

Date: 2025-0307

CONDOR Antenna Test Report

Project Version	Head of RF	Head of Structures	frequency band
CONDOR	Xin Li	Cen Gong	GSM:850/900/1800/1900 WCDMA:850/900/1900 BT

Our company has been evaluated and complies with the requirements of the applicable provisions of GB/T19001-2016/ISO9001:2015 Quality Management System Standard 701, Building 212, Tai Ran Science and Technology Park, Tai Ran Si Road, Futian District, Shenzhen, China. www.tyquant.com

Cataloge:

- 1, Test Environment
- 2, Matching Circuit Design
- 3, Antenna Test Report
- 4, Environmental Handling Suggesti



天宇通天线

深圳市天宇通电子科技有限公司

专心，专业，专注做最好的天线

Shenzhen Tianyutong Electronics Technology Co., LTD

1. Test Environment

Test system: ETS 3D shielded darkroom

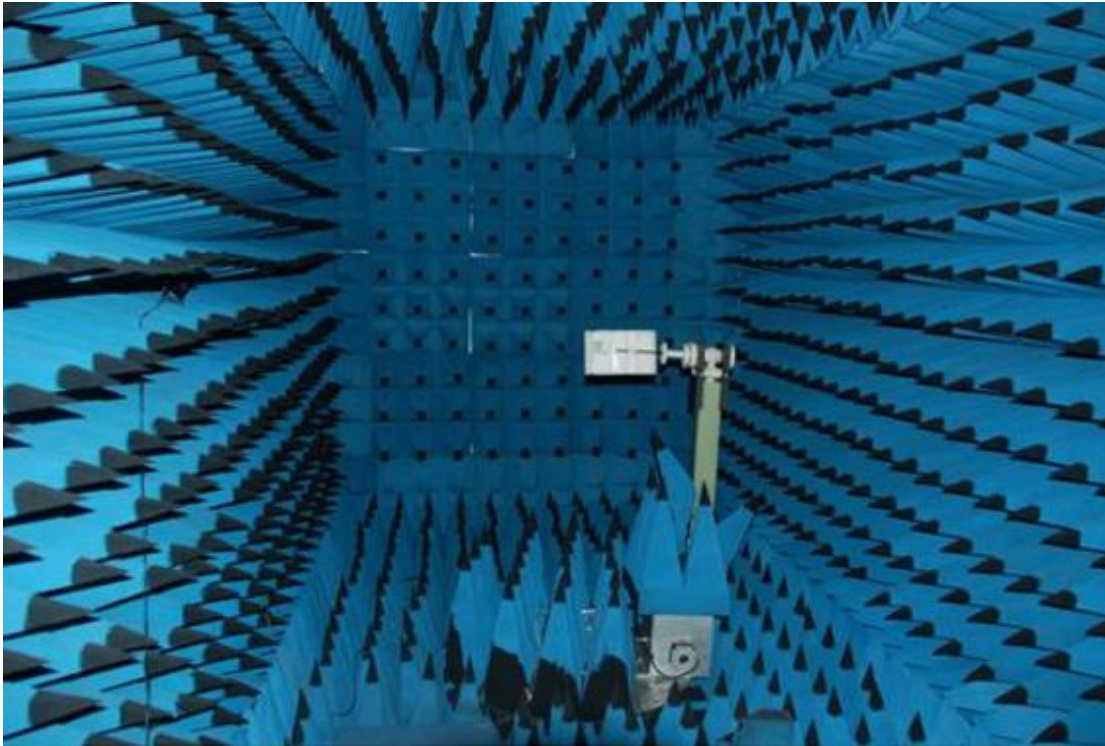
Test environment: temperature $22\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment:

