

LPWA: 868 MHz Board Antenna

ABR3407I8

Request Samples



Check Inventory



34 x 7 x 0.8 mm

RoHS/RoHS II Compliant

MSL Level = 1

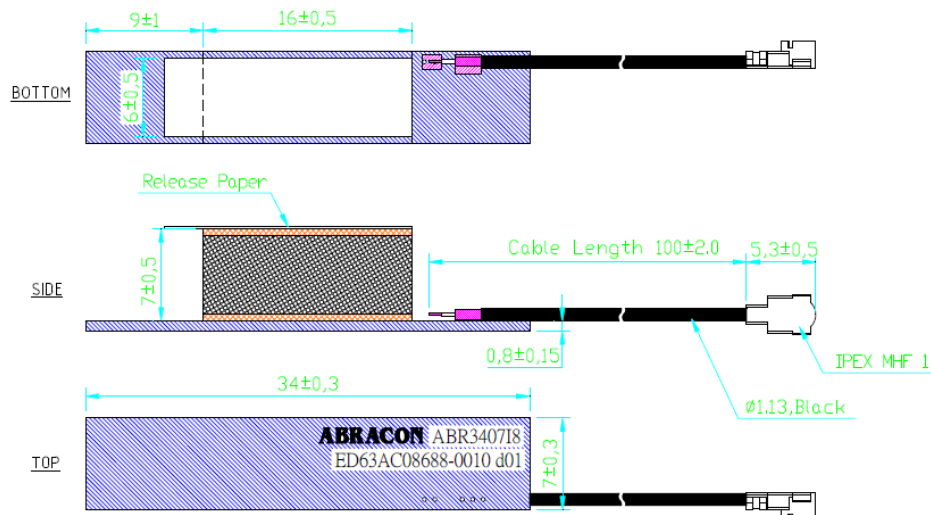
Features

- Low Profile PCB
- Compact Design
- Double Sided Foam
- Peak Gain of 1.28 dBi
- Linear Polarization
- Adhesive Mount
- Customizable RF cable and connector options

Applications

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

Product Dimensions



- Cover Area
- Plating Area
- Adhesive Area

Material:

1.PCB:

FR-4 Thickness=0.8mm

2.Double Sided Adhesive+Foam:

3M 9472+CR4305

3.IPEX MHF 1 ϕ 1.13 Coaxial Cable:

PBT · Copper Alloy

Unit: mm



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Part Number Builder

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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
ABR3407I8-0100S	0100 mm	Ø1.13 mm with IPEX-1 (F) (Standard)
ABR3407I8-0050A	0050 mm	Ø1.13 mm with IPEX-4 (F)

Note:

- For the standard part number (ABR3407I8-0100S), please refer to the packaging at the end of the document.
- For custom configurations (ABR3407I8-), MOQs, pricing and packaging changes may be applicable.



