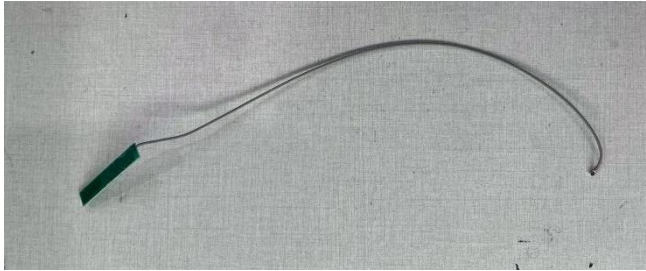


Antenna specification

1. Electric parameter

Manufacturer	Dongguan Kexun Electronics co., Ltd. B Room, 1 flood, No.2, Xinyuan Yi Road, Songbailang Village, Dalang Town, Dongguan City, China
Model	Main antenna
Frequency range	Bluetooth,:2402~2480MHz 2.4G WI-FI: 2.4~2.4835MHz 5G WI-FI:5150-5250MHz, 5250-5350MHz, 5470-5725MHz and 5725-5850MHz
Characteristic impedance	50 Ω
Voltage standing wave ratio	$\leq 2:1$
Gain	4.98dBi
Power capacity	2W
Polarization form	horizontal
Radiation direction	all directions
function	BT&WIFI ANT2, transmit and receive at the same time
Input connector	XD-4
picture of real products	

mechanical parameter

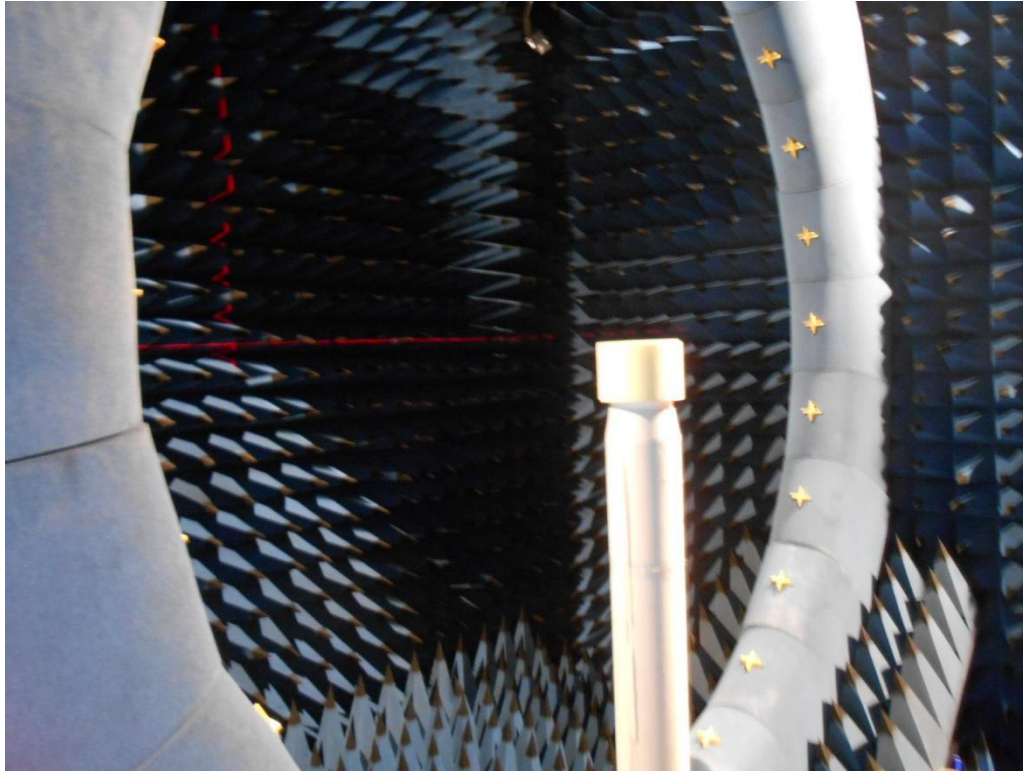
Size(Cable length)	240 \pm 5mm or 140 \pm 5mm
coaxial-cable	1.13

2. Operating/storage temperature

operating temperature	-30 $^{\circ}$ C ~65 $^{\circ}$ C
storage temperature	-30 $^{\circ}$ C ~75 $^{\circ}$ C