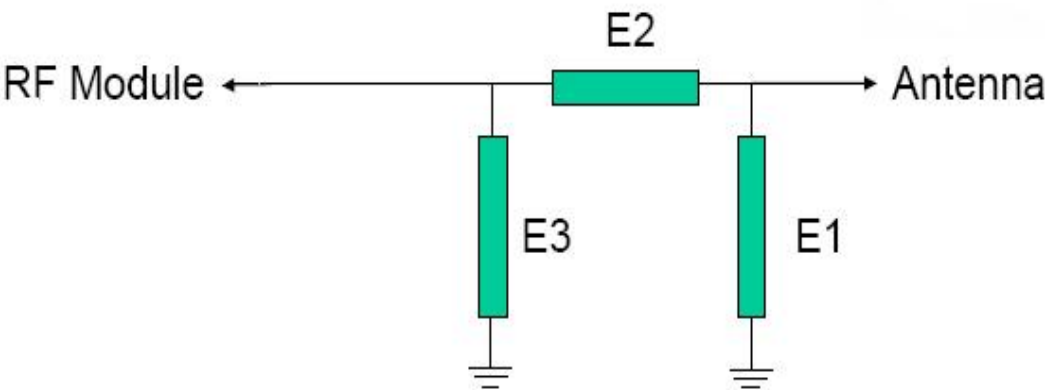
Test passive data, using the HP 8753E network analyzer

Test active data, using the E5515C-8960 3G full-featured synthesizer

Test active data, using the 8820C 4G full-featured synthesizer



2. Matching Circuit Design



Element	Value
E1(0402)	
E2(0402)	
E3(0402)	

3.1 Antenna Test Report

	EGSM900			Remarks	DCS1800			Remarks
Channel	1	62	120		512	698	885	
TRP	31.2	30.9	30.8		28.5	28.6	28.8	
level	46	46	45		46	47	47	
TIS	-104	-104	-104		-105	-106	-106	
	EGSM850			Remarks	PCS1900			Remarks
Channel	128	190	250		512	661	810	
TRP	30.5	30.6	30.8		28.9	28.8	28.6	
level	47	48	48		47	47	46	
TIS	-104	-104	-104		-106	-106	-105	

