

TEST REPORT

Application No.: GZEM2003011059AT
Applicant: Mobile Pixels Inc
Address of Applicant: 5268 Rivergrade Rd, Irwindale CA 91706 USA
Manufacturer: Mobile Pixels Inc
Address of Manufacturer: 5268 Rivergrade Rd, Irwindale CA 91706 USA
Factory: Shenzhen Yuko Technology Co.Ltd.
Address of Factory: A9 building,6th Floor, Tianrui Industrial Park,Fuyong Town,Bao'an District, Shenzhen,GuangDong.

Equipment Under Test (EUT):

EUT Name: Portable Laptop Monitor
Model No.: 101-1003P01, 101-1004P01 ☐
 ☐ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark: Trio, Trio Max
Standard(s): EN 55032:2015
 EN 55035:2017
Date of Receipt: 2020-03-24
Date of Test: 2020-03-26 to 2020-03-27
Date of Issue: 2020-04-27

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.




Kobe Jian
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-04-27		Original

Authorized for issue by:			
Tested By			
	Simon_Cai /Project Engineer	2020-03-26 to 2020-03-27	Date
Checked By			
	Terry_Lai /Reviewer	2020-04-27	Date



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2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (30MHz-1GHz)	EN 55032:2015	EN 55032:2015	Class B	Pass
Radiated Emissions (above 1GHz)	EN 55032:2015	EN 55032:2015	Class B	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN 55035:2017	EN 61000-4-2:2009	4kV Contact Discharge 8kV Air Discharge	Pass
Radiated Immunity (80MHz-1GHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz)	EN 55035:2017	EN 61000-4-3:2006 +A1:2008+A2:2010	3V/m, 80%, 1kHz Amp. Mod.	Pass

Internal Source	Upper Frequency
Below 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5 times the highest frequency or 6 GHz, whichever is less

■ Declaration of EUT Family Grouping:

Model No.: 101-1003P01, 101-1004P01

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference being the size and appearance.

Therefore only one model 101-1004P01 was performed full test and model 101-1003P01 was performed Radiated Emissions (30MHz-1GHz) as per applicant request in this report.



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4 General Information

4.1 Details of E.U.T.

Power Supply: DC 5V
 Cable: 1.0 m unscreened type-C cable

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	T430u	REF. No.SEA1800
NoteBook	Lenovo	ThinkPad T490	PF1D1MVJ
NoteBook	Lenovo	Xiaoxinchao 5000	PF0TLJX7
NoteBook	Lenovo	Xiaoxinchao 5000	PF0TNMGB
Mouse	DELL	MOC5UO	G1B02ZP5
Mouse	DELL	M-WDEL1	OT0943

4.3 Measurement Uncertainty

EMC

No.	Item	Measurement Uncertainty
1	Conducted Disturbance Voltage at Mains Terminals	±3.63dB (9kHz to 150kHz)
		±3.22dB (150kHz to 30MHz)
2	Disturbance Power	±3.78dB
3	Radiated Emissions	±5.0dB (30MHz-1GHz)
		±5.0dB (1GHz-6GHz)
4	Radiated Immunity	±2.18dB(80MHz-3GHz)
5	Conducted Immunity	±3.5dB(150kHz-230MHz)
6	Electrostatic Discharge	±6 %
7	EFT (Electrical Fast Transients)	±4 %
8	Surge Immunity	±6%
9	Voltage Dips and Interruptions	±4 %
10	CISPR 20 Immunity	±1.5dB
11	Temperature	±0.4°C
12	Humidity	±1.3%
13	DC power	±0.5 %



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4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

● **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

● **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

● **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

● **FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

● **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818, Jul 13, 2017.

● **Industry Canada (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

● **VCCI (Registration No.: R-12460, C-12584, G-10449 and T-11179)**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-10449 and T-11179 respectively.

● **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 Monitoring of EUT for All Immunity Test

Visual: LCD display of EUT

Audio: N/A



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5 Equipment List

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2020-01-10	2021-01-09
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2020-01-10	2021-01-09
Chamber cable	HangTianXing	N/A	EMC0542	2019-06-28	2021-06-27
Trilog Broadband Antenna 25MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	EMC2174	2018-09-06	2021-09-05
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Bi-log Type Antenna	Schaffner Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	Rohde & Schwarz	HF906	EMC0518	2018-09-02	2021-09-01
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2020-01-10	2021-01-09
Amplifier	HP	8447F	EMC2065	2019-05-29	2020-05-28
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2019-11-18	2020-11-17
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2021-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2020-01-10	2021-01-09
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2020-01-10	2021-01-09
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2020-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2019-11-18	2020-11-17
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2019-11-18	2020-11-17
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A



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Radiated Emissions (above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2020-01-10	2021-01-09
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2020-01-10	2021-01-09
Chamber cable	HangTianXing	N/A	EMC0542	2019-06-28	2021-06-27
Trilog Broadband Antenna 25MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	EMC2174	2018-09-06	2021-09-05
Bi-log Type Antenna	Schaffner Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	Rohde & Schwarz	HF906	EMC0518	2018-09-02	2021-09-01
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2019-01-07	2020-01-08
Amplifier	HP	8447F	EMC2065	2019-05-29	2020-05-28
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2019-11-18	2020-11-17
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2021-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2020-01-10	2021-01-09
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2020-01-10	2021-01-09
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2020-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2019-11-18	2020-11-17
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2019-11-18	2020-11-17
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

Electrostatic Discharge					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
ESD Simulator	TESEQ AG	NSG 435	EMC2071	2019-07-04	2020-07-03
ESD Simulator	EMTEST	NX30	EMC2186	2020-03-02	2021-03-01
ESD Ground Plane	SGS-EMC	3m x 3m	EMC0804	N/A	N/A
Temperature & Humidity	Shanghai Meteorological Instrument Factory Co., Ltd.	ZJ1-2B	EMC0078	2019-07-05	2020-07-04



