



Approval Sheet

Customer	Yanghua Digital	Data	2025/05/15
Product	WiFi Aux antenna	Models	H156-R2312
P/N	F1631-14LG-275	Customer P/N	47A3-WH1560-A0R
Specifications	Black FPC; RF0.81 fourth generation terminal grey coaxial line; Length:L=275mm		

Vender Approved By		Customer Approved By	
Checked By:		Checked By:	
Audit By:		Audit By:	
Approval By:		Approval By:	

Document revision Resume

Version	Revise The Content	Revused	Approval	Date	Note



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Specification

1.1 Electrical Properties

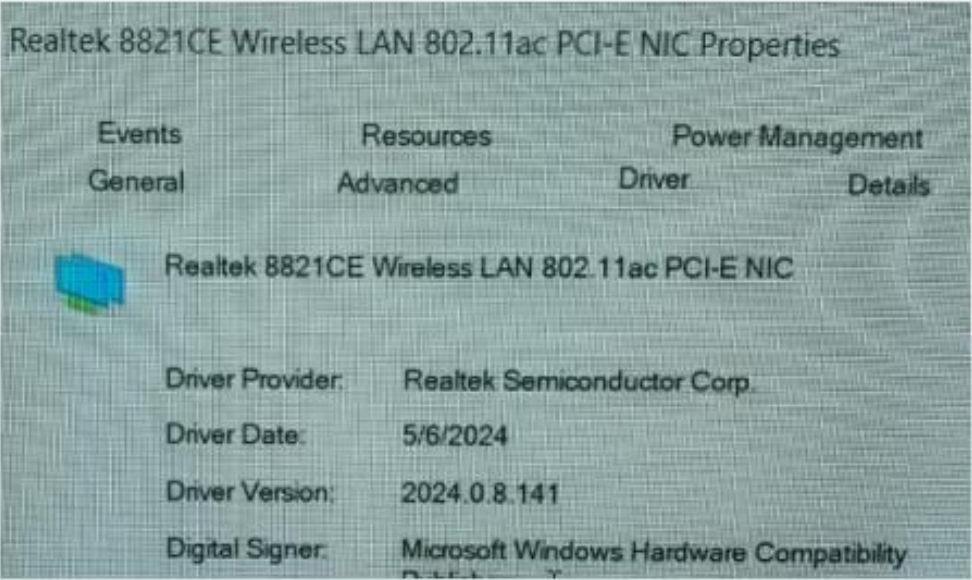
Characteristics	Specifications
Working Band	2.4GWiFi; 5GWiFi
Antenna From	PIFA
Impedance	50 Ω
Polarization	Linear
Peak Effi	45%@2.4G; 37%@5G
Peak Gain	3.0dBi@2.4G; 2.5dBi@5G

