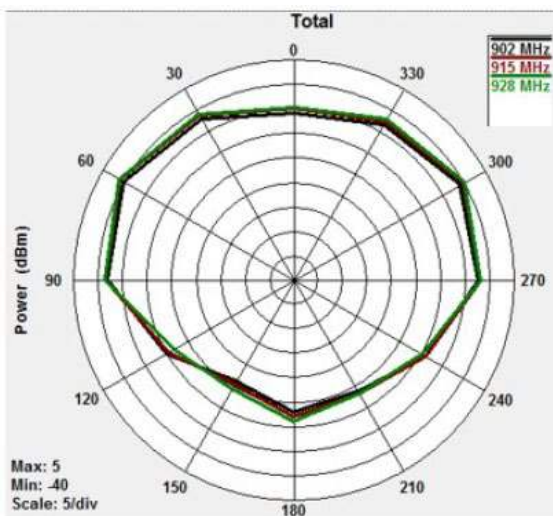
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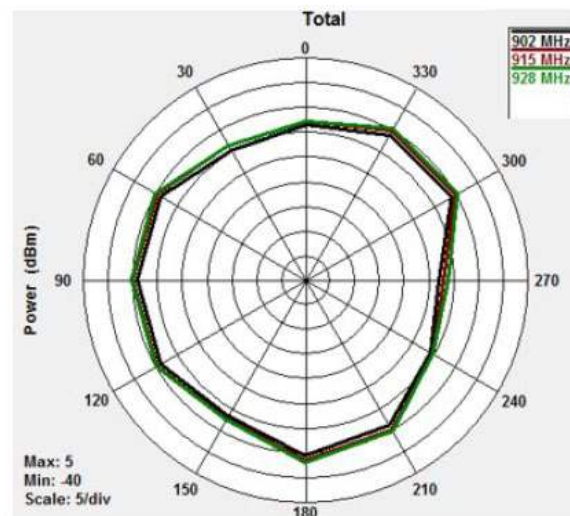
## Radiation Characteristics



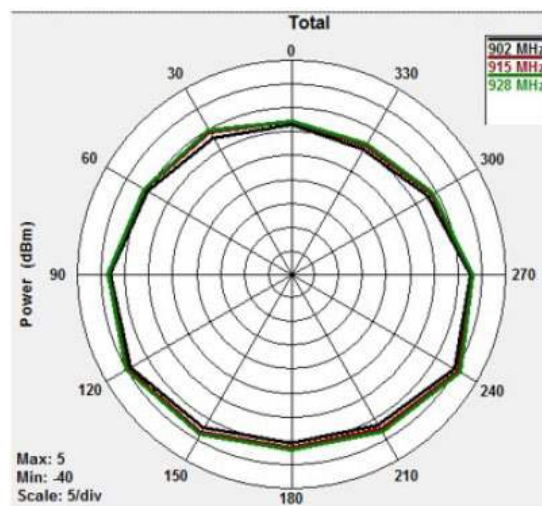
### 2D Patterns



XY-Plane



XZ-Plane



YZ-Plane

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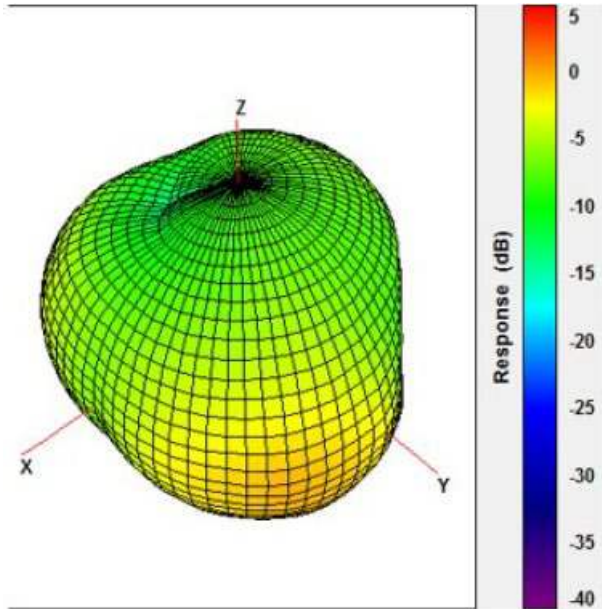