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Electrical Specification

Parameter	Specification			Unit
	Min	Typ	Max	
Operating Frequency	868		870	MHz
Return loss			-21.66	dB
Peak gain		1.28		dBi
Impedance		50		Ω
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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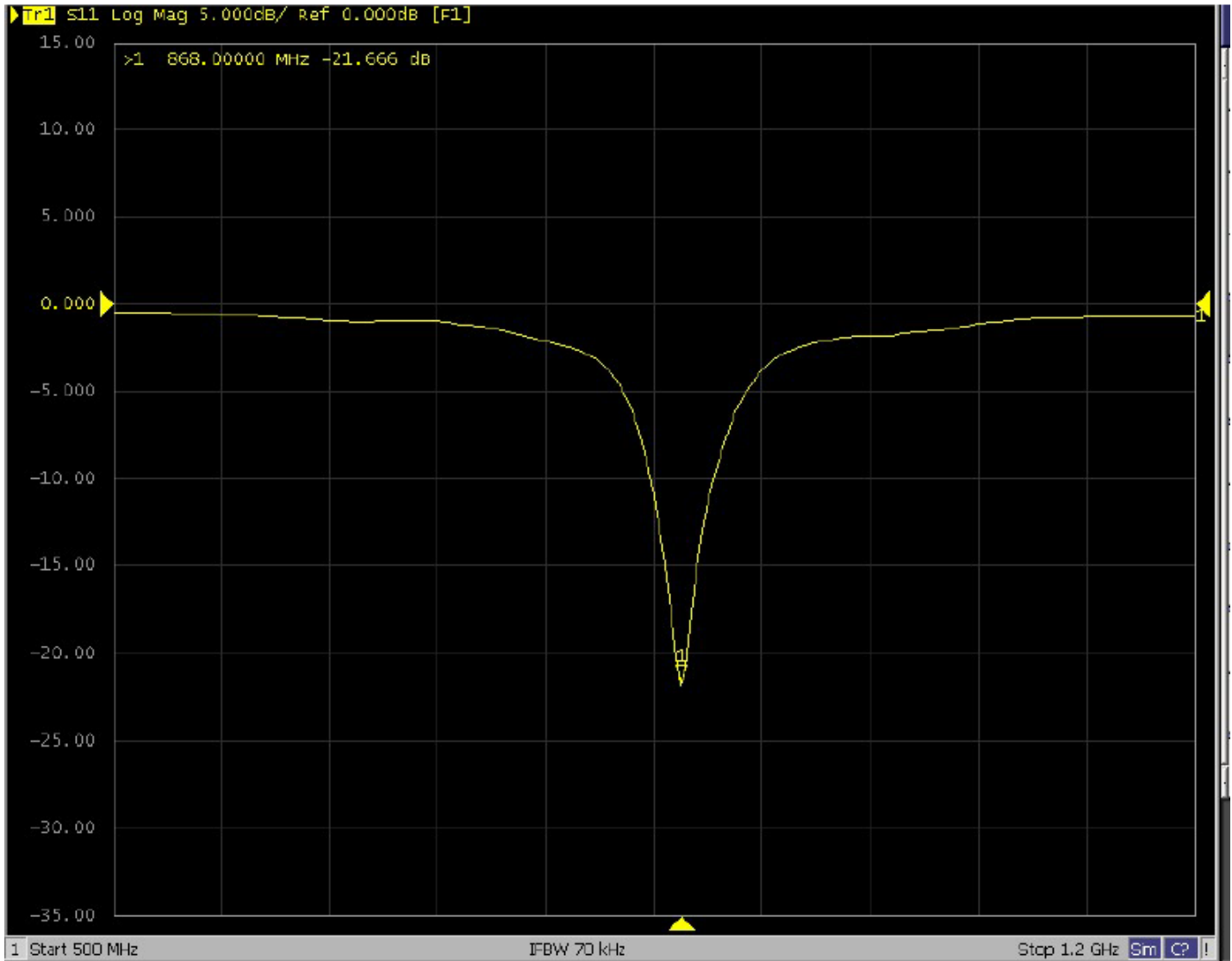


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Frequency Response Chart



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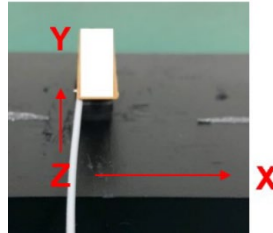


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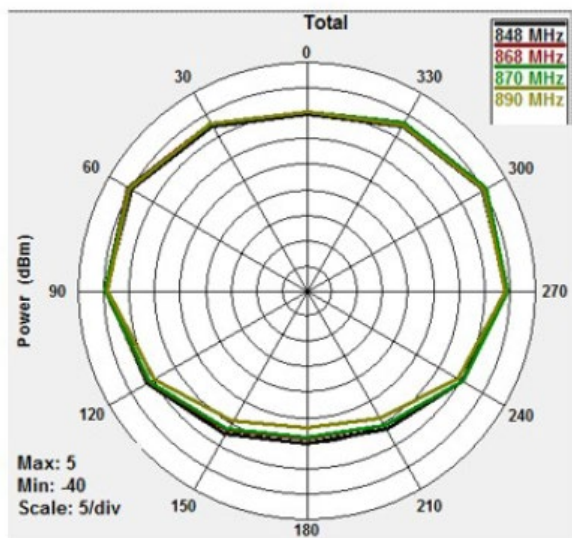
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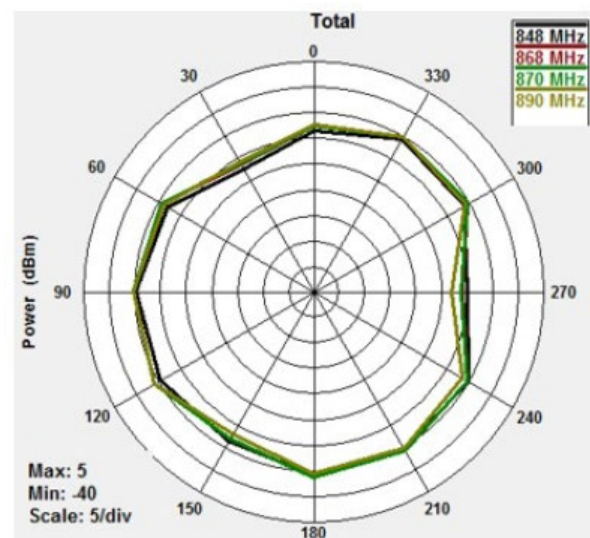
Radiation Characteristics