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Radiated Immunity (80MHz-1GHz,1800MHz,2600MHz,3500MHz,5000MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Compact 3m Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	EMC0525	2019-10-20	2022-10-19
Laser Probe Interface	RF Microwave Instrumentation	FI7000	EMC2089	N/A	N/A
Open Switch And Control Unit	Rohde & Schwarz	OSP130	EMC2090	N/A	N/A
Broadband Amplifier(80MHz~1GHz/250W)	Rohde & Schwarz	BBA150	EMC2091	2020-01-10	2021-01-09
Broadband Amplifier(800MHz~3GHz/110W)	Rohde & Schwarz	BBA150	EMC2092	2020-01-10	2021-01-09
Signal Generator	Rohde & Schwarz	SMB100A	EMC2093	2020-01-10	2021-01-09
Laser Probe	RF Microwave Instrumentation	FL7006	EMC2094	2020-03-02	2021-03-21
NRP-Z91 Power Sensor 6GHz	Rohde & Schwarz	NPR-Z91	EMC2095	2020-01-10	2021-01-09
NRP-Z91 Power Sensor 6GHz	Rohde & Schwarz	NPR-Z91	EMC2096	2020-01-10	2021-01-09
High-Gain Log-periodic Antenna	Rohde & Schwarz	HL046E	EMC2097	2019-02-15	2022-02-14
Stacked Logarithmic-Periodic Broadband Antenna (0.7~9GHz)/300W	SCHWARZBECK MESS - ELEKTRONIK	STLP 9149	SEM003-21	2018-09-18	2021-09-17
Broadband Amplifier (2.5~6GHz/30W)	Rohde & Schwarz	BBA150	EMC2105	2019-09-16	2020-09-15
RI Cable	Rohde & Schwarz	7m	EMC2098	2019-05-24	2020-05-23
Oscilloscope	Tektronix	TDS3052C	EMC2055	2020-01-10	2021-01-09
Audio Analyzer	Keysight	U8903B	EMC2180	2019-09-30	2020-09-29
Monitor System	Mitsubish Corp.	M-0552AB	EMC0909	N/A	N/A
Test Software EMC32	Rohde & Schwarz	Ver. 9.26.00	GZE100-63	N/A	N/A

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2019-07-16	2020-07-15
DMM	Fluke	73	EMC0007	2019-07-16	2020-07-15



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6 Emission Test Results

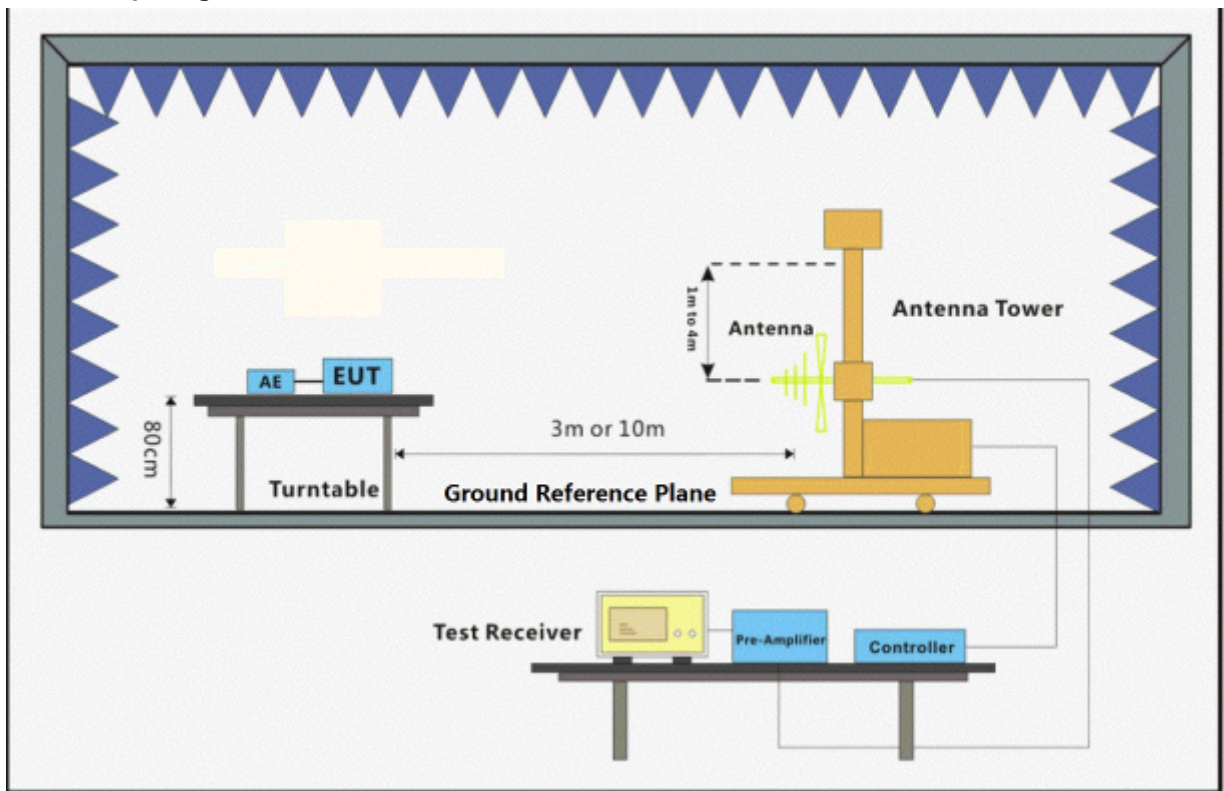
6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN 55032:2015
 Test Method: EN 55032:2015
 Frequency Range: 30MHz to 1GHz
 Measurement Distance: 10m
 Limit:
 30MHz-230MHz 30 dB(μV/m) quasi-peak
 230MHz-1GHz 37 dB(μV/m) quasi-peak
 Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

6.1.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 58.1 % RH Atmospheric Pressure: 1020 mbar
 Test mode a: Test the EUT in working mode with PC connecting.

6.1.2 Test Setup Diagram



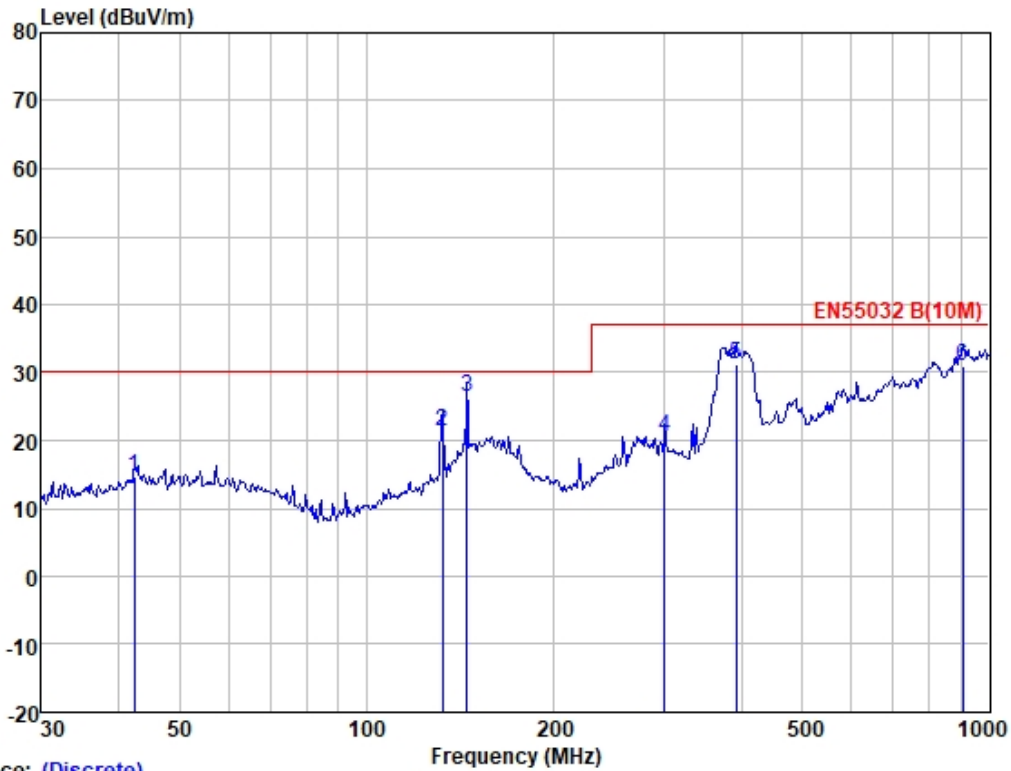
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6.1.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Mode:a; Polarization:Horizontal;model 101-1003P01



