

# Ethertronics Technology and Electronics (Shanghai) Co., Ltd

## Antenna Report

<b>Customer</b>	LongCheer
<b>Customer Code</b>	
<b>Product Name</b>	i270
<b>Product Part No.</b>	
<b>Product Type</b>	
<b>Band</b>	GSM850/EGSM/DCS/PCS&BT
<b>Date</b>	2009-07-28
<b>Version</b>	
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<b>Reviewer</b>	

## 1 Phone Conditions

This is the LongCheer antenna Antenna Report.

The working band of this equipment is GSM850/EGSM/DCS/PCS&BT.



Figure1 Photo of DUT

## 2 Test Environment

Agilent E5071C VNA is used to test return loss.

Satimo Starlab 3D near field chamber is used to test antenna efficiency and radiation pattern. The test coordinate system is shown in Figure2.

DASY4 is used to get SAR results.

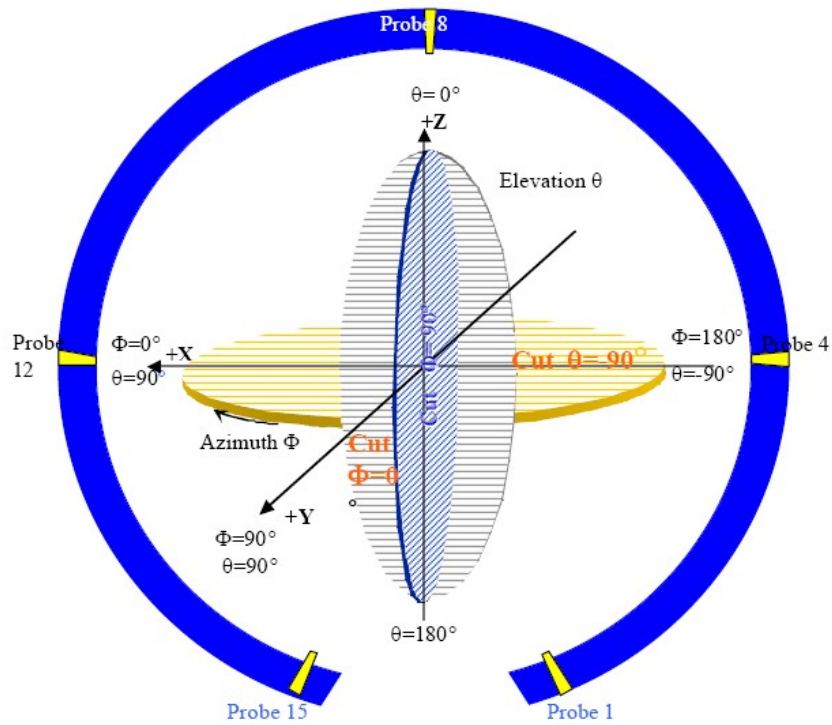


Figure2 Test Coordinate System of 3D Chamber

### 3 Antenna Test Results

#### 3.1 Return Loss

Band	Frequency(MHz)	S11(dB)
GSM850&EGSM	824	<-6.5
	960	<-3.6
DCS&PCS	1710	<-6.6
	1990	<-7.1
BT	2400	<-17.9
	2500	<-16.9

