

# Antenna Test Report

Client name: Hot pepper

project name: HPPL60A

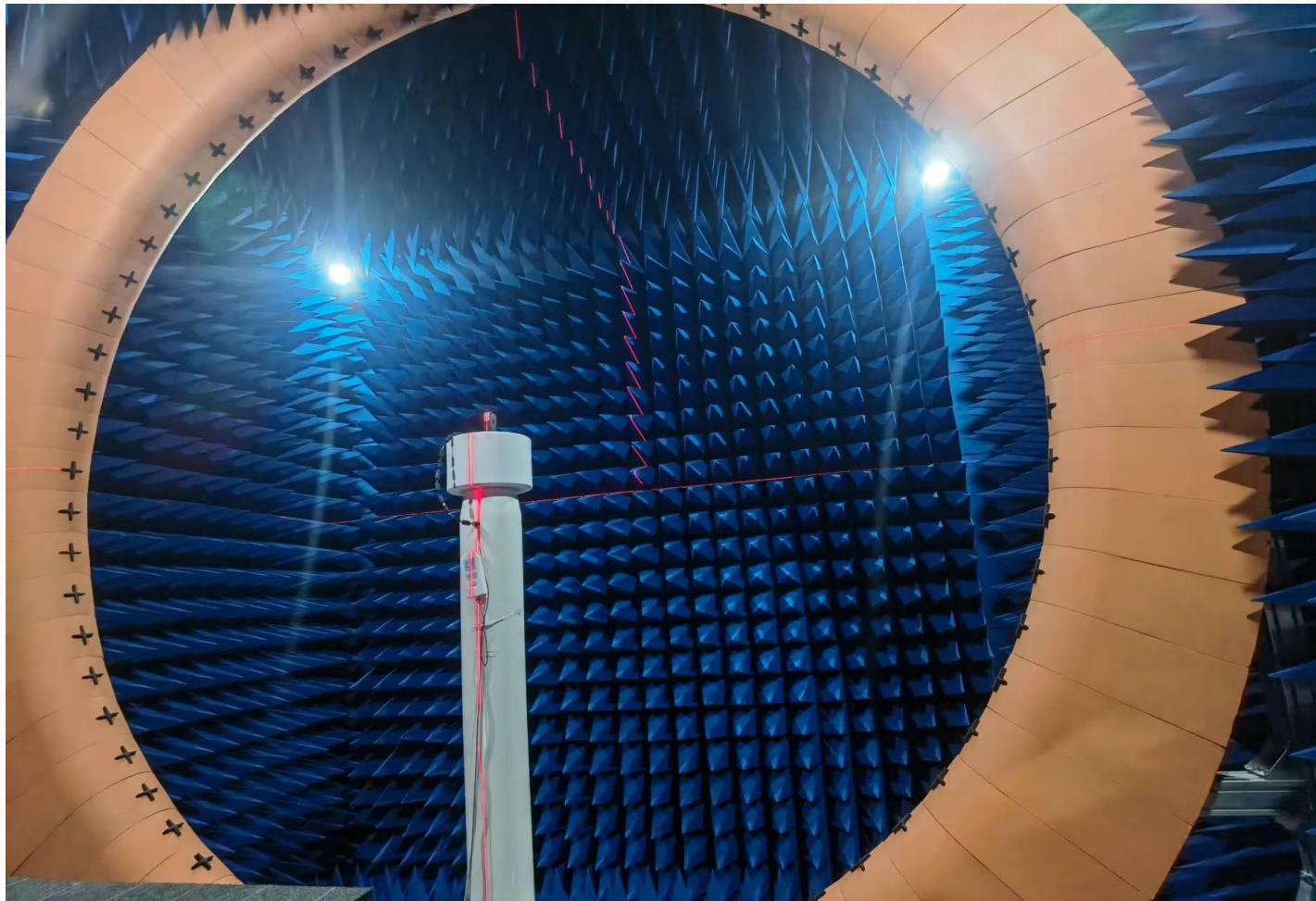
Date : 05/10/2022

Manufacture: Shangyuan Technology (China) Co., Ltd.