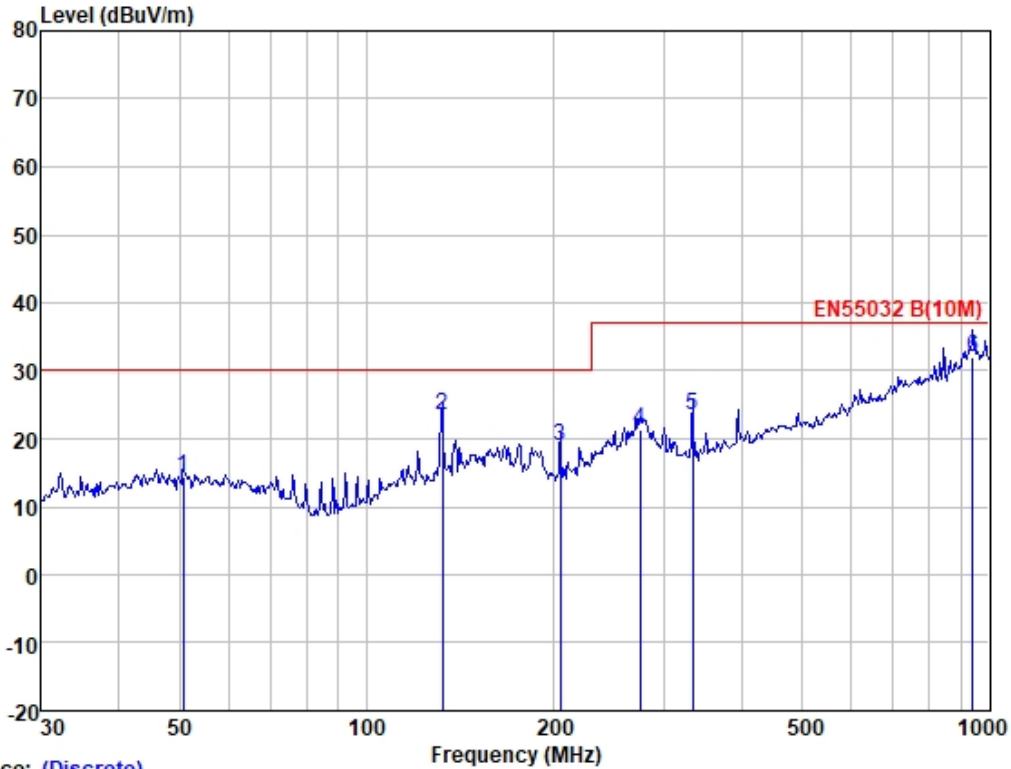
Trace: (Discrete)

	Read	Antenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dB	dB		
1	42.302	27.00	13.71	1.12	27.17	14.66	30.00	-15.34	HORIZONTAL QP
2	132.221	34.28	12.30	1.88	27.01	21.45	30.00	-8.55	HORIZONTAL QP
3	144.842	37.67	13.65	2.02	26.91	26.43	30.00	-3.57	HORIZONTAL QP
4	300.367	31.13	13.60	2.97	27.21	20.49	37.00	-16.51	HORIZONTAL QP
5	392.095	39.88	15.60	3.70	27.88	31.30	37.00	-5.70	HORIZONTAL QP
6	906.482	28.96	23.37	6.44	27.93	30.84	37.00	-6.16	HORIZONTAL QP



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Mode:a; Polarization:Horizontal;model 101-1004P01



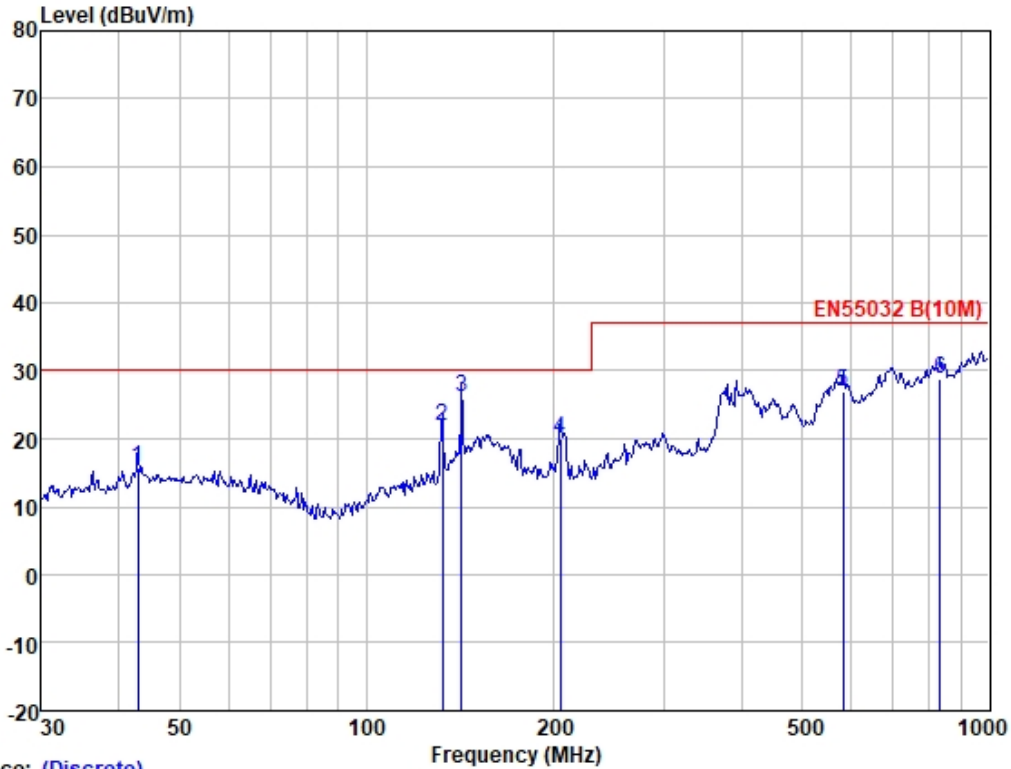
Trace: (Discrete)

