



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

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Revision History

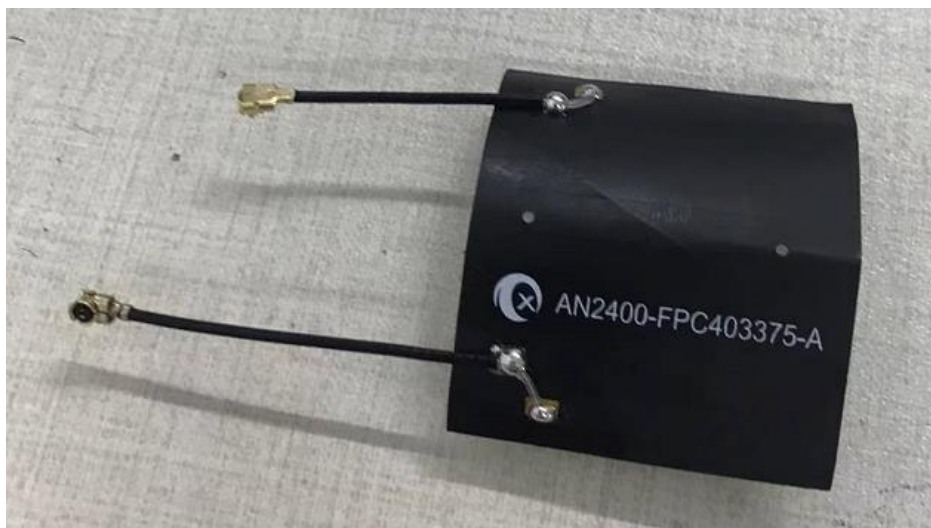
Revision	Date	Change Notification	Description
1.0	2022.09.14		

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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

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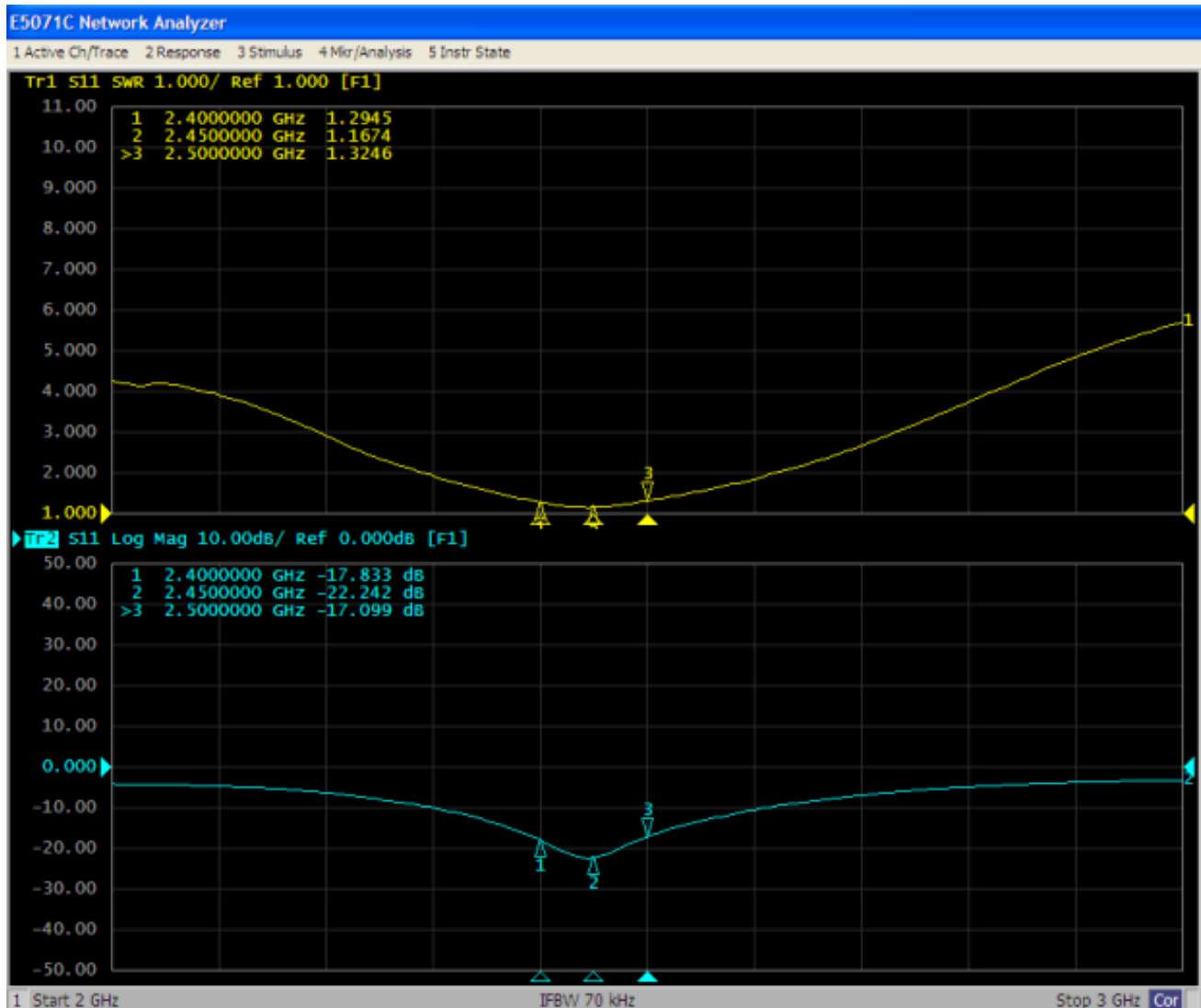
2. Characteristics and Reliability Test

