

Test Report No.:
FCC2022-0021

EMC Test Report

EUT : TrackLight
MODEL : VT2211
BRAND NAME : ANYTREK
APPLICANT : Anytrek Corporation
Classification Of Test : N/A

CVC Testing Technology Co., Ltd.



CVC Testing Technology Co., Ltd.

Test Report No.: FCC2022-0021

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Applicant		Name : Anytrek Corporation	
		Address : 4405 East Airport Drive, Unit 106, Ontario, CA. 91761	
Manufacturer		Name : Shenzhen Anxingzhiyuan Technology Co., Ltd.	
		Address : Room 305, Building C, Excellence Times Innovation Park, No. 6373, Bao 'an Avenue, Tangwei Community, Fuhai Street, Bao 'an District, Shenzhen, Guangdong, China	
Equipment Under Test		Name : TrackLight	
		Model/Type: VT2211	
		Trade mark : ANYTREK	
		SerialNO.:N/A	
		Sampe NO.:6-1	
Date of Receipt.	2022.04.06	Date of Testing	2022.04.06~2022.06.01
Test Specification		Test Result	
FCC Part 15, Subpart B, Class B (sDoC) ICES-003 Issue 7:2020, Class B		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied.		
	Issue Date: 2022.06.06		
Tested by:	Reviewed by:	Approved by:	
			
He GuangHuan	Xu ZhengFei	Chen HuaWen	
Name	Name	Name	
Signature	Signature	Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2022-0021	Original release	2022.06.06



1. SUMMARY OF TEST RESULTS

EMISSION			
Standard	Test Item	Result	Remarks
FCC Part 15, Subpart B, Class B (sDoC)	Radiated Test (30MHz~ 1GHz)	PASS	Minimum passing margin is 8.26dB at 273.1063MHz
	Radiated Test (Above 1GHz)	PASS	Minimum passing margin is 19.75dB at 12720.5721MHz
ICES-003 Issue 7:2020, Class B	Radiated Test (30MHz~ 1GHz)	PASS	Minimum passing margin is 8.78dB at 195.7896MHz
	Radiated Test (Above 1GHz)	PASS	Minimum passing margin is 19.75dB at 12720.5721MHz

1.1 List of Test and Measurement Instruments

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Radiation emission					/
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2023-03-03
EMI Test Receiver	ESR7	102235	VG DY-0956	R&S	2023-03-03
EMI Test Receiver	N9038A-508	MY53290078	EM-000396	Agilent	2023-03-03
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2023-03-03
Radio Communication Test	CMW500	156686	EM-000623	R&S	2022-12-08
Broadband Antenna(3m)	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2022-06-26
Loop Antenna	HLA 6121	540046	EM-000546	TESEQ	2022-06-05
Loop Antenna	FMZB1513	1513-170	EM-000384	SCHWARZBECK	2023-03-04
Monopole antenna	HFH2-Z6E	101317	EM-000613	R&S	2023-03-04
Waveguide Horn Antenna	BBHA9120B	602	EM-000383	SCHWARZBECK	2023-02-20
Waveguide Horn Antenna	HF906	360306/008	WKNA-0024-8	R&S	2023-03-04
Semi-Anechoic Chamber(3m)	FACT-4	ST08035	WKNA-0024	ETS	2024-12-12

1.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

No.	Item	Measurement Uncertainty
1	Radiated emission 30MHz-1GHz	4.10 dB
2	Radiated emission 1GHz-18GHz	4.84 dB
Remark: 95% Confidence Levels, k=2.		

1.3 Test Location

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology Co., Ltd.