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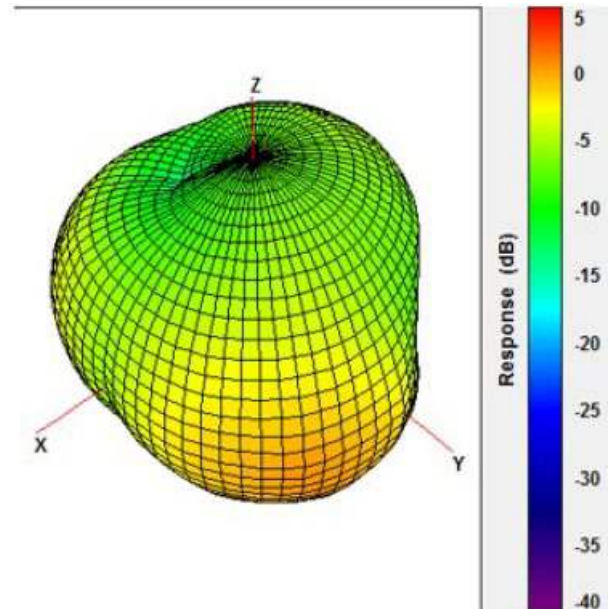
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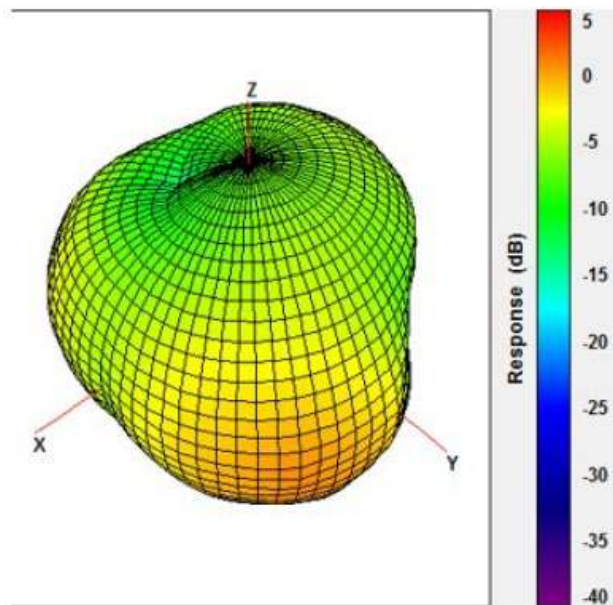
## 3D Patterns



902MHz



915MHz



928MHz

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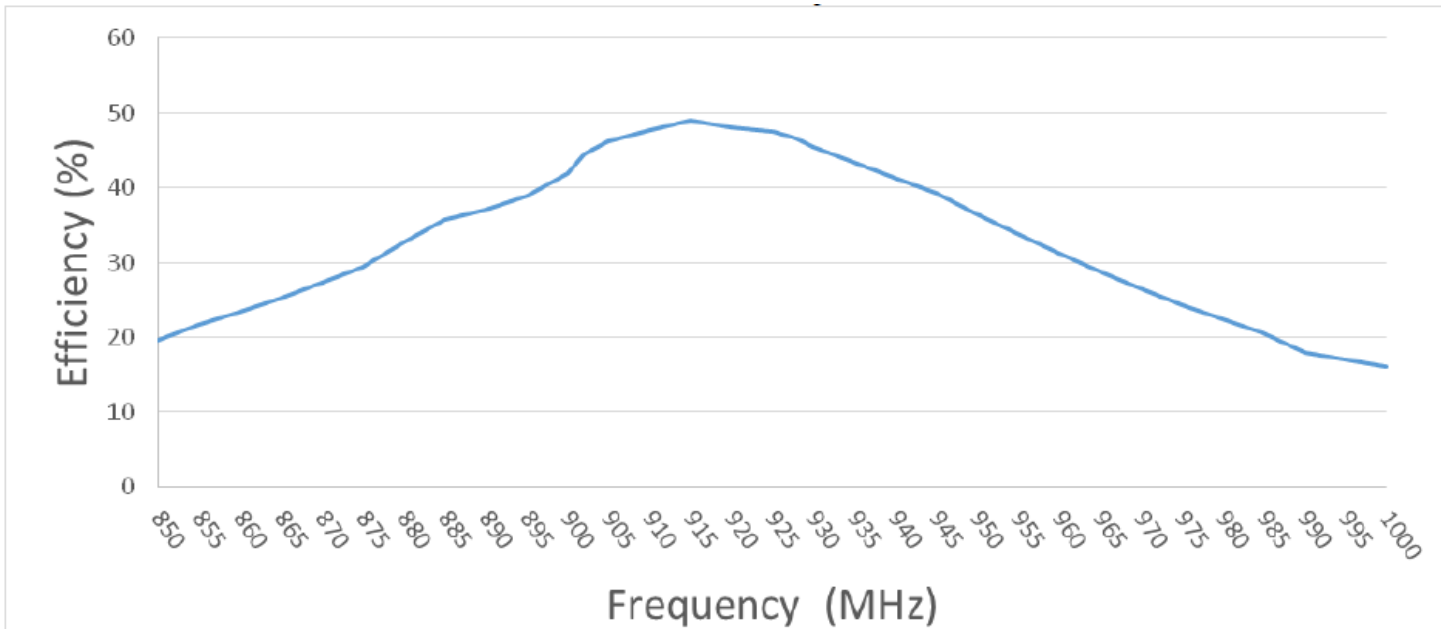
34 x 7 x 0.8 mm