1.2 Physical Properties

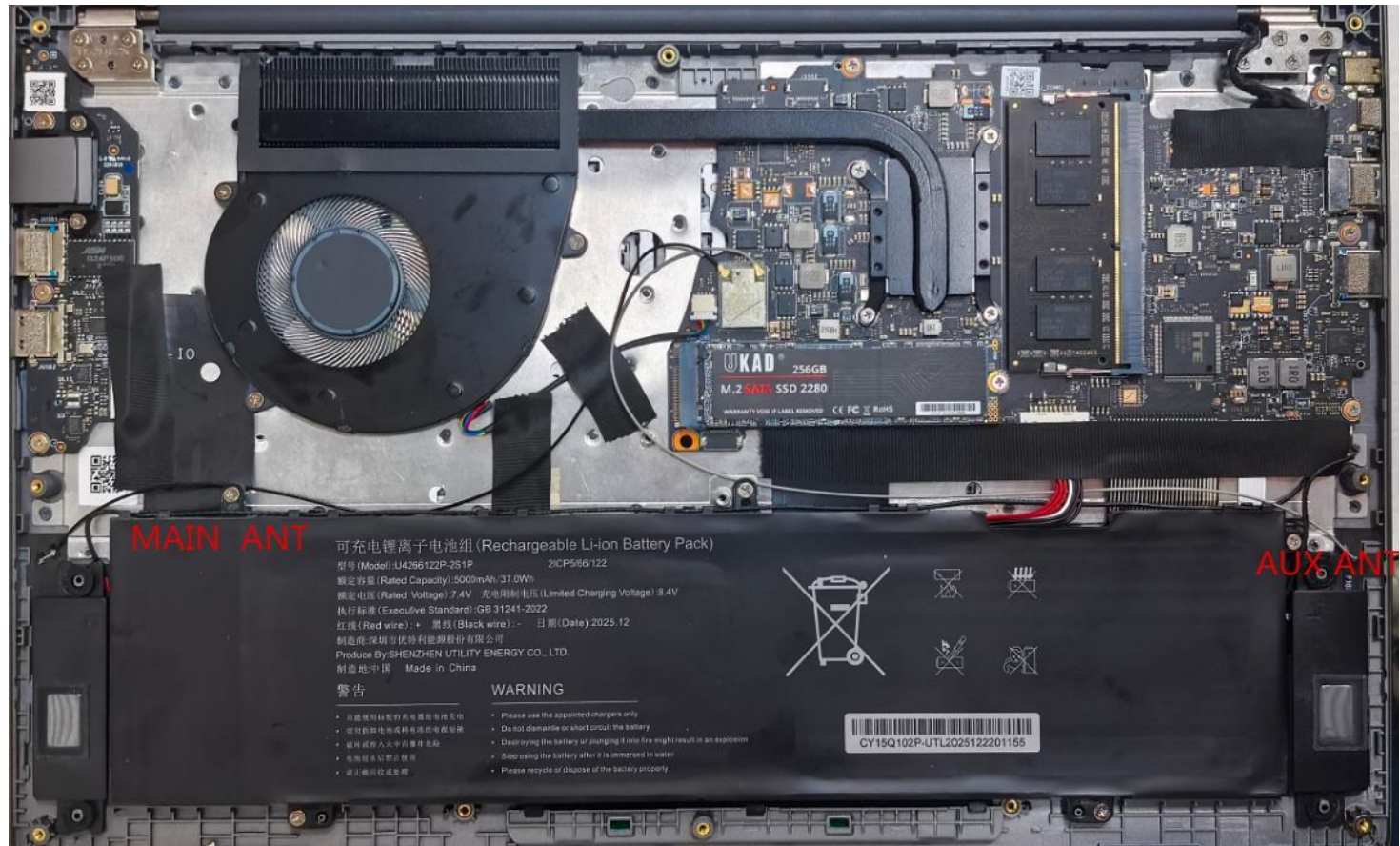
Characteristics	Specifications
Operating Temp	-10°C ~+60°C
Storage Temp	-10°C ~+70°C
Humidity	10~95%RH



WiFi Ant Test Information

Frequency	2. 4G (2402~2483) Mhz	5G (5150~5850) Mhz
Module information		
Driver version information		

Antenna Placement





Test Data

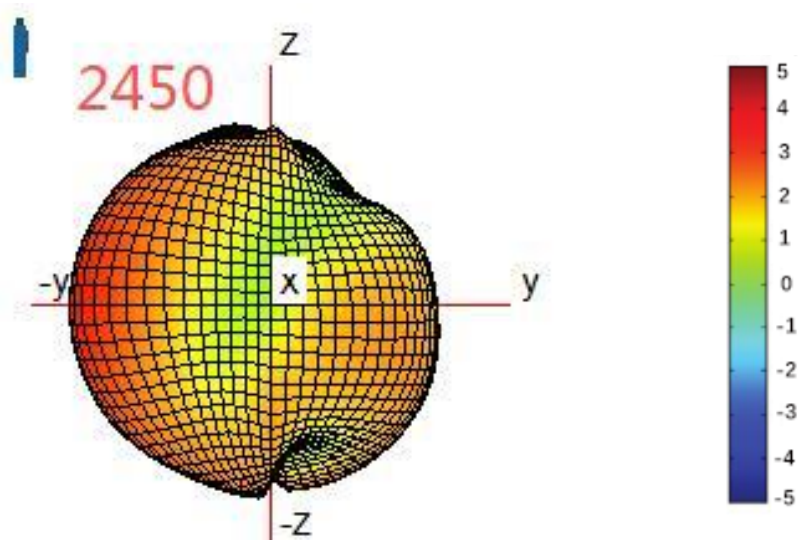
Efficiency Table(2.4G)

