

ADDI + kit ANT APPROVAL Sheet

Manufacturer : CREAMO.INC

Address: 903AE, H-1, KIST, 5, Hwarang-Ro 14-Gil, Seongbuk-Gu, Seoul, South Korea

Antenna Model Number: ADDI + kit ANT

IFA was designed to match an impedance of 50 ohm at 2.45 GHz. Thus no additional matching components are necessary.

1. KEYWORDS

PCB antenna

Average Gain 2dBi; Peak Gain 2.3dBi

ADDI + kit ANT

IOT application

2.4 GHz

Inverted F Antenna

2. INTRODUCTION

The PCB antenna described in this application note is now used on ADDI+ kit reference design. However, it can also be used in all 2.4 GHz designs, especially small space is required for the antenna.

This application note describes the antenna dimensions, the RF performance and considerations for complying with regulatory limits when using this design.

The suggested antenna design requires no more than 15.2 x 5.7 mm of space and ensures a VSWR ratio of less than 2 across the 2.4 GHz ISM band when connected to a 50 ohm source.

3. Measuring institution: GYEONGBUK RESEARCH INSTITUTE OF VEHICLE EMBEDDED TECHNOLOGY

Address : 38822 97-70 Myeongsan-gil, Yeongcheon-si, Gyeongsangbuk-do (Nokjeon-dong),
Republic of Korea

Purpose of establishment : Built and operated as an innovation base to support technological innovation of automobile, mechanical, electronic parts and materials companies, one of the four strategic industries in Gyeongsangbuk-do, and to lead the advancement of the structure of the local parts and materials industry

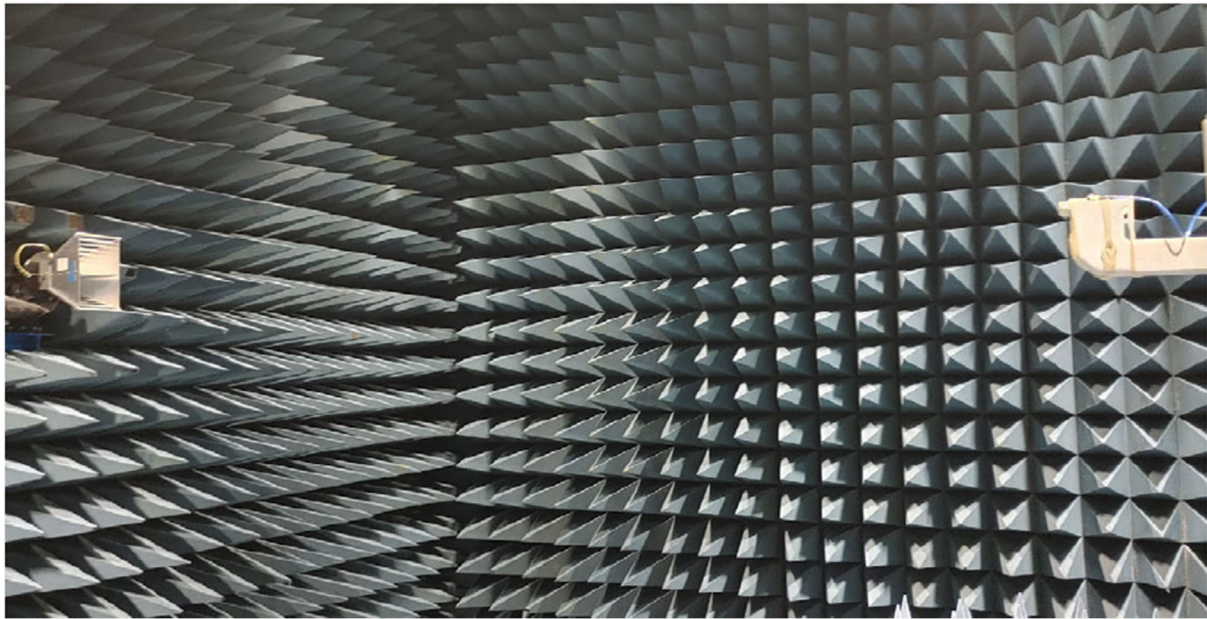
Home : <http://www.givet.re.kr/main.do>(OTA Antenna test center)

4. OTA Chamber (A-Plustech CO.,Ltd)

-Chamber Size & equipment

OTA Chamber (3m), 2G/3G(5515C), LTE (MT8820)C, WLAN (MT8860C), Network Analyzer(ZNB8)

