



Tengxiang Technology.Inc

Product Number: AN2400-FPC53BX

Product Name: Antenna

Specification For Approval

Date: 2022.09.14

Version: 1.0

Customer: _____

Customer P/N: _____

T X P/N: AN2400-FPC53BX

Description : 2.4G FPC OD1.13mm 35mm&45mm +IPEX

Tengxiang Checked By:		Customer Approved By:	
DRAWN		TESTED BY	
CHECKED BY		CHECKED BY	
Q.C.DEPT.		Q.C.DEPT.	
APPROVED BY		APPROVEDBY	



NO.53 Shatou ShaChong Road, ChangAn Town, Guangdong province, China

TEL:86-769-81873082 FAX:86-769-82663788



Tengxiang Technology.Inc

Product Number: AN2400-FPC53BX

Product Name: Antenna

Index:

1. Specification
2. Characteristics and Reliability Test
3. Antenna - S Parameter Test Data
4. Antenna - Radiation Pattern Test Data
5. Mechanical and Packing Drawing

Revision History

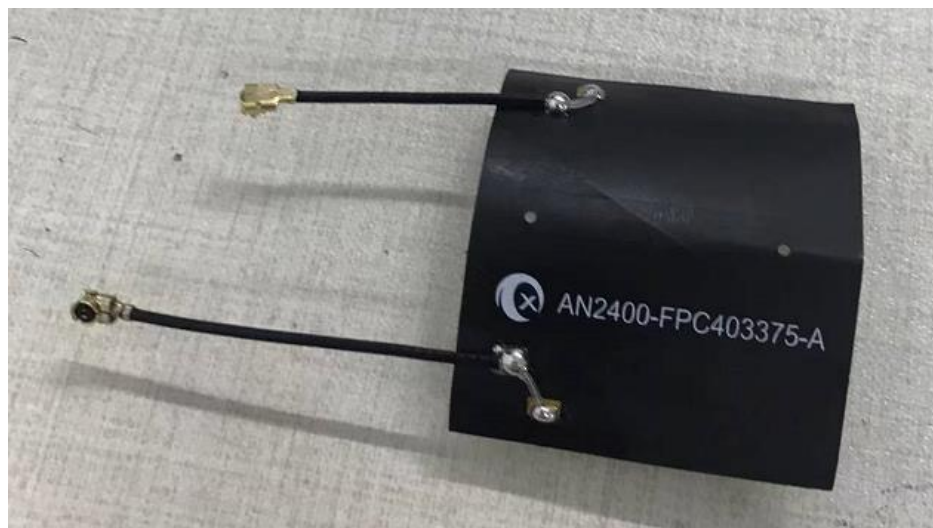
Revision	Date	Change Notification	Description
1.0	2022.09.14		

Product Number: AN2400 FPC53BX

Product Name: Antenna

1. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400-2500 MHz
S.W.R.	<= 2.0
Antenna Gain	L=35mm : 4.36dBi / L=45mm : 3.77dBi
Polarization	Linear
Impedance	50 Ohm

