



台灣安潔電子股份有限公司
Taiwan Anjie Electronics Co., Ltd

承認書

APPROVAL SHEET

Customer: 研華

Customer Model No.: 1751000197-01

Part No.: AJQQ1J-Q0008

Product Description: Antenna Internal WIFI&GPS<E
1.13/160mm(Red)IPEX_IV&115mm(Gray)IPEX_IV&100mm(Yellow)IP
EX_IV

Issue Date: 20211202

REV.: A

客戶承認用印	安潔承認用印

核准	審核	承辦
		Anders

Taiwan Anjie Electronics Co., Ltd
台灣安潔電子股份有限公司

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Table of Contents

Item

1. Drawing

2. Test Report

- Electrical test
 - Antenna Gain and Efficiency
-

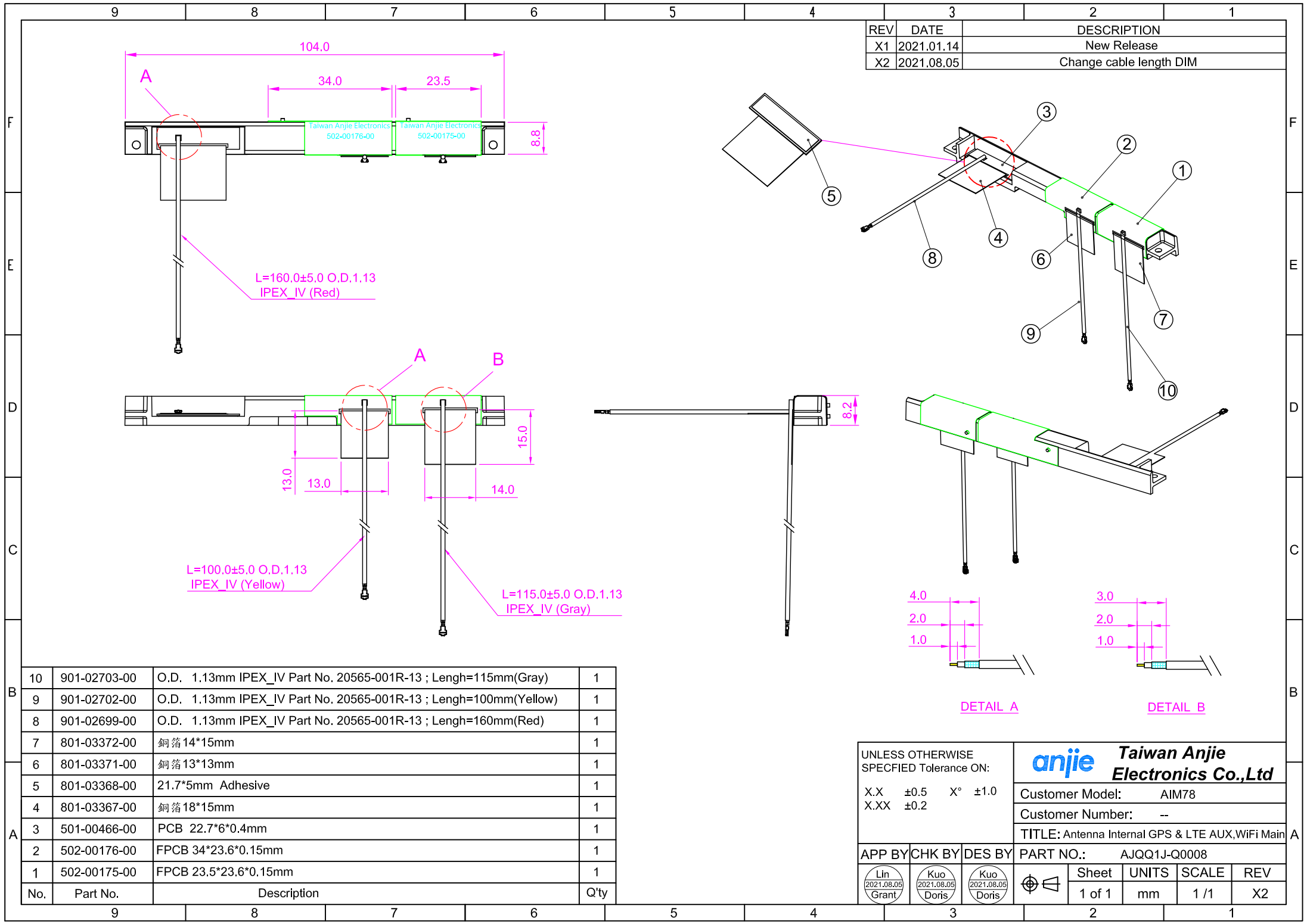
3. Material Certifications

- Antenna
 - Connector
-



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SPECIFICATION			
Frequency Range	2400~5850MHz	1575~1602MHz	1710~2690MHz
Impedance	50Ω	50Ω	50Ω
V.S.W.R	≤ 2.5	≤ 2.5	≤ 4.0
Radiation	Omni	Omni	Omni
Gain	2.4G<3.36dBi 5G<4.31 dBi	<1.20dBi	<4.59dBi
Type	PIFA	PIFA	PIFA
Polarization	Vertical	Vertical	Vertical
Mechanical Properties			
Connector	I-PEX_IV	I-PEX_IV	I-PEX_IV