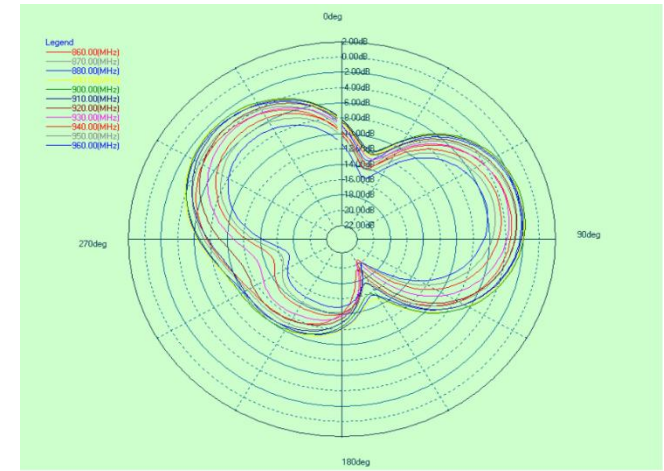
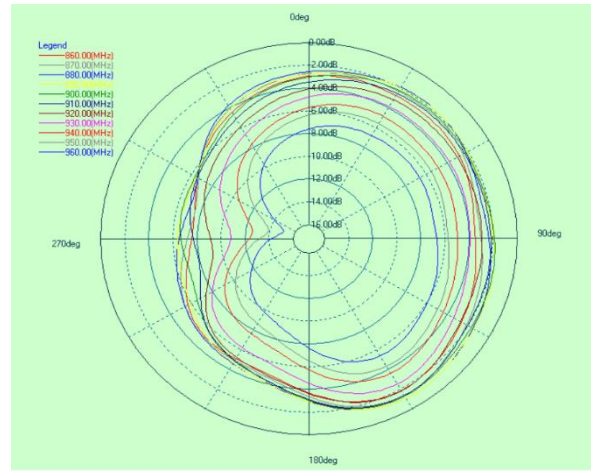
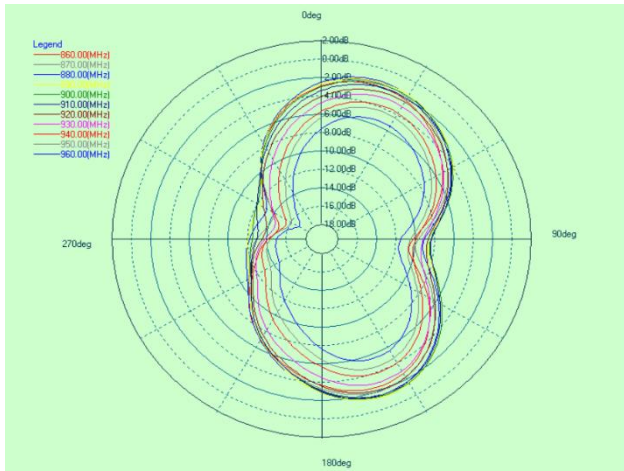
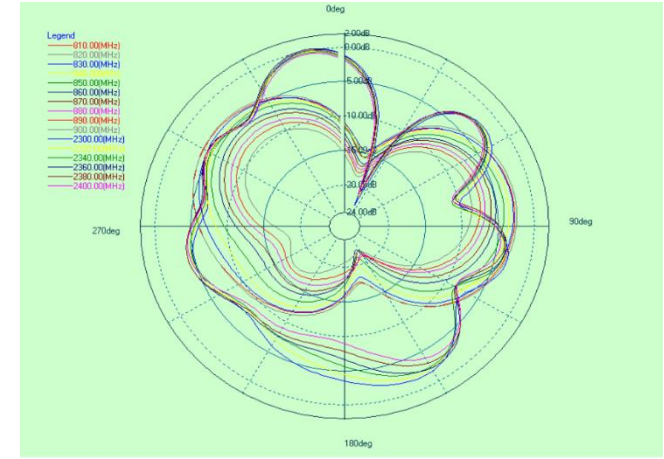
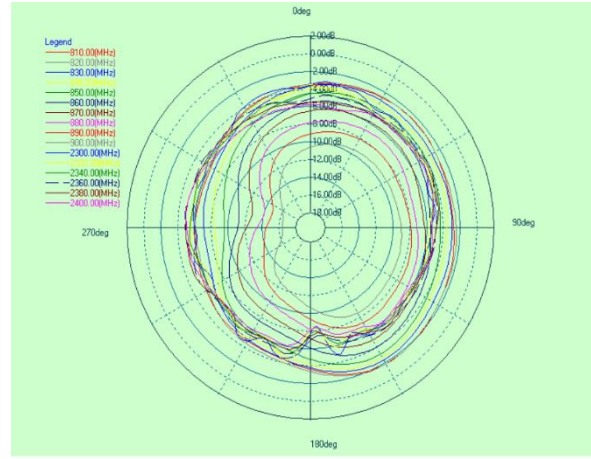
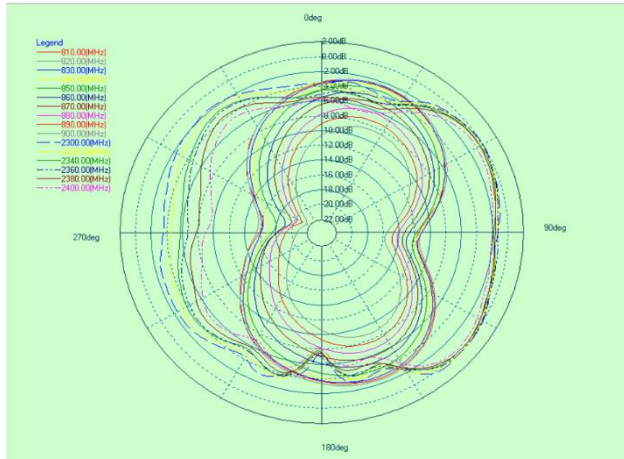
3. 2 3G test report