Test item : 2G/3G TRP/TIS : CTIA Rev3.1 (Phantom) WCDMA, CDMA, CDMA2000, 1*EV-DO, GSM/GPRS etc, LTE : FDD TRP/TIS test (SISO) , WLAN test: 802.11b/g/a TRP, TIS , Passive test : antenna Radiation pattern test (700MHz-6GHz) - 2D/3D (Gain, efficiency)

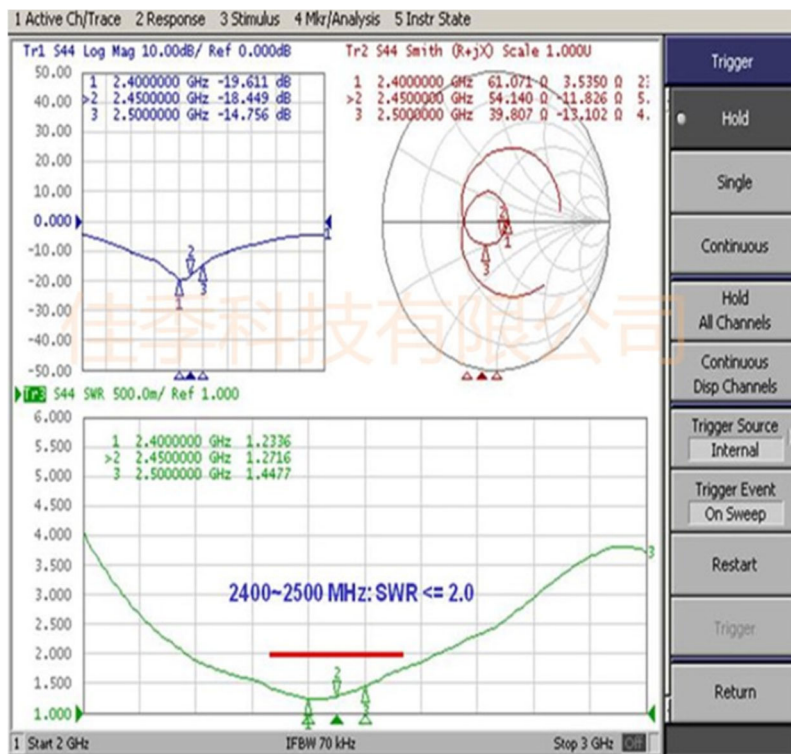


Test Date : 2018. 07. 27

5. Electrical Characteristics

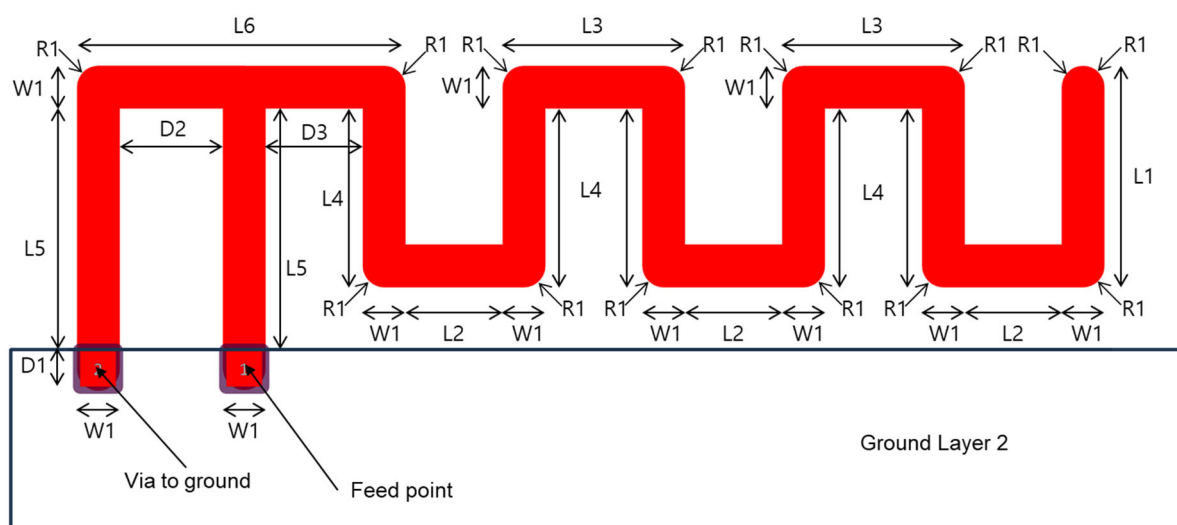
Frequency	2400~2490 MHz
VSWR	Less than 2.0
Impedance	50 Ohm
Polarization	Linear
Antenna type	PCB Pattern ANT(PIFA)
E Plane Average gain	-13.28dBi
H Plane Average gain	-8.79dBi
Operation Temperature	-40°C ~ +65°C
Storage Temperature	-40°C ~ +80°C