B. Material & Mechanical Characteristics

Cable Type	OD1.13mm ,Black
Connector Type	Mini con

C. Environmental

Storage Temperature	- 40°C ~ +80 °C
Operation Temperature	- 40°C ~ +80 °C

Product Number: AN2400-FPC53BX

Product Name: Antenna

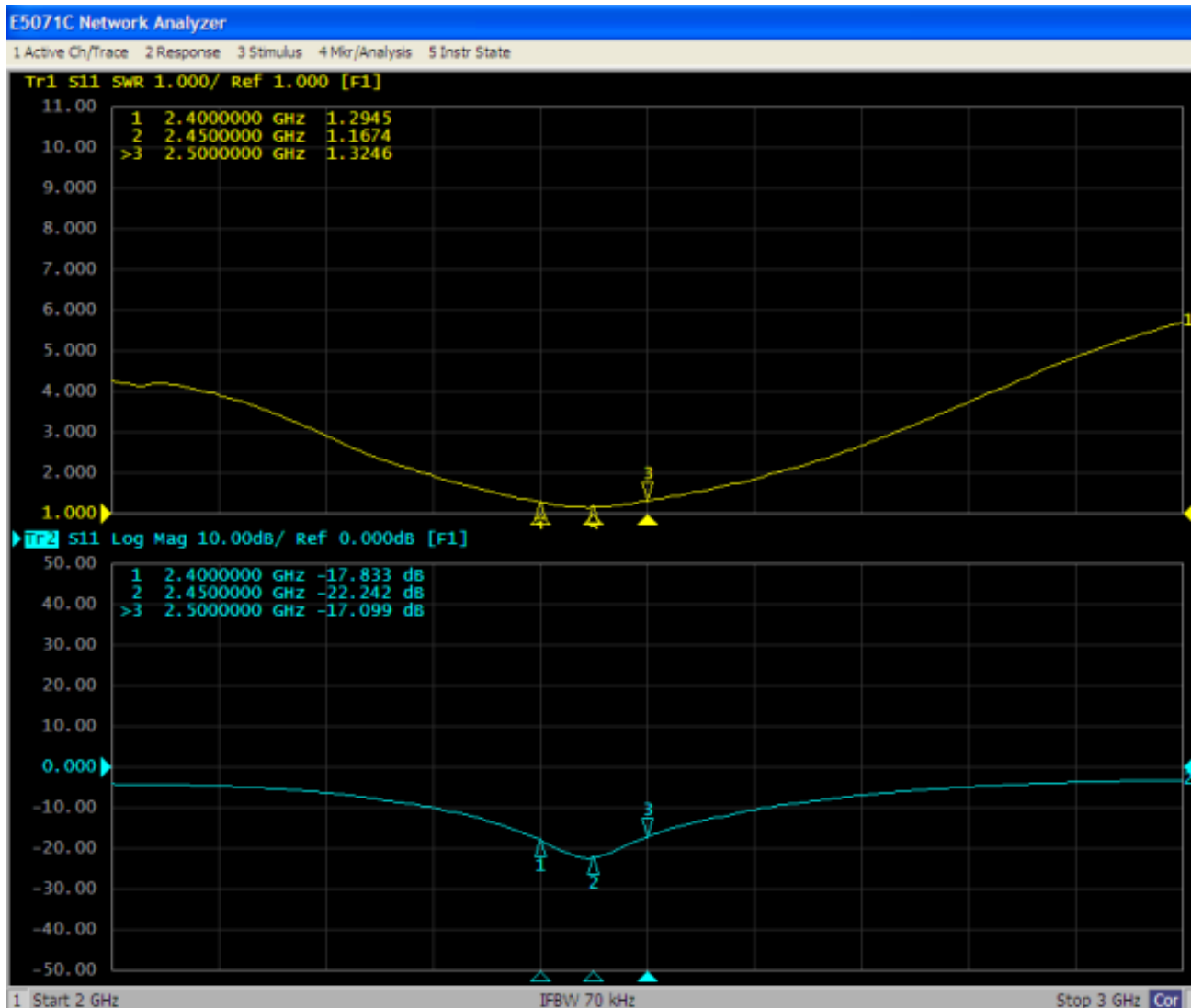
2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements	Result
1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
2	Insertion Loss	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification	PASS
4	Solderability	GB / T2423.28-2005 Temp: 260±5° C;Duration: 5 seconds	Tin evenly on full	N/A
5	Pull Test	Holding with individual specification; force applied to axis of terminal .	1. Directive DUT specification 2. Frequency Tol.≤5%	PASS
6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
7	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol.≤5%	PASS
8	RoHS	With Reference to IEC 62321:2008 with flow chart IEC 62321	Directive RoHS 2015/863/EU	PASS

