



Shenzhen Qianmu Communication Technology Co., Ltd.

The customer: TELCONN

The project name: S1

DATE: 2022-9-5

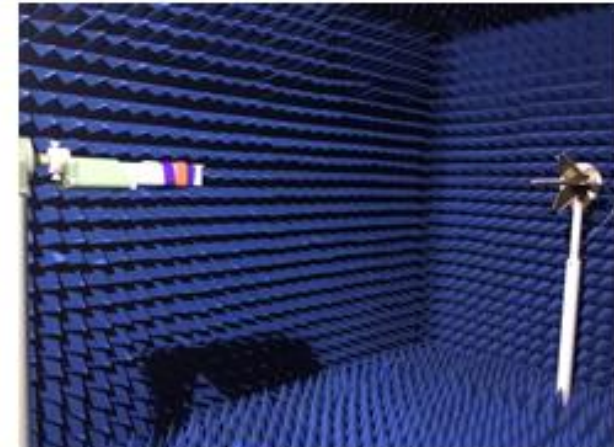
VERSION: A1

RF: ZHENG LI GUO



The test environment

	Test project	equipment
1. S-parameter	1. Return Loss) 2. VSWR	Network analyzer: Agilent E5071B HP 8753D
2. Active	1. TRP) 2. TIS	1.A dark room: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.Comprehensive tester: Agilent 8960 E5515B × 2 StarPoint SP6011
3.Passive	1.Gain 2.Efficiency	1. A dark room: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Network analyzer: Agilent E5071B HP 8753D



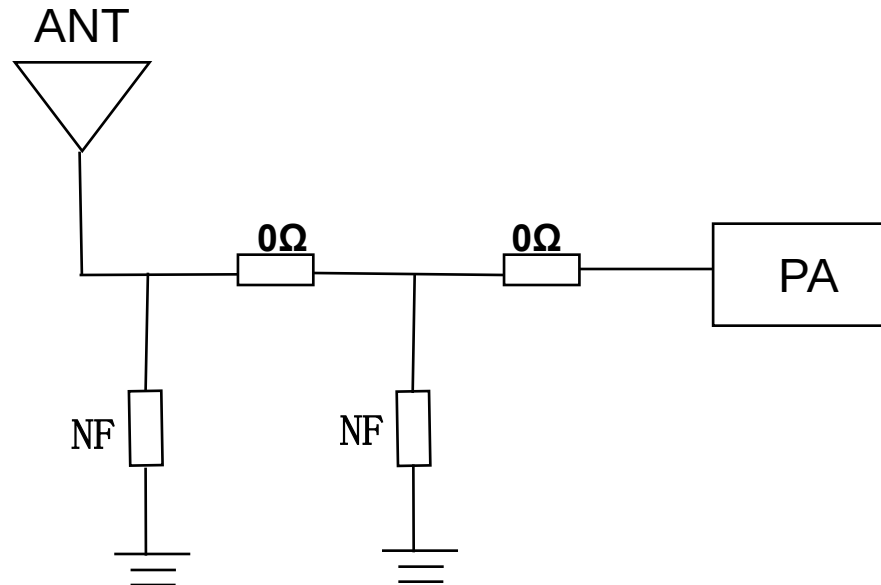


Commissioning Instructions

Models	Smart Watch						
Version	PCBA						
Antenna profile		State of the antenna		State of the antenna	Antenna form	Design area	Match the changes
	BT Antenna	BT	2.4GHz~2.5GHz	L=22mm D=0.8mm	Monopole	PCBA	NA
State of the prototype	Debug machine			Environmental treatment			