Address: Room 101, Building 3, Building B, No. 99, Lane 215, Gaoguang Road, Qingpu District, Shanghai

1. Project Overview
2. Test equipment and environment introduction
3. Project pictures
4. Antenna product pictures
5. SY\_AA20\_BWG antenna test data

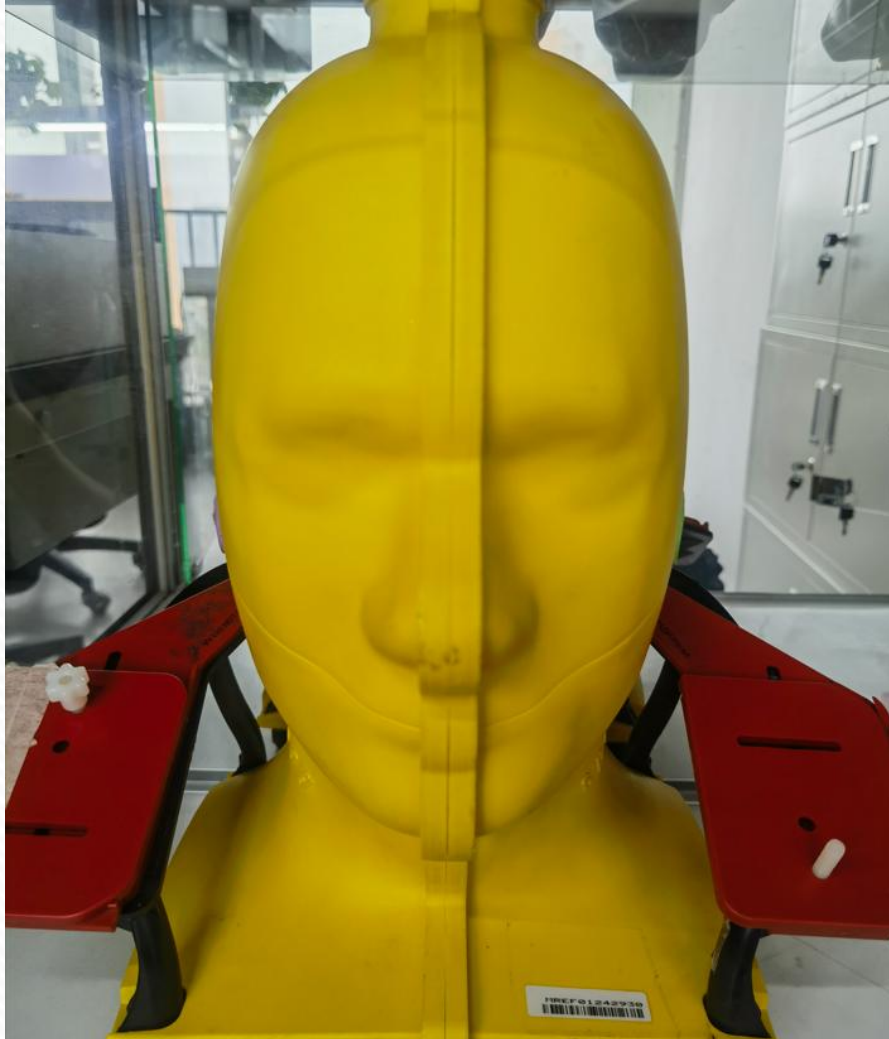
Type of product	Mobile phone
Number of antennas	BT/WLAN/GPS 3in1 antenna
Band	GSM 850/1900
	WCDMA Band2/4/5
	FDD Band2/4/5/12/13/25/26/66/71
	TDD Band41
	GPS L1 + WIFI 802.11 b/g/n + BT
structural form	FPC
Environmental treatment	N/A



64 Multi-probe OTA test system

Instrument name	brand	Instrument type
CMW500	R&S	Comprehensive tester
ZND	R&S	Vector Network Analyzer
E4438C	Agilent	signal source device

