



Document	Datasheet
Type	PCB Trace Antenna
Application	2.4GHz
Model	MD-N3000x

# DATASHEET

Oct , 2014

## Contents

<b>1. Applications</b> .....	3
<b>2. Features</b> .....	3
<b>3. Specifications</b> .....	4
3.1 Electrical Specifications .....	4
3.2 Mechanical Specification .....	4
<b>4. Matching Component</b> .....	4
4.1 Ant Circuit.....	4
4.2 Matching value .....	4
<b>5. Measurement Result</b> .....	5
5.1 Typical Measurement Result (Smith Chart & Return Loss) .....	5
5.2 Typical Measurement Result (Gain).....	5
5.3 Typical Measurement Result ( Radiation pattern, 2.44GHz ) .....	6
<b>6 Revision History</b> .....	7

## 1. Applications

Bluetooth

ZigBee

ISM 2.4GHz Wireless Devices

## 2. Features

Monopole type PCB trace antenna

Size ( 25.0 x 1.2mm )



### 3. Specifications

#### 3.1 Electrical Specifications

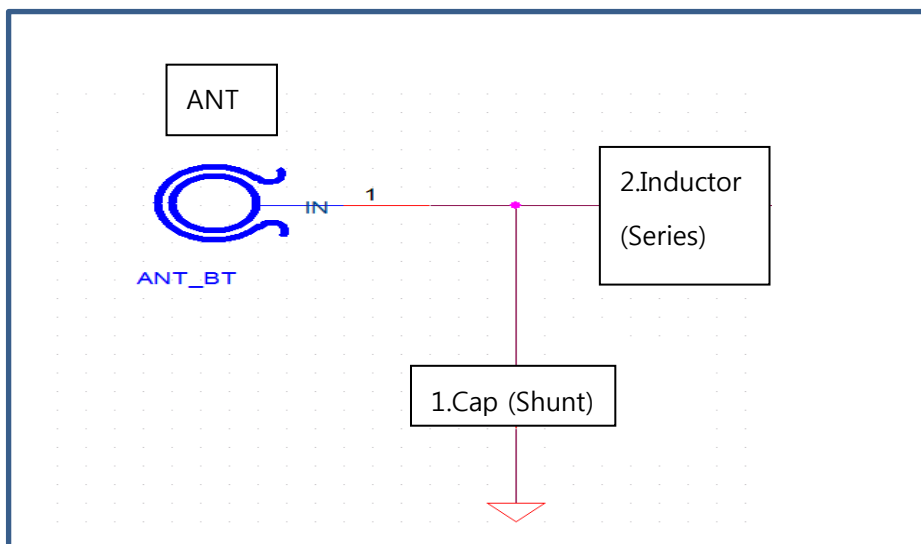
No	Item	Spec	Remark
1	Frequency Range[GHz]	2.4~2.485	
2	Peak Gain [dBi]	Typ 6.35	2.440 [GHz]
3	Total Avg. Gain [dBi]	Typ -2.37	2.440 [GHz]
4	Impedance [ $\Omega$ ]	Nominal 50	

#### 3.2 Mechanical Specification

No	Item	Spec	Remark
1	Dimensions (L x W)	25.0 x 1.2 mm	
2	Operating temperature	- 40 ~ +85 °C	