测试频段	测试频率	Efficiency-DB	Efficiency-%	Gain(dBi)
PASSIVE	2400	-3.51	44.56	2.54
PASSIVE	2410	-3.48	44.83	2.82
PASSIVE	2420	-3.5	44.67	2.93
PASSIVE	2430	-3.51	44.54	2.97
PASSIVE	2440	-3.48	44.88	3.03
PASSIVE	2450	-3.42	45.49	3.07
PASSIVE	2460	-3.43	45.36	2.99
PASSIVE	2470	-3.42	45.52	2.99
PASSIVE	2480	-3.47	44.99	2.89
PASSIVE	2490	-3.52	44.43	2.77
PASSIVE	2500	-3.61	43.59	2.62

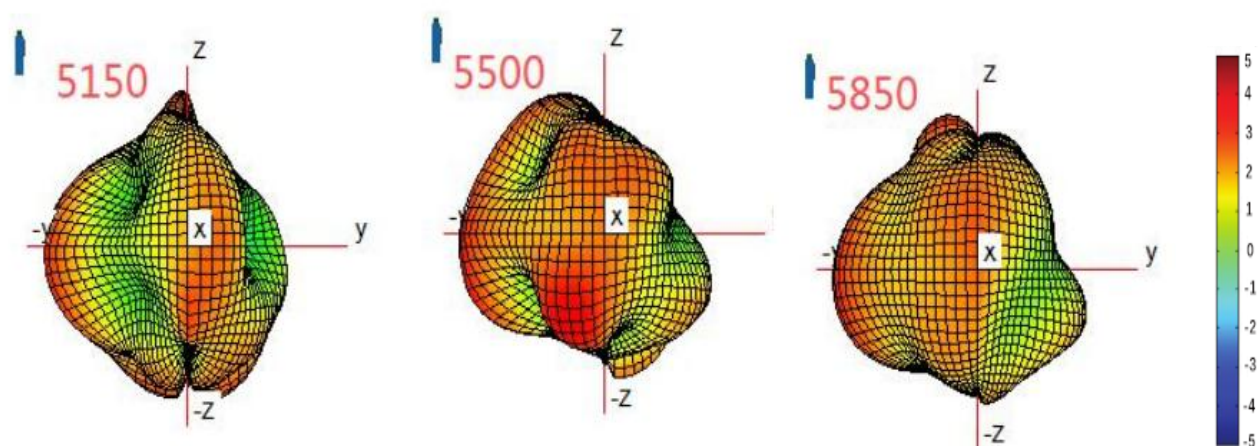
Efficiency Table(5G)

测试频段	测试频率	Efficiency-DB	Efficiency-%	Gain(dBi)
PASSIVE	5150	-4.8	33.08	0.45
PASSIVE	5200	-4.6	34.64	0.35
PASSIVE	5250	-4.31	37.04	0.42
PASSIVE	5300	-4.21	37.97	0.75
PASSIVE	5350	-4.44	35.98	0.79
PASSIVE	5400	-4.82	32.94	0.71
PASSIVE	5450	-4.9	32.4	0.72
PASSIVE	5500	-4.96	31.89	0.85
PASSIVE	5550	-4.71	33.81	1.27
PASSIVE	5600	-4.51	35.4	1.49
PASSIVE	5650	-4.47	35.69	1.73
PASSIVE	5700	-4.39	36.38	2.27
PASSIVE	5750	-4.52	35.31	2.58
PASSIVE	5800	-4.54	35.16	2.57
PASSIVE	5850	-4.58	34.81	2.59

Radiation Pattern(2.4G)



Radiation Pattern(5G)



BT Test

Test environment: Corridor channel

Test tool: Bluetooth speaker

Test distance: 10+M (smooth music playback without stalling)

Active test data

802.11b	Frequency	TRP		(TIS)	
	2412	CH1 11Mbps	13.50	CH1 11Mbps	-82.26
	2437	CH6 11Mbps	12.15	CH6 11Mbps	-81.95
	2467	CH11 11Mbps	13.39	CH11 11Mbps	-82.51
802.11a		TRP		TIS	
	5180	CH36 6Mbps	10.14	CH36 54Mbps	-66.06
	5300	CH60 6Mbps	10.45	CH60 54Mbps	-66.35
	5805	CH161 6Mbps	10.17	CH161 54Mbps	-65.91