REV	DATE	DESCRIPTION
X1	2021.01.14	New Release
X2	2021.08.05	Change cable length DIM

10	901-02703-00	O.D. 1.13mm IPEX_IV Part No. 20565-001R-13 ; Lengh=115mm(Gray)	1
9	901-02702-00	O.D. 1.13mm IPEX_IV Part No. 20565-001R-13 ; Lengh=100mm(Yellow)	1
8	901-02699-00	O.D. 1.13mm IPEX_IV Part No. 20565-001R-13 ; Lengh=160mm(Red)	1
7	801-03372-00	銅箔 14*15mm	1
6	801-03371-00	銅箔 13*13mm	1
5	801-03368-00	21.7*5mm Adhesive	1
4	801-03367-00	銅箔 18*15mm	1
3	501-00466-00	PCB 22.7*6*0.4mm	1
2	502-00176-00	FPCB 34*23.6*0.15mm	1
1	502-00175-00	FPCB 23.5*23.6*0.15mm	1
No.	Part No.	Description	Q'ty

UNLESS OTHERWISE SPECIFIED Tolerance ON:				anjie Taiwan Anjie Electronics Co.,Ltd			
X.X ±0.5 X° ±1.0				Customer Model: AIM78			
X.XX ±0.2				Customer Number: --			
				TITLE: Antenna Internal GPS & LTE AUX,WiFi Main			
APP BY				PART NO.: AJQQ1J-Q0008			
CHK BY							
DES BY							
Lin 2021.08.05 Grant				Sheet 1 of 1			
Kuo 2021.08.05 Doris				UNITS mm			
Kuo 2021.08.05 Doris				SCALE 1 / 1			
				REV X2			