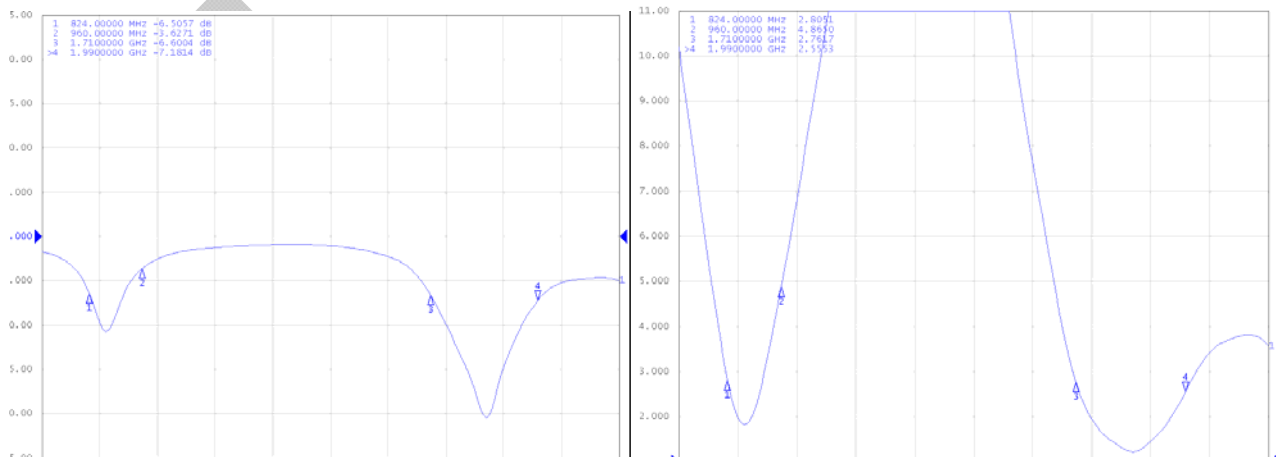


Figure3 Return Loss & VSWR of the main antenna



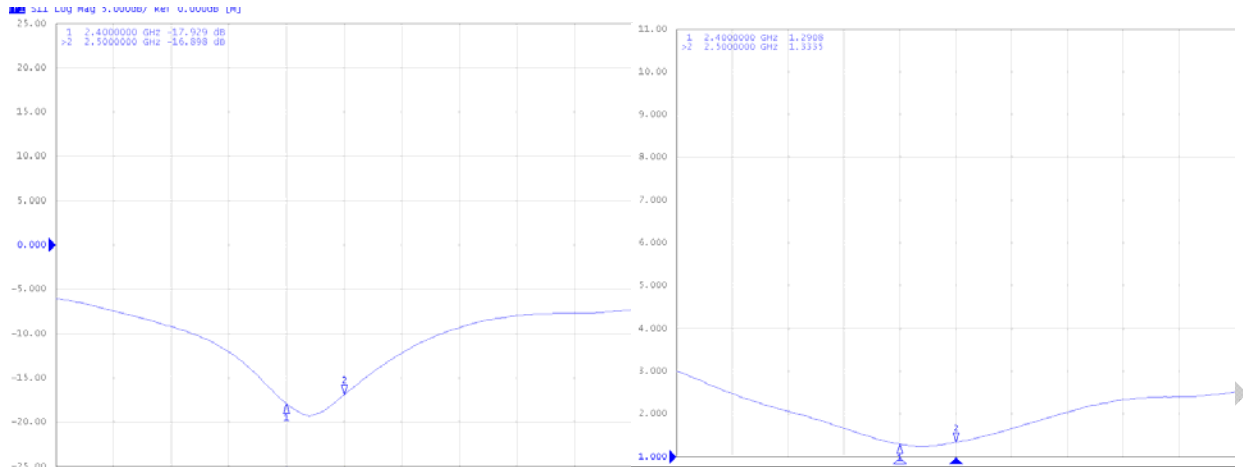


Figure4 Return Loss & VSWR of the BT antenna

### 3.2 BT Efficiency

Frequency(MHz)	Efficiency
2400	41%
2450	40%
2500	38%
<b>AVE</b>	<b>39%</b>

### 3.3 Antenna Gain

The gain of the low band(GSM850&EGSM)

824MHz	-2.53dB
870MHz	-0.91dB
960MHz	-2.10dB

The gain of the high band(DCS&PCS)

1710MHz	-0.73dB
1840MHz	<b>2.18dB</b>
1990MHz	0.45dB

The gain of the BT band

2400MHz	0.32dB
2450MHz	1.27dB
2500MHz	1.05dB

### 3.4 Active Results

#### 3.4.1 TRP&TIS

Band	GSM850			EGSM			DCS			PCS		
CHN	128	190	251	975	37	124	512	698	885	512	661	810
TRP(dB)	29.1	29.7	29.4	28.8	30.2	31.6	24.1	25.4	26.4	25.6	25.4	25.4
TIS(dB)			-105.3			-102.6			-105.2			-103.4

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