

Product Name	Type	Rev.	SUNNYWAY	IR
RG3102	LDS & FPC			

APPROVAL SHEET

Customer Name : **Franklin Technology**

Company Name : SUNNYWAY

Product Name : RG3102

Mfr. P/N :

Antenna Name	P/N
LDS ANT 1	SZ24499IB88-1
LDS ANT 2	SZ24499IB88-2
WIFI1 ANT	SZ2426IB75-1
WIFI2 ANT	SZ2426IB75-2

Sunnyway Co.,Ltd.

6F Building 5, Nam Tai Inno Park, Guangming District, Shenzhen

Product Name	Type	Rev.	SUNNYWAY	IR
RG3102	LDS & FPC			

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RG3102	LDS & FPC			

1. Revision History of Product Specification

1.1 History List of Approval Sheet

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Product Name	Type	Rev.	SUNNYWAY	IR
RG3102	LDS & FPC			

2. Circuit Specification

2.1 Test Condition

2.1.1 Test Environment (Condition/Method)

① Voltage Standing Wave Ratio(VSWR)

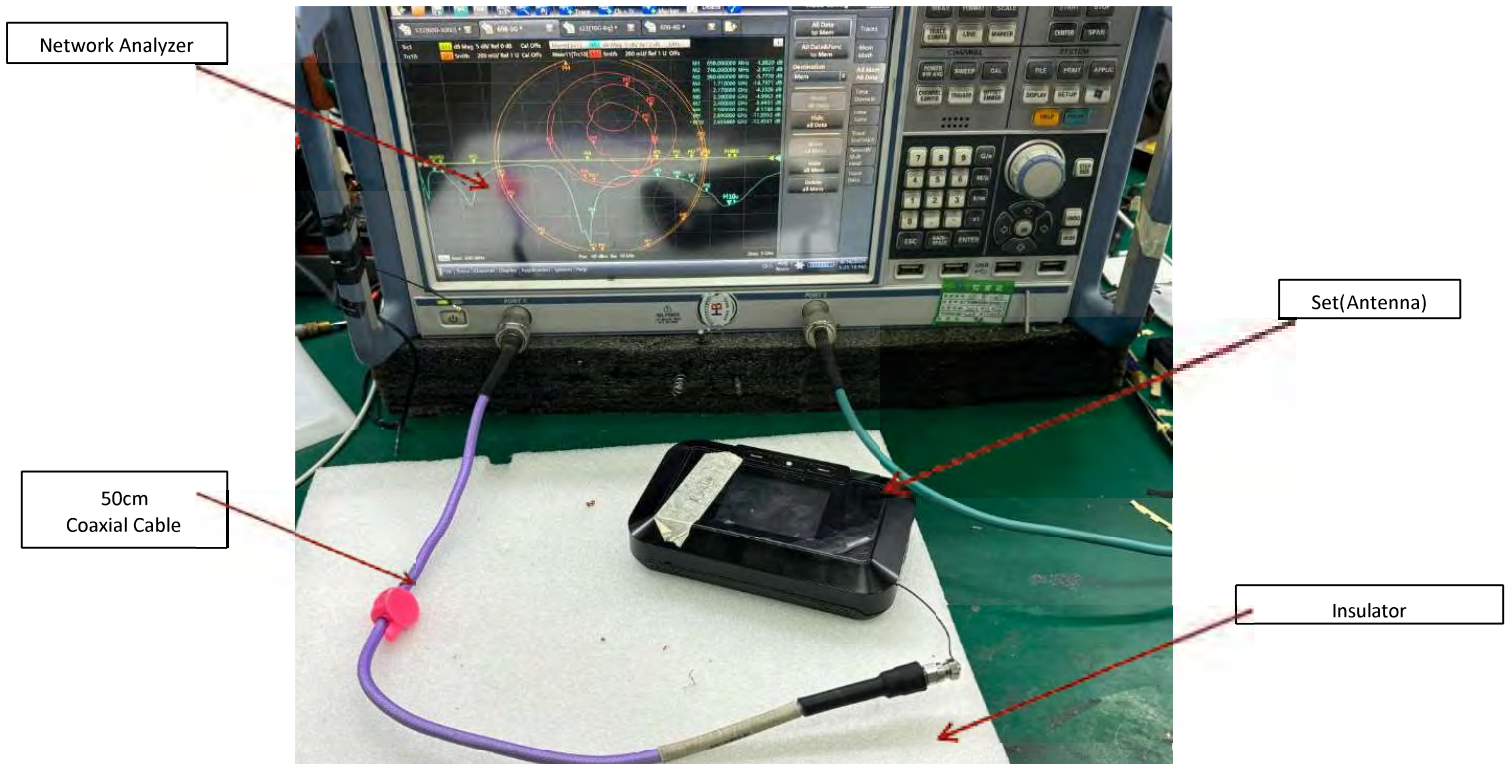
Step 1. Set the frequency range after connect 50cm cable to Network analyzer.

Step 2. Connect Calibration Kit to Network analyzer and calibrate.

Step 3. Fix the cable and keep separation distance over 30cm for reducing effect by Network analyzer.

Step 4. Fix insulator over 5cm on the bottom of measuring antenna.

Step 5. Measure VSWR with setting marker of desired frequency.



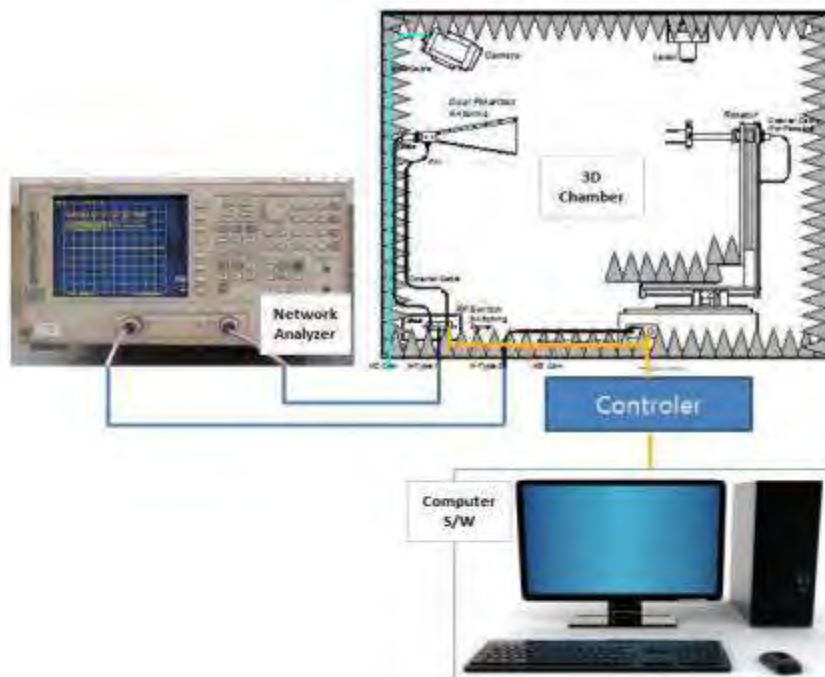
Product Name	Type	Rev.	SUNNYWAY	IR
RG3102	LDS & FPC			

② Radiation Pattern & Gain

Step 1. Calibrate the Chamber system using Horn antenna, and set up the software to control the Chamber system at the same time.

Step 2. Keep the measuring antenna to holder.

Step 3. Measure Gain & efficiency.



Product Name	Type	Rev.	SUNNYWAY	IR
ANT0	LDS			

2.2.1 VSWR

617~745Mhz



698~803Mhz



824~894Mhz



880~960Mhz



Product Name	Type	Rev.	SUNNYWAY	IR
ANT1	LDS			

617~745Mhz

698~803Mhz



824~894Mhz

880~960Mhz



Product Name	Type	Rev.	SUNNYWAY	IR
ANT2 ANT3	LDS			

ANT2



ANT3



Product Name	Type	Rev.	SUNNYWAY	IR
ANT5 ANT6	FPCB Type		Franklin Technology	

ANT5



ANT6



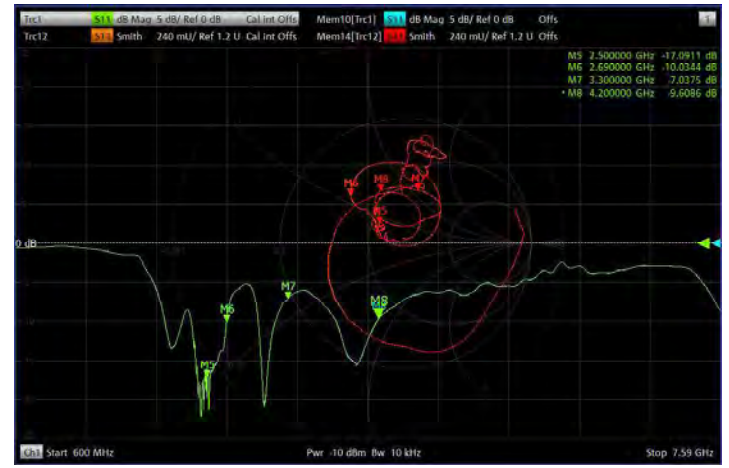
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Product Name	Type	Rev.	SUNNYWAY	IR
ANT7 ANT8	LDS			