Matching circuit -BT antenna





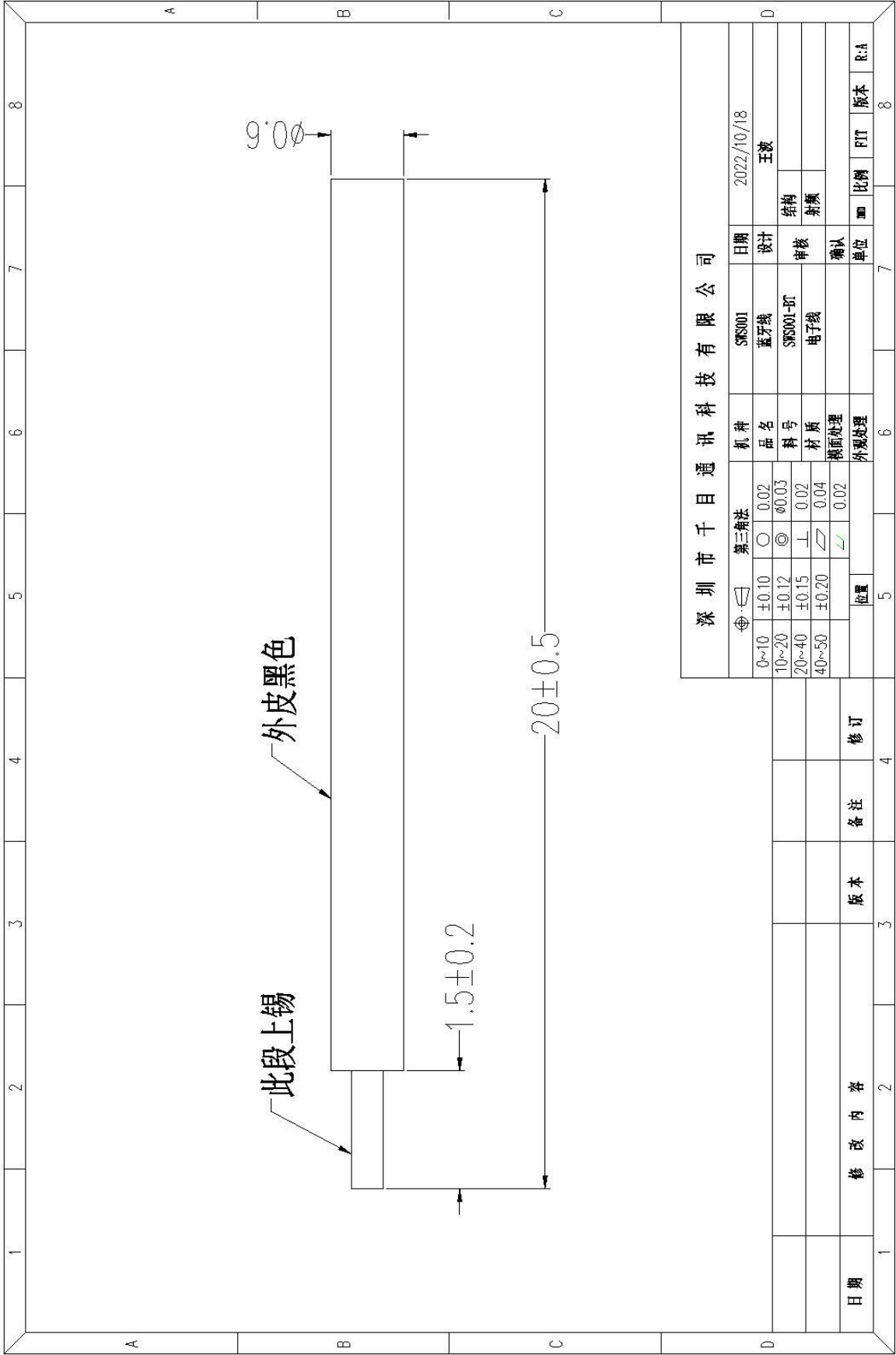
Antenna passive efficiency gain data

FEITUKEJI											
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)	-10.30	-10.28	-10.24	-10.00	-9.93	-9.63	-9.75	-9.97	-9.99	-9.86	-9.84
Peak EIRP (dBm)	-4.42	-4.55	-4.65	-4.52	-4.45	-4.16	-4.22	-4.31	-4.16	-3.96	-4.05
Directivity (dBi)	5.88	5.73	5.58	5.48	5.48	5.48	5.53	5.66	5.82	5.90	5.79
Efficiency (dB)	-10.30	-10.28	-10.24	-10.00	-9.93	-9.63	-9.75	-9.97	-9.99	-9.86	-9.84
Efficiency (%)	9.30	9.40	9.50	10.00	10.20	10.90	10.60	10.10	10.00	10.30	10.40
Gain (dBi)	-4.42	-4.55	-4.65	-4.52	-4.45	-4.16	-4.22	-4.31	-4.16	-3.96	-4.05
NHPRP $\pm\pi/4$ (dBm)	-12.26	-12.22	-12.15	-11.90	-11.81	-11.49	-11.59	-11.80	-11.82	-11.70	-11.67
NHPRP $\pm\pi/6$ (dBm)	-14.34	-14.28	-14.20	-13.93	-13.84	-13.52	-13.64	-13.89	-13.95	-13.86	-13.82
NHPRP $\pm\pi/8$ (dBm)	-15.80	-15.74	-15.63	-15.34	-15.24	-14.93	-15.07	-15.34	-15.42	-15.34	-15.29
Upper Hem. PRP (dBm)	-15.28	-15.28	-15.24	-15.03	-15.01	-14.76	-14.92	-15.17	-15.20	-15.11	-15.09
Lower Hem. PRP (dBm)	-11.96	-11.94	-11.89	-11.64	-11.55	-11.23	-11.32	-11.53	-11.54	-11.41	-11.38
Upper Hem. PRP (%)	2.96	2.97	2.99	3.14	3.16	3.34	3.22	3.04	3.02	3.09	3.10
Lower Hem. PRP (%)	6.37	6.40	6.48	6.85	7.00	7.54	7.38	7.03	7.01	7.23	7.28



