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## **Specification**

Model No.	:	FXP100						
Part No.	:	FXP100.07.0100A						
Product Name	:	Flexible WiMAX antenna						
Features	:	High Efficiency Wide-Band Antenna 31*53*0.2mm						
International Patent#: US 2009/0189825 A1								

#### RoHS 🗸



#### **REVISION STATUS**

Version	Date	Page	Revision Description	Prepared	Approved
01	20 November 2008	All	New release	Matthias John, AHFR	

#### 1. Introduction

This flexible wideband WiMAX antenna has been designed by DIT Antenna High Frequency and Research Centre in Dublin, Ireland. Taoglas and DIT have developed this range of solutions following years of expertise and collaboration in design of high performance antennas.

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#### 1.1 Key Advantages

- 1. Highest efficiency in small size 31\*53\*0.2mm.
- 2. Flexible can be fitted to curved surfaces
- 3. Highly reliable and robust
- 4. Rectangular shape Easy to integrate. Other antenna designs come in irregular shapes and sizes making them hard to integrate.

#### **2.0 Electrical Characteristics**

No	Parameter	Specification					
1	Working Frequency	2100~4320MHz					
2	Dimensions	sions 31*53*0.2mm					
3	VSWR	2 max (depends on the special environment)					
4	Polarization	Linear					
5	Impedance	50 Ω					
6	Operating Temperature	-40°C~+105°C					
7	Termination	Cu (Environmentally Friendly Pb Free)					

\* Actual Electrical value will depend on customer ground plane size



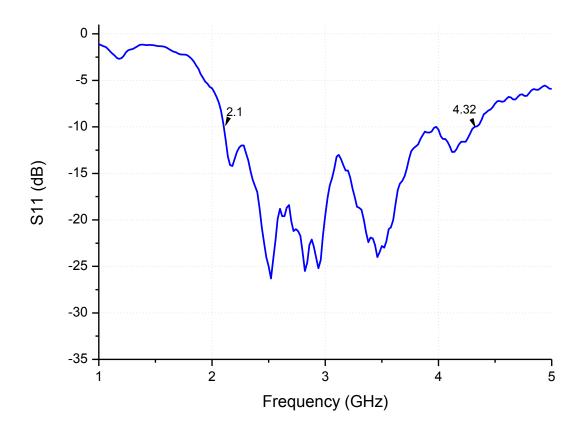
#### 3.0 Key Antenna Performance Indicators

#### Measured in chamber

		00		4 5 0	
Gain	(Ground Length:	i 33mm, Coax	Cable Length:	150mm,	UF-L Connector)

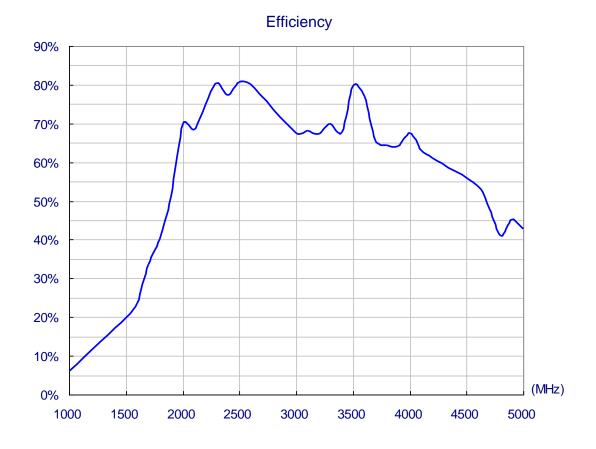
WiMAX Antenna peak gain parameter Summary												
Band (GHz)	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3
Peak Gain (dBi)	1.2	1.9	2.1	2.5	2.6	3.2	2.1	1.3	1.5	1.2	1.5	2.6