ANT7



ANT8



DATE	2024.08.16.
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Product Name	Type	Rev.	SUNNYWAY	IR
ANT9 ANT10	LDS			

ANT9



ANT10



Product Name	Type	Rev.	SUNNYWAY	IR
ANT0	LDS			

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
700	-4.61	2.49	34.59
710	-4.72	2.13	33.73
720	-5.52	0.92	28.05
730	-6.14	-0.85	24.32
740	-6.93	-1.79	20.28
750	-6.62	-1.58	21.79
760	-6.22	-1.87	23.87
770	-6.22	-1.22	23.89
780	-6.44	-2.12	22.7
790	-6.35	-2.54	23.18
800	-6.91	-4.6	20.35
810	-6.94	-1.84	20.22
820	-6.97	-2.04	20.07
830	-6.84	-2.51	20.68
840	-6.56	-2.04	22.08
850	-6.27	-1.63	23.6
860	-5.98	-1.16	25.23
870	-6.18	-1.43	24.1
880	-6.43	-2.11	22.75
890	-6.93	-1.02	20.28
900	-5.69	-1.73	26.98
910	-5.66	-1.78	27.16
920	-5.82	-2.02	26.18
930	-6.21	-2.25	23.93
940	-6.66	-2.56	21.58
950	-6.99	-2.12	20
960	-6.58	-2.57	21.96
1700	-4.96	-0.66	31.92
1720	-4.88	-0.79	32.51
1740	-4.66	-0.71	34.2
1760	-4.25	-0.46	37.58
1780	-3.97	-0.02	40.09
1800	-3.93	0.23	40.46
1820	-3.92	-0.05	40.55
1840	-3.77	0.29	41.98
1860	-3.85	0.51	41.21

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1880	-3.94	0.36	40.36
1900	-4.17	-0.09	38.28
1920	-4.29	-0.31	37.24
1940	-4.6	-0.81	34.67
1960	-5.01	-0.85	31.55
1980	-5.56	-1.16	27.8
2000	-6.03	-0.25	24.95
2020	-3.84	0.58	41.3
2040	-3.49	1.43	44.77
2060	-3.23	1.86	47.53
2080	-2.92	2.07	51.05
2100	-2.76	2.31	52.97
2120	-2.42	2.82	57.28
2140	-2.37	2.72	57.94
2160	-2.45	2.03	56.89
2180	-2.46	2.39	56.75
2200	-2.48	2.68	56.49
2220	-2.57	2.73	55.34
2240	-2.56	2.53	55.46
2260	-2.52	2.53	55.98
2280	-2.65	2.52	54.33
2300	-2.82	2.45	52.24
2320	-2.89	2.39	51.4
2340	-2.94	2.29	50.82
2360	-2.83	2.5	52.12
2380	-2.75	2.81	53.09
2400	-2.88	2.85	51.52
2420	-2.95	2.68	50.7
2440	-2.78	3.11	52.72
2460	-2.74	3.53	53.21
2480	-2.62	3.97	54.7
2500	-2.65	3.98	54.33
2520	-2.76	4.03	52.97
2540	-3.03	3.74	49.77
2560	-3.22	3.61	47.64
2580	-3.33	3.4	46.45
2600	-3.5	3.15	44.67

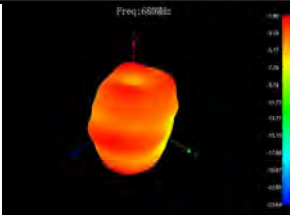
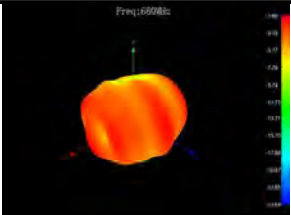
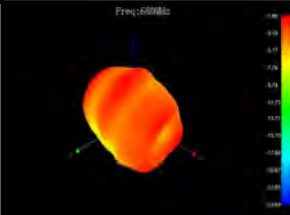
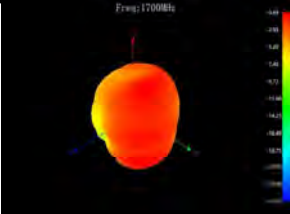
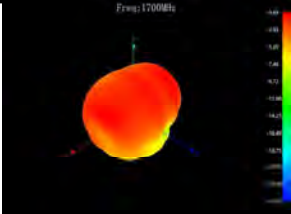
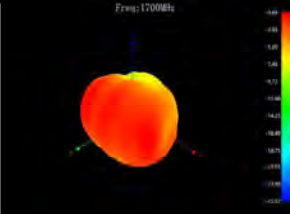
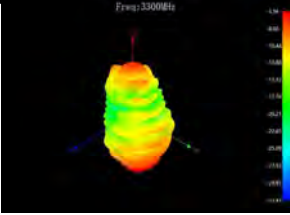
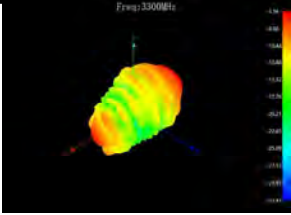
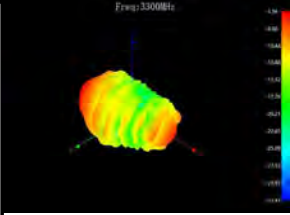
Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
2620	-3.71	3.14	42.56
2640	-3.75	3.35	42.17
2660	-3.94	3.46	40.36
2680	-4.18	3.31	38.19
3300	-6.21	-3.87	23.96
3320	-14.05	-2.61	3.94
3340	-6.85	-2.41	20.64
3360	-6.86	-1.92	20.63
3380	-6.89	-2.64	20.47
3400	-6.98	-0.02	20.05
3420	-6.98	-1.33	20.04
3440	-6.99	-1.21	20
3460	-7.00	-3.54	19.94
3480	-7.00	-1.54	19.93
3500	-7.19	-1.03	19.12
3520	-7.01	0.21	19.91
3540	-7.03	0.12	19.8
3560	-7.05	-1.36	19.74
3580	-7.05	-2.12	19.72
3600	-7.08	-3.11	19.61
3620	-7.07	-2.25	19.63
3640	-7.15	1.21	19.29
3660	-7.19	-0.45	19.08
3680	-7.18	-0.78	19.13
3700	-7.20	-0.98	19.07
3720	-7.22	-1.42	18.95
3740	-7.23	-1.85	18.92
3760	-7.25	-1.96	18.83
3780	-7.07	-2.18	19.63
3800	-7.30	-2.4	18.62
3820	-7.30	-3.5	18.6
3840	-7.09	-2.12	19.55
3860	-6.89	-1.01	20.45
3880	-6.68	-2.01	21.46
3900	-6.71	-1.59	21.35
3920	-6.70	-1.53	21.36

Product Name	Type	Rev.	SUNNYWAY	IR
ANT0	LDS			

Frequency / Mhz	Efficiency / dB	MaxGain/ dBi	Efficiency / %
3940	-7.16	-0.11	19.25
3960	-6.73	-2.45	21.21
3980	-6.73	-1.78	21.21
4000	-6.94	-1.58	20.21
4020	-6.97	-1.96	20.1
4040	-6.76	-2.74	21.07
4060	-6.77	-2.72	21.06
4080	-6.78	-3.52	20.98
4100	-7.01	-1.23	19.9
4120	-7.24	-0.25	18.89
4140	-7.25	-2.78	18.84
4160	-7.75	-2.44	16.79
4180	-7.50	-3.15	17.8
4200	-7.50	-2.58	17.79

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Product Name	Type	Rev.	SUNNYWAY	IR
ANT0	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT70	700~960 Mhz			
	1700~2700 Mhz			
	3300~4400 Mhz			

Product Name	Type	Rev.	SUNNYWAY	IR
ANT1	LDS			

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
690	-3.78	3.38	41.88
700	-3.26	4.06	47.21
710	-3.45	3.62	45.19
720	-4.3	2.48	37.15
730	-5.05	0.93	31.26
740	-5.92	-0.16	25.59
750	-6.64	-0.69	21.68
760	-6.23	-0.34	23.82
770	-5.84	-0.24	26.06
780	-5.37	0.19	29.04
790	-4.85	0.74	32.73
800	-4.93	-1.08	32.14
810	-4.61	-0.15	34.59
820	-4.32	0.4	36.98
830	-4.24	0.67	37.67
840	-4.14	0.89	38.55
850	-4.32	0.93	36.98
860	-4.47	1.05	35.73
870	-4.76	0.7	33.42
880	-4.6	0.45	34.67
890	-4.58	-0.02	34.83
900	-4.72	-0.81	33.73
910	-4.34	-0.59	36.81
920	-4.49	-0.82	35.56
930	-4.67	-0.87	34.12
940	-4.66	-0.82	34.2
950	-4.52	-0.68	35.32
960	-4.6	-0.85	34.67
1700	-3.45	1.28	45.19
1720	-3.18	1.06	48.08
1740	-2.92	1.39	51.05
1760	-2.66	1.16	54.2
1780	-2.59	0.68	55.08
1800	-2.72	0.56	53.46
1820	-2.8	1.05	52.48
1840	-2.79	1.1	52.6