	ReadAntenna	Cable	Preamp	Limit	Over				
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	50.764	26.39	13.93	1.20	27.17	14.35	30.00	-15.65	HORIZONTAL QP
2	132.221	36.21	12.30	1.88	27.01	23.38	30.00	-6.62	HORIZONTAL QP
3	204.238	33.43	9.84	2.52	26.80	18.99	30.00	-11.01	HORIZONTAL QP
4	274.194	32.59	12.93	2.76	27.04	21.24	37.00	-15.76	HORIZONTAL QP
5	333.687	33.59	14.50	3.05	27.63	23.51	37.00	-13.49	HORIZONTAL QP
6	938.833	29.31	23.80	6.67	27.87	31.91	37.00	-5.09	HORIZONTAL QP



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Mode:a; Polarization:Vertical;model 101-1003P01



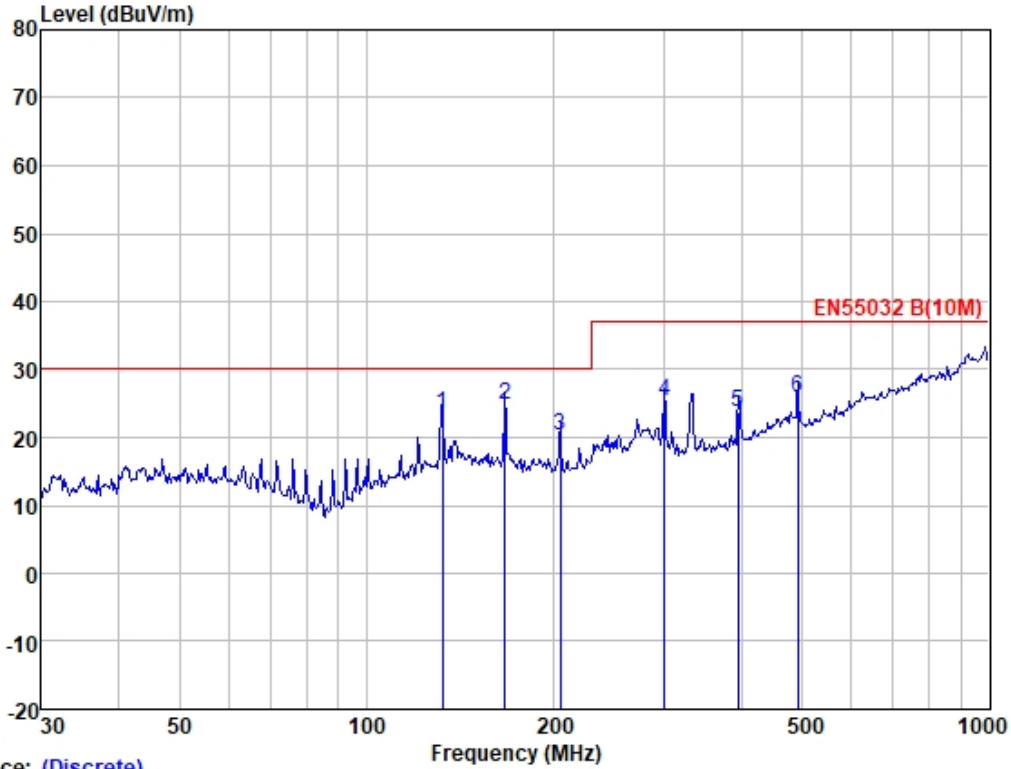
Trace: (Discrete)

	ReadAntenna	Cable	Preamp	Limit	Over					
Freq	Level	Factor	Loss	Line	Limit	Pol/Phase	Remark			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dB				
1	42.900	28.03	13.75	1.14	27.17	15.75	30.00	-14.25	VERTICAL	QP
2	132.221	34.62	12.30	1.88	27.01	21.79	30.00	-8.21	VERTICAL	QP
3	141.826	37.55	13.50	1.99	26.94	26.10	30.00	-3.90	VERTICAL	QP
4	204.238	34.40	9.84	2.52	26.80	19.96	30.00	-10.04	VERTICAL	QP
5	582.743	31.06	19.25	4.74	28.06	26.99	37.00	-10.01	VERTICAL	QP
6	833.317	28.51	22.70	5.71	28.09	28.83	37.00	-8.17	VERTICAL	QP



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Mode:a; Polarization:Vertical;model 101-1004P01



Trace: (Discrete)

	ReadAntenna	Cable	Preamp	Limit	Over				
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	132.221	36.42	12.30	1.88	27.01	23.59	30.00	-6.41	VERTICAL QP
2	166.651	35.93	13.37	2.21	26.83	24.68	30.00	-5.32	VERTICAL QP
3	204.238	34.58	9.84	2.52	26.80	20.14	30.00	-9.86	VERTICAL QP
4	300.367	35.89	13.60	2.97	27.21	25.25	37.00	-11.75	VERTICAL QP
5	394.855	32.28	15.60	3.82	27.89	23.81	37.00	-13.19	VERTICAL QP
6	492.469	32.13	17.85	4.05	28.04	25.99	37.00	-11.01	VERTICAL QP