SPEAG (Switzerland) SAM Head model

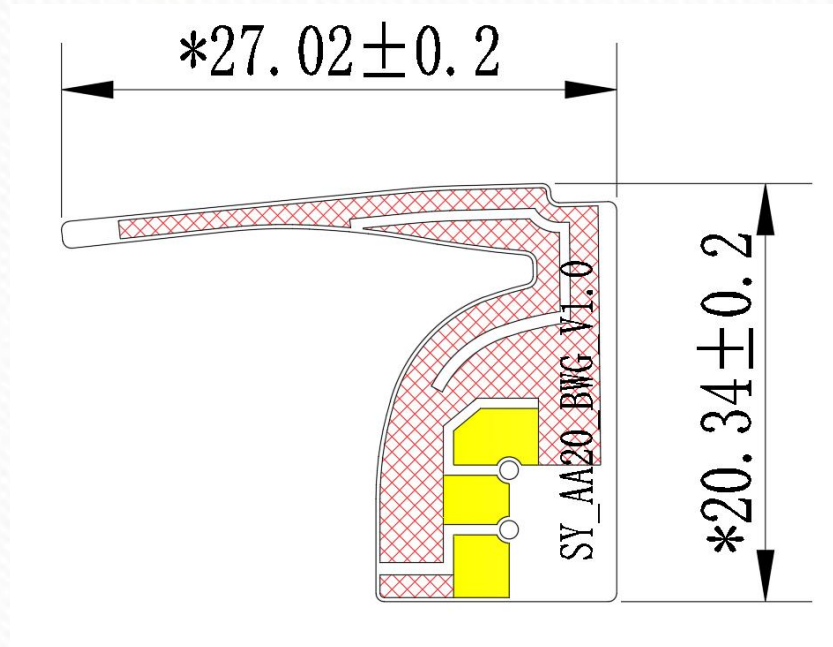


SPEAG (Switzerland) SAM Hand model

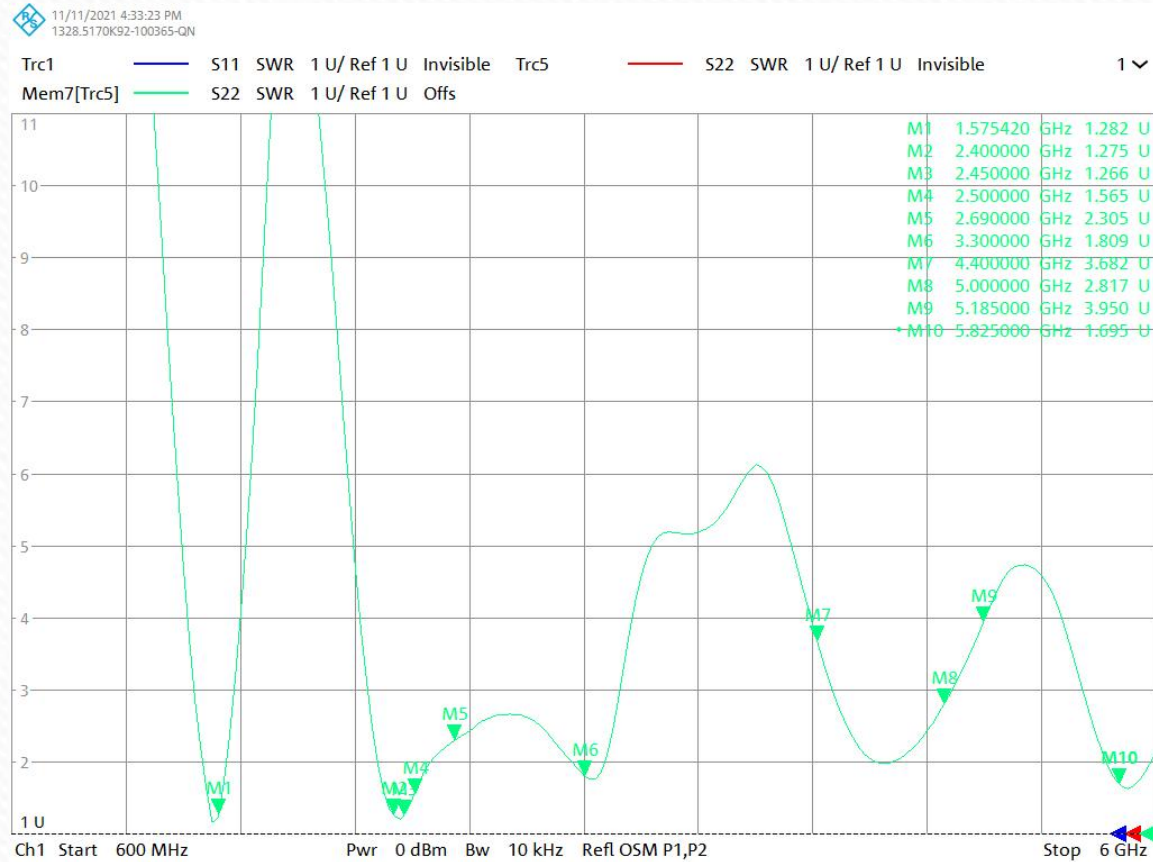




SY\_AA20\_BWG Antenna



### S11-VSWR





## Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
1550	45.69	1.24	2400	48.56	2.76	5150	24.63	0.2	5510	28.79	0.02
1555	44.35	1.18	2410	58.13	4.05	5170	26.29	0.75	5530	26.35	-0.39
1560	46.55	1.38	2420	51.53	4.19	5190	27.57	1.08	5550	24.55	-0.79
1565	51.79	1.77	2430	52	4.82	5210	29.13	1.38	5570	27.64	-0.91
1570	52.42	1.62	2440	52.71	5.13	5230	31.03	1.78	5590	30.14	-1.14
1575	51.99	1.41	2450	54.25	5.22	5250	33.52	2.08	5610	31.74	-0.85
1580	55.6	1.5	2460	58.14	5.06	5270	33.55	1.93	5630	35.5	0.11
1585	58.49	1.7	2470	57.19	4.28	5290	29.48	1.12	5650	39.45	1.42
1590	60.02	1.87	2480	56.07	3.35	5310	26.45	0.46	5670	38.42	1.54
1595	62.92	2.27	2490	50.11	1.92	5330	25.49	0.16	5690	36.89	0.97
1600	63.84	2.56	2500	44.21	0.81	5350	26	0.01	5710	36.45	0.06
1605	63.46	2.64				5370	27.61	0.2	5730	37.48	-0.26
1610	65.76	2.97				5390	30.06	0.69	5750	37.51	-0.66
1615	67.01	3.32				5410	31.26	0.72	5770	39.52	-0.61