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Electrical test





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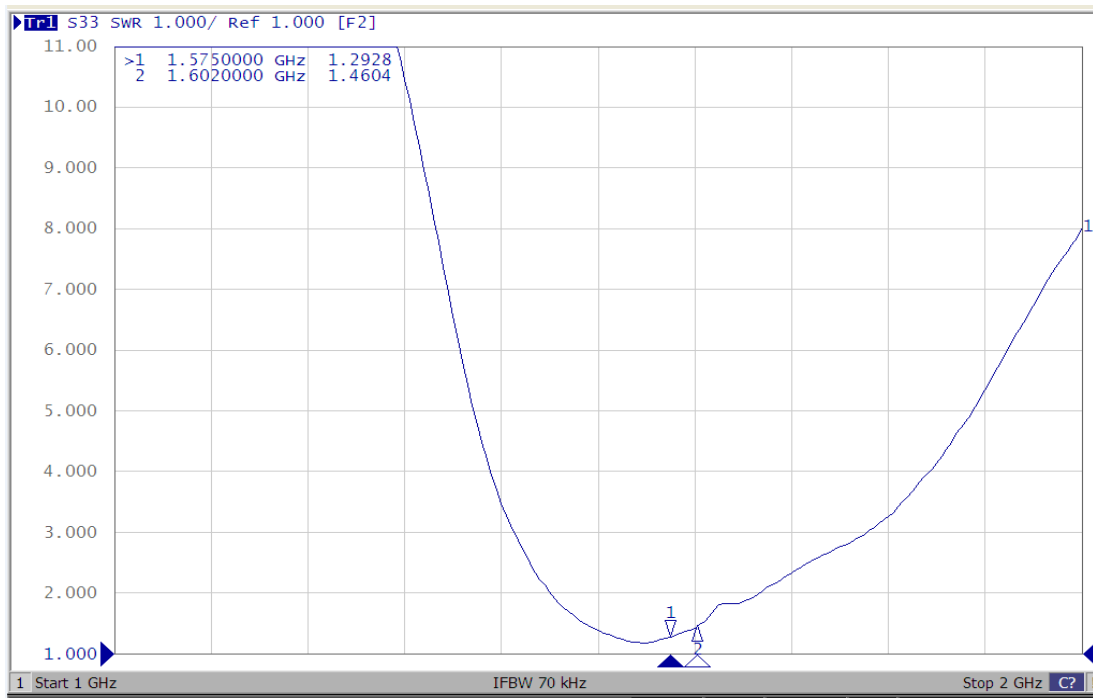
Electrical test





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Taiwan Anjie Electronics Co., Ltd

Electrical test





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Antenna Gain and Efficiency

Frequency(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	3.36	3.36	3.15	3.16	3.06	3.25	3.22	3.23	3.32	3.01	3.12
Directivity (dBi)	6.31	6.3	6.12	6.05	5.83	5.99	5.95	5.94	6	5.75	5.7
Efficiency (dB)	-2.96	-2.93	-2.97	-2.9	-2.77	-2.74	-2.73	-2.71	-2.69	-2.73	-2.58
Efficiency (%)	50.62	50.88	50.47	51.34	52.8	53.23	53.31	53.62	53.89	53.31	55.2

Frequency(MHz)	5150	5250	5350	5450	5550	5650	5750	5850
Gain (dBi)	4.31	3.23	2.63	1.97	2.33	2.76	2.61	2.71
Directivity (dBi)	6.7	5.84	5.39	5.17	5.56	5.93	5.52	5.33
Efficiency (dB)	-2.39	-2.61	-2.75	-3.2	-3.23	-3.18	-2.9	-2.62
Efficiency (%)	57.64	54.77	53.05	47.84	47.53	48.12	51.25	54.67



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Antenna Gain and Efficiency

Frequency(MHz)	1565	1575	1585	1592	1602	1612
Gain (dBi)	-1.14	-0.38	0.3	0.68	1.2	1.11
Directivity (dBi)	3.57	3.63	3.8	3.96	4.05	4.11
Efficiency (dB)	-4.71	-4.01	-3.5	-3.28	-2.86	-3
Efficiency (%)	33.81	39.72	44.71	46.98	51.82	50.17



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Antenna Gain and Efficiency

Frequency(MHz)	1710	1730	1750	1770	1785	1805	1840	1850	1880	1910	1920
Gain (dBi)	1.68	1.77	2.06	2.35	2.73	2.82	2.96	3.11	3.31	3.84	4.01
Directivity (dBi)	5.34	5.42	5.5	5.42	5.57	5.62	5.76	5.85	5.85	5.96	5.98
Efficiency (dB)	-3.67	-3.65	-3.44	-3.06	-2.84	-2.81	-2.79	-2.74	-2.54	-2.13	-1.97
Efficiency (%)	42.97	43.16	45.27	49.41	52.03	52.4	52.56	53.2	55.75	61.3	63.53

Frequency(MHz)	1930	1950	1960	1980	1990	2010	2018	2025	2110	2140	2170
Gain (dBi)	4.13	4.51	4.59	4.37	4.23	4.09	4.06	3.9	3.3	3.55	3.24
Directivity (dBi)	5.96	6.07	6.05	5.73	5.63	5.47	5.49	5.5	5.22	4.98	4.54
Efficiency (dB)	-1.83	-1.56	-1.46	-1.36	-1.4	-1.39	-1.44	-1.6	-1.92	-1.43	-1.3
Efficiency (%)	65.63	69.85	71.44	73.06	72.41	72.7	71.84	69.15	64.29	71.88	74.14