### 4. Matching Component

#### 4.1 Ant Circuit.



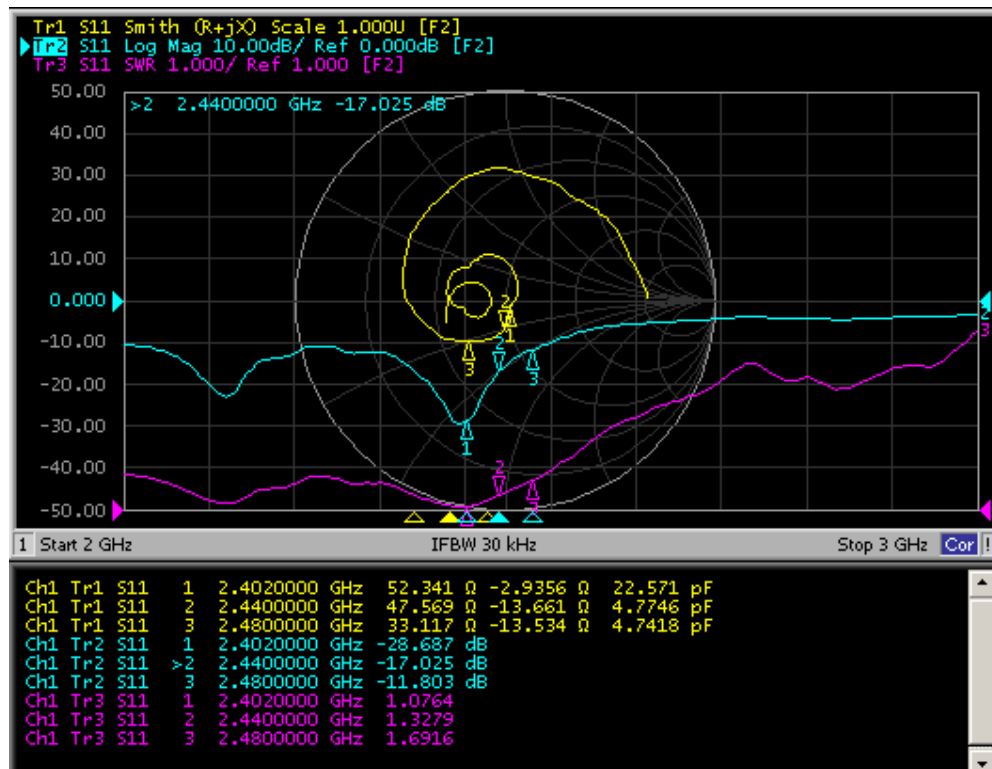
#### 4.2 Matching value

1.Cap(Shunt)	0.3pF
2.Inductor (Series)	4.7nH

## 5. Measurement Result

### 5.1 Typical Measurement Result (Smith Chart & Return Loss)

- Smith Chart : Yellow line, Return Loss : Blue line

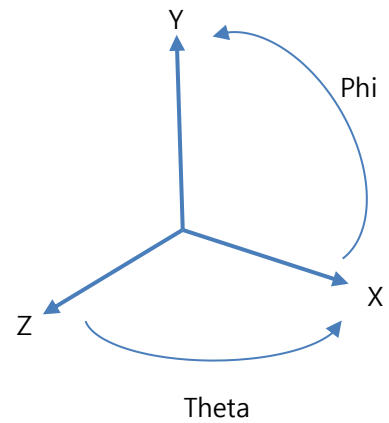
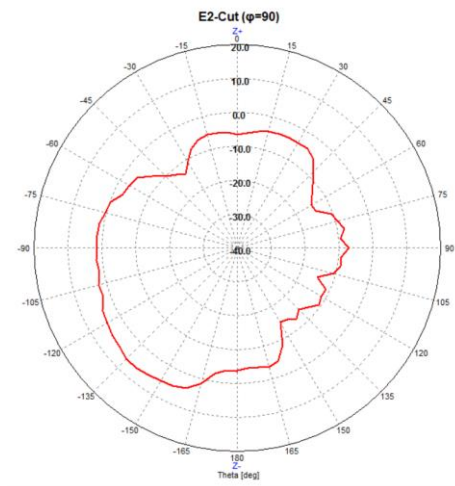
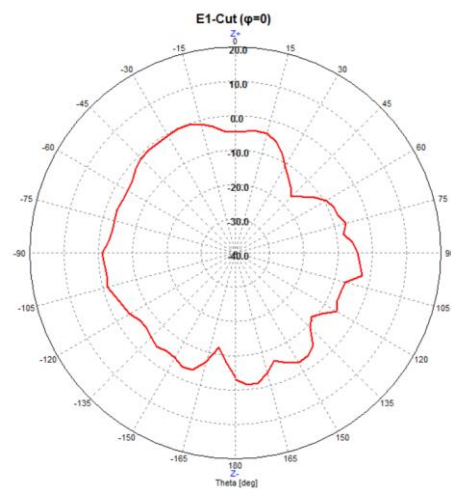
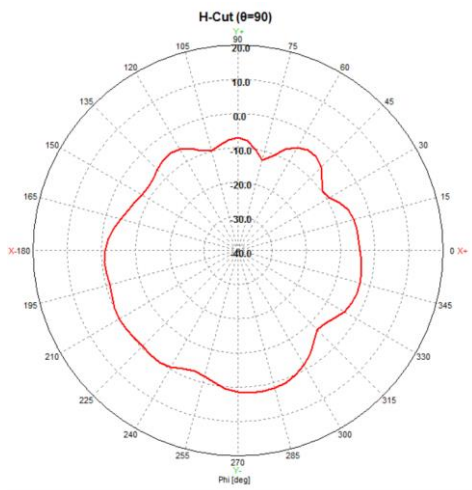


### 5.2 Typical Measurement Result (Gain)

Frequency [GHz]	Avg.[dBi]	Peak[dBi]
2.400	-2.04	6.08
2.440	-2.37	6.35
2.480	-2.56	6.23

### 5.3 Typical Measurement Result ( Radiation pattern, 2.44GHz )

	Peak Gain [dBi]	Avg. Gain [dBi]	Total Avg. Gain [dBi]
Phi	1.82	-2.89	-2.37
Theta 1	-0.23	-4.11	
Theta 2	6.28	-0.98	



## 6 Revision History

Revision No	Date	Change	page
1	14.10.07	Initial revision	