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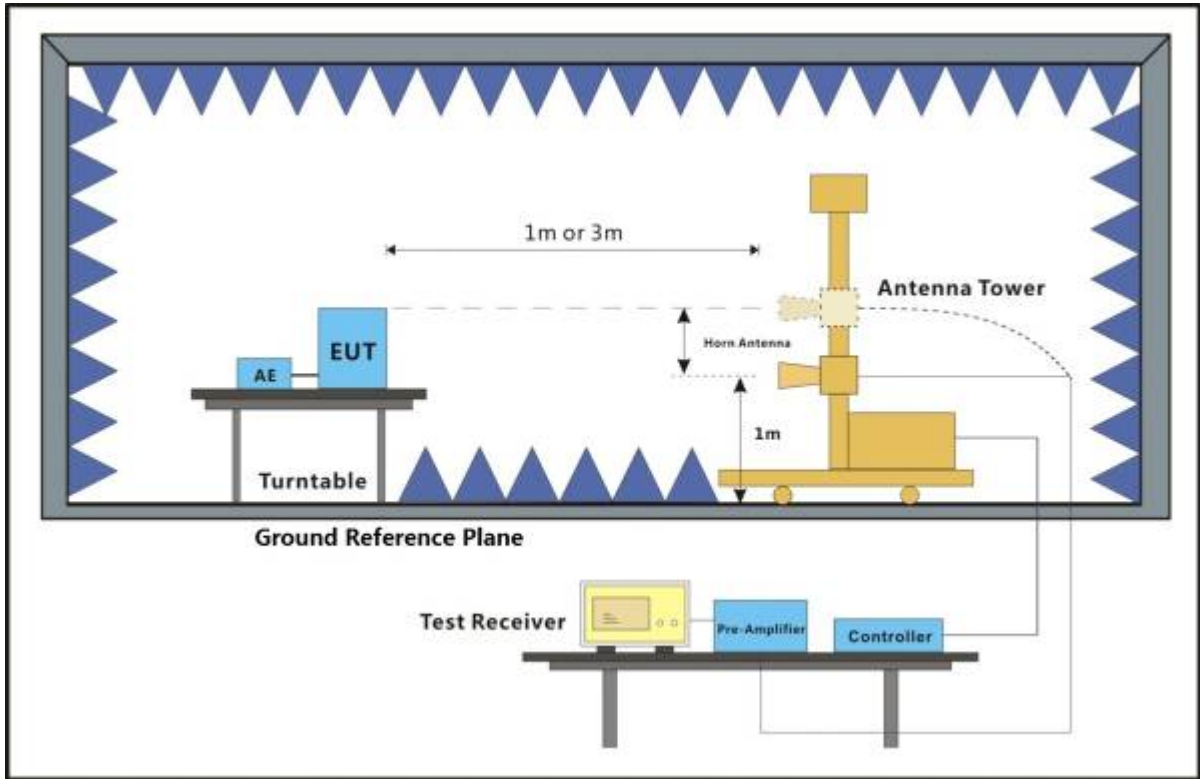
6.2 Radiated Emissions (above 1GHz)

Test Requirement: EN 55032:2015
 Test Method: EN 55032:2015
 Frequency Range: Above 1GHz
 Measurement Distance: 3m
 Limit:
 1GHz-3GHz 70 dB(μV/m) peak, 50 dB(μV/m) average
 3GHz-6GHz 74 dB(μV/m) peak, 54dB(μV/m) average
 Detector: Peak for pre-scan (1000kHz resolution bandwidth) 1000M to 6000MHz

6.2.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 58.1 % RH Atmospheric Pressure: 1020 mbar
 Test mode a:Test the EUT in working mode with PC connecting.

6.2.2 Test Setup Diagram



6.2.3 Measurement Data

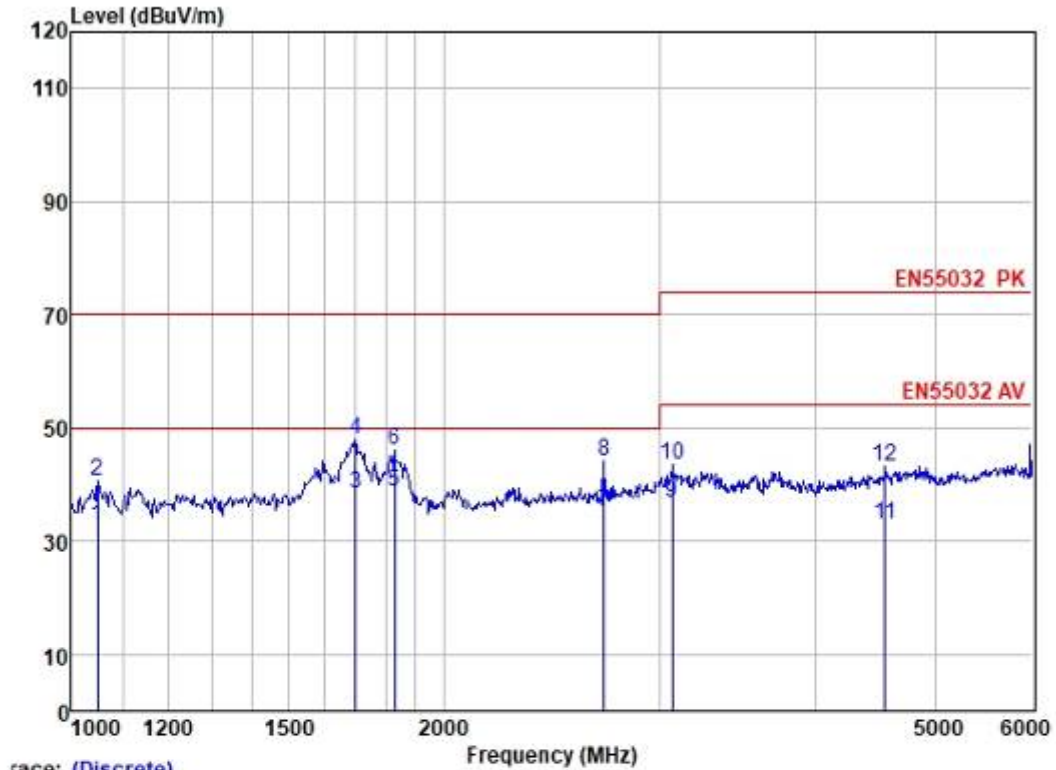
An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor



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Mode:a; Polarization:Horizontal