Address: No.3, TiantaiyiRoad, KaitaiAvenue, ScienceCity, Guangzhou, China

Post Code: 510663 Tel: 020-32293888

FAX: 020-32293889 E-mail: office@cvc.org.cn

Test Firm Registration Number: 937273

CN Number: 26239 Wireless Test Site Registration Number : CN0103



2. GENERAL INFORMATION

2.1 General Product Information

PRODUCT	TrackLight		
BRAND	ANYTREK		
TEST MODEL	VT2211		
FCC ID	2ANJN-VT2211-BG95		
IC ID	26299-VT2211BG95M		
ADDITIONAL MODEL	N/A		
POWER SUPPLY	DC 3.7 from Li-ion battery or DC 12V from Host unit		
OPERATING FREQUENCY	Band	TX(MHz)	RX(MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	Band2	1850~1910	1930~1990
	Band4	1710~1755	2110~2155
	Band5	824~849	869~894
	Band12	699~716	729~746
	Band13	777~787	746~756
	Band14	788~798	758~768
	Band25	1850~1915	1930~1995
	Band26	814~849	859~894
	Band66	1710~1780	2110~2180
	Band85	698~716	728~746
	NB-IOT Band2	824~849	869~894
	NB-IOT Band4	1850~1910	1930~1990
	NB-IOT Band5	1850~1910	1930~1990
	NB-IOT Band12	1710~1755	2110~2155
	NB-IOT Band13	824~849	869~894
	NB-IOT Band14	699~716	729~746
	NB-IOT Band25	777~787	746~756
NB-IOT Band26	788~798	758~768	
NB-IOT Band66	1850~1915	1930~1995	
NB-IOT Band85	814~849	859~894	
I/O PORTS	Refer to user's manual		
CABLE SUPPLIED	DC line, 0.5 Meter, Unshielded without ferrite		
<p>Remark:</p> <ol style="list-style-type: none"> For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. EUT photo refer to the report (Report NO.: FCC2022-0021-E). 			



2.2 Description of Accessories

N/A

2.3 Independent Operation Modes

The EUT were tested under the following modes, the final worst mode was marked in boldface and recorded in this report.

EMISSION Test Modes		
For Radiated Emission Tests		
	Test Mode	Test Voltage
1	Charging + LED	DC 12V From Host unit
2	IDLE	DC 3.7V from battery

2.4 General Description of Applied Standards

According to the specifications of the manufacturers, the EUT must comply with the requirements of the following standards:

FCC PART 15, SUBPART B, CLASS B (SDOC)
ANSI C63.4:2014
ICES-003 Issue 7:2020, Class B

All test items have been performed and recorded as per the above standards.

2.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support Equipment					
NO	Description	Brand	Model No.	Serial Number	Supplied by
-	-	-	-	-	-



3. EMISSION

3.1 Radiated emission

3.1.1 Limits Of Radiated

TEST STANDARD:

FCC Part 15, Subpart B (Section: 15.109), for above 1GHz (section 3.2.2 Table 4)

Frequency (MHz)	Distance (m)	Class A (dBuV)	Class B (dBuV)
30 - 88	3	QP: 49.5	QP: 40
88 - 216	3	QP: 54	QP: 43.5
216 - 960	3	QP: 56.9	QP: 46
960-1000	3	QP: 60	QP: 54
Above 1000	3	Avg: 60 Peak: 80	Avg: 54 Peak: 74

NOTE: 1. The lower limit shall apply at the transition frequencies.
 NOTE: 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
 NOTE: 3. All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

ICES-003 for below 1GHz (section 3.2.2 Table 2);

Table 2: Radiated emissions limits (30 MHz to 1 GHz)

Frequency range (MHz)	Class A (3 m) Quasi-peak (dBµV/m)	Class A (10 m) Quasi-peak (dBµV/m)	Class B (3 m) Quasi-peak (dBµV/m)	Class B (10 m) Quasi-peak (dBµV/m)
30 – 88	50.0	40.0	40.0	30.0
88 – 216	54.0	43.5	43.5	33.1
216 – 230	56.9	46.4	46.0	35.6
230 – 960	57.0	47.0	47.0	37.0
960 – 1000	60.0	49.5	54.0	43.5

Note: The more stringent limit applies at transition frequencies.

ICES-003 for above 1GHz (section 3.2.2 Table 4)

Table 4: Radiated emission limits at 3 m distance (at and above 1 GHz)

Frequency range (GHz) ⁱ	Class A ^{ii, iii, iv} Average dB(µV/m)	Class A ^{ii, iii, iv} Peak dB(µV/m)	Class B ^{ii, iii, iv} Average dB(µV/m)	Class B ^{ii, iii, iv} Peak dB(µV/m)
1 – F_M	60	80	54	74

i. The highest measurement frequency, F_M , in GHz, shall be determined as per table 3.
 ii. The measurement bandwidth shall be 1 MHz or greater.
 iii. These limit levels apply for a measurement distance of 3 m. If using a different measurement distance, the measured levels shall be extrapolated to the 3 m limit distance using a factor of 20 dB per decade of distance. The measurement distance shall place the measurement antenna in the far field of the ITE or digital apparatus under test.
 iv. The test site shall have been validated at the distance used for radiated emission measurements on the ITE or digital apparatus under test.