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: $260 \pm 5^{\circ}$ 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. $\leq 5\%$	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: $\geq 95\%$; NaCl solution: $\geq 5\%$; Time: 24H	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	PASS
8	RoHS	With Reference to IEC 62321:2008 with flow chart IEC 62321	Directive RoHS 2015/863/EU	PASS

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3. Antenna - S Parameter Test Data



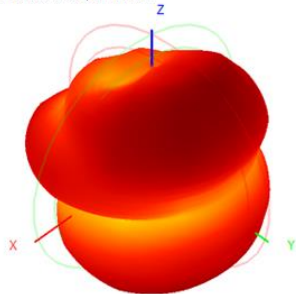
L= 35mm

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

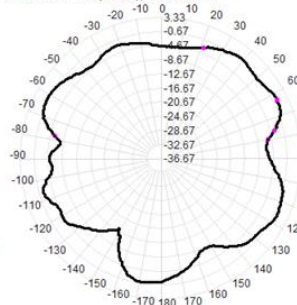
Product Number: AN2400-FPC53BX

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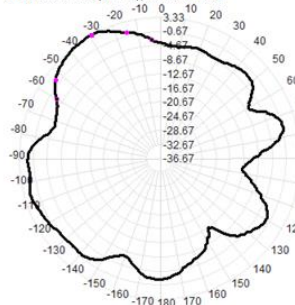
2400.0MHz H+V, Eff: 61.0%