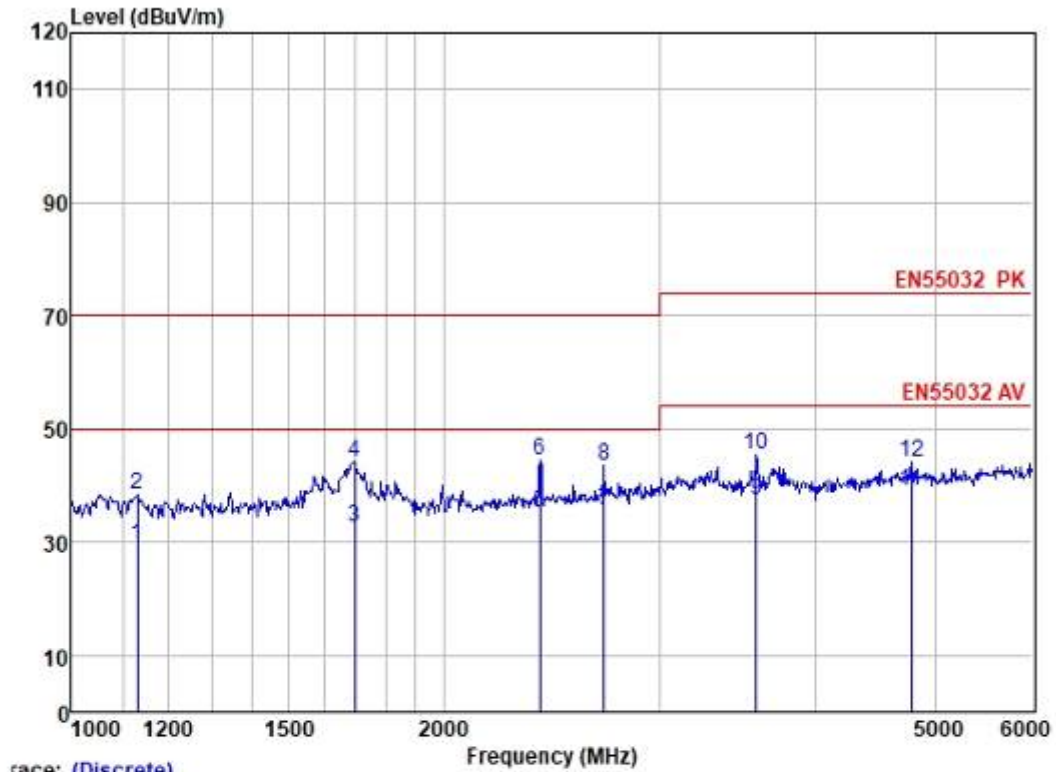


Trace	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit	Over	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1049.567	43.27	24.27	2.40	37.39	32.55	50.00	-17.45	HORIZONTAL	Average
2	1049.567	51.27	24.27	2.40	37.39	40.55	70.00	-29.45	HORIZONTAL	Peak
3	1699.545	46.99	25.71	2.80	37.05	38.45	50.00	-11.55	HORIZONTAL	Average
4	1699.545	56.53	25.71	2.80	37.05	47.99	70.00	-22.01	HORIZONTAL	Peak
5	1825.824	46.86	25.97	2.98	37.02	38.79	50.00	-11.21	HORIZONTAL	Average
6	1825.824	54.03	25.97	2.98	37.02	45.96	70.00	-24.04	HORIZONTAL	Peak
7	2698.334	40.75	27.82	3.59	36.81	35.35	50.00	-14.65	HORIZONTAL	Average
8	2698.334	49.52	27.82	3.59	36.81	44.12	70.00	-25.88	HORIZONTAL	Peak
9	3064.394	40.92	28.44	3.85	36.55	36.66	54.00	-17.34	HORIZONTAL	Average
10	3064.394	47.70	28.44	3.85	36.55	43.44	74.00	-30.56	HORIZONTAL	Peak
11	4561.357	33.08	30.89	5.29	36.44	32.82	54.00	-21.18	HORIZONTAL	Average
12	4561.357	43.41	30.89	5.29	36.44	43.15	74.00	-30.85	HORIZONTAL	Peak



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Mode:a; Polarization:Vertical



Trace: (Discrete)	ReadAntenna	Cable	Preamp	Limit	Over					
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1	1129.573	40.19	24.43	2.20	37.37	29.45	50.00	-20.55	VERTICAL	Average
2	1129.573	49.06	24.43	2.20	37.37	38.32	70.00	-31.68	VERTICAL	Peak
3	1696.503	41.03	25.71	2.80	37.05	32.49	50.00	-17.51	VERTICAL	Average
4	1696.503	52.86	25.71	2.80	37.05	44.32	70.00	-25.68	VERTICAL	Peak
5	2393.094	41.37	27.34	3.49	36.92	35.28	50.00	-14.72	VERTICAL	Average
6	2393.094	50.45	27.34	3.49	36.92	44.36	70.00	-25.64	VERTICAL	Peak
7	2698.334	40.94	27.82	3.59	36.81	35.54	50.00	-14.46	VERTICAL	Average
8	2698.334	48.99	27.82	3.59	36.81	43.59	70.00	-26.41	VERTICAL	Peak
9	3587.747	40.30	29.02	4.49	36.44	37.37	54.00	-16.63	VERTICAL	Average
10	3587.747	48.34	29.02	4.49	36.44	45.41	74.00	-28.59	VERTICAL	Peak
11	4787.449	38.71	31.39	5.40	36.47	39.03	54.00	-14.97	VERTICAL	Average
12	4787.449	43.91	31.39	5.40	36.47	44.23	74.00	-29.77	VERTICAL	Peak



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7 Immunity Test Results

7.1 Performance Criteria Description in EN 55035:2017

- Criterion A** The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
- Criterion B** After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.
- During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.
- If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
- Criterion C** Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.
- Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.



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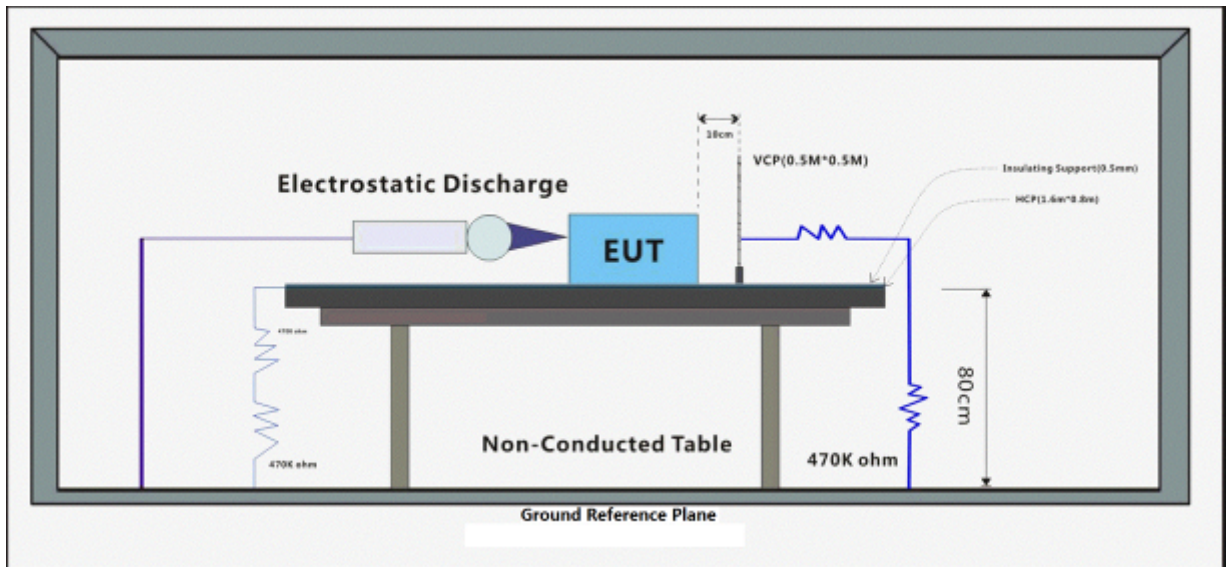
7.2 Electrostatic Discharge

Test Requirement:	EN 55035:2017
Test Method:	EN 61000-4-2:2009
Performance Criterion:	B
Discharge Impedance:	330Ω/150pF
Number of Discharge:	Minimum 10 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

7.2.1 E.U.T. Operation

Operating Environment:	
Temperature:	21 °C Humidity: 52 % RH Atmospheric Pressure: 1020 mbar
Test Mode:	a:Test the EUT in working mode with PC connecting.