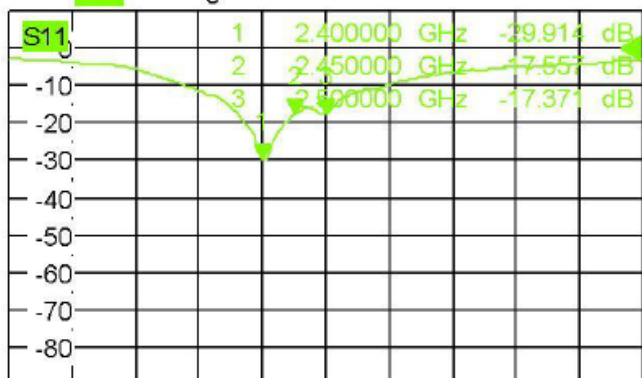
Placement mode of Bluetooth cables

6、结构图纸



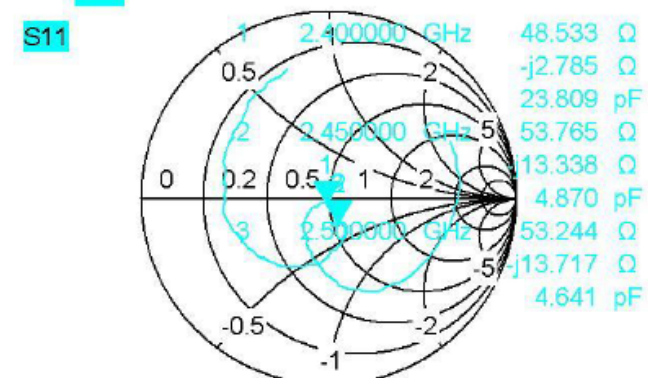


Trc1 S11 dB Mag 10 dB / Ref 0 dB



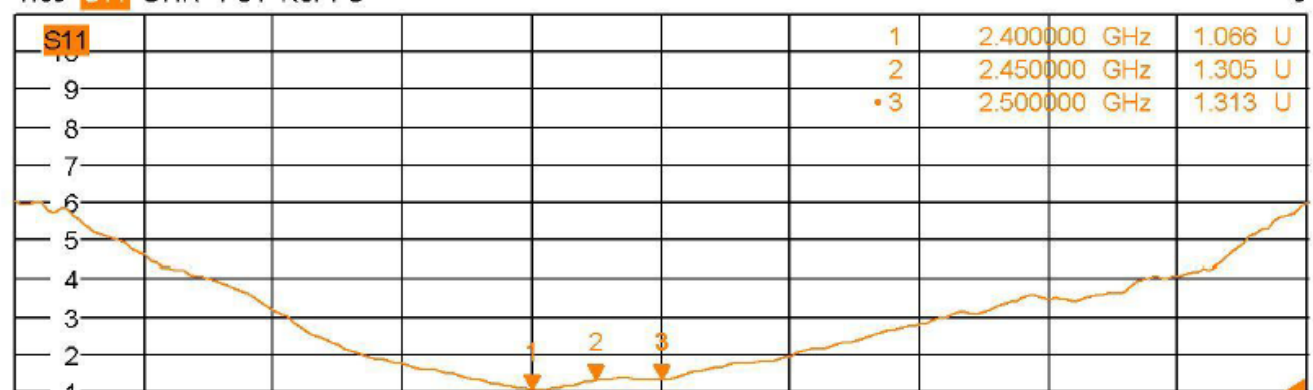
Ch1 Start 2 GHz Pwr -10 dBm Stop 3 GHz

Trc2 S11 Smith Ref 1 U



Ch1 Start 2 GHz Pwr -10 dBm Stop 3 GHz

Trc3 S11 SWR 1 U / Ref 1 U



Ch1 Start 2 GHz Pwr -10 dBm Stop 3 GHz