1620	64.8	3.66				5430	33.89	0.78	5790	42.07	-0.2
1625	61.78	3.64				5450	35.03	0.89	5810	40.91	-0.44
1630	62.09	3.52				5470	34.86	1.11	5830	38.77	-0.45
1635	63.63	3.41				5490	31.76	0.69	5850	39.01	0.28
1640	62.28	3.06									
1645	59.73	2.48									
1650	55.23	2.22									

## Active Test Data

Test Result	Wifi 2.4G		
	1	6	12
Frequency (MHz)	2412	2437	2467
TRP(dBm)	15.17	16.06	16.29
TIS(dBm)	-85.64	-85.82	-85.83
AdditionalInfor	802.11b : 11Mbps		

Test Result	Wifi 5G		
	36	149	165
Frequency (MHz)	5180	5745	5825
TRP(dBm)	9.52	8.63	8.44
TIS(dBm)	-69.38	-68.29	-70.21
AdditionalInfor	802.11a : 54Mbps		

Test Result	Wifi 2.4G		
	1	6	12
Frequency (MHz)	2412	2437	2467
TRP(dBm)	12.37	13.33	13.51
TIS(dBm)	-73.05	-74.37	-73.88
AdditionalInfor	802.11g : 54Mbps		

Test Result	Wifi 5G		
	36	149	165
Frequency (MHz)	5180	5745	5825
TRP(dBm)	9.32	8.53	8.19
TIS(dBm)	-64.92	-64.59	-66.03
AdditionalInfor	802.11a : 54Mbps		

Test Result	Wifi 2.4G		
	1	6	12
Frequency (MHz)	2412	2437	2467
TRP(dBm)	13.7	12.88	12.8
TIS(dBm)	-67.73	-66.99	-66.71
AdditionalInfor	802.11n : MCS7		

**Thank You**