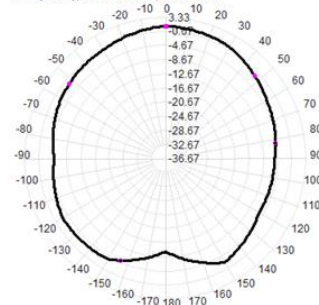
2400.0MHz Total(E1-XZ), Max= 0.13dBi



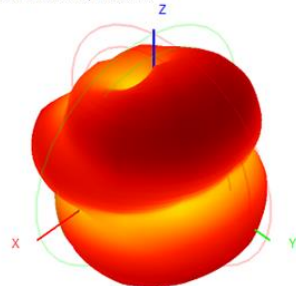
2400.0MHz Total(E2-YZ), Max= 3.33dBi



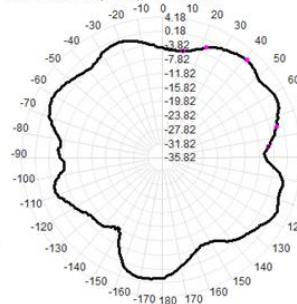
Total(H+V), Max= 0.85dBi, CirD=11.34



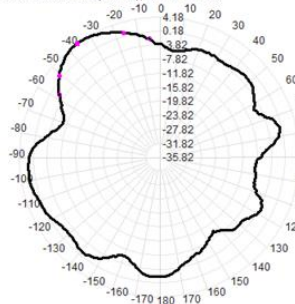
2450.0MHz H+V, Eff: 64.1%



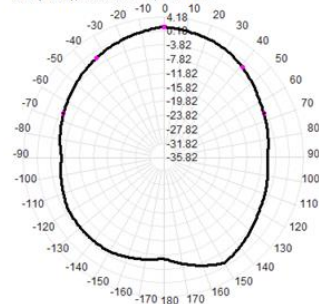
2450.0MHz Total(E1-XZ), Max= 1.01dBi



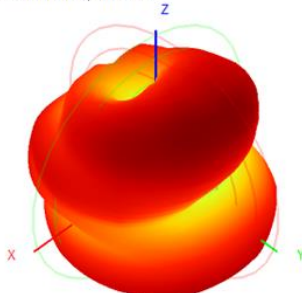
2450.0MHz Total(E2-YZ), Max= 4.18dBi