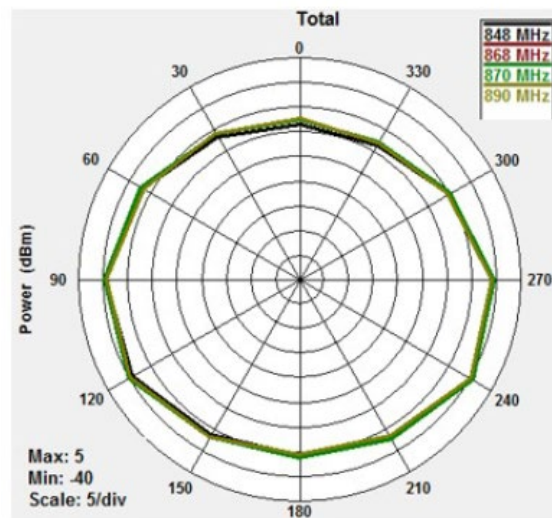
2D Patterns



XY-Plane



XZ-Plane



YZ-Plane

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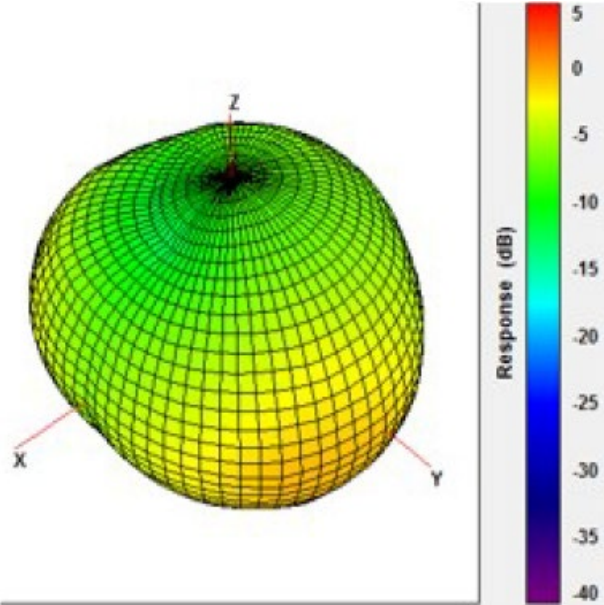


