



深圳市千目通讯科技有限公司

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Customer: Xinyuan

Project: OM-T-WATCHLORA

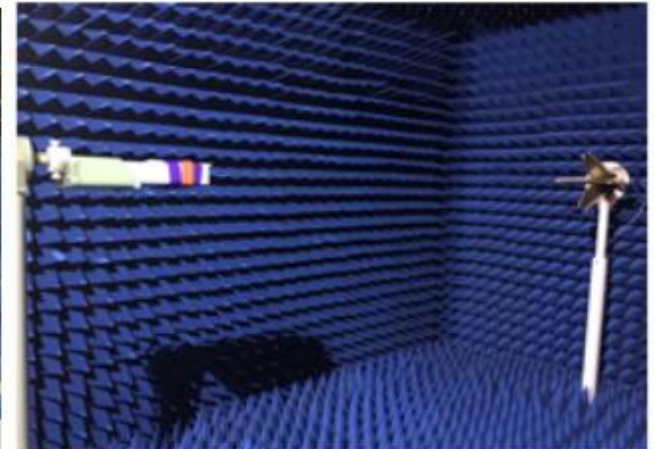
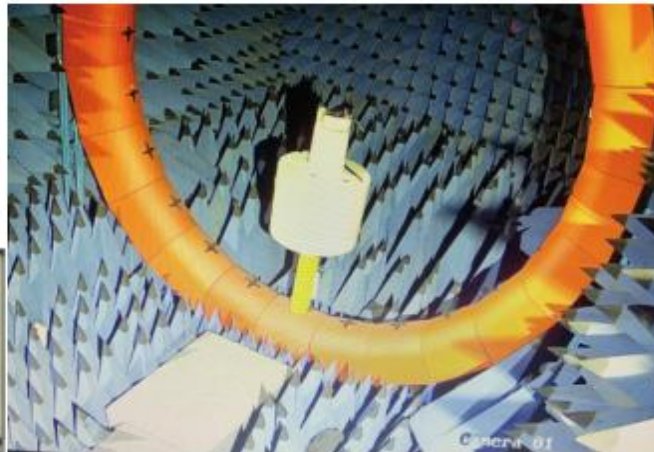
Date: 2024.11.28

RF: YANG ZONG YU



Test Environment

	Test items	Device
1. S-parameter	1. Return Loss 2. VSWR	Network Analyzers: Agilent E5071B ×2 HP 8753D PROTEK A338
2. Active test (Active)	1. Transmit power (TRP) 2. Receive sensitivity (TIS) 3. Frequency errors 4. Screen off, screen on	1. Darkroom feitu 7x4x3 m (24-Probes 3D) Chamber ETS 5x3x3 m (3D) Chamber 2 :Comprehensive tester Agilent 8960 ×2 CMW500 ×3/CMU200
3. Passive test (Passive)	1. Antenna Gain (Gain) 2. Antenna Efficiency	1. Darkroom: feitu 7x4x3 m (24-Probes 3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Network Analyzer: Agilent E5071B



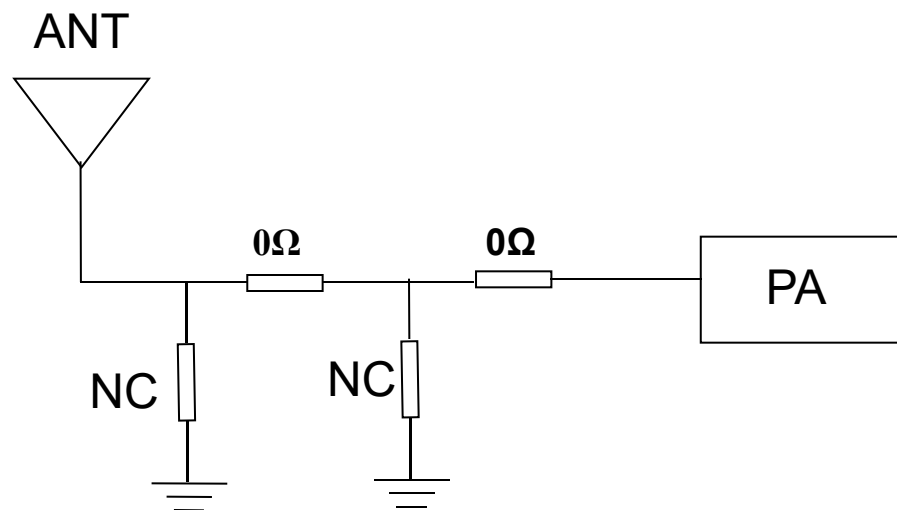


Debugging Details

model	T-WATCH-S3						
type	Mainboard						
Antenna Overview	main antenna	band		status	form	Design Area	Matching changes
		2G	N/A	FPC sample	IFA	N/A	N/A
		3G	N/A				
		4G	868MHz				
	Other Antennas	WIFI/BT	2. 4G	FPC sample	IFA	Shellstock	N/A
		GPS	N/A				
		subset	N/A	N/A	N/A	N/A	N/A
Prototype status	Debugging prototype			Environmental treatment	None		