6. Return loss, VSWR, passive data

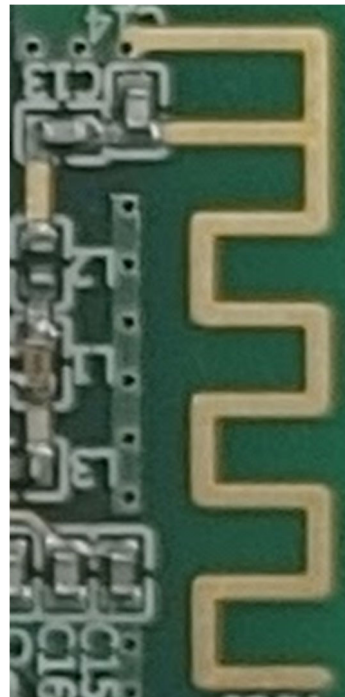
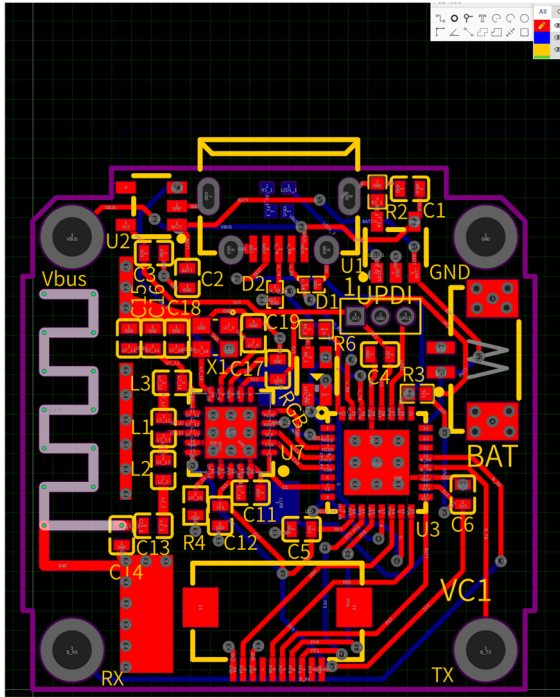


7. Material & Mechanical Characteristics

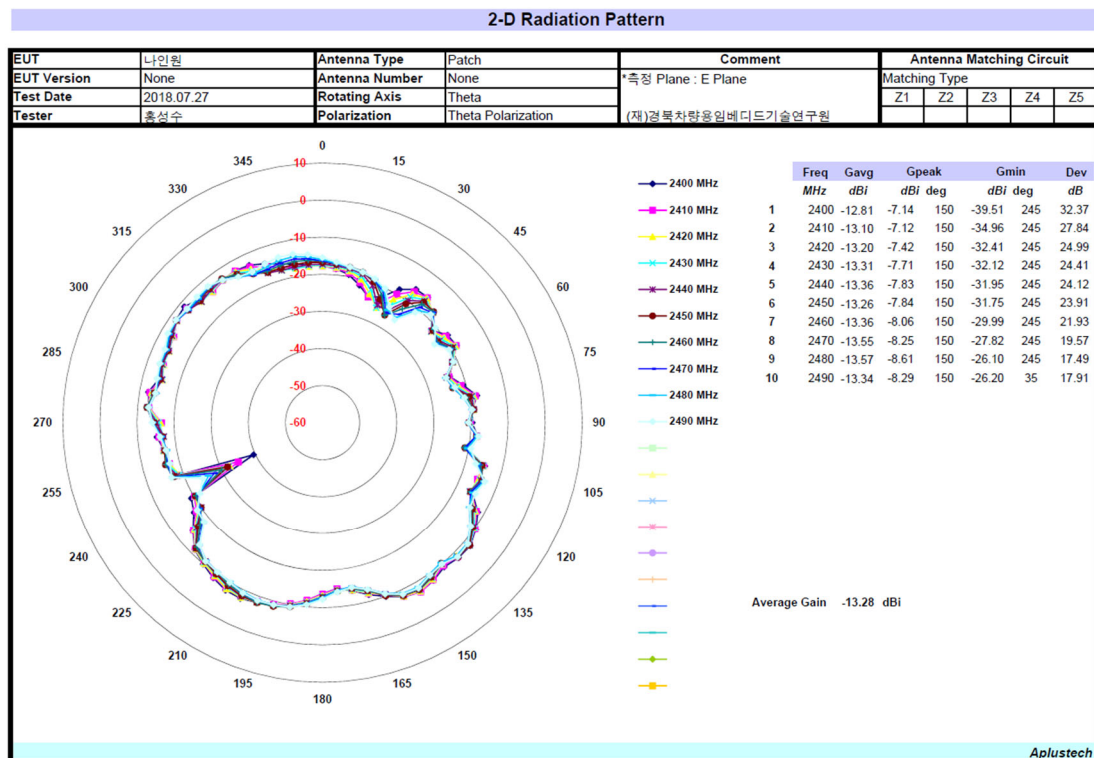
Antenna Pattern PCB layout & Mechanical drawing