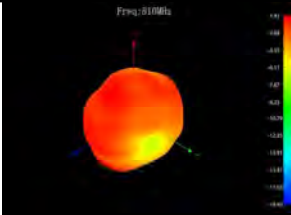
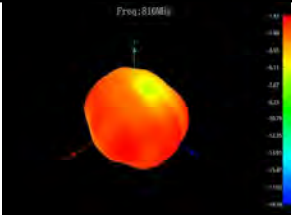
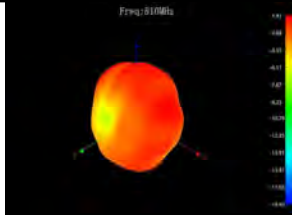
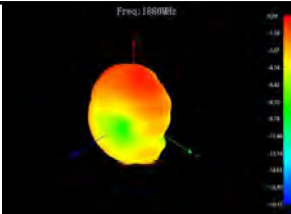
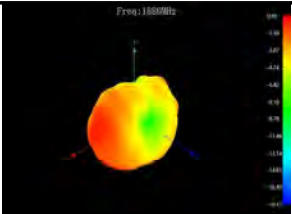
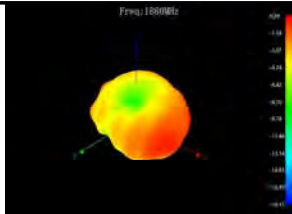
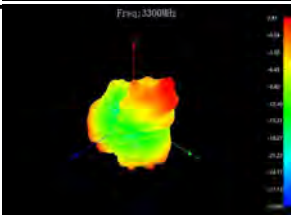
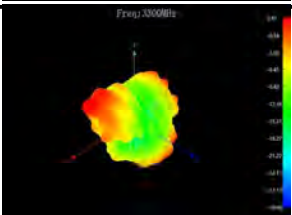
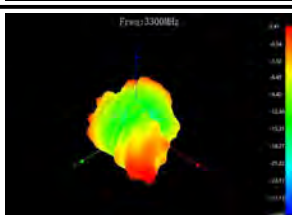
Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1860	-2.98	0.82	50.35
1880	-3.15	1.15	48.42
1900	-3.3	1.15	46.77
1920	-3.15	1.52	48.42
1940	-3.11	1.25	48.87
1960	-3.11	0.55	48.87
1980	-3.11	0.79	48.87
2000	-3.32	0.83	46.56
2020	-3.51	0.87	44.57
2040	-3.33	1.41	46.45
2060	-3.04	1.82	49.66
2080	-3.07	1.88	49.32
2100	-3.14	1.99	48.53
2120	-3.07	2.21	49.32
2140	-3.36	1.76	46.13
2160	-3.4	1.48	45.71
2180	-3.28	1.69	46.99
2200	-3.49	1.6	44.77
2220	-3.62	1.41	43.45
2240	-3.71	1.01	42.56
2260	-3.79	0.58	41.78
2280	-3.73	0.6	42.36
2300	-3.83	0.38	41.4
2320	-3.91	0.06	40.64
2340	-3.74	0.22	42.27
2360	-3.25	0.77	47.32
2380	-3.59	0.35	43.75
2400	-3.5	0.52	44.67
2420	-3.22	0.9	47.64
2440	-3.28	0.64	46.99
2460	-3.52	1.03	44.46
2480	-3.18	1.04	48.08
2500	-3.22	0.74	47.64
2520	-3.85	0.8	41.21
2540	-3.62	0.19	43.45
2560	-3.45	0.58	45.19
2580	-3.7	0.41	42.66

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
2600	-3.95	0.4	40.27
2620	-4.25	0.51	37.58
2640	-4.53	0.45	35.24
2660	-4.71	0.61	33.81
2680	-5.04	0.75	31.33
2690	-6.78	2.15	20.99
3300	-6.78	2.15	20.99
3320	-6.7	2.52	21.38
3340	-6.9	2.55	20.42
3360	-7.14	2.73	19.32
3380	-7.27	2.6	18.75
3400	-7.14	2.55	19.32
3420	-7.14	2.5	19.32
3440	-6.97	2.62	20.09
3460	-6.85	2.75	20.65
3480	-7.05	2.77	19.72
3500	-7.4	2.54	18.2
3520	-6.93	2.11	20.26
3540	-6.64	1.4	21.67
3560	-7.20	0.68	19.06
3580	-7.39	0.12	18.24
3600	-6.98	-0.55	20.05
3620	-6.71	-0.99	21.35
3640	-6.80	-1.48	20.89
3660	-6.93	-1.62	20.28
3680	-6.67	-1.91	21.55
3700	-7.13	-2.04	19.38
3720	-7.38	-2.55	18.26
3740	-7.54	-2.91	17.6
3760	-7.64	-3.22	17.21
3780	-7.74	-2.36	16.84
3800	-7.96	-2.96	15.98
3820	-8.02	-3.23	15.78
3840	-8.06	-3.51	15.64
3860	-8.18	-3.91	15.19
3880	-8.18	-3.75	15.21

Product Name	Type	Rev.	SUNNYWAY	IR
ANT1	LDS			

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Product Name	Type	Rev.	SUNNYWAY	IR
ANT1	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT71	700~960 Mhz			
	1700~2700 Mhz			
	3300~4400 Mhz			

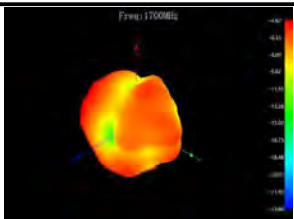
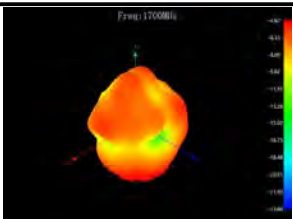
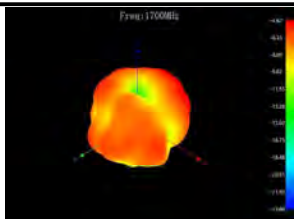
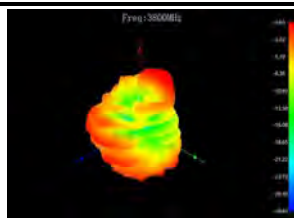
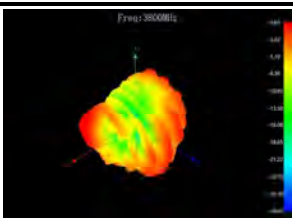
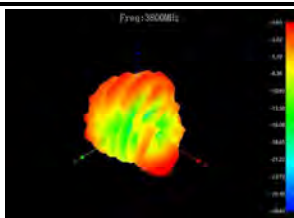
Product Name	Type	Rev.	SUNNYWAY	IR
ANT2	LDS			

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1700	-7.48	-2.64	17.86
1720	-7.39	-2.57	18.24
1740	-7.37	-3.1	18.32
1760	-7.09	-3.24	19.54
1780	-6.87	-2.95	20.56
1800	-7.15	-3.08	19.28
1820	-6.99	-2.72	20
1840	-6.7	-1.45	21.38
1860	-6.54	-1.03	22.18
1880	-5.72	-0.03	26.79
1900	-5.47	0.36	28.38
1920	-5.62	0.8	27.42
1940	-5.38	1.38	28.97
1960	-5.05	2.08	31.26
1980	-4.98	2.3	31.77
2000	-4.88	2.49	32.51
2020	-4.85	2.56	32.73
2040	-4.8	2.69	33.11
2060	-4.54	3.17	35.16
2080	-4.73	3.01	33.65
2100	-5.44	2.49	28.58
2120	-5.37	2.76	29.04
2140	-5.35	2.68	29.17
2160	-5.69	1.44	26.98
2180	-5.41	1.21	28.77
2200	-5.53	0.78	27.99
2220	-5.55	0.34	27.86
2240	-5.42	0.27	28.71
2260	-5.15	0.72	30.55
2280	-4.73	1.12	33.65
2300	-4.58	0.99	34.83
2320	-4.66	0.53	34.2
2340	-4.78	0.58	33.27
2360	-4.98	1.08	31.77
2380	-5.13	1.17	30.69
2400	-5.12	1.64	30.76
2420	-5	2.12	31.62

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
2440	-4.8	2.38	33.11
2460	-4.77	2.28	33.34
2480	-4.68	2.14	34.04
2500	-4.9	1.43	32.36
2520	-4.88	1.73	32.51
2540	-4.81	1.99	33.04
2560	-4.61	2.79	34.59
2580	-4.55	3.29	35.08
2600	-4.6	3.19	34.67
2620	-4.96	2.74	31.92
2640	-5.25	3	29.85
2660	-5.38	3.78	28.97
2680	-5.79	4.08	26.36
2700	-6.39	3.58	22.96
3300	-4.72	4.81	33.73
3320	-4.75	5.04	33.5
3340	-5.1	4.72	30.9
3360	-5.3	4.43	29.51
3380	-5.54	4.02	27.93
3400	-5.95	3.36	25.41
3420	-6.11	2.89	24.49
3440	-6.32	2.3	23.33
3460	-6.54	2.22	22.18
3480	-6.65	1.9	21.63
3500	-6.41	2.01	22.86
3520	-6.39	2.36	22.96
3540	-6.04	2.98	24.89
3560	-5.77	3.04	26.49
3580	-5.49	3.13	28.25
3600	-5.22	3.12	30.06
3620	-4.98	3.03	31.77
3640	-4.98	2.52	31.77
3660	-4.83	2.37	32.89
3680	-4.7	2.39	33.88
3700	-4.68	2.15	34.04
3720	-4.85	1.56	32.73

