62.0 x 7.0 x 0.5 (mm) ISM PCB Antenna W462D1

Engineering Specification

1. Explanation of Product Number

H	2	B	1	S	F	1	A	2	H	0	1	0	0
				(1)	(2)		(3)	(4)		(5)			

Product Code:

(1) Product Applications:

S: polymer substrate antenna

(2) Dimensions:

F1: 62 x 7.0 x 0.5(mm)

(3) Material:

A: GF

(4) Working Frequencies

2H: 433 MHz

(5) Antenna Series:

01: serial number

(Connector(MHF I)+Cable(ϕ 1.13mm,Gray),L=100mm)

Prepared by : Xenia	Designed by :Sam	Checked by : Chinling	Approved by : Herbert

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2. Features

*Stable and reliable in performances
*Compact size
*RoHS compliance

3. Applications

*ISM 433 band
*Smart meters
*Wireless alarm and security system
*Industrial monitoring and control
*IOT applications
*LPD433

4. Description

Unictron's W462D0 FPCB antenna is designed for ISM 433 MHz band applications, covering frequencies 433.05 ~ 434.79 MHz. Fabricated with proprietary design and processes.

5. Electrical Specifications

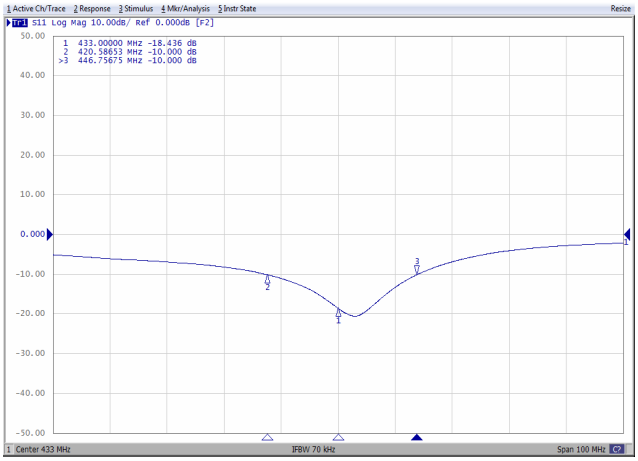
(Antenna is attached on a 2.0mm-thick ABS + PC material plate)

5-1. Electrical Table:

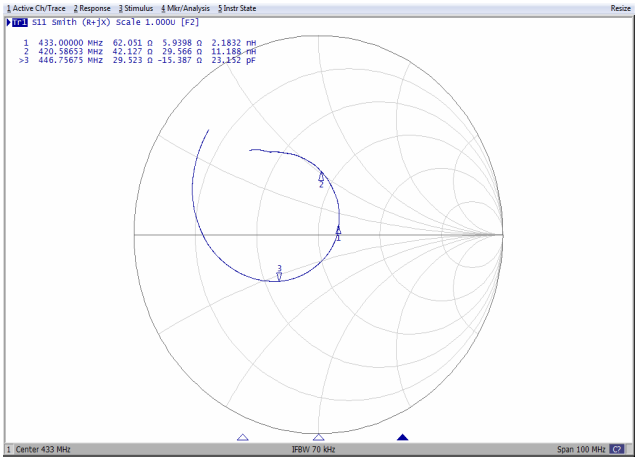
Characteristics		Specifications	Unit
Outline Dimensions		62.0 x 7.0 x 0.5	mm
Working Frequency		433	MHz
VSWR		2 Max. (typical).	
Characteristic Impedance		50	Ω
Polarization		Linear Polarization	
Peak Gain	(@ 433 MHz)	-0.9 (typical).	dBi
Efficiency		35.1 (typical).	%

5-2. Return Loss & Smith Chart

Return Loss



Smith Chart



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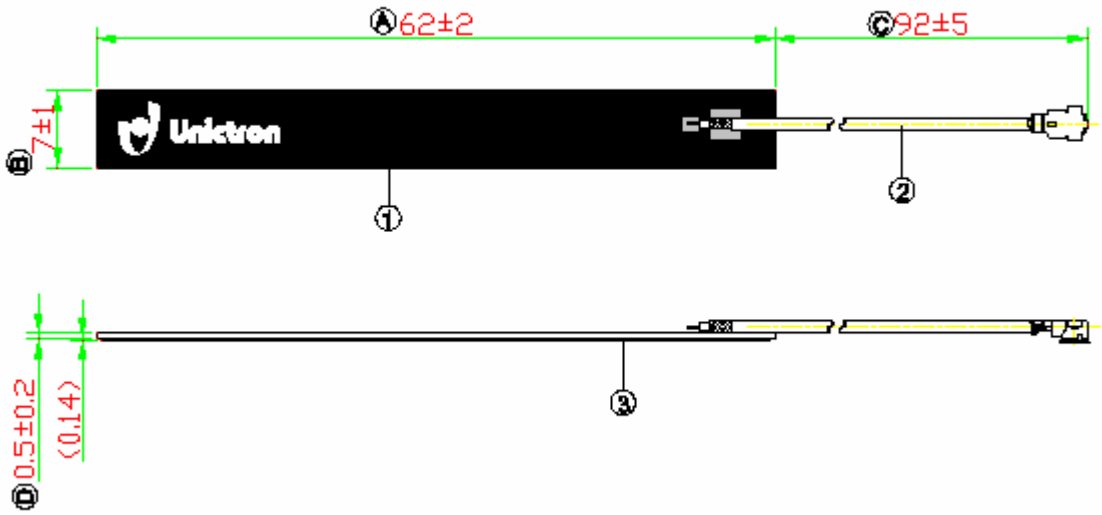
6. Dimensions of antenna with cable (unit: mm)



NOTE:
1.All materials are RoHS compliant.
2."Ⓐ~Ⓓ" Critical Dimensions.
3."( )" Reference Dimensions.