4.test equipment

SATIMO 24SG



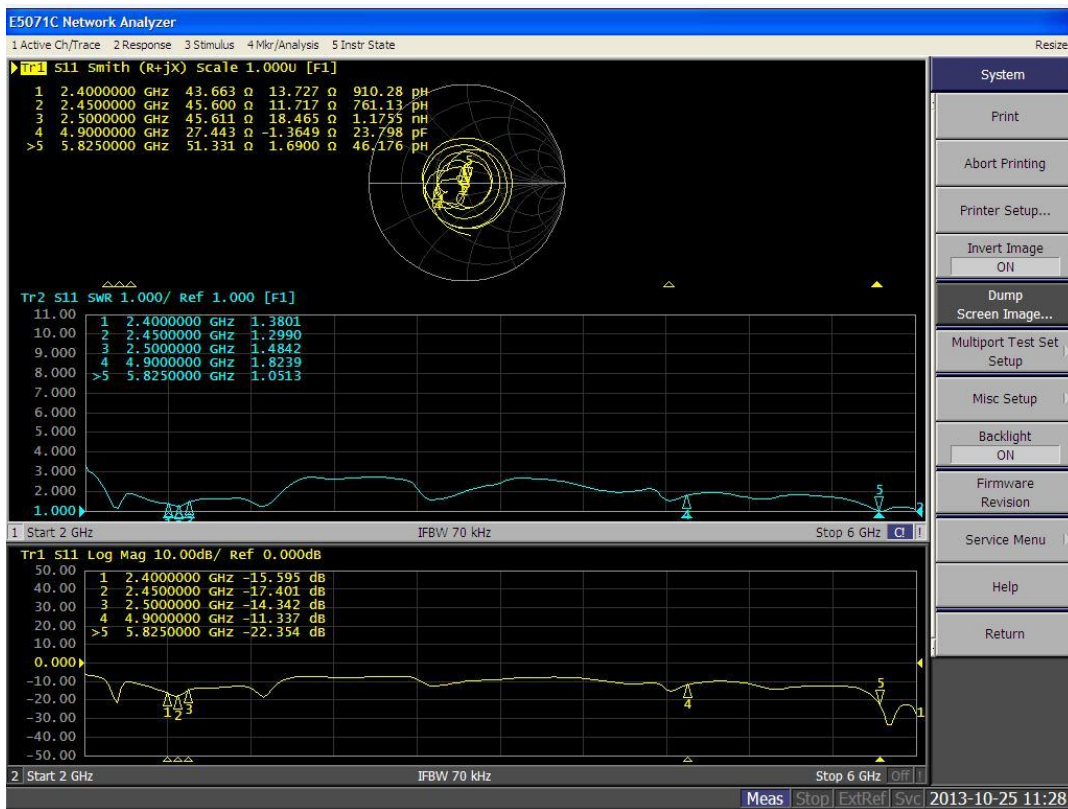
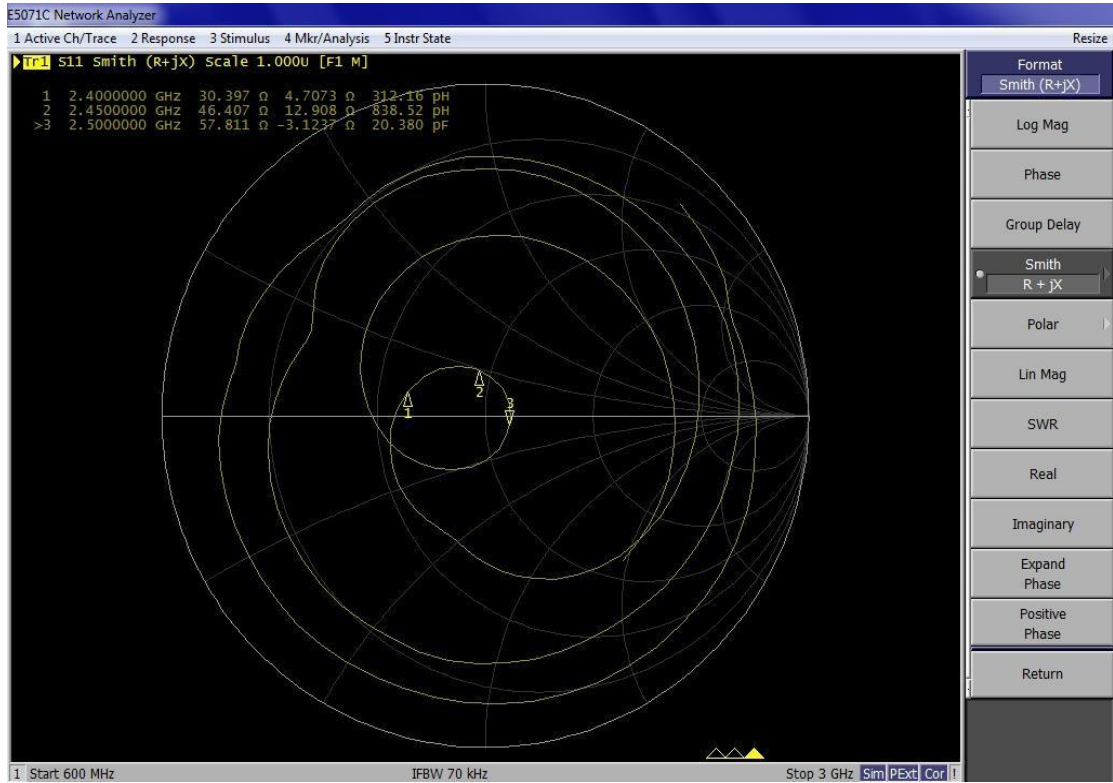
3. Environmental and reliability tests