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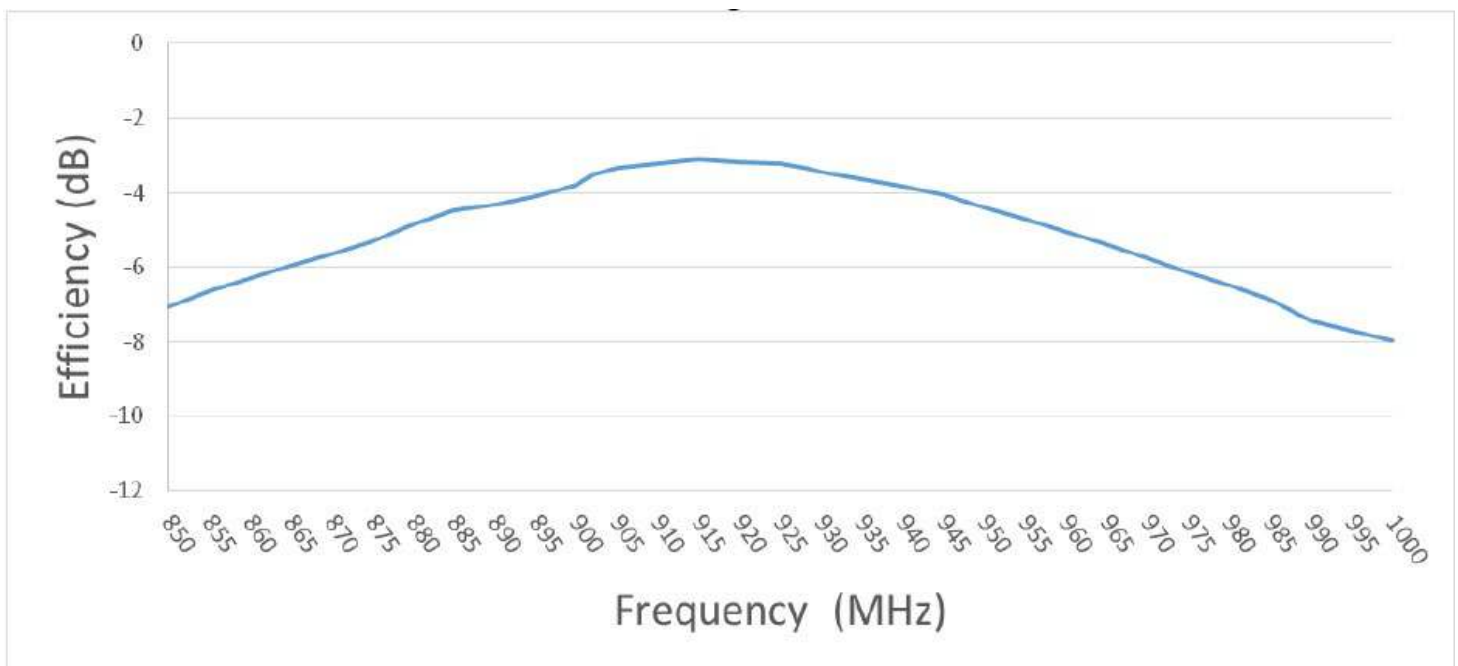
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## Gain and Efficiency