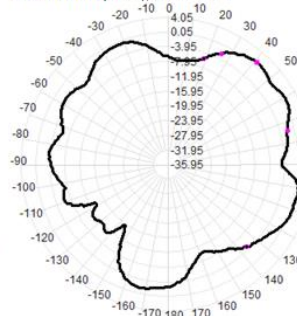
Total(H+V), Max= 1.32dBi, CirD=8.42



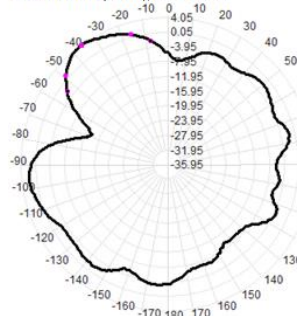
2500.0MHz H+V, Eff: 57.2%



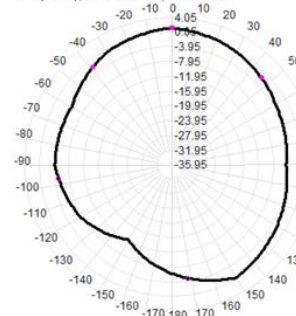
2500.0MHz Total(E1-XZ), Max= 0.93dBi



2500.0MHz Total(E2-YZ), Max= 4.05dBi

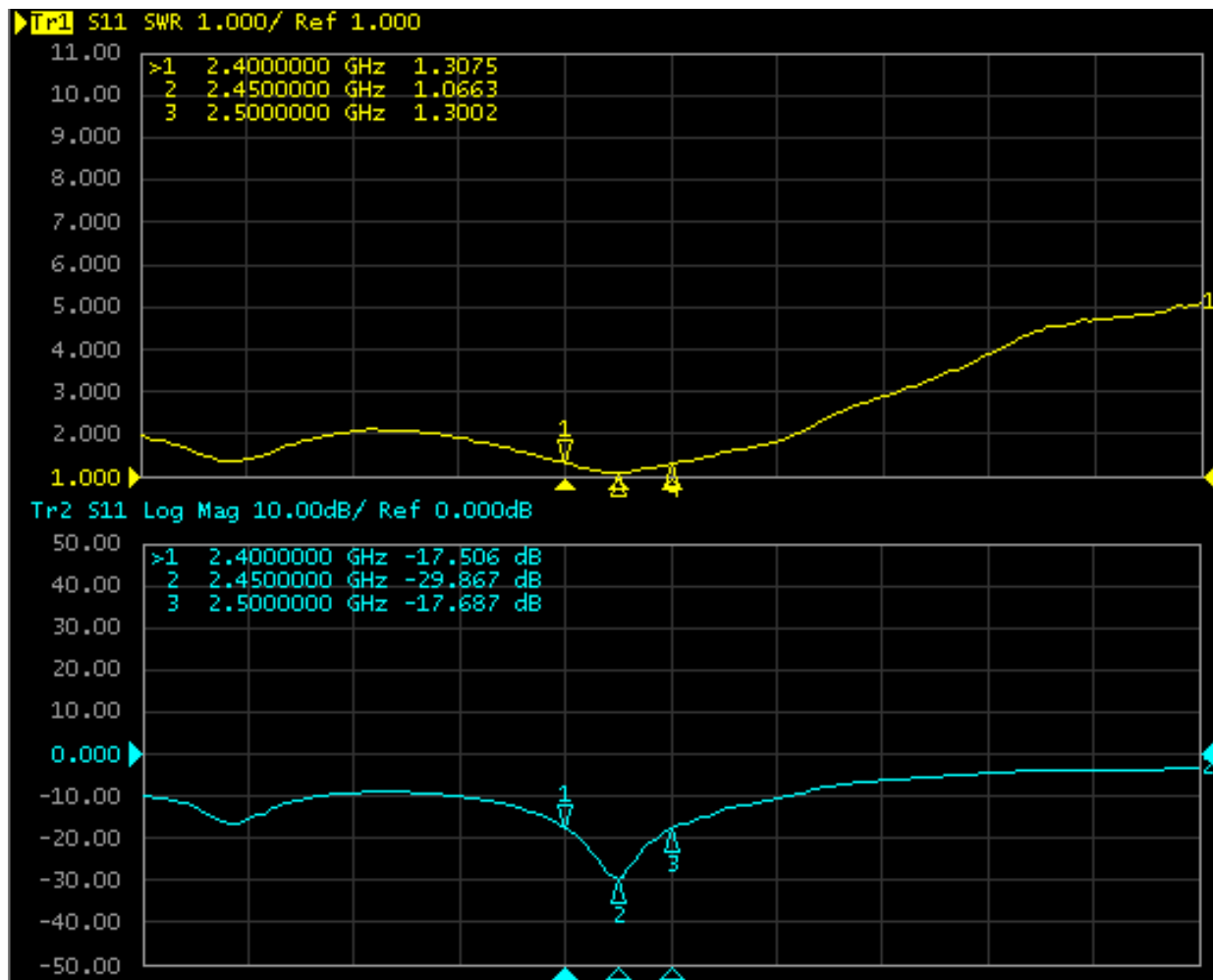


Total(H+V), Max= 1.10dBi, CirD=13.65



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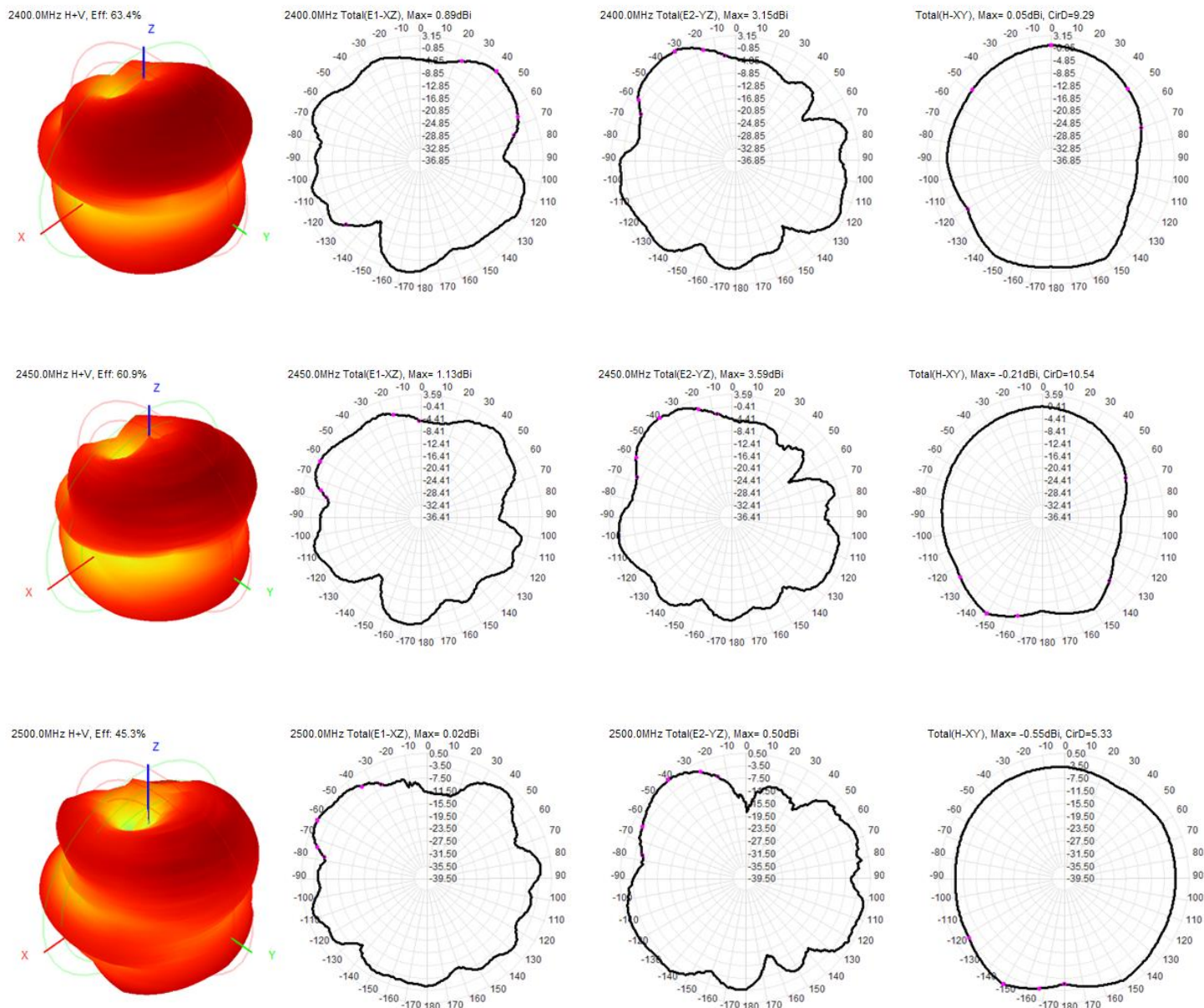