project	experiment condition	performance requirement	experiment/test equipment
low temperature storage	Temperature $-30\text{ }^{\circ}\text{C} \pm 2^{\circ}\text{C}$ / humidity 0% /RH/ time 48H	Appearance and function tests had no effect after the test	Constant temperature and humidity testing machine
high-temperature storage	Temperature $-70\text{ }^{\circ}\text{C}$, humidity 90~ 95% /RH time 48H	Appearance and function tests had no effect after the test	Constant temperature and humidity testing machine
temperature shock	Product environment: 2H at $-35\text{ }^{\circ}\text{C}$ transferred to 2H at $80\text{ }^{\circ}\text{C}$, 12 cycles for 48H	Appearance and function tests had no effect after the test	thermal shock test machine

4. test data

① return loss and standing wave ratio





②. Benefit and gain

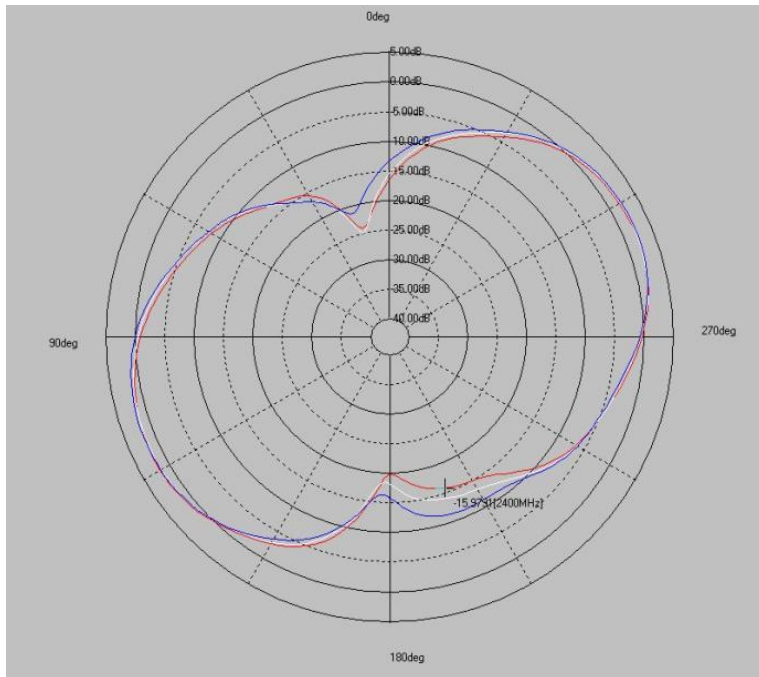
Frequency	X-Z plane		Y-Z plane		X-Y plane		E-total	Efficiency
	Phi=0		Phi=90		theta=90			
(MHz)	Peak Gain	Average Gain	Peak Gain	Average Gain	Peak Gain	Average Gain	(dBi)	(%)
2400	3.11	-2.54	3.40	-5.05	2.62	2.45	4.43	68%
2450	3.20	-2.21	3.13	-5.19	2.70	2.36	4.62	75%
2500	3.32	-2.91	3.30	-4.88	2.63	2.56	4.88	72%