7.2.2 Test Setup Diagram



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7.2.3 Test Results

Test Point:

Observations:

1. All insulated enclosure and seams.
2. All accessible metal parts of the enclosure.
3. All side

Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

Results:

A: No degradation in the performance of the EUT was observed.



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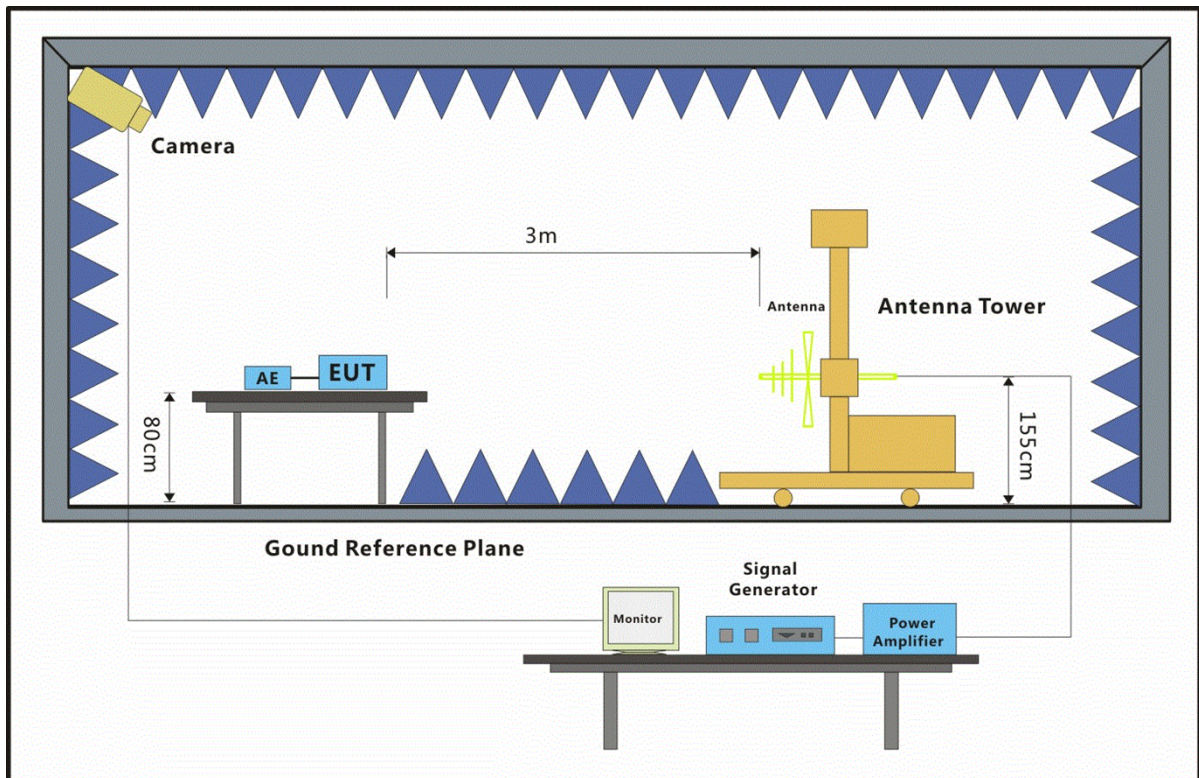
7.3 Radiated Immunity (80MHz-1GHz,1800MHz,2600MHz,3500MHz,5000MHz)

Test Requirement: EN 55035:2017
 Test Method: EN 61000-4-3:2006 +A1:2008+A2:2010
 Performance Criterion: A
 Frequency Range: 80MHz to 1GHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz
 Antenna Polarisation: Vertical and Horizontal
 Modulation: 1kHz,80% Amp. Mod,1% increment

7.3.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.3 °C Humidity: 52 % RH Atmospheric Pressure: 1020 mbar
 Test Mode: a:Test the EUT in working mode with PC connecting.

7.3.2 Test Setup Diagram



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7.3.3 Test Results

Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-1GHz	3	Front	2s	A
80MHz-1GHz	3	Back	2s	A
80MHz-1GHz	3	Left	2s	A
80MHz-1GHz	3	Right	2s	A
80MHz-1GHz	3	Top	2s	A
80MHz-1GHz	3	Underside	2s	A
1800MHz	3	Front	2s	A
1800MHz	3	Back	2s	A
1800MHz	3	Left	2s	A
1800MHz	3	Right	2s	A
1800MHz	3	Top	2s	A
1800MHz	3	Underside	2s	A
2600MHz	3	Front	2s	A
2600MHz	3	Back	2s	A
2600MHz	3	Left	2s	A
2600MHz	3	Right	2s	A
2600MHz	3	Top	2s	A
2600MHz	3	Underside	2s	A
3500MHz	3	Front	2s	A
3500MHz	3	Back	2s	A
3500MHz	3	Left	2s	A
3500MHz	3	Right	2s	A
3500MHz	3	Top	2s	A
3500MHz	3	Underside	2s	A
5000MHz	3	Front	2s	A
5000MHz	3	Back	2s	A
5000MHz	3	Left	2s	A
5000MHz	3	Right	2s	A
5000MHz	3	Top	2s	A
5000MHz	3	Underside	2s	A

Results:

A: No degradation in the performance of the EUT was observed.