L= 45mm

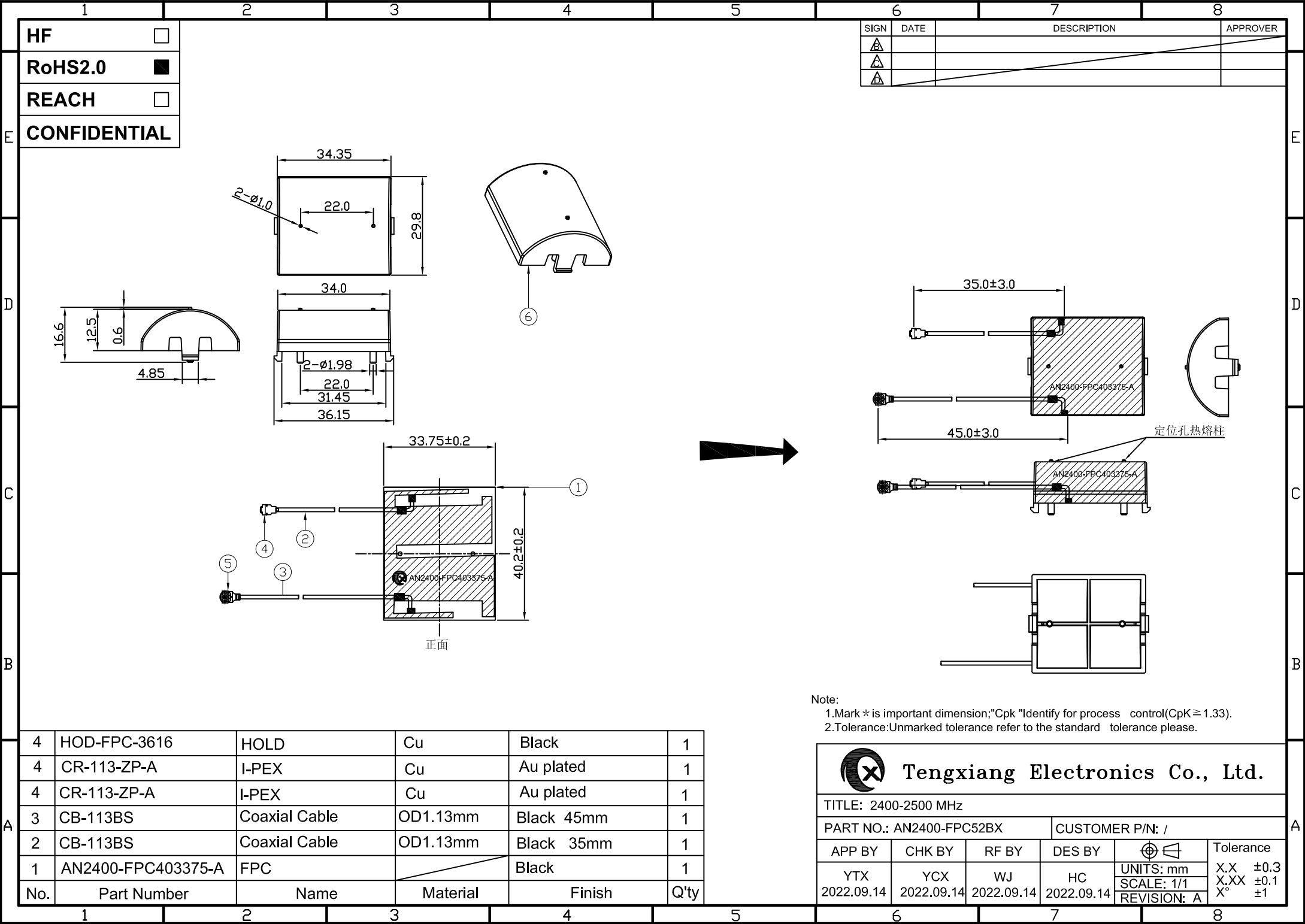
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	3.15	3.31	3.60	3.70	3.77	3.59	3.18	2.71	1.85	0.97	1.39
Efficiency (%)	63.40	64.12	66.17	64.67	63.99	60.90	54.71	50.18	46.50	44.25	45.28

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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
YTX	YCX	WJ	HC	UNITS: mm	X.X ±0.3
2022.09.14	2022.09.14	2022.09.14	2022.09.14	SCALE: 1/1	X.XX ±0.1
				REVISION: A	X° ±1