Matching Circuit



No changes to the matching circuit

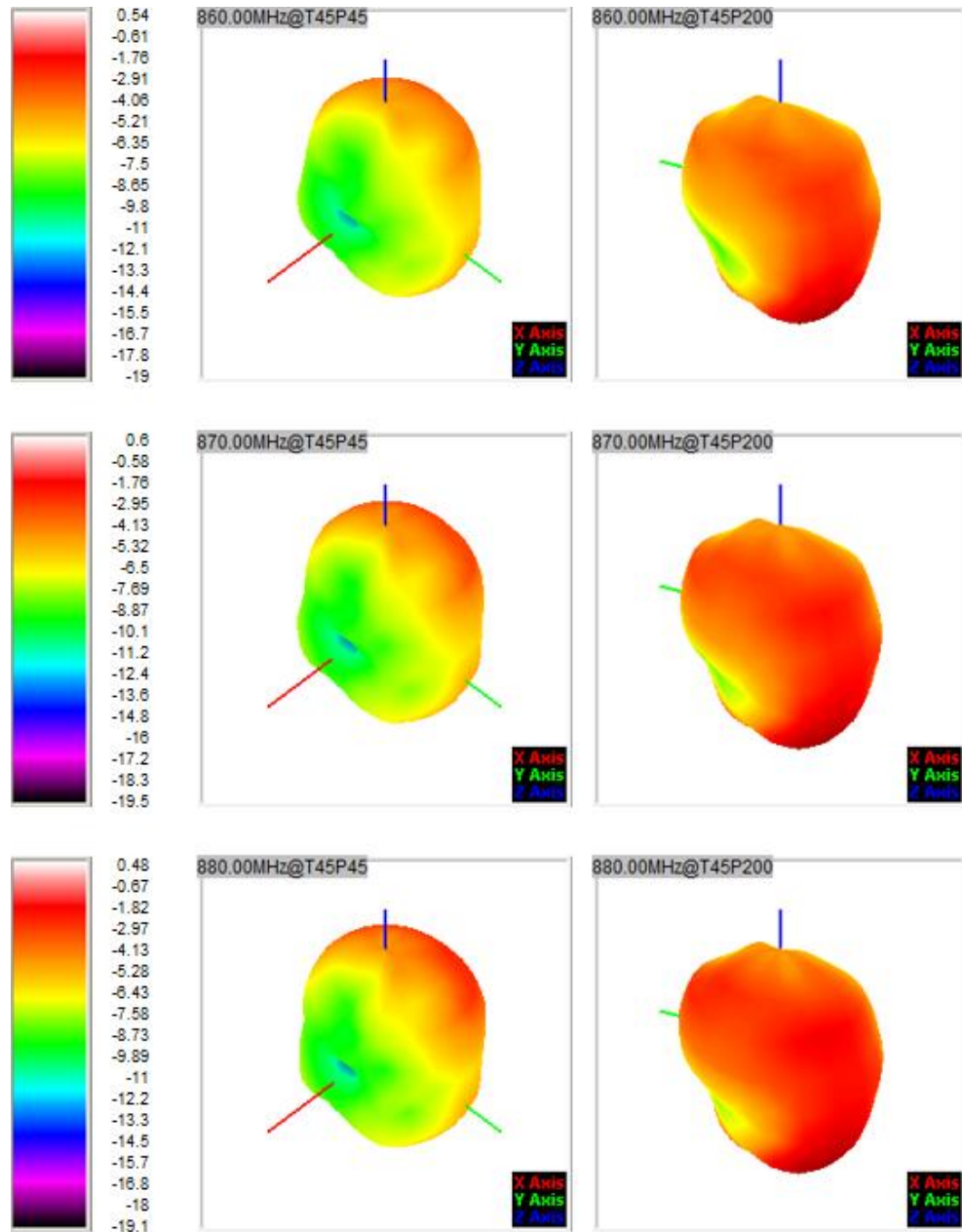


Passive-868MHz-Efficiency/Gain

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	850.0	860.0	870.0	880.0	890.0	900.0	910.0	920.0	930.0	940.0	950.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-6.14	-5.82	-5.56	-5.43	-5.19	-5.01	-4.98	-4.86	-4.89	-5.02	-5.08
Peak EIRP (dBm)	0.36	0.54	0.60	0.48	0.47	0.51	0.57	0.99	1.01	0.78	1.04
Directivity (dBi)	6.50	6.35	6.17	5.92	5.66	5.52	5.54	5.85	5.91	5.80	6.13
Efficiency (dB)	-6.14	-5.82	-5.56	-5.43	-5.19	-5.01	-4.98	-4.86	-4.89	-5.02	-5.08
Efficiency (%)	10.30	11.20	12.80	13.60	15.30	16.50	16.80	17.60	17.40	16.50	16.00
Gain (dBi)	0.36	0.54	0.60	0.48	0.47	0.51	0.57	0.99	1.01	0.78	1.04
NHPRP $\pm\pi/4$ (dBm)	-7.77	-7.44	-7.20	-7.09	-6.85	-6.66	-6.58	-6.43	-6.41	-6.48	-6.48
NHPRP $\pm\pi/6$ (dBm)	-9.52	-9.17	-8.93	-8.83	-8.60	-8.38	-8.25	-8.09	-8.04	-8.09	-8.05
NHPRP $\pm\pi/8$ (dBm)	-10.87	-10.49	-10.26	-10.17	-9.94	-9.71	-9.55	-9.40	-9.34	-9.38	-9.33
Upper Hem. PRP (dBm)	-9.45	-9.06	-8.65	-8.35	-8.01	-7.79	-7.77	-7.67	-7.74	-7.94	-8.16
Lower Hem. PRP (dBm)	-8.87	-8.61	-8.50	-8.54	-8.40	-8.27	-8.22	-8.08	-8.08	-8.13	-8.03
Upper Hem. PRP (%)	11.36	12.42	13.65	14.62	15.81	16.64	16.71	17.10	16.84	16.09	15.29