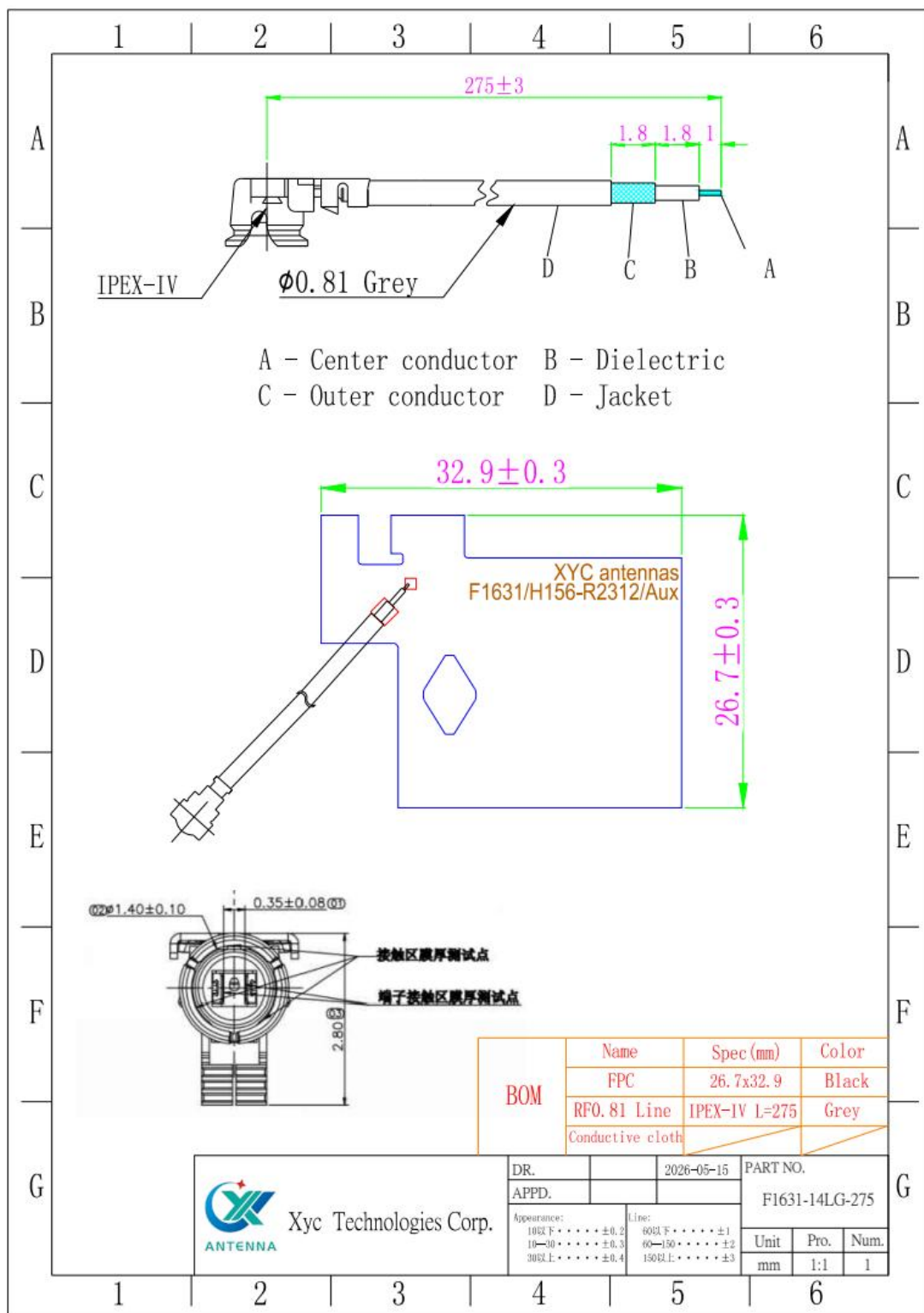
Throughput Test(2.4G)