Product Number: AN2400-FPC53BX

Product Name: Antenna

3. Antenna - S Parameter Test Data

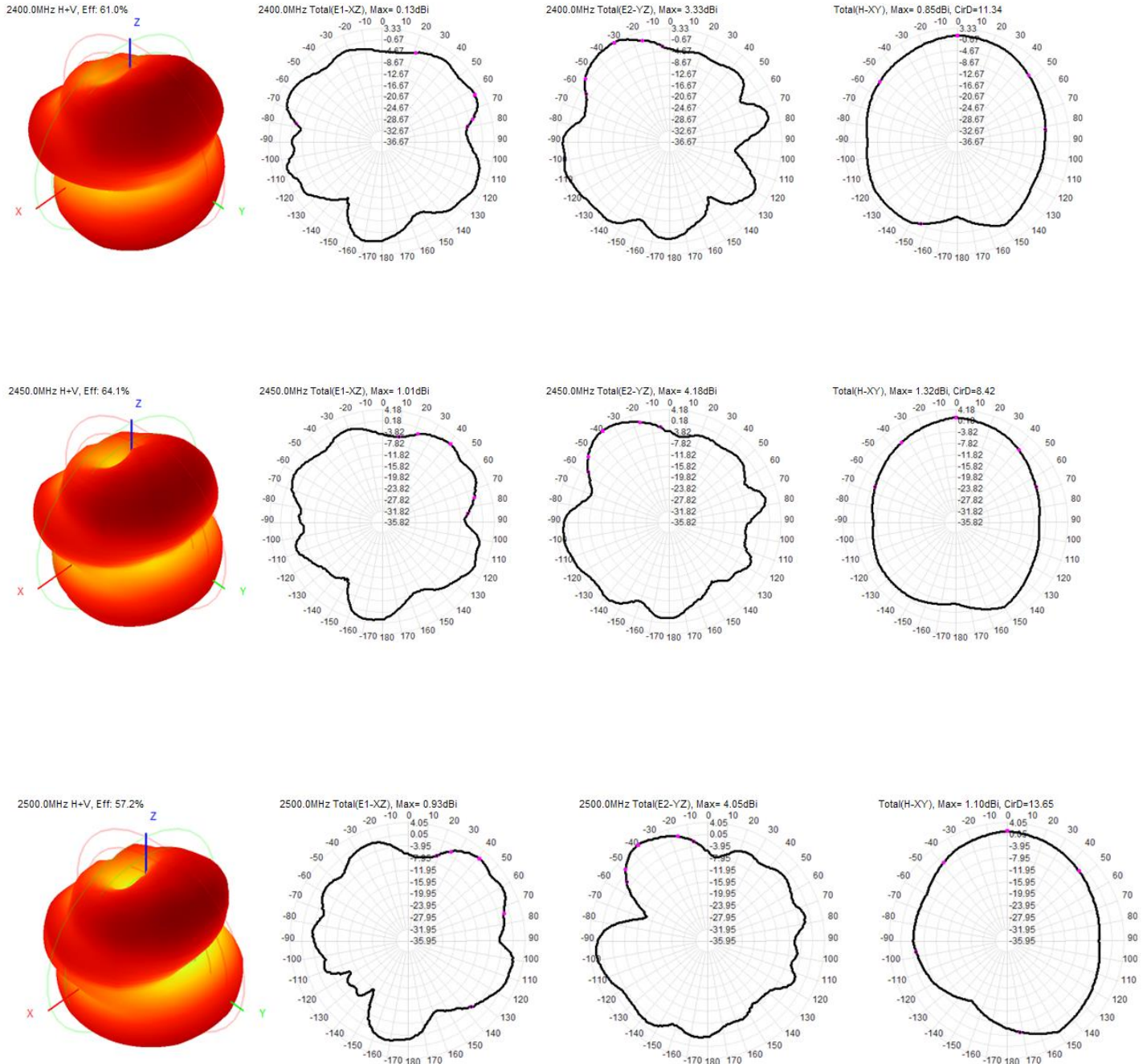


L= 35mm

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	3.33	3.47	3.70	4.01	4.26	4.32	4.32	4.31	4.36	4.31	4.17
Efficiency (%)	60.98	62.63	64.43	65.09	66.17	64.09	61.41	59.19	59.57	58.40	57.24