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
3740	-4.92	1.23	32.21
3760	-5.04	1.48	31.33
3780	-5.04	1.8	31.33
3800	-5.03	1.92	31.41
3820	-5.06	1.92	31.19
3840	-5.02	1.87	31.48
3860	-5.02	2.62	31.48
3880	-4.87	3.15	32.58
3900	-4.88	3.2	32.51
3920	-4.89	3.03	32.43
3940	-5.2	2.29	30.2
3960	-5.12	2.23	30.76
3980	-5.23	2.05	29.99
4000	-5.23	1.89	29.99
4020	-5.44	1.83	28.58
4040	-5.22	2.44	30.06
4060	-5.38	2.51	28.97
4080	-5.46	2.88	28.44
4100	-5.9	2.76	25.7
4120	-6.14	2.49	24.32
4140	-6.72	1.9	21.28
4160	-7.18	1.35	19.14
4180	-7.62	0.72	17.3
4200	-5.86	0.14	25.96
4220	-6.10	0.21	24.52
4240	-6.37	-0.22	23.06
4260	-6.70	-0.96	21.4
4280	-6.91	-1.61	20.35
4300	-6.90	-2.33	20.42
4320	-6.80	-3.61	20.89
4340	-7.59	-3.79	17.4
4360	-6.85	-3.28	20.67
4380	-6.79	-3.4	20.92
4400	-6.91	-2.44	20.37

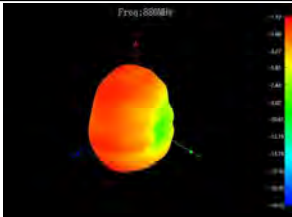
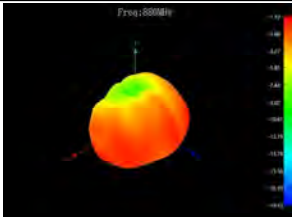
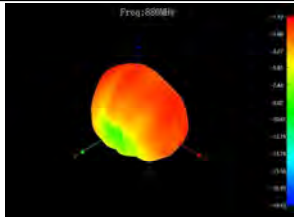
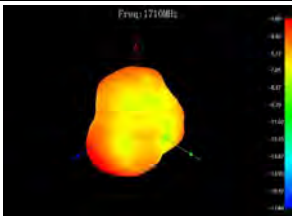
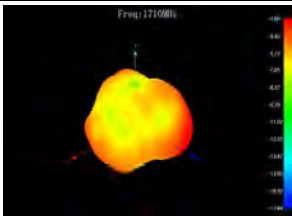
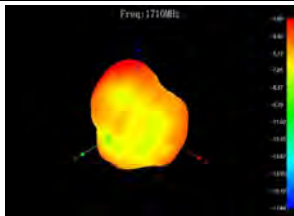
Product Name	Type	Rev.	SUNNYWAY	IR
ANT2	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT2	1700~ 2700 Mhz			
	3300~ 4400 Mhz			

Product Name	Type	Rev.	SUNNYWAY	IR
ANT3	LDS			

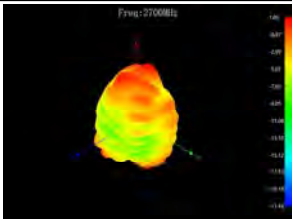
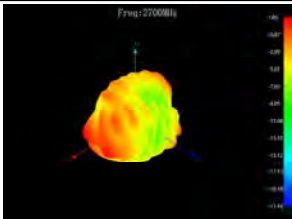
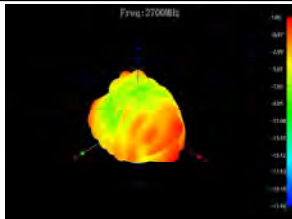
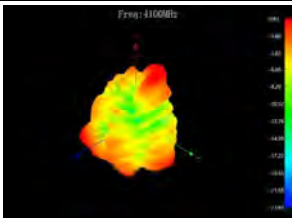
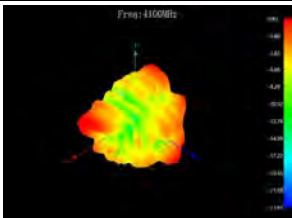
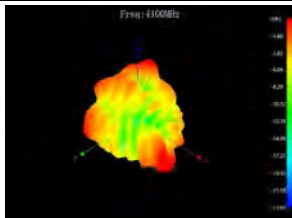
Frequency / MHz	Efficiency / dB	MaxGain / dBi	Efficiency / %	Frequency / MHz	Efficiency / dB	MaxGain / dBi	Efficiency / %	Frequency / MHz	Efficiency / dB	MaxGain / dBi	Efficiency / %
800	-8.72	-5.15	13.43	2090	-4.63	0.3	34.43				
810	-8.51	-4.64	14.09	2110	-4.87	0.54	32.58				
820	-8.25	-4.02	14.96	2130	-5.41	0.48	28.77				
830	-7.85	-3.32	16.41	2150	-5.46	-0.09	28.44				
840	-7.11	-2.63	19.45	2170	-6.44	-1.37	22.7				
850	-6.61	-1.91	21.83	2190	-6.2	-1.17	23.99				
860	-5.9	-1.13	25.7	2210	-5.59	-0.32	27.61				
870	-5.4	-0.81	28.84	2230	-5.32	-0.05	29.38				
880	-5.08	-0.61	31.05	2250	-5.05	0.16	31.26				
890	-5.01	-0.79	31.55	2270	-4.74	0.43	33.57				
900	-4.71	-0.79	33.81	2290	-4.63	0.55	34.43				
910	-4.62	-0.61	34.51	2310	-4.69	0.47	33.96				
920	-4.91	-0.71	32.28	2330	-4.41	0.68	36.22				
930	-4.78	-0.35	33.27	2350	-4.24	0.96	37.67				
940	-4.52	0.02	35.32	2370	-4.44	0.88	35.97				
950	-4.26	0.16	37.5	2390	-4.11	1.21	38.82				
960	-4.5	-0.38	35.48	2410	-4.17	1.18	38.28				
				2430	-4.11	1.14	38.82				
1710	-6.14	-1.01	24.32	2450	-3.96	1.39	40.18				
1730	-6.05	-0.84	24.83	2470	-3.62	1.91	43.45				
1750	-6.02	-1.36	25	2490	-3.6	1.85	43.65				
1770	-7.05	-2.29	19.72	2510	-3.44	1.86	45.29				
1790	-7.84	-2.65	16.44	2530	-3.46	1.88	45.08				
1810	-7.82	-2.7	16.52	2550	-3.46	1.95	45.08				
1830	-7.55	-3.1	17.58	2570	-3.47	1.96	44.98				
1850	-7.27	-2.28	18.75	2590	-3.58	1.94	43.85				
1870	-6.72	-1.69	21.28	2610	-3.67	2.1	42.95				
1890	-6.36	-1.38	23.12	2630	-3.96	2.15	40.18				
1910	-6.08	-1.5	24.66	2650	-4.17	2.12	38.28				
1930	-6.07	-1.67	24.72	2670	-4.37	2.31	36.56				
1950	-5.81	-1.39	26.24	2690	-4.74	2.5	33.57				
1970	-5.6	-0.92	27.54								
1990	-5.45	-0.6	28.51								
2010	-5.22	-0.73	30.06								
2030	-5.02	-1.38	31.48								
2050	-5.26	-1.22	29.79								
2070	-4.78	0.18	33.27								

Product Name	Type	Rev.	SUNNYWAY	IR
ANT3	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT3	800~960 Mhz			
	1710~2690 Mhz			

Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %
2500	-5.39	1.53	28.91	3750	-4.38	5.49	36.48				
2510	-5.33	1.71	29.31	3800	-4.24	5.87	37.67				
2520	-5.18	1.65	30.34	3850	-3.93	6.63	40.46				
2530	-5.13	1.88	30.69	3900	-3.65	6.83	43.15				
2540	-4.97	2.02	31.84	3950	-3.68	6.59	42.85				
2550	-4.96	2.23	31.92	4000	-3.81	5.47	41.59				
2560	-4.84	2.36	32.81	4050	-4.09	3.91	38.99				
2570	-4.78	2.54	33.27	4100	-4.37	3.12	36.56				
2580	-4.77	2.44	33.34	4150	-5.04	2.4	31.33				
2590	-4.67	2.34	34.12	4200	-4.94	3.04	32.06				
2600	-4.55	2.14	35.08	4250	-4.94	3.53	32.06				
2610	-4.46	1.84	35.81	4300	-4.95	3.6	31.99				
2620	-4.25	1.72	37.58	4350	-5.19	3.05	30.27				
2630	-4.06	1.68	39.26	4400	-5.43	2.22	28.64				
2640	-3.94	1.62	40.36								
2650	-3.83	1.97	41.4								
2660	-3.7	2.04	42.66								
2670	-3.75	2.2	42.17								
2680	-3.8	2.12	41.69								
2690	-3.88	2.32	40.93								
2700	-4.17	2.22	38.28								
3000	-5.29	3.31	29.58								
3050	-4.79	5.02	33.19								
3100	-5.78	3.83	26.42								
3150	-6.58	1.07	21.96								
3200	-6.10	-0.26	24.54								
3250	-6.37	0.98	23.06								
3300	-7.26	2.08	18.79								
3350	-6.19	3.19	24.04								
3400	-5.76	3.28	26.55								
3450	-5.59	3.13	27.61								
3500	-5.9	3.09	25.7								
3550	-5.97	2.97	25.29								
3600	-5.42	3.21	28.71								
3650	-5.19	3.74	30.27								
3700	-4.47	5.15	35.73								

