

Specification of Earphone Antenna Element

Project	OT93A earphone		Frequency Band	BT(2400-2500)	
P/N	F-KT-7Z-0002-002-K0		Version	T01	
Date	2024/06/17				
SPEED					
Checked by	RF	Xiaojun Tang	Design by	RF	Shiwu Yan
	ME	Kevin Wang		ME	Rui Wang
			Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

Antenna Supplier Name: Huizhou SPEED Wireless Technology Co., Ltd

Address: No. SX-01-02, Shangxia District, Dongjiang High-Tech Zone, Huizhou City, Guangdong Province

1 Introduction

The antenna covers the band:BT(2400MHz-2500MHz).
Antenna properties were measured in the actual environment plane.



Figure 1: Proposed Antenna

2 Electrical Performance

2.1 Specification

Antenna Passive Performance		
Antenna Bands		
1	Operation Frequency (MHz)	2400-2500
2	Return Loss (dB)	-8
3	Zenith Gain(dBi)	Peak Gain :-3.7
4	Efficiency (%)	9
5	Polarization	Vertical polarization
6	Impedance	50 Ω

2.2 Test Set-up

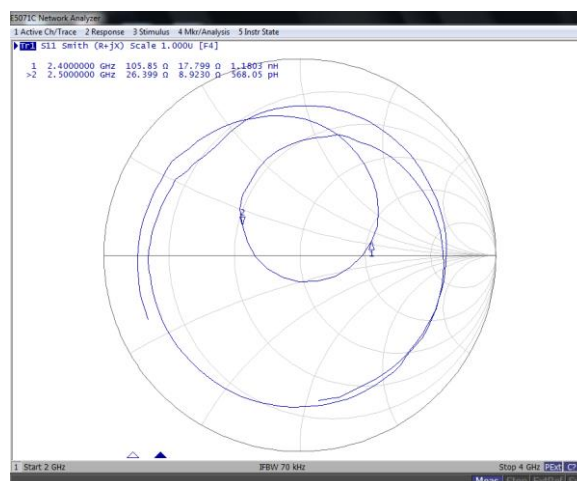
The return loss and VSWR were measured with Agilent E5071C.

The efficiency and gain were measured in ETS-Lindgren Chamber in picture2

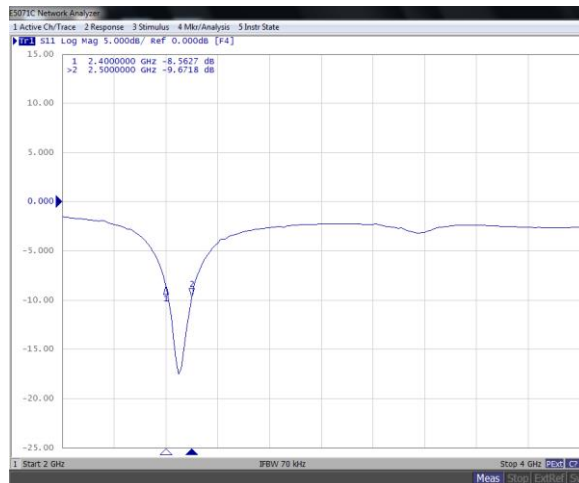


Figure 2: ETS chamber and measurement system

2.3 Smith Chart & Return Loss

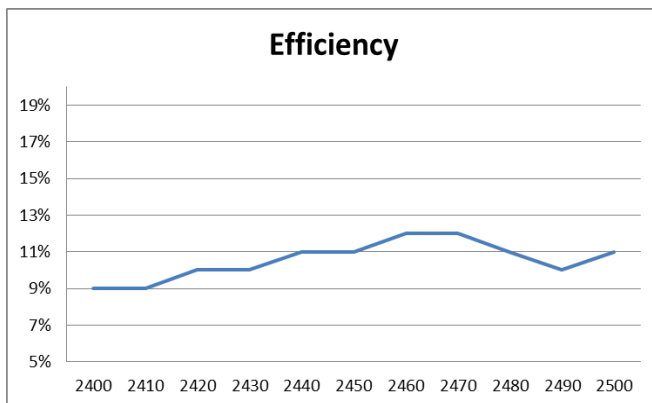


Smith

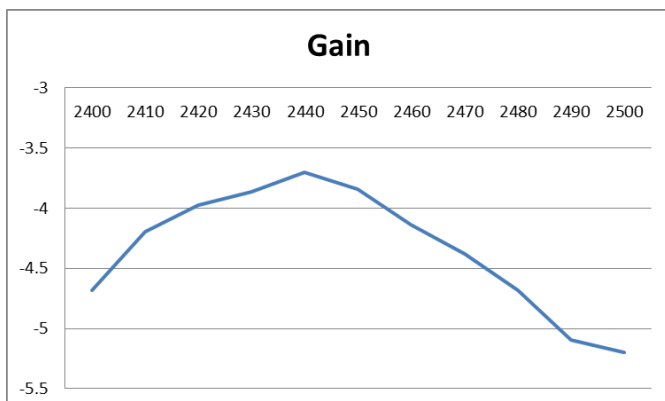


Return Loss

2.4 Efficiency and Gain

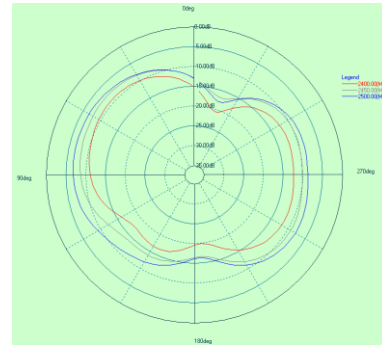
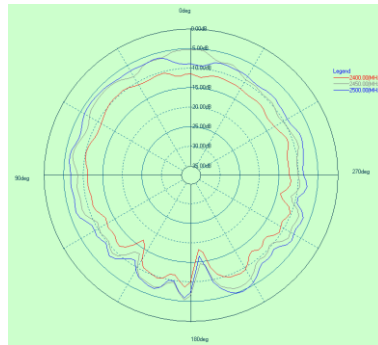
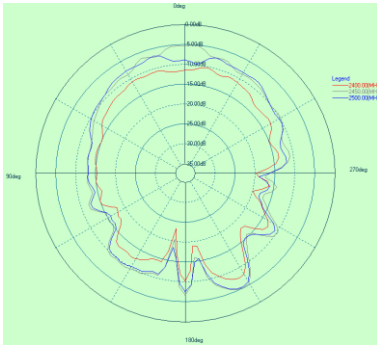


Efficiency

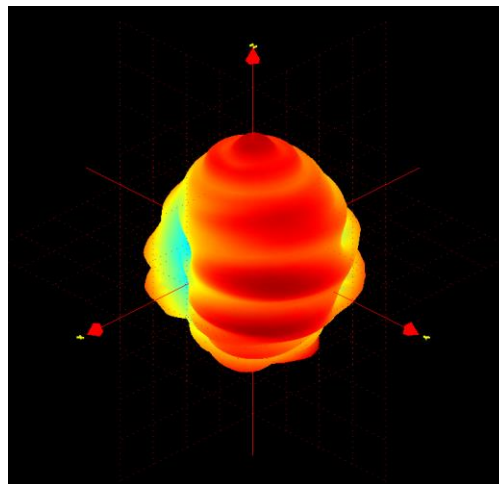


Peak Gain

2.5 Gain and Radiation Pattern



2D pattern



3D radiation pattern

3 Mechanical Drawing (Units: mm)