	WCDMA2100			Remarks	WCDMA1900			
Channel	10562	10700	10838		9663	9800	9937	
Max TRP					21.9	21.8	21.5	
TIS					-104	-104	-103	
	WCDMA850			Remarks	WCDMA900			
Channel	4357	4408	4458		2938	3013	3087	
Max TRP	19.8	20.2	20.3		20.3	19.8	19.6	
TIS	-103	-104	-104		-104	-104	-103	

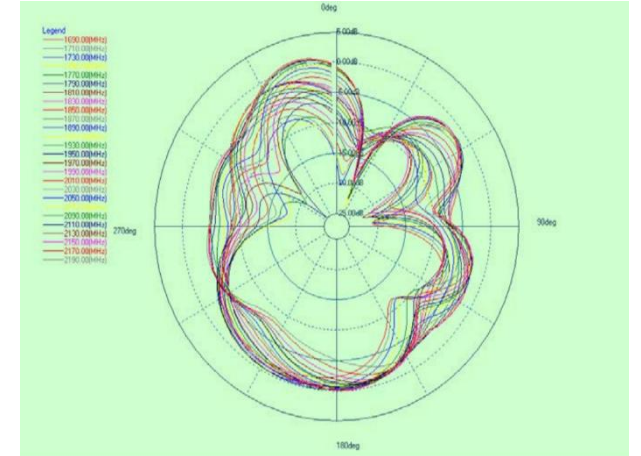
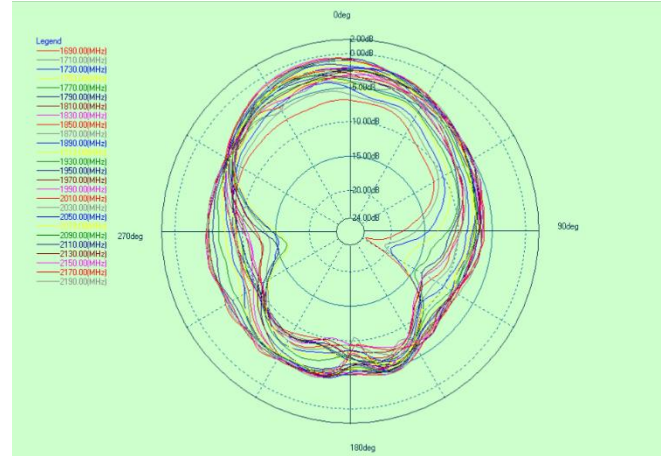
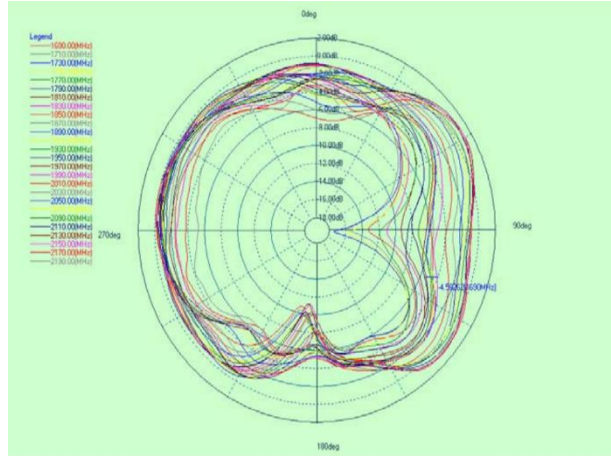
Antenna gain

2G AVG Gain(dbi)	850	900	1800	1900	BT
	-1.6	-1.5	-1.1	-1.0	-0.9
3G AVG Gain(dbi)	W850	W1900			
	-1.6	-1.0			