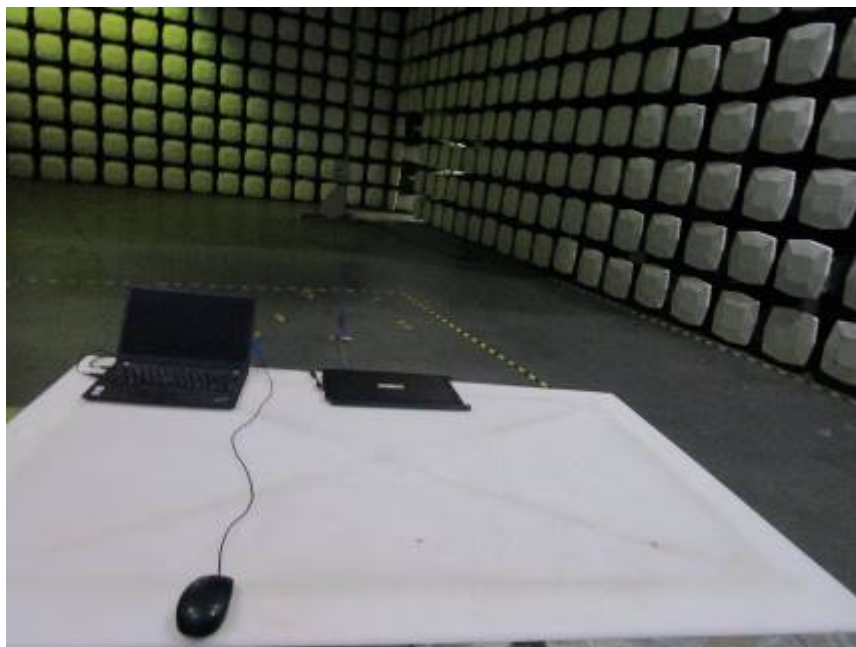
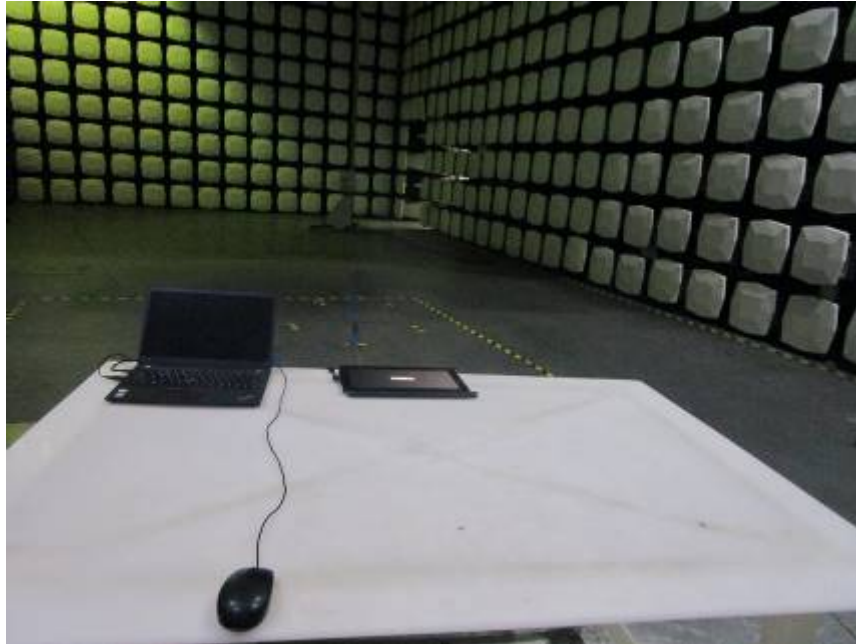


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8 Photographs

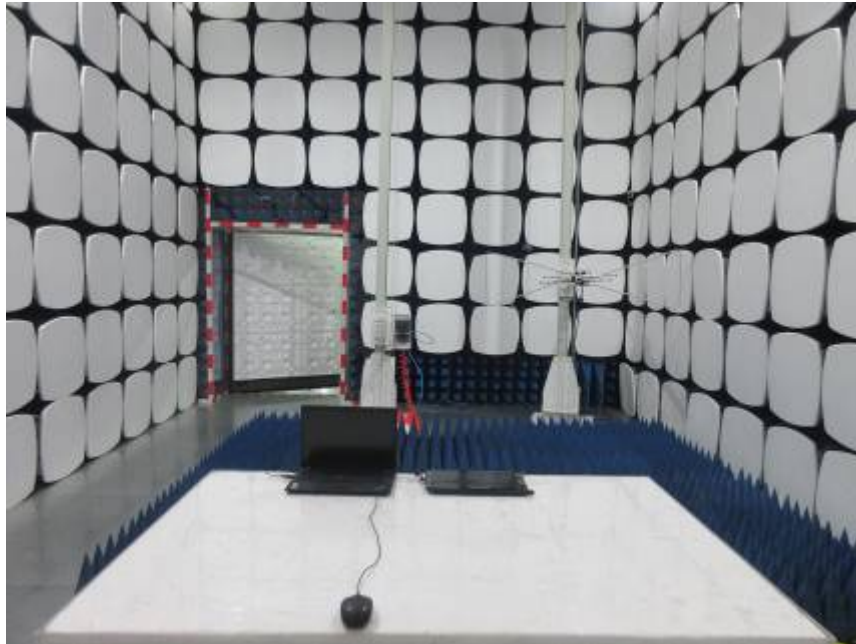
8.1 Radiated Emissions (30MHz-1GHz) Test Setup



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8.2 Radiated Emissions (above 1GHz) Test Setup



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8.3 Electrostatic Discharge Test Setup



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8.4 Radiated Immunity (80MHz-1GHz,1800MHz,2600MHz,3500MHz,5000MHz) Test Setup



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8.5 EUT Constructional Details



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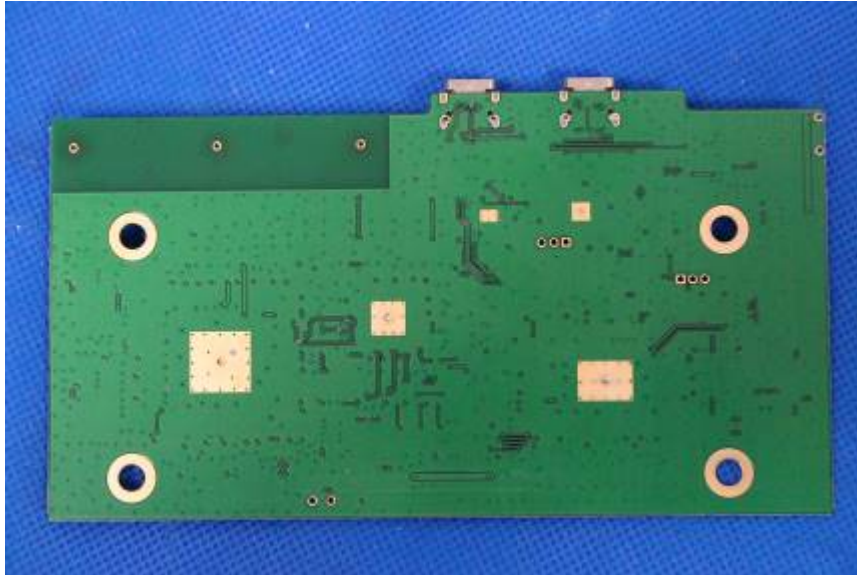


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