Passive Test For dipole_5G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
5100	58.88	-2.3	4.07	1.92	37.228	21.649	4.07	-27.58	61.62	61.57
5110	56.94	-2.45	3.88	1.73	36.147	20.795	3.88	-25.52	61.79	61.31
5120	57.04	-2.44	3.82	1.67	36.365	20.678	3.82	-26.01	61.28	60.98
5130	61.73	-2.09	4.08	1.93	39.567	22.164	4.08	-24.59	62.33	62.08
5140	61.5	-2.11	3.97	1.82	39.581	21.922	3.97	-22.78	62.17	61.83
5150	62.38	-2.05	4.1	1.95	40.32	22.062	4.1	-22.91	62.47	62.15
5160	59.14	-2.28	3.93	1.78	38.308	20.833	3.93	-27.77	61.98	61.38
5170	57.29	-2.42	3.85	1.7	37.153	20.14	3.85	-33.16	61.9	61.76
5180	56.97	-2.44	3.87	1.72	36.947	20.023	3.87	-26.43	61.86	61.29
5190	58.21	-2.35	4.04	1.89	37.742	20.465	4.04	-22.8	61.49	61.19
5200	60.55	-2.18	4.3	2.15	39.236	21.312	4.3	-23.24	61.58	61.13
5210	60.05	-2.21	4.35	2.2	38.865	21.19	4.35	-23.02	61.24	60.8
5220	60.96	-2.15	4.47	2.32	39.371	21.586	4.47	-21.76	61.43	61.18
5230	65.08	-1.87	4.79	2.64	41.934	23.147	4.79	-21.63	62.46	61.77
5240	65.11	-1.86	4.8	2.65	41.843	23.262	4.8	-21.87	62.17	62.02
5250	60.15	-2.21	4.45	2.3	38.524	21.623	4.45	-21.63	61.82	61.03
5260	61.44	-2.12	4.5	2.35	39.181	22.26	4.5	-20.9	61.43	61.15
5270	62.02	-2.07	4.54	2.39	39.368	22.652	4.54	-22.69	61.65	61.11
5280	63.29	-1.99	4.64	2.49	40.024	23.268	4.64	-24.26	61.44	60.8
5290	63.05	-2	4.61	2.46	39.691	23.355	4.61	-25.56	61.99	61.71
5300	60.29	-2.2	4.4	2.25	37.734	22.56	4.4	-28.76	61.69	61.16
5310	60.88	-2.16	4.41	2.26	37.889	22.992	4.41	-31.16	61.38	61.16
5320	62.23	-2.06	4.49	2.34	38.524	23.707	4.49	-28.49	62.28	61.82
5330	61.41	-2.12	4.46	2.31	37.833	23.575	4.46	-26.37	61.52	61.29
5340	62.59	-2.04	4.57	2.42	38.394	24.195	4.57	-25.45	62.31	61.69
5350	63.26	-1.99	4.64	2.49	38.637	24.624	4.64	-24.99	61.36	61.43
5360	59.59	-2.25	4.4	2.25	36.256	23.33	4.4	-24.59	61.93	61.73
5370	61.88	-2.08	4.56	2.41	37.425	24.452	4.56	-23.29	61.87	61.4
5380	63.92	-1.94	4.68	2.53	38.401	25.517	4.68	-22.26	61.93	61.68
5390	61.24	-2.13	4.45	2.3	36.479	24.76	4.45	-21.87	61.97	61.4