Item	Name	Material	Color	Q'ty
1	PCB	FR4	Black	1
2	I-PEX Connector (MHF I)_Cable Φ1.13mm	FEP	Gray	1
3	Adhesive Tape			1

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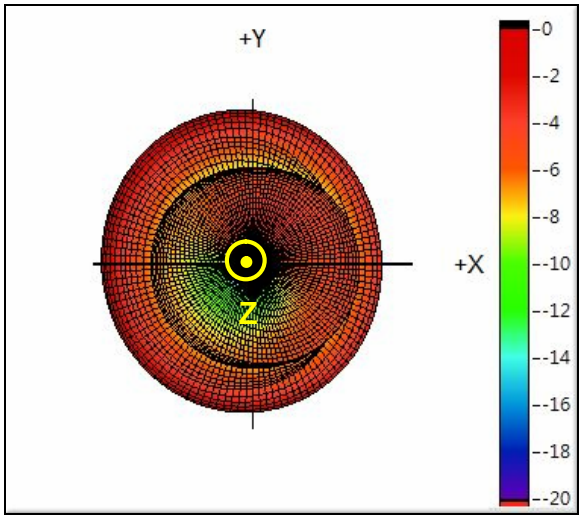
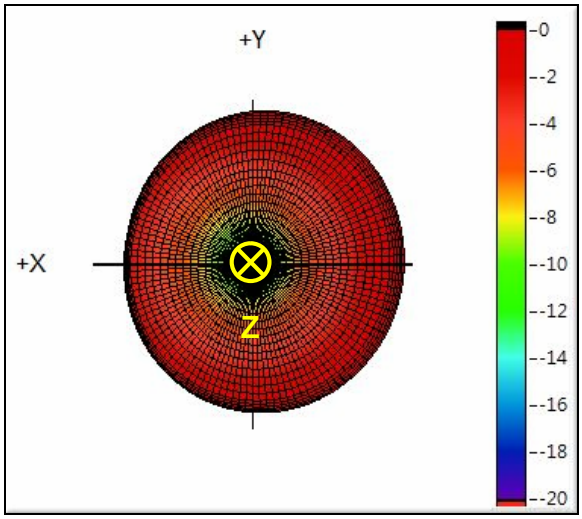
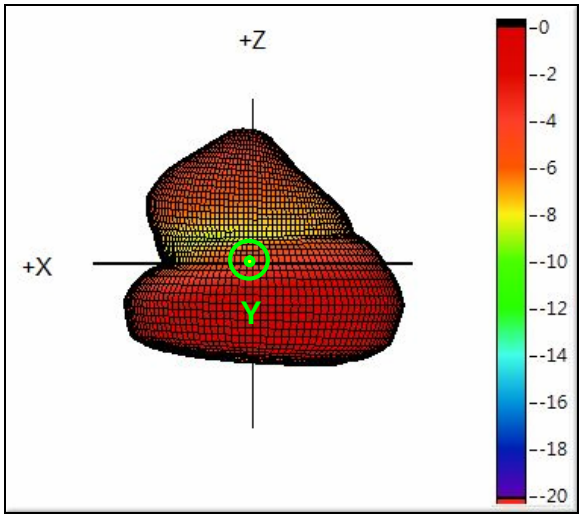
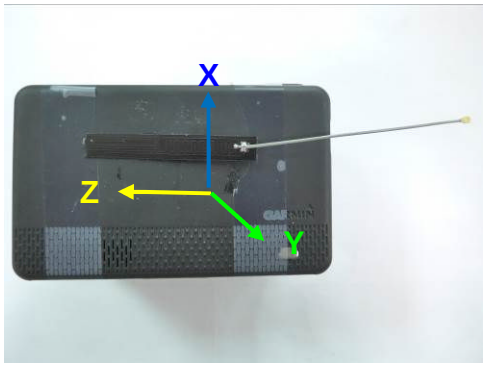
7. Radiation Pattern

7-1. 3D Gain Pattern (Radiation Pattern @ 433 MHz)









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7-2. 3D Efficiency Table

Frequency(MHz)	428	429	430	431	432	433	434	435	436	437	438
Efficiency(dB)	-4.6	-4.4	-4.3	-4.4	-4.5	-4.6	-4.5	-4.4	-4.4	-4.6	-4.8
Efficiency(%)	35.0	36.7	37.4	36.6	35.6	35.1	35.7	36.5	36.3	34.9	33.1
Peak Gain(dBi)	-0.9	-0.7	-0.6	-0.7	-0.8	-0.9	-0.9	-0.8	-0.8	-1.0	-1.2

7-3. 3D Efficiency vs. Frequency