Upward	37.1M	Downward	45.4M
Picture	<pre> 5.00-6.00 sec 4.75 MBytes 39.8 Mbits/sec 6.00-7.00 sec 4.75 MBytes 39.8 Mbits/sec 7.00-8.00 sec 4.63 MBytes 38.8 Mbits/sec 8.00-9.00 sec 4.63 MBytes 38.8 Mbits/sec 9.00-10.00 sec 4.75 MBytes 39.8 Mbits/sec 10.00-11.00 sec 4.50 MBytes 37.7 Mbits/sec 11.00-12.00 sec 4.38 MBytes 36.7 Mbits/sec 12.00-13.00 sec 4.00 MBytes 33.6 Mbits/sec 13.00-14.00 sec 4.13 MBytes 34.6 Mbits/sec 14.00-15.00 sec 4.13 MBytes 34.6 Mbits/sec 15.00-16.00 sec 4.63 MBytes 38.8 Mbits/sec 16.00-17.00 sec 4.75 MBytes 39.8 Mbits/sec 17.00-18.00 sec 4.63 MBytes 38.8 Mbits/sec 18.00-19.00 sec 4.00 MBytes 33.6 Mbits/sec 19.00-20.00 sec 4.00 MBytes 33.6 Mbits/sec 20.00-20.23 sec 89.4 MBytes 37.1 Mbits/sec </pre>	Picture	<pre> Interval Transfer Bandwidth 4.0- 5.0 sec 4.68 MBytes 39.3 Mbits/sec Interval Transfer Bandwidth 5.0- 6.0 sec 5.41 MBytes 45.4 Mbits/sec Interval Transfer Bandwidth 6.0- 7.0 sec 5.87 MBytes 49.2 Mbits/sec Interval Transfer Bandwidth 7.0- 8.0 sec 5.46 MBytes 45.8 Mbits/sec Interval Transfer Bandwidth 8.0- 9.0 sec 5.64 MBytes 47.3 Mbits/sec Interval Transfer Bandwidth 9.0-10.0 sec 5.55 MBytes 46.5 Mbits/sec Interval Transfer Bandwidth 10.0-10.0 sec 54.3 MBytes 45.4 Mbits/sec </pre>

Throughput Test(5G)

Upward	224M	Downward	247M
Picture	<pre> 1] 8.00-9.00 sec 28.6 MBytes 240 Mbits/sec 1] 9.00-10.00 sec 23.4 MBytes 196 Mbits/sec 1] 10.00-11.00 sec 27.5 MBytes 231 Mbits/sec 1] 11.00-12.00 sec 29.3 MBytes 245 Mbits/sec 1] 12.00-13.00 sec 22.0 MBytes 185 Mbits/sec 1] 13.00-14.00 sec 27.8 MBytes 233 Mbits/sec 1] 14.00-15.00 sec 25.9 MBytes 217 Mbits/sec 1] 15.00-16.00 sec 27.0 MBytes 226 Mbits/sec 1] 16.00-17.00 sec 28.5 MBytes 239 Mbits/sec 1] 17.00-18.00 sec 29.3 MBytes 245 Mbits/sec 1] 18.00-19.00 sec 27.0 MBytes 226 Mbits/sec 1] 19.00-20.00 sec 27.3 MBytes 229 Mbits/sec 1] 20.00-20.05 sec 535 MBytes 224 Mbits/sec </pre>	Picture	<pre> Interval Transfer Bandwidth 1.0- 2.0 sec 28.8 MBytes 241 Mbits/sec Interval Transfer Bandwidth 2.0- 3.0 sec 29.9 MBytes 251 Mbits/sec Interval Transfer Bandwidth 3.0- 4.0 sec 30.3 MBytes 255 Mbits/sec Interval Transfer Bandwidth 4.0- 5.0 sec 31.0 MBytes 260 Mbits/sec Interval Transfer Bandwidth 5.0- 6.0 sec 29.2 MBytes 245 Mbits/sec Interval Transfer Bandwidth 6.0- 7.0 sec 29.7 MBytes 249 Mbits/sec Interval Transfer Bandwidth 7.0- 8.0 sec 27.8 MBytes 233 Mbits/sec Interval Transfer Bandwidth 8.0- 9.0 sec 30.5 MBytes 256 Mbits/sec Interval Transfer Bandwidth 9.0-10.0 sec 29.4 MBytes 247 Mbits/sec Interval Transfer Bandwidth 10.0-10.0 sec 294 MBytes 247 Mbits/sec </pre>

Antenna Assembly





Inspection Standard

Xyc Technologies Corp.	File Cod.	XYC-WI-PZ-02	Page.
	File Vers.	A0	1 of 1
File Name	Sampling Plan		