Antenna Dimensions



8. Radiation Pattern data

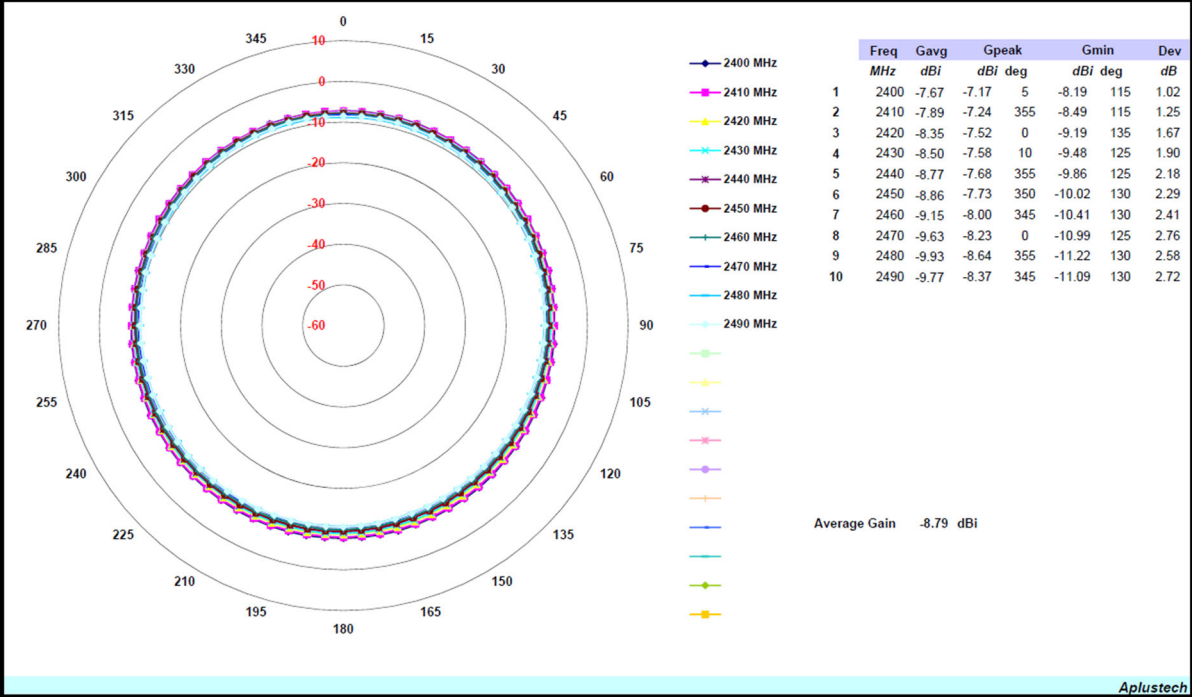


2-D Radiation Pattern

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2-D Radiation Pattern

EUT	나인원	Antenna Type	Patch	Comment	Antenna Matching Circuit				
EUT Version	None	Antenna Number	None	* 측정 Plane : H Plane	Matching Type				
Test Date	2018.07.27	Rotating Axis	Phi		Z1	Z2	Z3	Z4	Z5
Tester	홍성수	Polarization	Theta Polarization	(재)경북차량용임베디드시스템연구원					



2-D Radiation Pattern

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