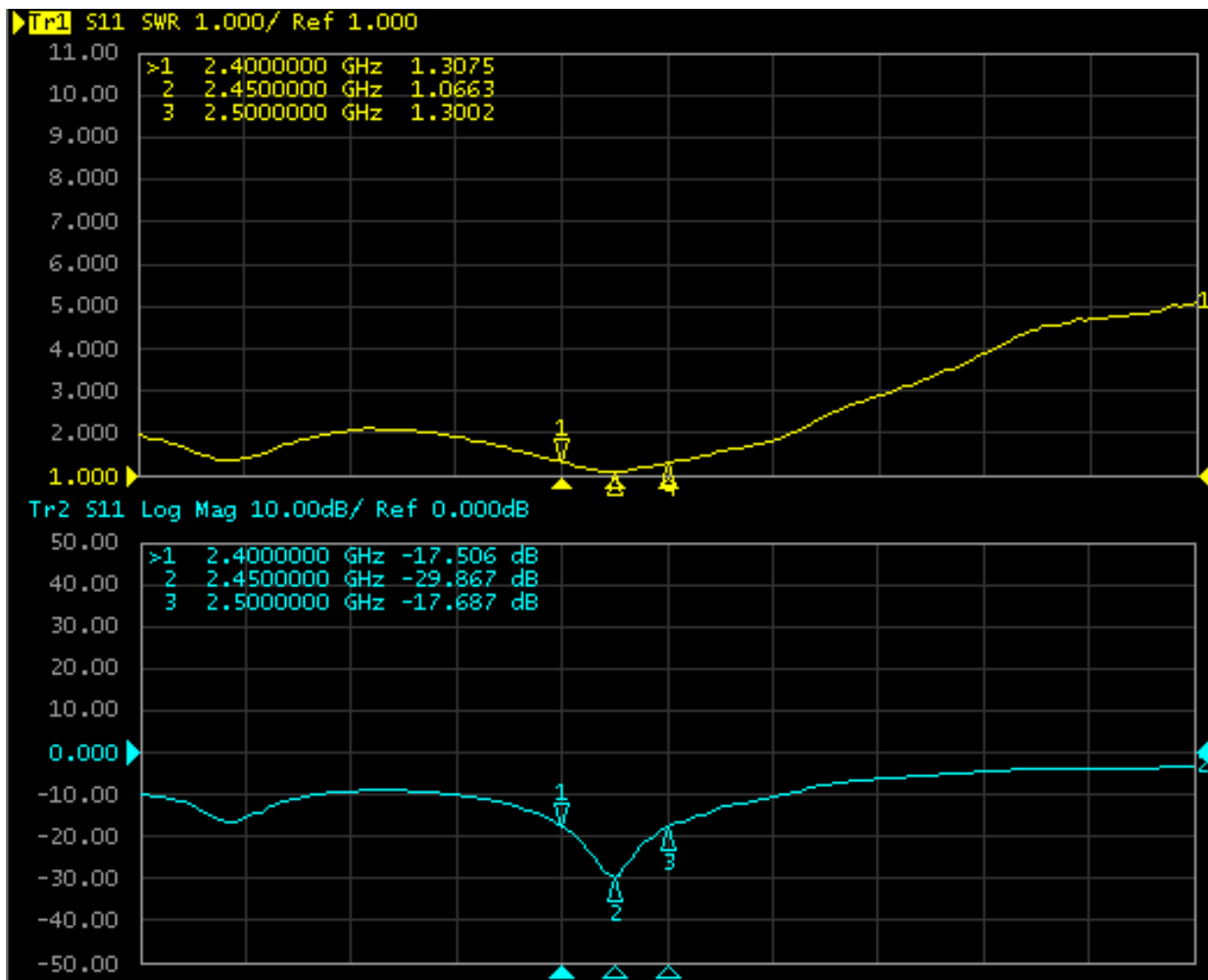
Product Number: AN2400-FPC53BX

Product Name: Antenna



Product Number: AN2400-FPC53BX

Product Name: Antenna



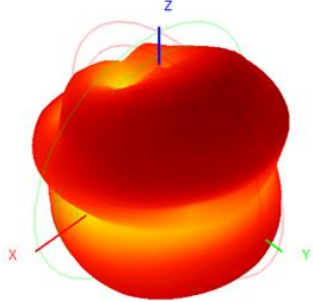
L= 45mm

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	3.15	3.31	3.60	3.70	3.77	3.59	3.18	2.71	1.85	0.97	1.39
Efficiency (%)	63.40	64.12	66.17	64.67	63.99	60.90	54.71	50.18	46.50	44.25	45.28