Frequency(MHz)	2300	2325	2350	2375	2400	2500	2515	2535	2555	2570	2595
Gain (dBi)	2.93	2.63	2.47	2.11	2.67	3.99	3.94	3.96	3.89	3.48	3.4
Directivity (dBi)	4.44	4.11	4.09	4.23	4.88	5.77	5.62	5.64	5.74	5.47	5.41
Efficiency (dB)	-1.5	-1.48	-1.62	-2.12	-2.22	-1.78	-1.68	-1.69	-1.85	-1.99	-2
Efficiency (%)	70.73	71.08	68.87	61.35	60.05	66.38	67.97	67.84	65.3	63.19	63.05



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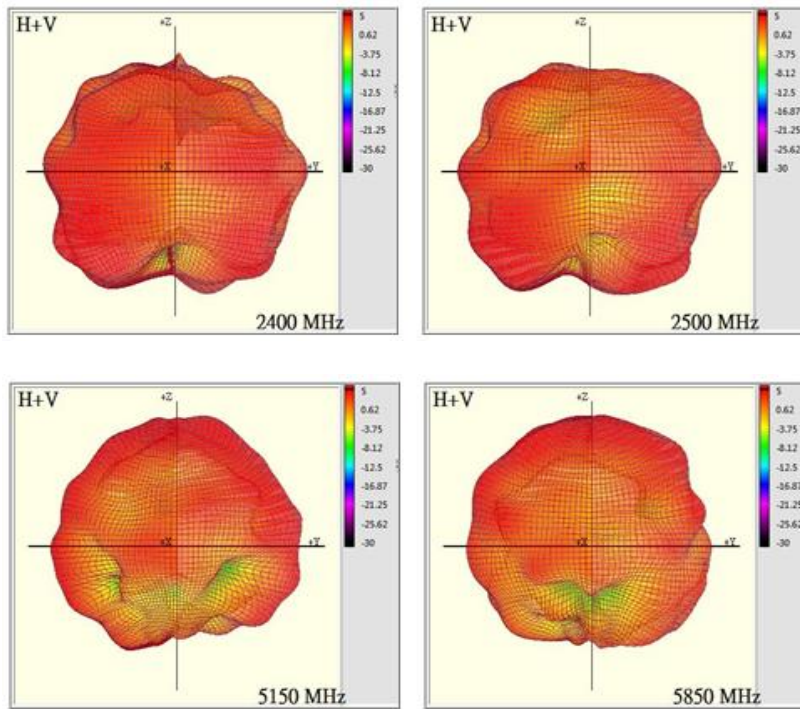
Antenna Gain and Efficiency

Frequency(MHz)	2620	2630	2655	2680	2690
Gain (dBi)	3.31	3.01	3.16	3.57	3.27
Directivity (dBi)	5.36	5.18	5.18	4.93	4.82
Efficiency (dB)	-2.05	-2.17	-2.02	-1.36	-1.55
Efficiency (%)	62.38	60.68	62.78	73.19	69.98



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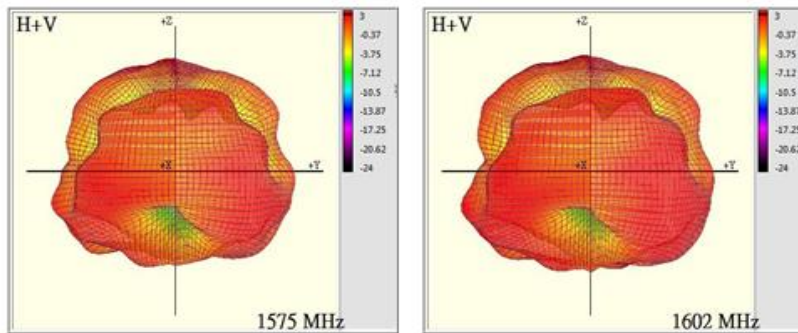
Antenna 3D Pattern





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Antenna 3D Pattern





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Antenna 3D Pattern