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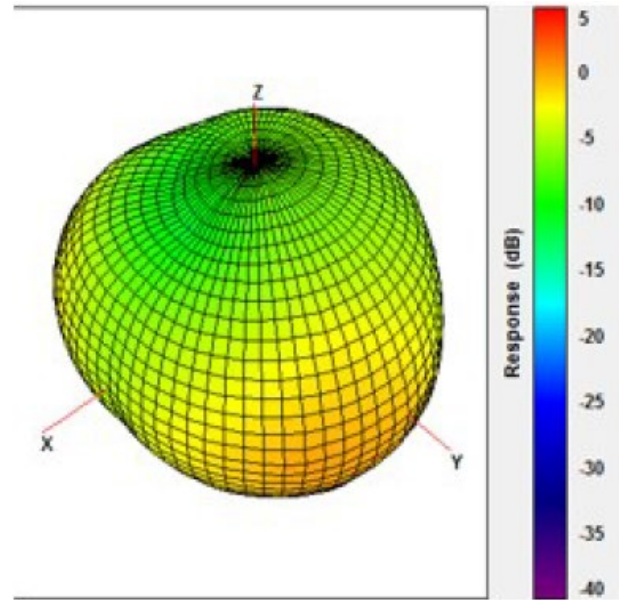
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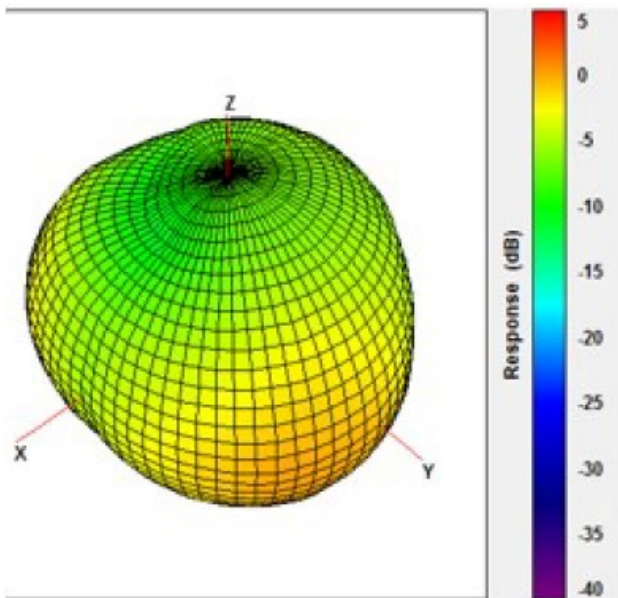
3D Patterns