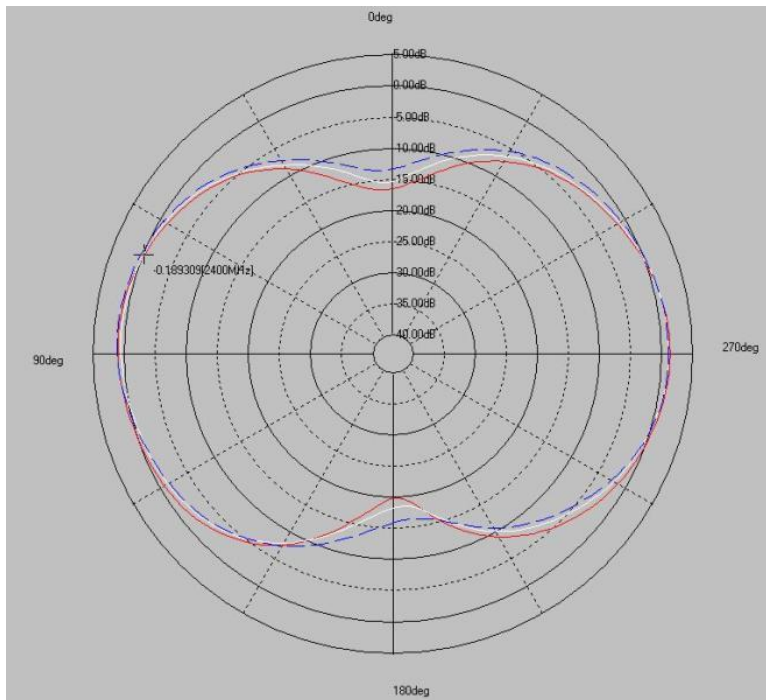
5400	69.55	-1.58	4.98	2.83	41.188	28.365	4.98	-21.29	62.12	61.83
5410	66.41	-1.78	4.75	2.6	39.164	27.244	4.75	-21.59	63.31	62.65
5420	66.85	-1.75	4.76	2.61	39.241	27.611	4.76	-21.23	62.51	61.83
5430	69.07	-1.61	4.88	2.73	40.421	28.649	4.88	-20.25	63.42	62.67
5440	66.01	-1.8	4.69	2.54	38.504	27.508	4.69	-19.02	62.49	61.83
5450	65.03	-1.87	4.64	2.49	37.792	27.236	4.64	-19.13	62.87	62.21
5460	65.08	-1.87	4.67	2.52	37.672	27.413	4.67	-18.34	63.06	61.99
5470	66.88	-1.75	4.79	2.64	38.558	28.32	4.79	-17.5	62.85	61.97
5480	66.3	-1.78	4.75	2.6	38.071	28.228	4.75	-17.75	63.27	62
5490	64.63	-1.9	4.64	2.49	37.095	27.536	4.64	-17.96	62.85	61.64
5500	65	-1.87	4.66	2.51	37.434	27.566	4.66	-18.04	63.43	62.18
5510	65.67	-1.83	4.67	2.52	37.925	27.748	4.67	-18.34	64.64	62.96
5520	65.62	-1.83	4.63	2.48	37.956	27.661	4.63	-18.83	64.12	62.98
5530	64.19	-1.93	4.49	2.34	37.181	27.008	4.49	-19.24	64.63	63.18
5540	66.49	-1.77	4.66	2.51	38.507	27.984	4.66	-19.54	63.69	62.58
5550	67.3	-1.72	4.75	2.6	38.978	28.323	4.75	-19.41	64.63	63.05
5560	66.33	-1.78	4.73	2.58	38.466	27.864	4.73	-18.98	64.05	62.81
5570	64.8	-1.88	4.66	2.51	37.69	27.114	4.66	-18.92	64.74	63.28
5580	66.87	-1.75	4.74	2.59	39.039	27.834	4.74	-18.38	64.13	63.02
5590	64.13	-1.93	4.51	2.36	37.771	26.361	4.51	-18.97	63.96	62.73
5600	62.32	-2.05	4.35	2.2	37.061	25.26	4.35	-19.34	64.78	62.96
5610	63.47	-1.97	4.44	2.29	37.955	25.514	4.44	-18.97	64.02	62.84
5620	63.94	-1.94	4.52	2.37	38.358	25.584	4.52	-20.3	64.61	63.11
5630	62.59	-2.04	4.48	2.33	37.618	24.97	4.48	-21.87	63.63	62.36
5640	61.93	-2.08	4.49	2.34	37.369	24.562	4.49	-22.83	64.01	62.78
5650	61.82	-2.09	4.48	2.33	37.497	24.324	4.48	-23.06	64.03	62.73
5660	62.96	-2.01	4.57	2.42	38.515	24.443	4.57	-24.22	64.32	63.39
5670	63.31	-1.99	4.55	2.4	39.079	24.23	4.55	-23.61	63.98	62.86
5680	64.29	-1.92	4.57	2.42	40.104	24.188	4.57	-21.7	63.68	62.75
5690	62.72	-2.03	4.44	2.29	39.509	23.208	4.44	-19.95	64.05	63
5700	59.23	-2.27	4.2	2.05	37.621	21.608	4.2	-19.04	63.94	63.01
5710	61.94	-2.08	4.43	2.28	39.586	22.356	4.43	-18.62	64.31	63.38
5720	65.33	-1.85	4.73	2.58	41.966	23.369	4.73	-18.24	63.98	63.1
5730	67.53	-1.71	4.95	2.8	43.659	23.867	4.95	-20.02	63.97	63.38
5740	65.52	-1.84	4.84	2.69	42.743	22.78	4.84	-22.46	64.24	63.2
5750	63.49	-1.97	4.67	2.52	41.781	21.704	4.67	-24.75	64.04	63.47
5760	61.83	-2.09	4.51	2.36	41.006	20.825	4.51	-25.56	64.37	63.62
5770	60.87	-2.16	4.42	2.27	40.74	20.132	4.42	-23.49	63.93	62.93
5780	65.51	-1.84	4.75	2.6	44.049	21.46	4.75	-20.03	64.35	63.75
5790	64.59	-1.9	4.7	2.55	43.584	21.007	4.7	-20.27	64.45	63.47
5800	59.78	-2.23	4.36	2.21	40.443	19.341	4.36	-21.59	64.79	64.17
5810	58.7	-2.31	4.28	2.13	39.774	18.931	4.28	-22.85	64.64	63.81
5820	64.03	-1.94	4.72	2.57	43.452	20.575	4.72	-23.97	64.41	63.79
5830	66.96	-1.74	4.95	2.8	45.546	21.416	4.95	-23.01	64.86	63.94