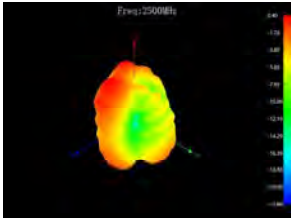
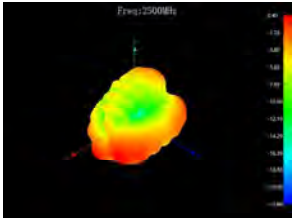
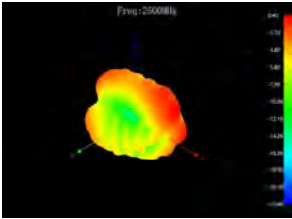
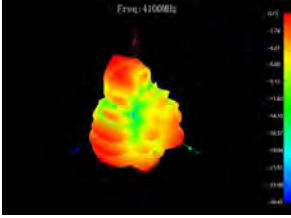
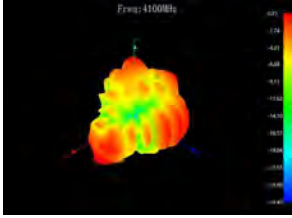
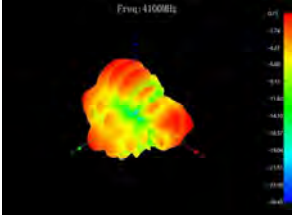
Product Name	Type	Rev.	SUNNYWAY	IR
ANT5	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT5	2500~ 2700 Mhz			
	3200~ 4400 Mhz			

Product Name	Type	Rev.	SUNNYWAY	IR
ANT6	FPCB Type		Franklin Technology	

Frequency / Mhz	Efficiency / dB	MaxGain / dBi	Efficiency / %	Frequency / Mhz	Efficiency / dB	MaxGain / dBi	Efficiency / %				
2500	-5.91	0.51	25.64	3900	-3.92	6.03	40.55				
2510	-5.85	0.85	26	3950	-4.01	5.59	39.72				
2520	-5.72	1.04	26.79	4000	-4	4.16	39.81				
2530	-5.65	1.53	27.23	4050	-4.19	3.47	38.11				
2540	-5.45	1.8	28.51	4100	-4.38	2.99	36.48				
2550	-5.37	2.2	29.04	4150	-5.11	1.55	30.83				
2560	-5.17	2.46	30.41	4200	-5.05	2.85	31.26				
2570	-5	2.66	31.62	4250	-5.12	2.36	30.76				
2580	-4.91	2.49	32.28	4300	-5.17	2.46	30.41				
2590	-4.72	2.25	33.73	4350	-5.3	1.92	29.51				
2600	-4.63	2.28	34.43	4400	-5.54	1.5	27.93				
2610	-4.56	1.73	34.99								
2620	-4.4	2.13	36.31								
2630	-4.2	1.84	38.02								
2640	-4.1	2.27	38.9								
2650	-3.95	2.15	40.27								
2660	-3.81	2.55	41.59								
2670	-3.86	2.46	41.11								
2680	-3.92	2.69	40.55								
2690	-3.99	2.54	39.9								
2700	-4.27	2.73	37.41								
3000	-5.19	3.68	30.27								
3050	-4.76	4.12	33.42								
3100	-5.58	3.14	27.67								
3150	-7.86	1.44	16.37								
3200	-8.69	0.46	13.52								
3250	-7.47	1.51	17.91								
3300	-6.52	2.32	22.28								
3350	-5.77	3.06	26.49								
3400	-5.66	2.53	27.16								
3450	-5.52	2.11	28.05								
3500	-5.84	2.11	26.06								
3550	-6.28	1.3	23.55								
3600	-5.59	1.53	27.61								
3650	-5.34	1.53	29.24								
3700	-4.72	3.94	33.73								
3750	-4.52	4.68	35.32								
3800	-4.4	5.21	36.31								
3850	-4.18	6.03	38.19								

Product Name	Type	Rev.	SUNNYWAY	IR
ANT6	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT6	2500~ 2700 Mhz			
	3200~ 4400 Mhz			

Product Name	Type	Rev.	SUNNYWAY	IR
ANT7	LDS			

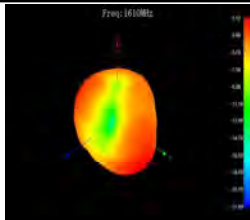
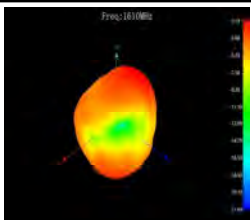
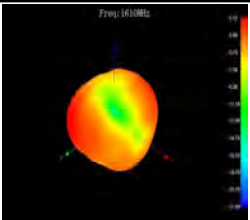
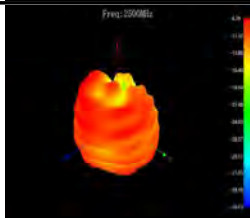
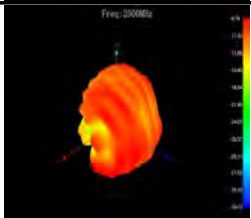
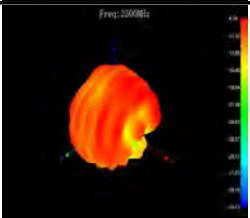
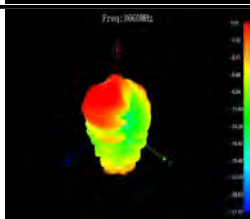
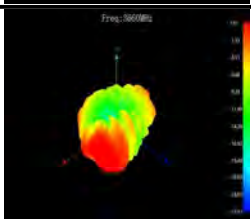
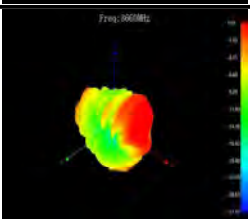
Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1160	-6.78	-1.8	20.99
1161	-6.75	-1.81	21.13
1162	-6.66	-1.72	21.58
1163	-6.57	-1.63	22.03
1164	-6.51	-1.56	22.34
1165	-6.49	-1.53	22.44
1166	-6.44	-1.47	22.7
1167	-6.46	-1.48	22.59
1168	-6.47	-1.5	22.54
1169	-6.43	-1.48	22.75
1170	-6.37	-1.44	23.07
1171	-6.38	-1.45	23.01
1172	-6.36	-1.44	23.12
1173	-6.33	-1.41	23.28
1174	-6.32	-1.4	23.33
1175	-6.32	-1.41	23.33
1176	-6.31	-1.4	23.39
1177	-6.36	-1.45	23.12
1178	-6.44	-1.54	22.7
1179	-6.54	-1.66	22.18
1180	-6.56	-1.69	22.08
1181	-6.61	-1.76	21.83
1182	-6.66	-1.81	21.58
1183	-6.71	-1.86	21.33
1184	-6.77	-1.9	21.04
1185	-6.84	-1.96	20.7
1550	-6	-2.32	25.12
1551	-6	-2.3	25.12
1552	-5.99	-2.24	25.18
1553	-5.95	-2.13	25.41
1554	-5.89	-2.02	25.76
1555	-5.8	-1.91	26.3
1556	-5.73	-1.79	26.73
1557	-5.68	-1.73	27.04
1558	-5.64	-1.66	27.29
1559	-5.63	-1.58	27.35
1560	-5.61	-1.49	27.48

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1561	-5.6	-1.46	27.54
1562	-5.58	-1.41	27.67
1563	-5.53	-1.33	27.99
1564	-5.47	-1.23	28.38
1565	-5.41	-1.12	28.77
1566	-5.34	-1.04	29.24
1567	-5.3	-1	29.51
1568	-5.28	-1	29.65
1569	-5.27	-0.99	29.72
1570	-5.29	-1.01	29.58
1571	-5.27	-0.99	29.72
1572	-5.28	-0.99	29.65
1573	-5.27	-1.01	29.72
1574	-5.25	-1.01	29.85
1575	-5.2	-1.01	30.2
1576	-5.2	-1.03	30.2
1577	-5.2	-1.04	30.2
1578	-5.19	-1.03	30.27
1579	-5.17	-1.01	30.41
1580	-5.15	-0.97	30.55
1581	-5.15	-1	30.55
1582	-5.15	-1.01	30.55
1583	-5.15	-1.03	30.55
1584	-5.16	-1.05	30.48
1585	-5.15	-1.05	30.55
1586	-5.05	-0.99	31.26
1587	-4.97	-0.94	31.84
1588	-4.94	-0.95	32.06
1589	-4.97	-1.02	31.84
1590	-5.02	-1.12	31.48
1591	-5.05	-1.15	31.26
1592	-5.07	-1.16	31.12
1593	-5.07	-1.16	31.12
1594	-5.04	-1.15	31.33
1595	-4.99	-1.12	31.7
1596	-5.02	-1.16	31.48
1597	-5.04	-1.17	31.33