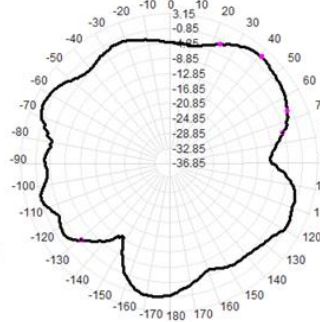
Product Number: AN2400-FPC53BX

Product Name: Antenna

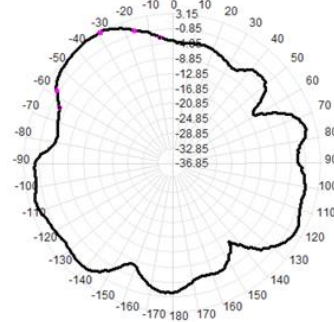
2400.0MHz H+V, Eff: 63.4%



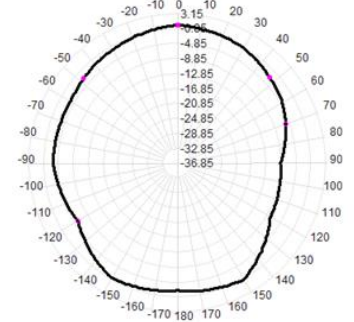
2400.0MHz Total(E1~XZ), Max= 0.89dBi



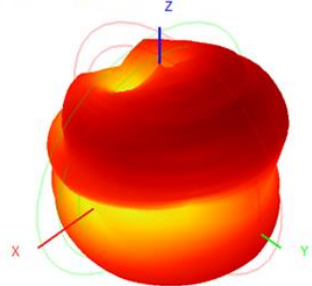
2400.0MHz Total(E2~YZ), Max= 3.15dBi



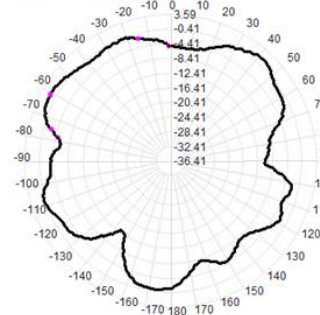
Total(H~XY), Max= 0.05dBi, CirD=9.29



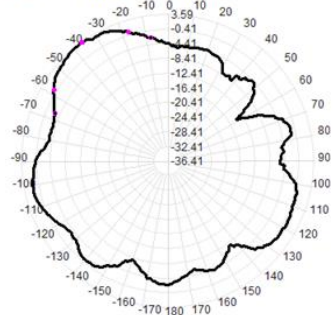
2450.0MHz H+V, Eff: 60.9%



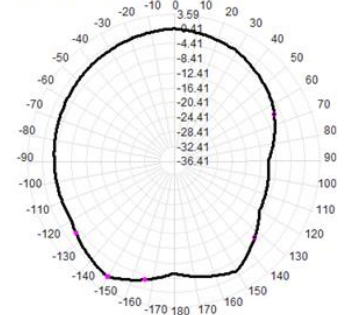
2450.0MHz Total(E1~XZ), Max= 1.13dBi



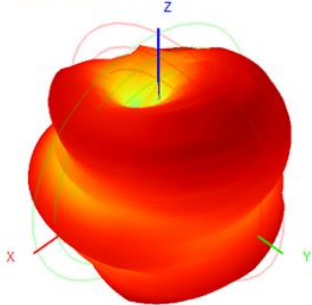
2450.0MHz Total(E2~YZ), Max= 3.59dBi



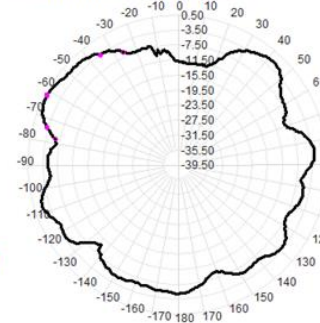
Total(H~XY), Max= -0.21dBi, CirD=10.54



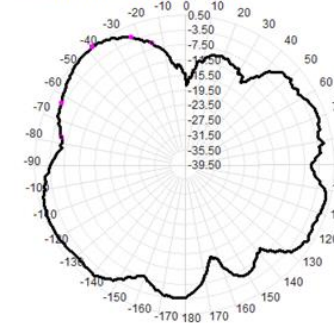
2500.0MHz H+V, Eff: 45.3%



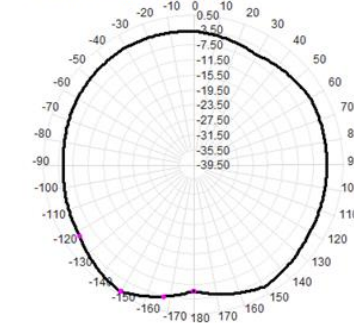
2500.0MHz Total(E1~XZ), Max= 0.02dBi



2500.0MHz Total(E2~YZ), Max= 0.50dBi



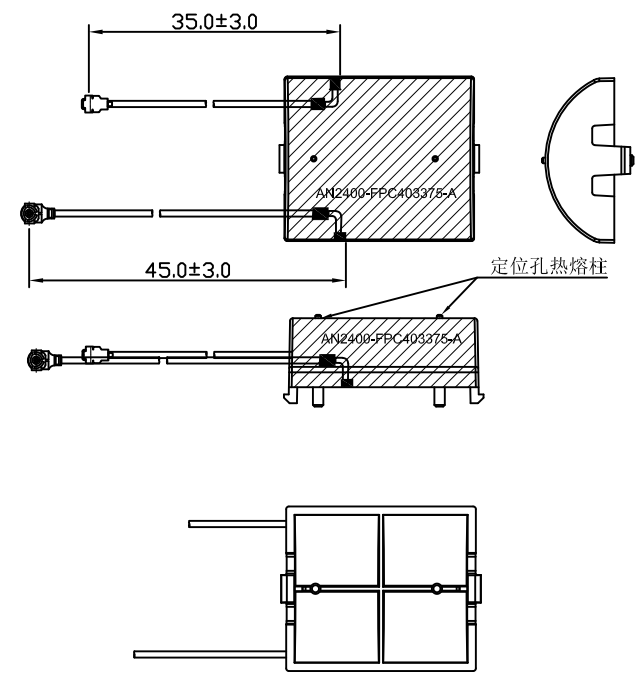
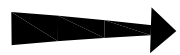