③.directional diagram

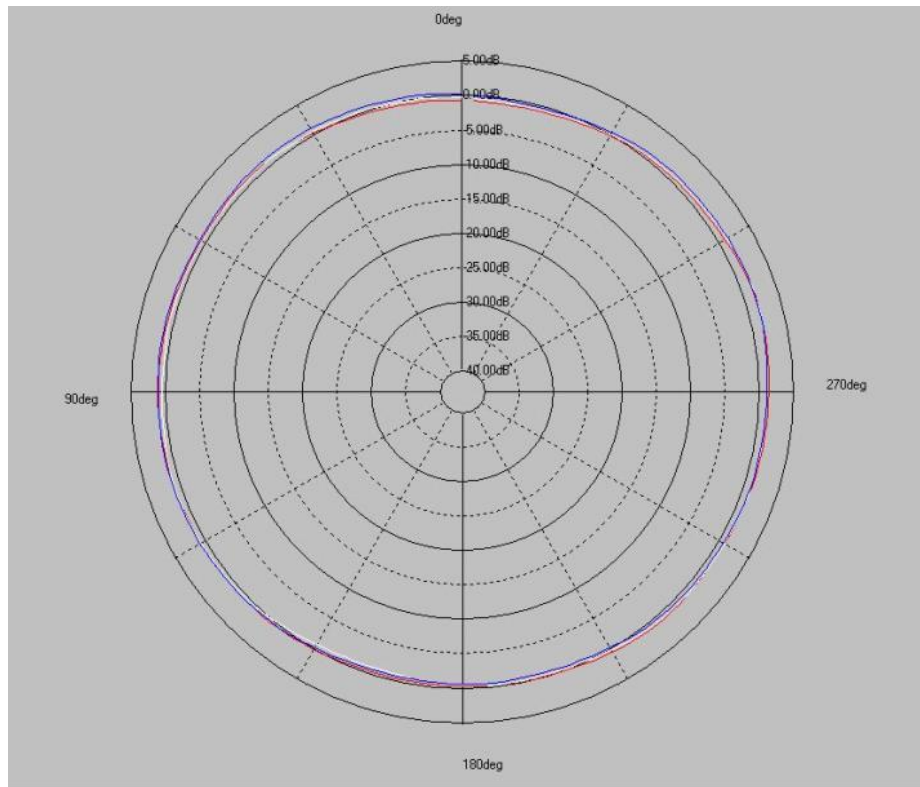
x-z plane

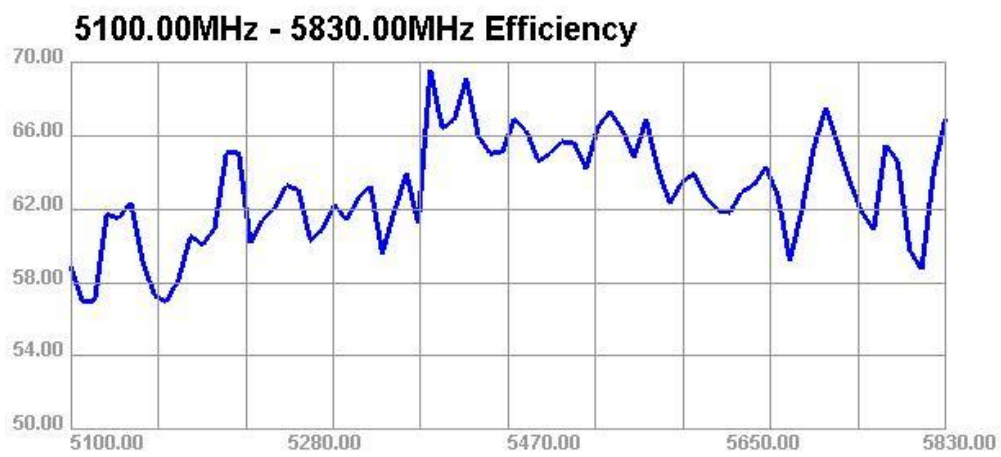
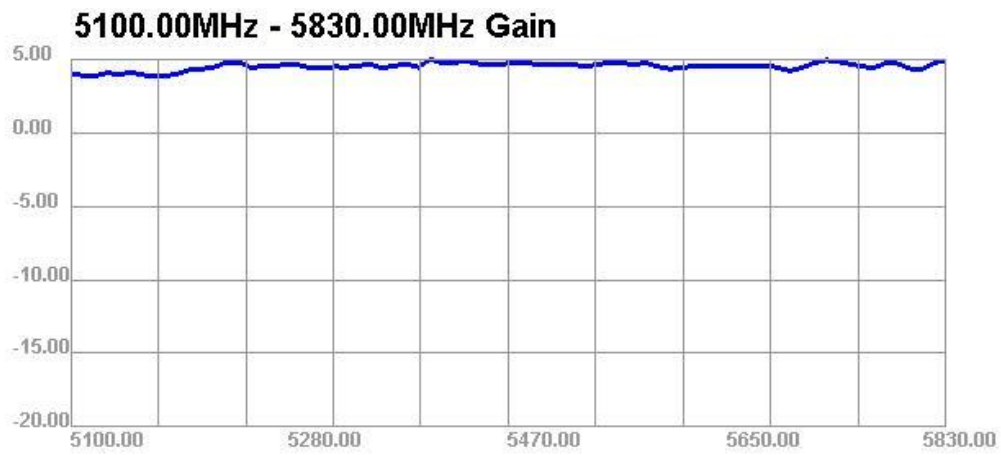


y-z plane

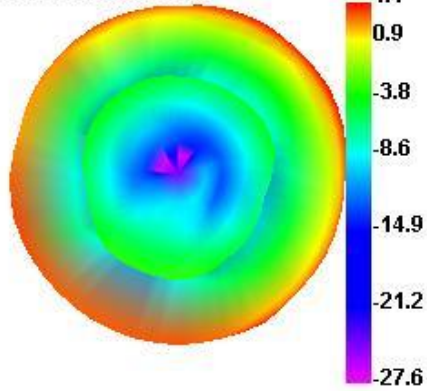