Lower Hem. PRP (%)	12.98	13.79	14.13	14.00	14.47	14.90	15.08	15.55	15.57	15.37	15.74



Passive-868MHz-3D Pattern





Passive-2.4GHz-Efficiency/Gain

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
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-4.53	-4.57	-4.50	-4.32	-4.31	-4.06	-4.15	-4.36	-4.39	-4.31	-4.40
Peak EIRP (dBm)	1.27	1.31	1.37	1.43	1.30	1.40	1.24	1.01	1.02	1.08	0.94
Directivity (dBi)	5.80	5.87	5.87	5.76	5.62	5.45	5.39	5.37	5.41	5.39	5.34
Efficiency (dB)	-4.53	-4.57	-4.50	-4.32	-4.31	-4.06	-4.15	-4.36	-4.39	-4.31	-4.40
Efficiency (%)	25.20	24.90	25.50	26.90	27.00	29.30	28.50	26.60	26.40	27.10	26.30
Gain (dBi)	1.27	1.31	1.37	1.43	1.30	1.40	1.24	1.01	1.02	1.08	0.94
NHPRP $\pm\pi/4$ (dBm)	-4.85	-4.90	-4.84	-4.68	-4.68	-4.43	-4.52	-4.72	-4.74	-4.66	-4.77
NHPRP $\pm\pi/6$ (dBm)	-5.24	-5.30	-5.25	-5.08	-5.08	-4.82	-4.90	-5.09	-5.10	-5.00	-5.10
NHPRP $\pm\pi/8$ (dBm)	-5.64	-5.70	-5.65	-5.49	-5.48	-5.21	-5.27	-5.45	-5.44	-5.33	-5.42
Upper Hem. PRP (dBm)	-6.18	-6.20	-6.12	-5.92	-5.86	-5.59	-5.69	-5.94	-5.99	-5.93	-6.03
Lower Hem. PRP (dBm)	-9.54	-9.61	-9.56	-9.45	-9.54	-9.32	-9.40	-9.53	-9.48	-9.36	-9.45
Upper Hem. PRP (%)	24.09	23.99	24.43	25.60	25.93	27.60	27.00	25.48	25.17	25.50	24.94
Lower Hem. PRP (%)	11.12	10.94	11.06	11.35	11.11	11.70	11.49	11.15	11.27	11.60	11.35



Passive-2.4GHz-3D Pattern