Frequenc y/Mhz	Efficienc y / dB	MaxGain/ dBi	Efficienc y / %
1598	-5.03	-1.16	31.41
1599	-5	-1.11	31.62
1600	-4.95	-1.03	31.99
1601	-4.98	-1.08	31.77
1602	-5	-1.11	31.62
1603	-4.99	-1.11	31.7
1604	-4.96	-1.09	31.92
1605	-4.95	-1.1	31.99
1606	-4.9	-1.06	32.36
1607	-4.89	-1.07	32.43
1608	-4.89	-1.1	32.43
1609	-4.94	-1.16	32.06
1610	-5.01	-1.25	31.55
2500	-5.79	-1.46	26.38
2510	-5.89	-1.76	25.77
2520	-5.65	-1.55	27.24
2530	-5.59	-1.16	27.6
2540	-5.57	-2.06	27.74
2550	-5.52	-1.76	28.07
2560	-5.48	-1.57	28.32
2570	-5.58	-1.72	27.64
2580	-5.57	-2.41	27.76
2590	-5.69	-3.37	27
2600	-5.78	-3.43	26.41
2610	-5.89	-3.37	25.79
2620	-5.99	-3.75	25.15
2630	-6.11	-3.96	24.49
2640	-6.18	-2.31	24.08
2650	-6.27	-2.7	23.62
2660	-6.38	-2.56	23.03
2670	-6.41	-2.73	22.86
2680	-6.48	-2.33	22.51
2690	-6.55	-3.16	22.15
2700	-6.55	-2.14	22.13

Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/dBi	Efficiency / %
3200	-6.95	-5.33	20.17	3940	-6.83	1.56	20.74				
3220	-6.07	-4.41	24.73	3960	-6.30	1.01	23.46				
3240	-6.79	-3.17	20.93	3980	-6.71	0.38	21.32				
3260	-6.61	-2.46	21.85	4000	-6.15	0.22	24.24				
3280	-6.61	-1.83	21.82	4020	-6.34	0.09	23.22				
3300	-7.27	-1.37	18.77	4040	-6.58	-0.04	21.96				
3320	-7.11	-1.13	19.44	4060	-6.04	-0.19	24.91				
3340	-7.06	-1.09	19.68	4080	-6.14	-0.29	24.32				
3360	-6.86	-0.68	20.62	4100	-5.64	-0.64	27.26				
3380	-6.66	-0.27	21.56	4120	-5.71	-0.67	26.85				
3400	-6.50	0.06	22.39	4140	-5.72	-0.64	26.81				
3420	-6.04	1.13	24.86	4160	-5.81	-1.16	26.22				
3440	-5.89	1.54	25.74	4180	-5.85	-1.45	26.03				
3460	-5.60	2.2	27.54	4200	-5.90	-1.86	25.7				
3480	-6.99	3.04	20	4220	-5.95	-2.19	25.43				
3500	-6.52	3.61	22.28	4240	-6.00	-2.71	25.09				
3520	-6.33	3.78	23.28	4260	-6.01	-2.98	25.05				
3540	-6.10	3.95	24.55	4280	-6.09	-3.71	24.59				
3560	-5.96	3.92	25.35	4300	-6.10	-4.17	24.53				
3580	-5.89	3.89	25.76	4320	-6.10	-4.44	24.55				
3600	-5.68	4.2	27.04	4340	-6.14	-4.88	24.3				
3620	-5.58	4.6	27.67	4360	-6.17	-5.14	24.15				
3640	-5.55	4.95	27.86	4380	-6.12	-4.97	24.42				
3660	-5.58	5.14	27.67	4400	-6.12	-4.86	24.45				
3680	-5.72	4.95	26.79								
3700	-5.81	4.66	26.24								
3720	-6.13	4.18	24.38								
3740	-6.47	3.59	22.54								
3760	-6.78	3	20.99								
3780	-6.97	2.57	20.09								
3800	-5.58	1.98	27.7								
3820	-5.75	2.17	26.63								
3840	-6.58	2.29	21.96								
3860	-6.05	2.4	24.83								
3880	-6.09	2.59	24.62								
3900	-6.24	2.42	23.77								
3920	-6.48	2.11	22.5								

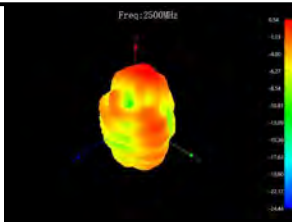
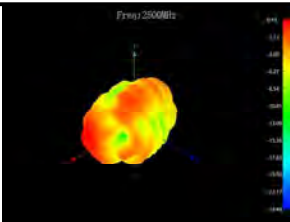
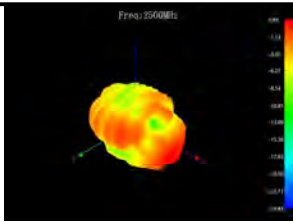
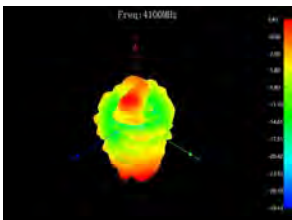
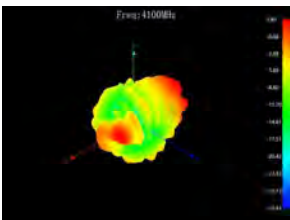
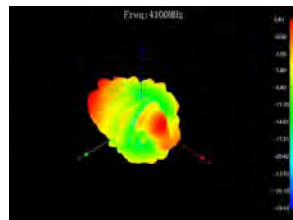
Product Name	Type	Rev.	SUNNYWAY	IR
ANT7	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT7	1550~1610 Mhz			
	2500~2700 Mhz			
	3200~4400 Mhz			

Product Name	Type	Rev.	SUNNYWAY	IR
ANT8	LDS			

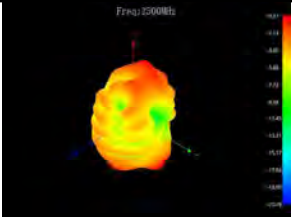
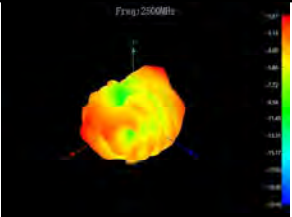
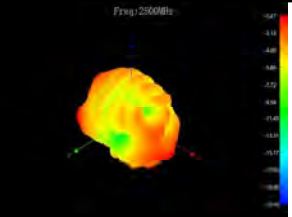
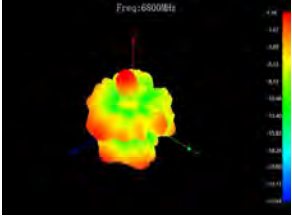
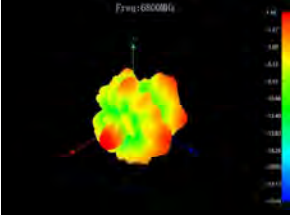
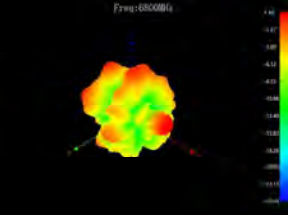
Frequency/ Mhz	Efficiency / dB	MaxGain/ n/dBi	Efficiency / %	Frequency/ Mhz	Efficiency / dB	MaxGain/ n/dBi	Efficiency / %	Frequency/ Mhz	Efficiency / dB	MaxGain/ n/dBi	Efficiency / %
2500	-4.51	1.06	35.4	3200	-4.21	4.88	37.93	3820	-4.37	5.89	36.56
2510	-4.52	1.01	35.32	3220	-4.22	5.15	37.84	3840	-4.34	5.64	36.81
2520	-4.4	1.13	36.31	3240	-4.3	5.35	37.15	3860	-4.23	5.55	37.76
2530	-4.37	1.14	36.56	3260	-4.44	5.36	35.97	3880	-4.1	5.61	38.9
2540	-4.28	1.12	37.33	3280	-4.41	5.45	36.22	3900	-4.12	5.55	38.73
2550	-4.29	1.07	37.24	3300	-4.5	5.49	35.48	3920	-4.17	5.48	38.28
2560	-4.18	0.94	38.19	3320	-4.53	5.39	35.24	3940	-4.4	5.12	36.31
2570	-4.16	0.98	38.37	3340	-4.63	4.98	34.43	3960	-4.43	5.15	36.06
2580	-4.13	0.82	38.64	3360	-4.73	4.36	33.65	3980	-4.37	5.22	36.56
2590	-4.03	1.03	39.54	3380	-4.84	4.24	32.81	4000	-4.47	5.07	35.73
2600	-4.03	0.87	39.54	3400	-4.95	4.13	31.99	4020	-4.57	4.99	34.91
2610	-4.1	0.88	38.9	3420	-4.97	3.92	31.84	4040	-4.42	5.36	36.14
2620	-4.11	0.95	38.82	3440	-5.06	3.86	31.19	4060	-4.42	5.2	36.14
2630	-4.18	1.05	38.19	3460	-4.94	4.14	32.06	4080	-4.39	5.11	36.39
2640	-4.3	1.1	37.15	3480	-4.88	4.37	32.51	4100	-4.45	4.86	35.89
2650	-4.33	1.34	36.9	3500	-4.83	4.69	32.89	4120	-4.45	4.64	35.89
2660	-4.42	1.8	36.14	3520	-4.82	4.81	32.96	4140	-4.71	4.24	33.81
2670	-4.5	1.88	35.48	3540	-4.83	4.54	32.89	4160	-4.8	4.3	33.11
2680	-4.58	2.24	34.83	3560	-4.8	4.23	33.11	4180	-4.87	4.46	32.58
2690	-4.7	2.04	33.88	3580	-4.78	3.94	33.27	4200	-4.81	4.87	33.04
2700	-4.83	2.06	32.89	3600	-4.81	3.57	33.04	4220	-4.76	4.78	33.42
				3620	-4.76	3.87	33.42	4240	-4.75	4.71	33.5
				3640	-4.83	4.39	32.89	4260	-4.84	4.76	32.81
				3660	-4.79	4.78	33.19	4280	-4.86	4.72	32.66
				3680	-4.6	5.27	34.67	4300	-4.79	5.02	33.19
				3700	-4.49	5.81	35.56	4320	-4.87	5.11	32.58
				3720	-4.48	5.94	35.65	4340	-4.85	5.2	32.73
				3740	-4.47	5.9	35.73	4360	-4.85	5.37	32.73
				3760	-4.56	5.92	34.99	4380	-4.95	5.59	31.99
				3780	-4.55	5.98	35.08	4400	-5.07	5.59	31.12
				3800	-4.43	5.99	36.06				