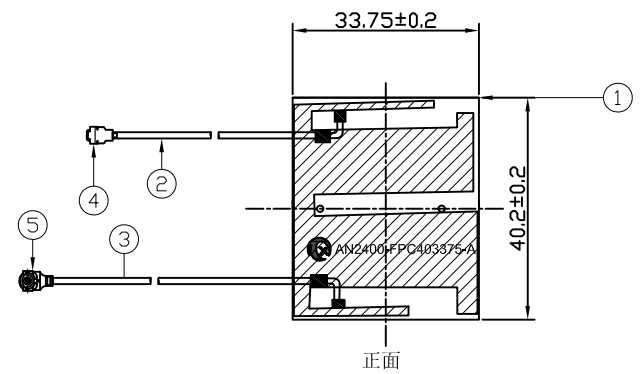
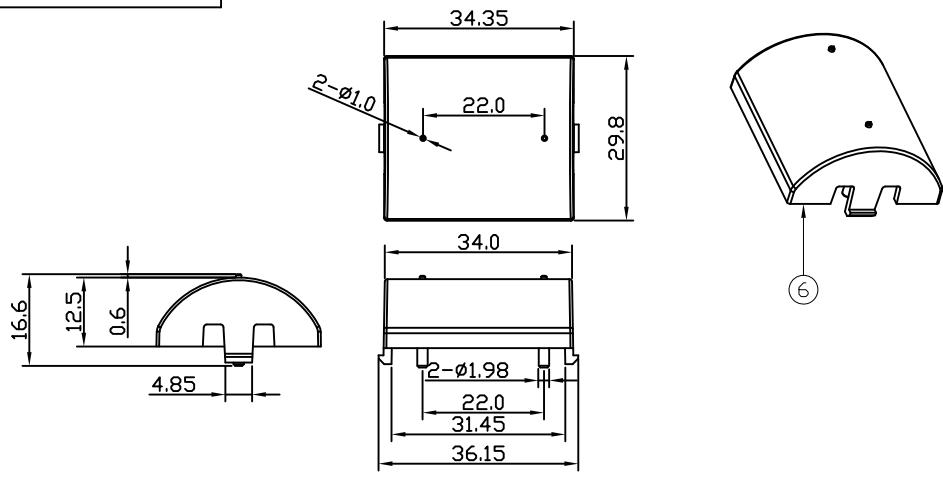
Total(H~XY), Max= -0.55dBi, CirD=5.33



4. Mechanical Drawing See attached files


HF
 RoHS2.0
 REACH
 CONFIDENTIAL

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



4	HOD-FPC-3616	HOLD	Cu	Black	1
4	CR-113-ZP-A	I-PEX	Cu	Au plated	1
4	CR-113-ZP-A	I-PEX	Cu	Au plated	1
3	CB-113BS	Coaxial Cable	OD1.13mm	Black 45mm	1
2	CB-113BS	Coaxial Cable	OD1.13mm	Black 35mm	1
1	AN2400-FPC403375-A	FPC		Black	1
No.	Part Number	Name	Material	Finish	Q'ty

Note:
 1. Mark * is important dimension; "Cpk" Identify for process control (Cpk ≥ 1.33).
 2. Tolerance: Unmarked tolerance refer to the standard tolerance please.

 **Tengxiang Electronics Co., Ltd.**

TITLE: 2400-2500 MHz					
PART NO.: AN2400-FPC52BX			CUSTOMER P/N: /		
APP BY	CHK BY	RF BY	DES BY	Tolerance X.X ±0.3 X.XX ±0.1 X° ±1	UNITS: mm SCALE: 1/1 REVISION: A
YTX 2022.09.14	YCX 2022.09.14	WJ 2022.09.14	HC 2022.09.14		