Sampling Level Table

Special Check				General			Batch Scope	Sample Word	Sampling	0.65		1.0		1.5		2.5		4.0		6.0	
S-1	S-2	S-3	S-4	I	II	III				AC	RE	AC	RE	AC	RE	AC	RE	AC	RE	AC	RE
A	A	A	A	A	A	B	2--8	A	2	0	1	0	1	0	1	0	1	0	1	0	1
A	A	A	A	A	B	C	9--15	B	3	0	1	0	1	0	1	0	1	0	1	0	1
A	A	B	B	B	C	D	16--25	C	5	0	1	0	1	0	1	0	1	0	1	1	2
A	B	B	C	C	D	E	26--50	D	8	0	1	0	1	0	1	0	1	1	2	1	2
B	B	C	C	C	E	F	51--90	E	13	0	1	0	1	0	1	1	2	1	2	2	3
B	B	C	D	D	F	G	91--150	F	20	0	1	0	1	1	2	1	2	2	3	3	4
B	C	D	E	E	G	H	151--280	G	32	0	1	1	2	1	2	2	3	3	4	5	6
B	C	D	E	F	H	J	281--500	H	50	1	2	1	2	2	3	3	4	5	6	7	8
C	C	E	F	G	J	K	501--1200	J	80	1	2	2	3	3	4	5	6	7	8	10	11
C	D	E	G	H	K	L	1201--3200	K	125	2	3	3	4	5	6	7	8	10	11	14	15
C	D	F	G	J	L	M	3201--10000	L	200	3	4	5	6	7	8	10	11	14	15	21	22
C	D	F	H	K	M	N	10001-35000	M	315	5	6	7	8	10	11	14	15	21	22	21	22
D	E	G	J	L	N	P	35001-150000	N	500	7	8	10	11	14	15	21	22	21	22	21	22
D	E	G	J	M	P	Q	150001-500000	P	800	10	11	14	15	21	22	21	22	21	22	21	22
D	E	H	K	N	Q	R	500001and over	Q	1250	14	15	21	22	21	22	21	22	21	22	21	22
									R	2000	21	22	21	22	21	22	21	22	21	22	22

AC-Qualified RE-No Qualified



List Of Raw Materials

Environmental protection parts test report statistical list

The company hereby guarantees that all the information recorded in and attached to this "Environmental Protection Parts Test Report" is true. If there is any inaccuracy (including but not limited to the error in the comparison between the part number and the original test report), the company will be fully liable for any damage caused to Shenzhen Yingzhongshi Intelligent Technology Co., LTD.

Material name: Aux Antennas Supplier part: F1631-14LG-275

Part number : issuer:

fiction: Legal representative:

N O .	Name	Material supplier	Mfr Part Number	Hazardous Substances Concentration in Homogeneous Material(PPM)										HF		Test Lab, organization	Test Report Number	Test Date (YY-MM-DD)	Insert a third party test report	
				Cd	Pb	Hg	Cr6+	PBBs	PBDEs	DBP	BBP	DEHP	DIBP	Cl	Br					
				<100	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<900	<900					
1	WIFI Aux Ant	XYC	FPC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Shenzhen Water Testing Technology Co., LTD	WTX25X07 182050R1 C WTX25X07 182051R1 C	2025.07.25	 WTX25X071820 50R1C ROHS_exp  WTX25X071820 51R1C REACH S	
			Rubber backing	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					ND
			Text	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					ND
			Solder shield	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					ND
			Wire rod	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					ND



Sample Inspection Report

Customer	Yang Hua	Product	WIFI Aux Antennas	Quantity shipped	5	Sampling quantity	2	
Models	H156-R2312	P/N	F1631-14LG-275	Shipping date	2025/05/15			
Sampling standard	☒ Normal inspection ☐ Tightened inspection ☐ Decrement inspection							
Sampling mode	MIL-STD-105D (II) Single sampling Acceptance limit AQL:CR: 0 Maj: 0.4 Min: 1.5							
Quality acceptance level			CR Acc	0	Maj ACC	0	Min ACC	0
			CR REJ	1	Maj REJ	1	Min REJ	1
project	program of tests	examination requirement	test method	inspection result				decide
				1	2	3	4	
Dimensi onal inspecti on	Line length	275±3	ruler	275	275			OK
	FPC shape	26.7±0.3	calliper	26.7	26.6			OK
	FPC shape	32.9±0.3	calliper	32.9	32.9			OK
project	program of tests	examination requirement	test method	Defect description	CR	Maj	Min	decide
visual inspectio	wire sheath	There is no scratching phenomenon on the outer cover	visual	No abnormality	0	0	0	OK
	Solder pad	No oxidation, tin point and other phenomena	visual	No abnormality	0	0	0	OK
	IPEX	No color difference, shrinkage, oxidation, deformation and other undesirable phenomena	visual	No abnormality	0	0	0	OK
electrical specifica tion								
final judgment	☒ OK ☐ NG							

FORM ID NO: XYC-WF-PZ-001

Packing Specification