Product Name	Type	Rev.	SUNNYWAY	IR
ANT8	LDS			

		Radiation Pattern		
		XY	XZ	YZ
ANT8	2500~ 2700 Mhz			
	3200~ 4400 Mhz			

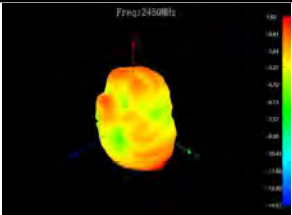
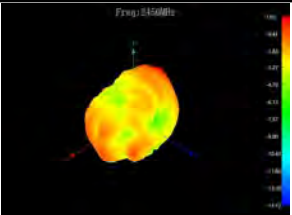
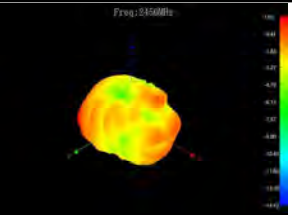
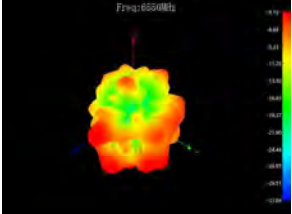
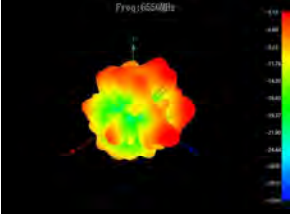
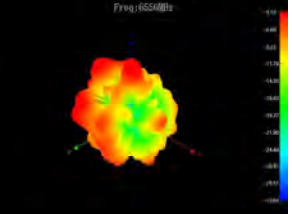
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Product Name	Type	Rev.	SUNNYWAY	IR
ANT9	FPC			

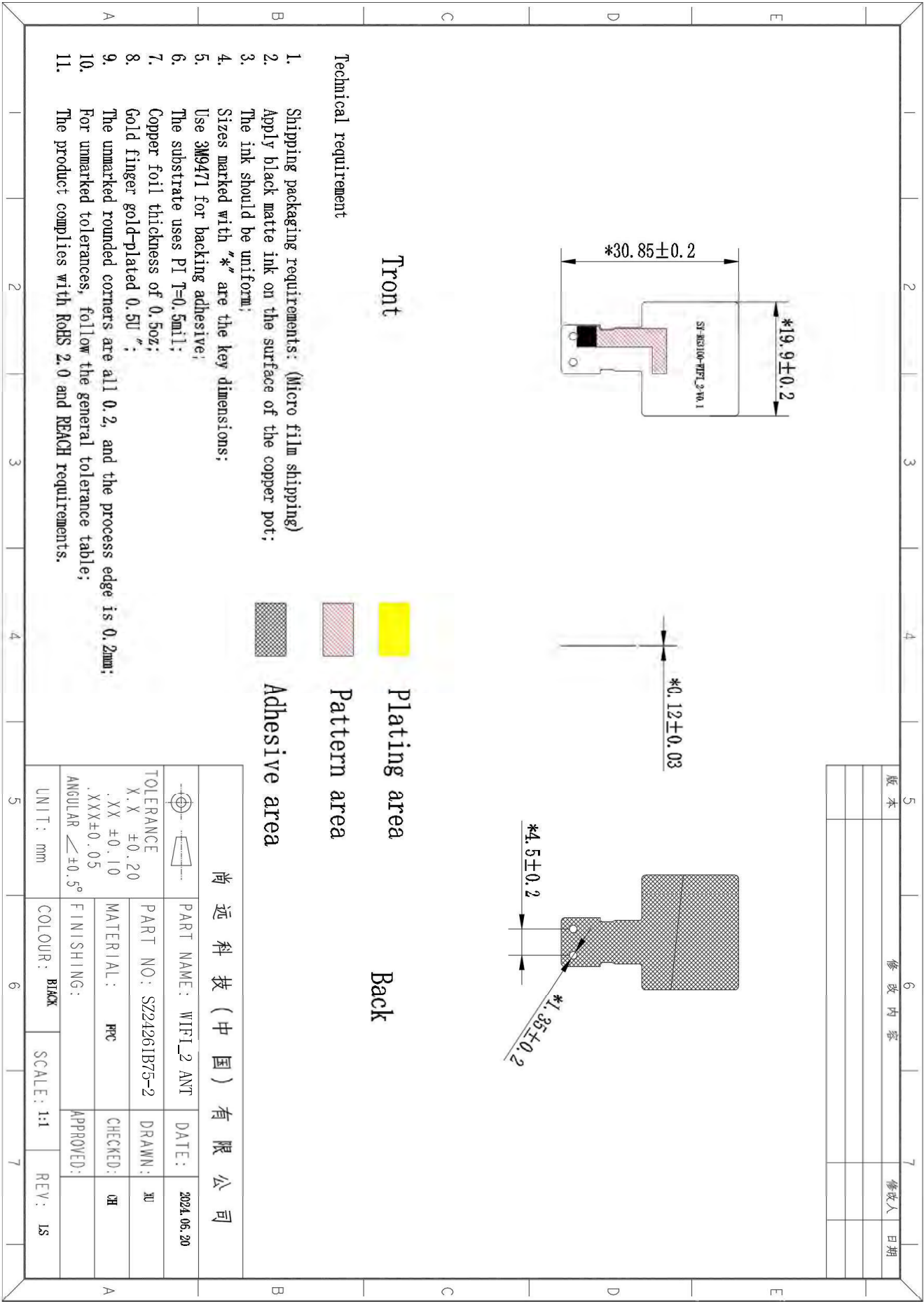
		Radiation Pattern		
		XY	XZ	YZ
ANT9	2400~2500 Mhz			
	5150~7200 Mhz			

Frequency/Mhz	Efficiency / dB	MaxGain/ dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/ dBi	Efficiency / %	Frequency/Mhz	Efficiency / dB	MaxGain/ dBi	Efficiency / %
2400	-3.77	2.68	41.98	6500	-6.80	1.24	20.89				
2410	-3.88	2.32	40.93	6550	-7.87	1.75	16.33				
2420	-4.02	2.12	39.63	6600	-7.42	2.72	18.11				
2430	-4.18	2.29	38.19	6650	-7.05	1.38	19.72				
2440	-4.07	2.28	39.17	6700	-6.83	1.64	20.75				
2450	-4.22	2.46	37.84	6750	-6.59	1.24	21.93				
2460	-4.35	2.29	36.73	6800	-6.59	1.75	21.93				
2470	-4.39	2.48	36.39	6850	-6.53	1.57	22.23				
2480	-4.56	2.28	34.99	6900	-6.88	0.74	20.51				
2490	-4.73	2.2	33.65	6950	-6.94	0.65	20.23				
2500	-4.76	2.11	33.42	7000	-7.12	1.47	19.41				
				7050	-7.28	1.25	18.71				
5150	-6.14	1.127	24.32	7100	-7.12	1.14	19.41				
5200	-7.56	0.27	17.54	7150	-7.33	1.04	18.49				
5250	-7.10	0.57	19.5	7200	-7.16	1.11	19.23				
5300	-6.49	1.74	22.44								
5350	-7.42	1.23	18.11								
5400	-7.96	2.24	16								
5450	-6.55	1.72	22.14								
5500	-6.22	3.64	23.88								
5550	-6.91	1.27	20.37								
5600	-6.87	3.78	20.54								
5650	-6.66	3.36	21.58								
5700	-7.18	3.32	19.14								
5750	-6.46	3.1	22.59								
5800	-6.31	3.97	23.39								
5850	-7.20	3.73	19.05								
5900	-6.41	2.92	22.85								
5950	-6.97	1.32	20.09								
6000	-6.78	2.21	20.99								
6050	-7.40	2.14	18.18								
6100	-7.17	2.54	19.17								
6150	-7.20	2.21	19.05								
6200	-6.89	3.56	20.46								
6250	-6.44	1.84	22.7								
6300	-6.72	1.11	21.28								
6350	-7.11	2.56	19.45								
6400	-6.84	2.41	20.71								
6450	-6.74	2.04	21.19								