Measured S11

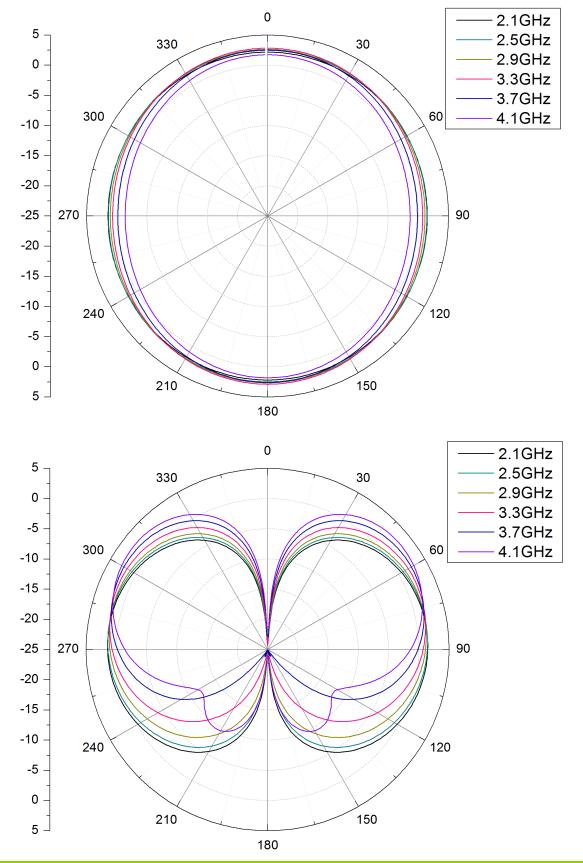




#### **Radiation Efficiency**



#### **Radiation Pattern**



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Specification

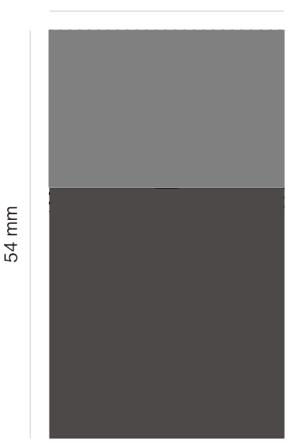
### 4.0 Drawings

4.1 Shape and Dimensions

31 mm



#### 31 mm

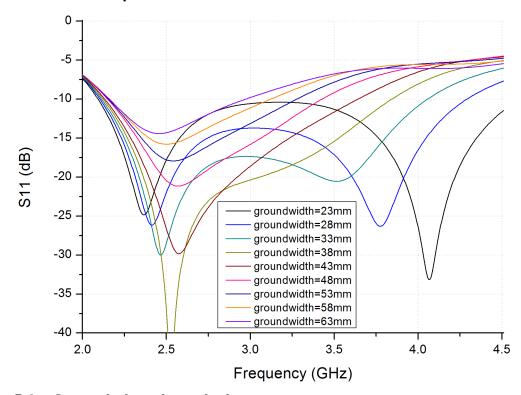




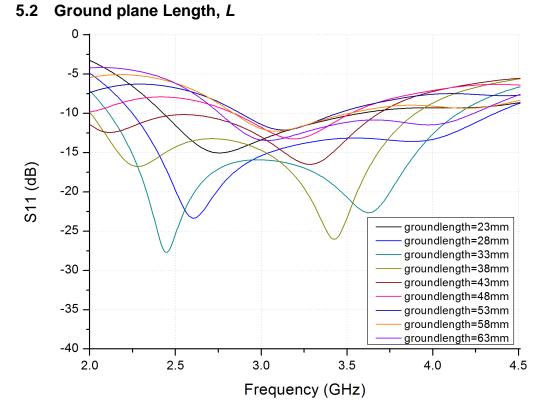
on 31x33mm Ground plane



#### 5.0 Sensitivity to Ground plane Dimensions (Simulation)



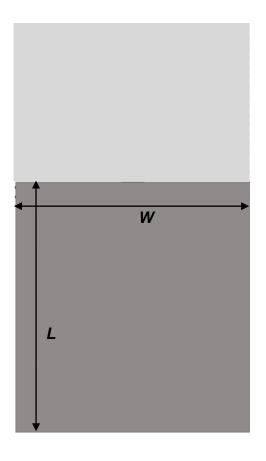
#### 5.1 Ground plane Width W

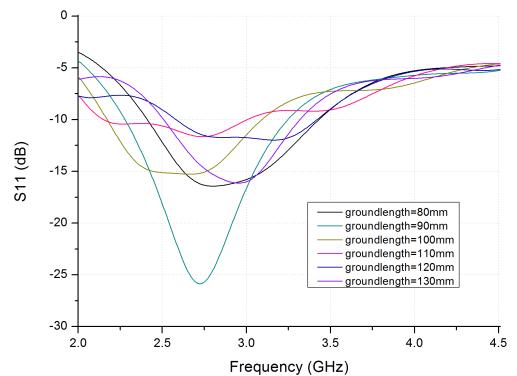


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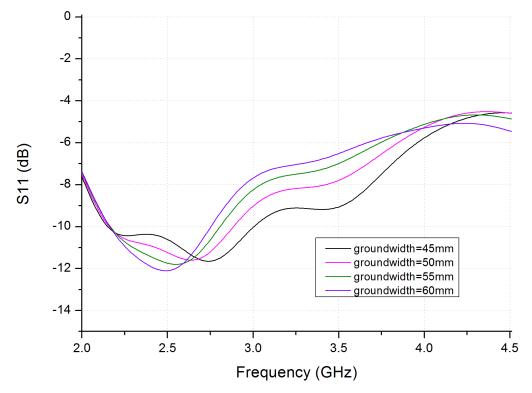
### 5.3 Handset Ground plane, 45mm × 110mm





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#### 5.3.2 Sweeping width W(L=110mm)



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## 5.3.1 Sweeping length L, (W=45mm)