### Efficiency



### Average Gain



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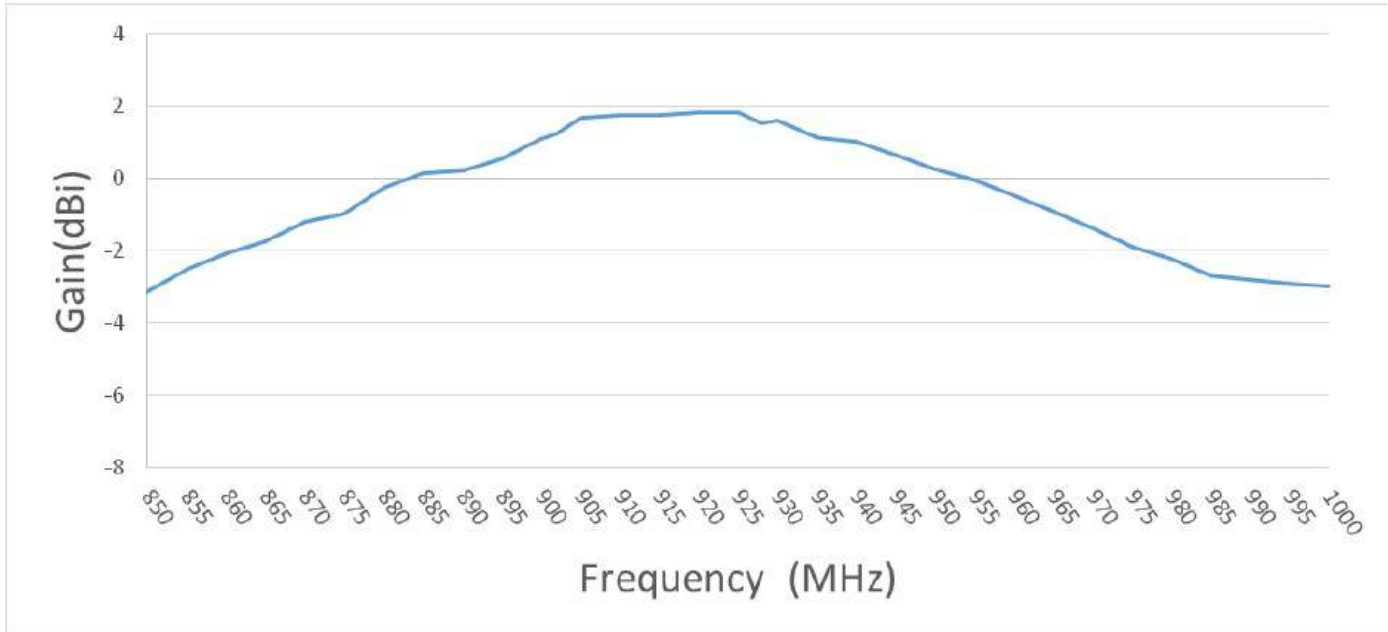


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## Peak Gain



Frequency (MHz)	850	860	870	880	890	900	910	920	930	940	950	960	969
Efficiency (%)	19.69	23.46	27.28	32.67	36.98	41.96	47.96	48.06	45.44	41.43	36.46	31.18	26.54
Average Gain (dB)	-7.06	-6.3	-5.64	-4.86	-4.32	-3.77	-3.22	-3.18	-3.43	-3.83	-4.3	-5.06	-5.76
Peak Gain (dBi)	-3.13	-2.09	-1.2	-0.24	0.24	1.08	1.75	1.84	1.6	1.02	0.25	-0.48	-1.38

## Packaging Information

Number of Antenna/ Carton: 1600 pcs

Dimension of the Carton: 330 x 280 x 254 mm

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