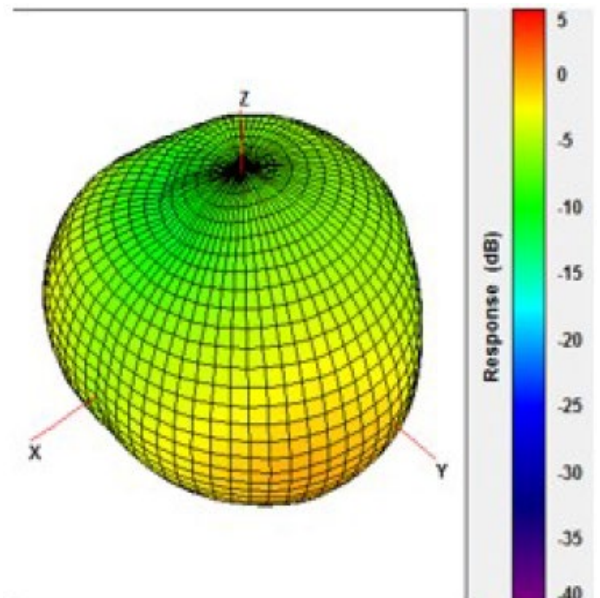
848MHz



868MHz



870MHz



890MHz

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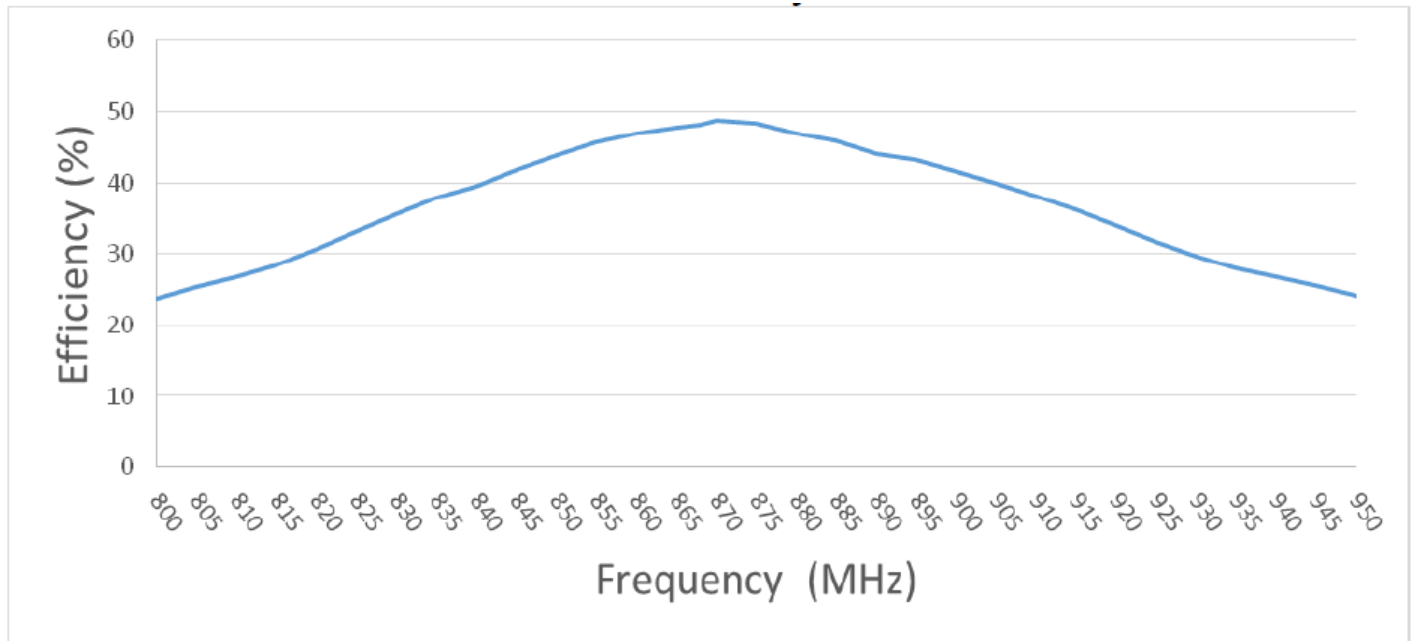
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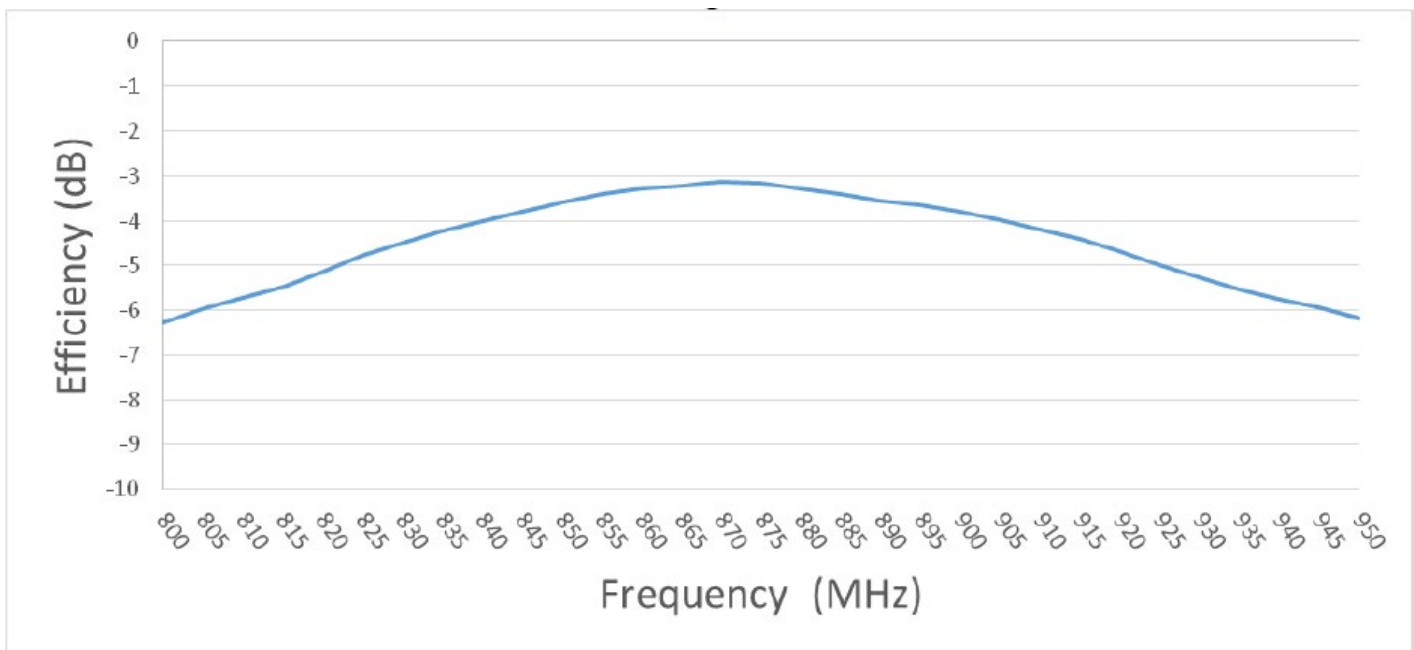
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Gain and Efficiency