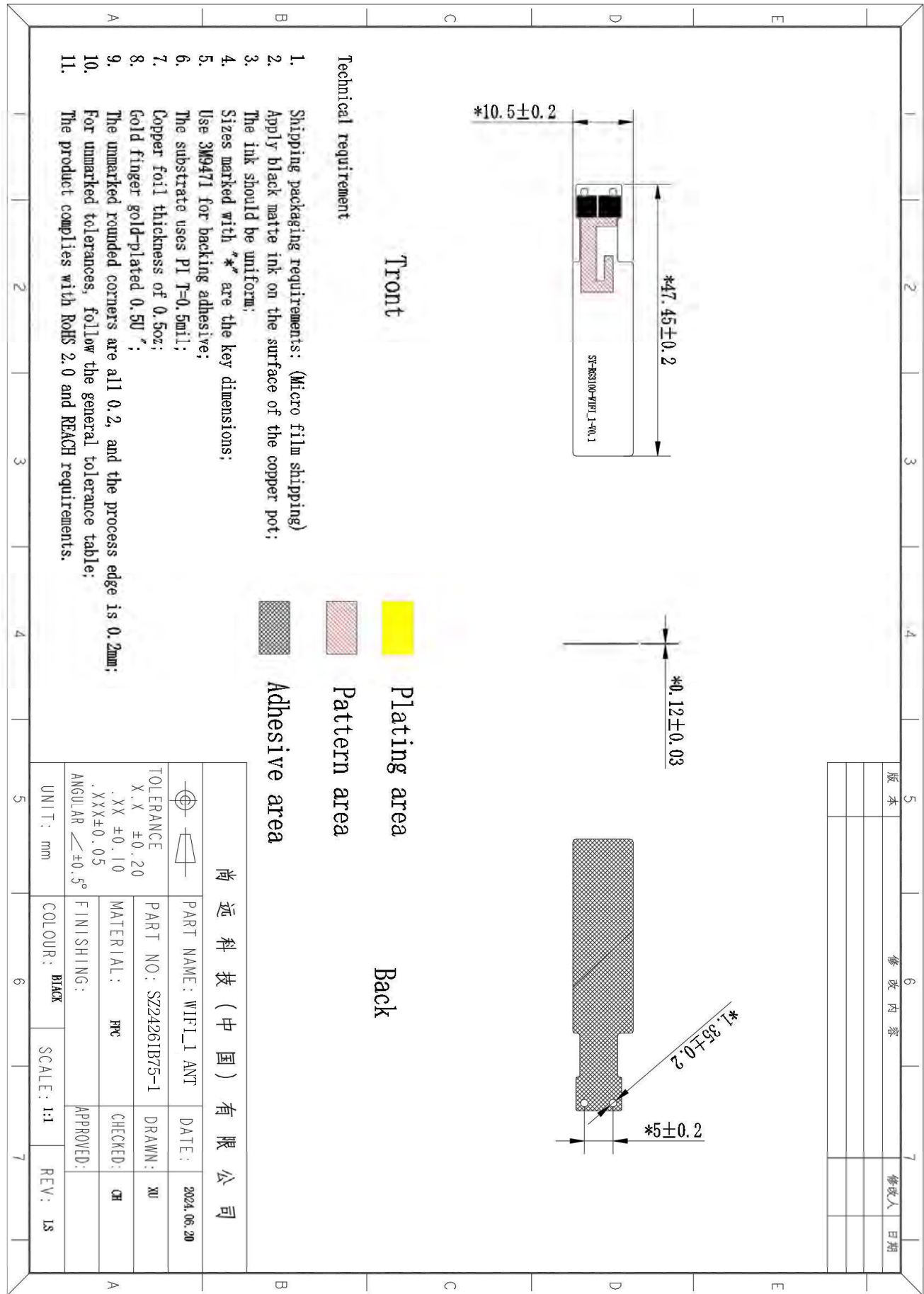
Product Name	Type	Rev.	SUNNYWAY	IR
ANT10	FPC			

		Radiation Pattern		
		XY	XZ	YZ
ANT10	2400~2500 Mhz			
	5150~7200 Mhz			

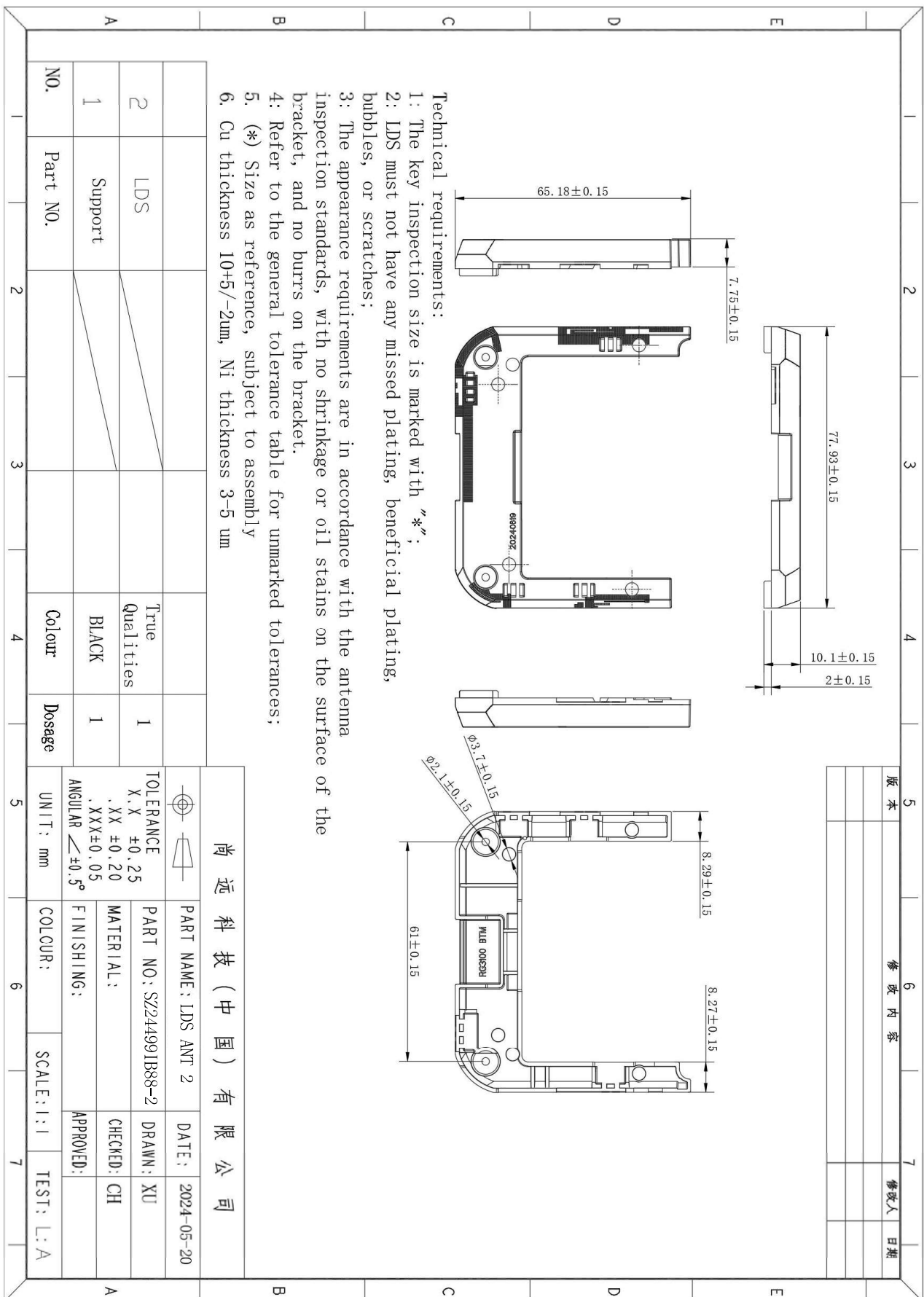
Product Name	Type	Rev.	SUNNYWAY	IR
RG3102 WIFI FPC	FPC Type		Franklin Technology	



Product Name	Type	Rev.	SUNNYWAY	IR
RG3102 WIFI FPC	FPC Type		Franklin Technology	



Product Name	Type	Rev.	SUNNYWAY	IR
RG3102 LDS	LDS Type		Franklin Technology	



Product Name	Type	Rev.	sunnyway	IR
RG3102 LDS	LDS Type		Franklin Technology	