x-y plane

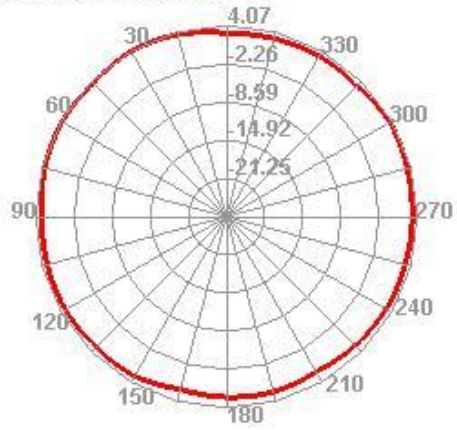




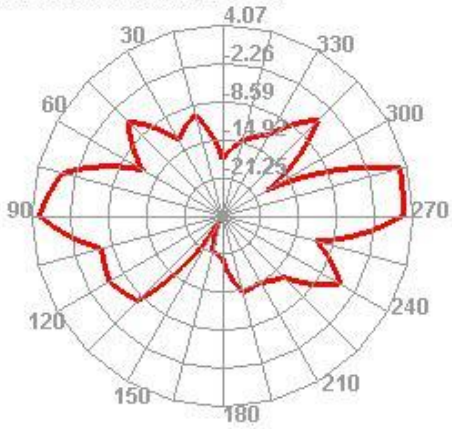
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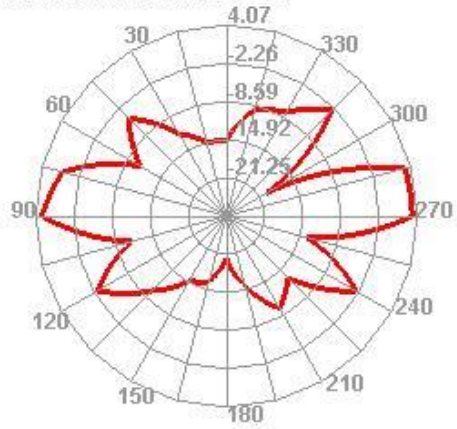
5100.000MHz H