Efficiency



Average Gain



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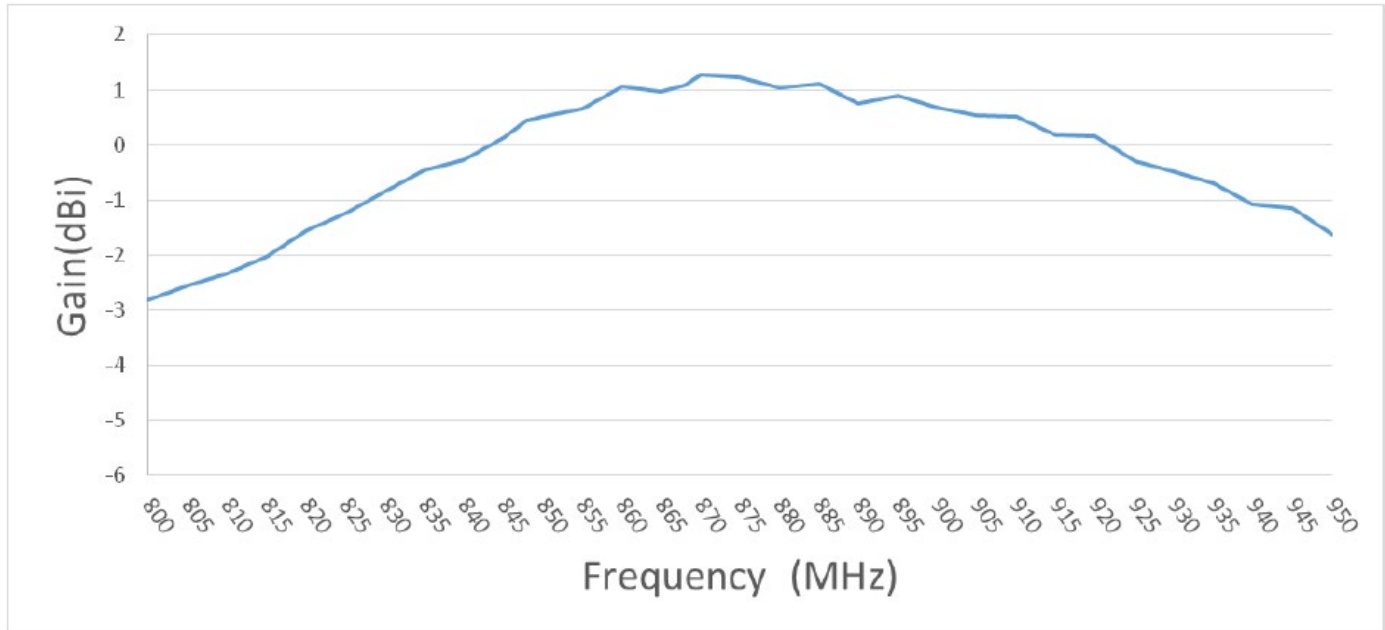


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Peak Gain



Frequency (MHz)	800	810	820	830	840	850	860	868	870	880	890	900
Efficiency (%)	23.59	26.77	30.64	35.53	39.59	43.79	46.97	48.22	48.74	47.01	44.13	41.6
Average Gain (dB)	-6.27	-5.72	-5.14	-4.49	-4.02	-3.59	-3.28	-3.17	-3.12	-3.28	-3.55	-3.81
Peak Gain (dBi)	-2.81	-2.35	-1.55	-0.84	-0.27	0.52	1.06	1.09	1.28	1.03	0.75	0.69

Packaging Information

Number of Antenna/ Carton: 1600 pcs

Dimension of the Carton: 330 x 280 x 254 mm

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