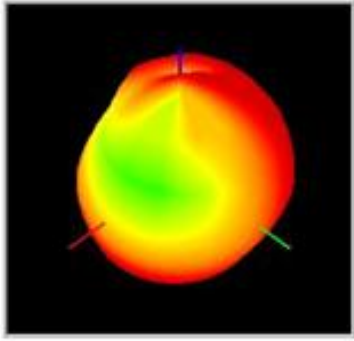
3 Main Antenna



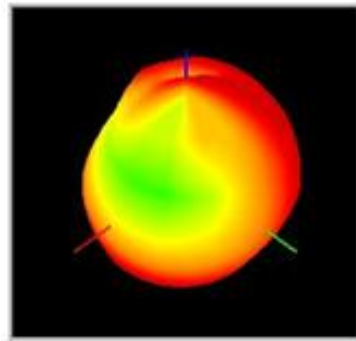
3 Main Antenna



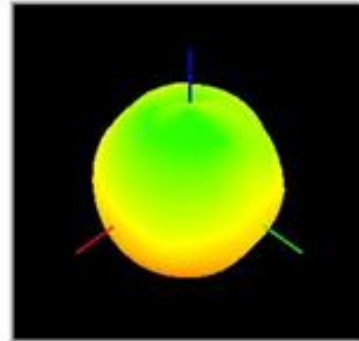
4 3D orientation plan



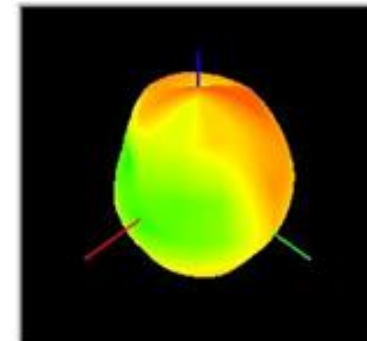
GSM850



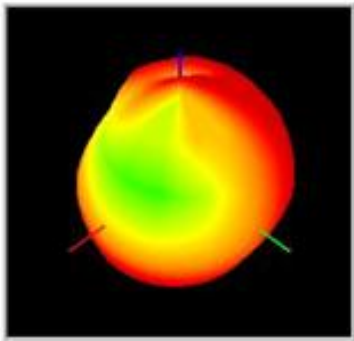
GSM900



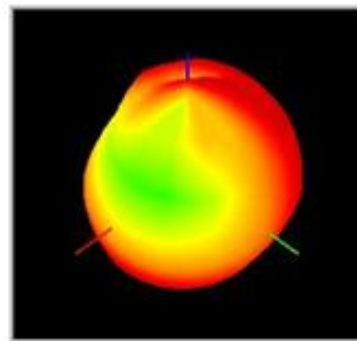
DCS1800



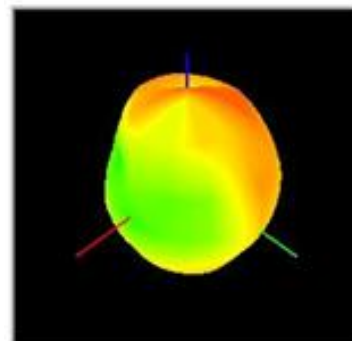
PCS1900



W850



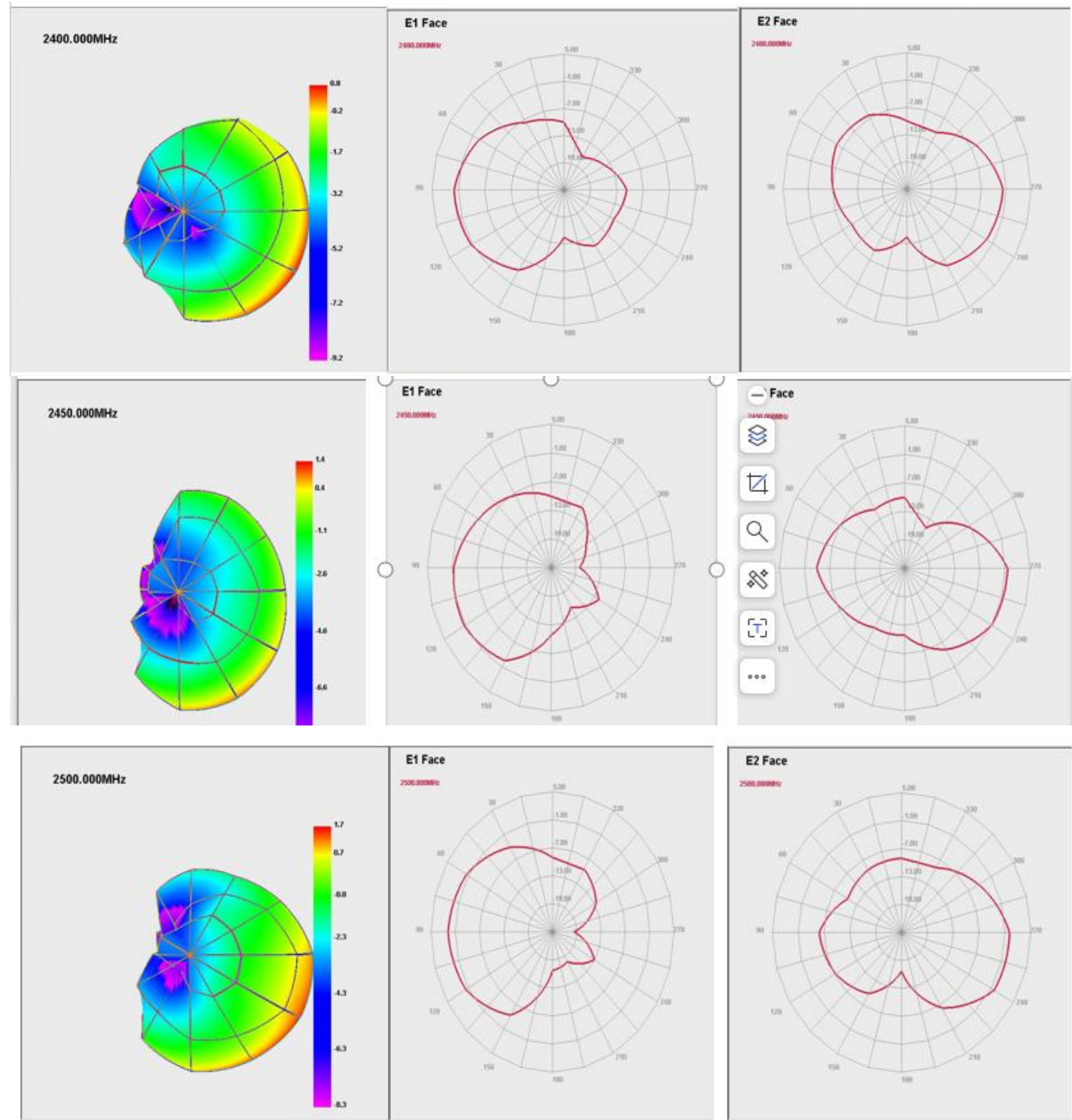
W900



W1900

5 2.4G BT Antenna gain

Freq (MHz)	<u>Effi</u> (%)	<u>Effi</u> (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	34.31	-4.65	0.81	-1.34	15.415	18.89	0.81	-19.85	52.57	52.52
2410	35.16	-4.54	0.76	-1.39	14.929	20.234	0.76	-19.06	52.61	52.56
2420	31.03	-5.08	0.3	-1.85	12.193	18.832	0.3	-16.99	52.49	52.49
2430	33.49	-4.75	1.11	-1.04	12.234	21.258	1.11	-19.47	52.55	52.52
2440	35.25	-4.53	1.59	-0.56	12.305	22.941	1.59	-20.3	52.69	52.57
2450	33.57	-4.74	1.39	-0.76	11.846	21.727	1.39	-20.47	52.92	52.78
2460	33.52	-4.75	1.28	-0.87	12.482	21.039	1.28	-23.49	52.79	52.62
2470	29.95	-5.24	0.58	-1.57	11.921	18.024	0.58	-26.3	52.83	52.65
2480	34.69	-4.6	0.92	-1.23	14.699	19.988	0.92	-23.39	52.81	52.65
2490	35.98	-4.44	1.17	-0.98	15.883	20.098	1.17	-21.58	53	52.81
2500	38.93	-4.1	1.67	-0.48	17.436	21.492	1.67	-19.77	53.02	52.84



4. 1 Environmental treatment recommendations

Conductive cloth behind the screen
to ground