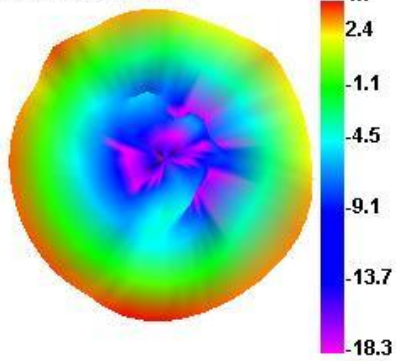
5100.000MHz E1



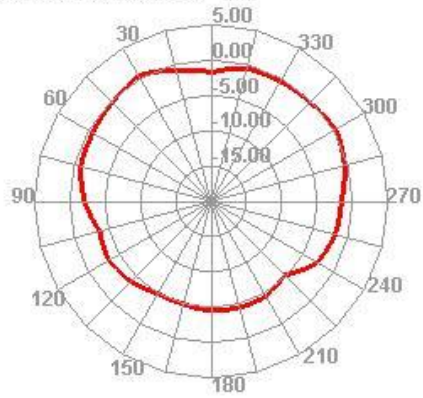
5100.000MHz E2



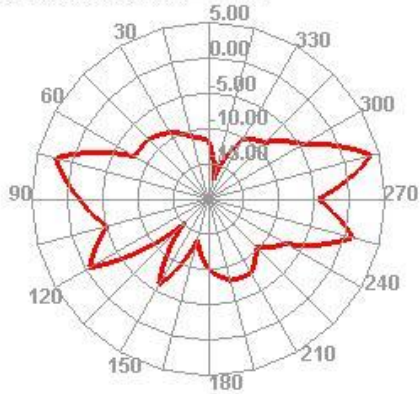
5460.000MHz



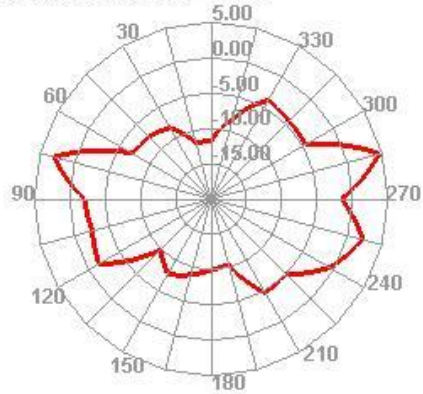
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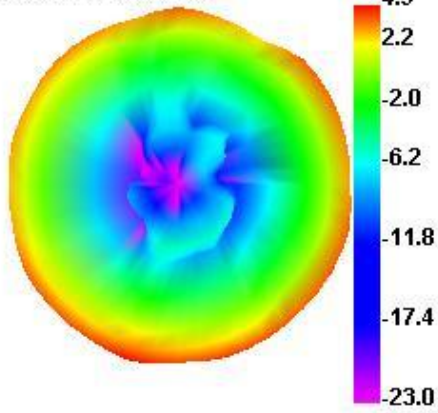
5460.000MHz E1



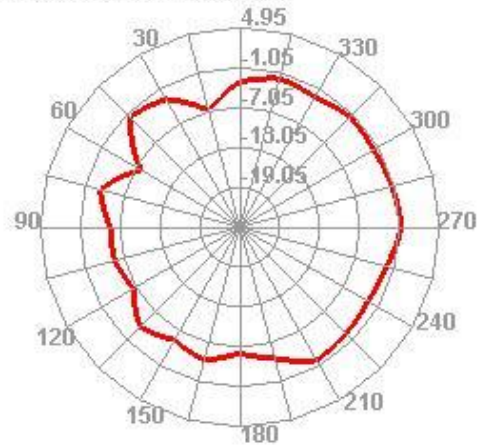
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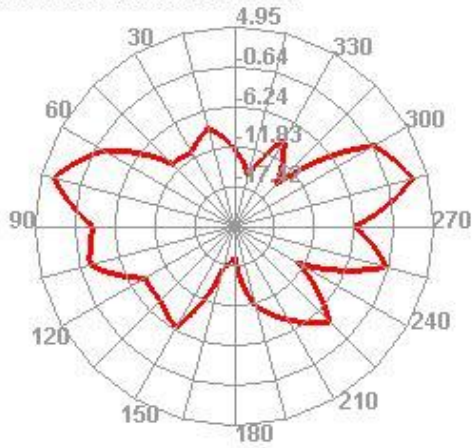
5830.000MHz



5830.000MHz H



5830.000MHz E1



5830.000MHz E2