3.1.2 Test Procedures

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

1. From 30 MHz to 1GHz test procedure as below:

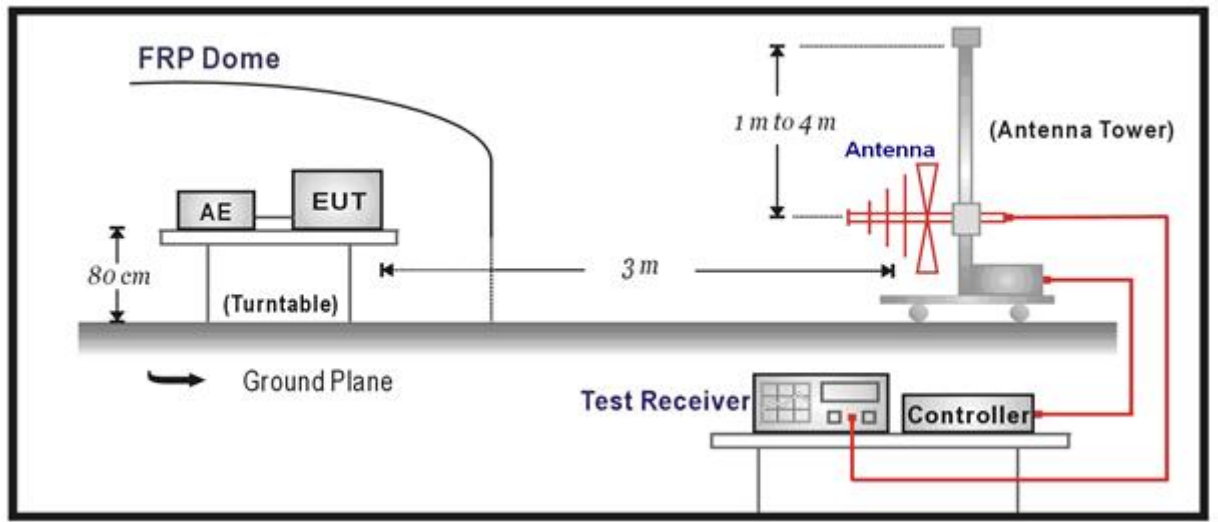
- 1) The radiated emissions were tested in a semi-anechoic chamber.
- 2) The Product was placed on the non-conductive turntable 0.1 m above the ground at a chamber.
- 3) Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- 4) For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

2. Above 1GHz test procedure as below:

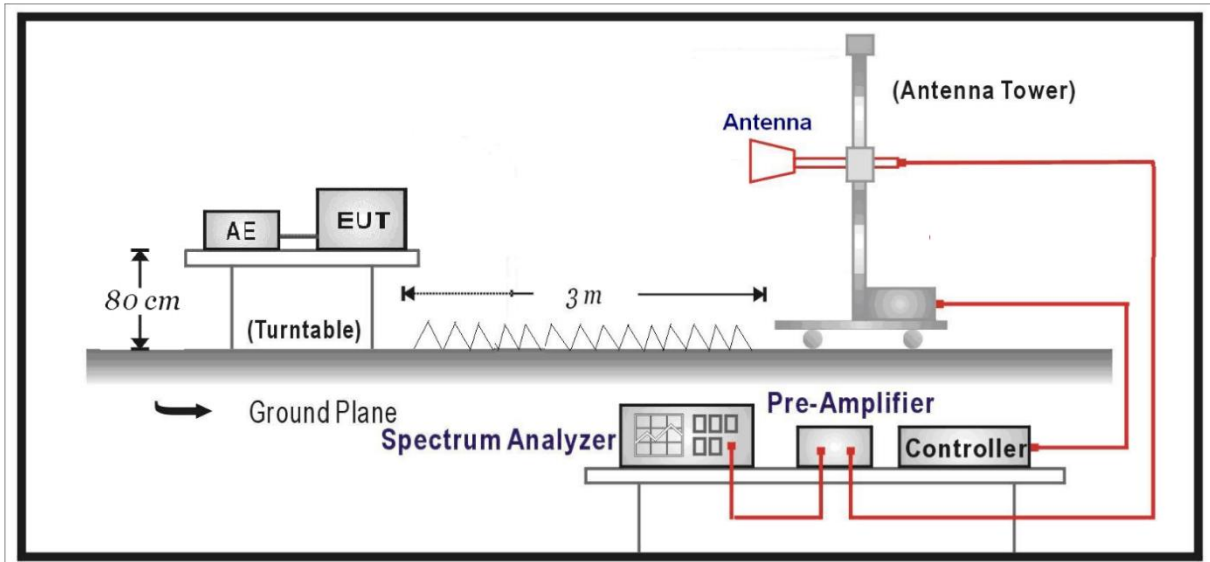
- 1) The radiated emissions were tested in a fully Anechoic Chamber.
- 2) Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- 3) For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

3.1.3 Test Setup

Below 1GHz Test Setup:



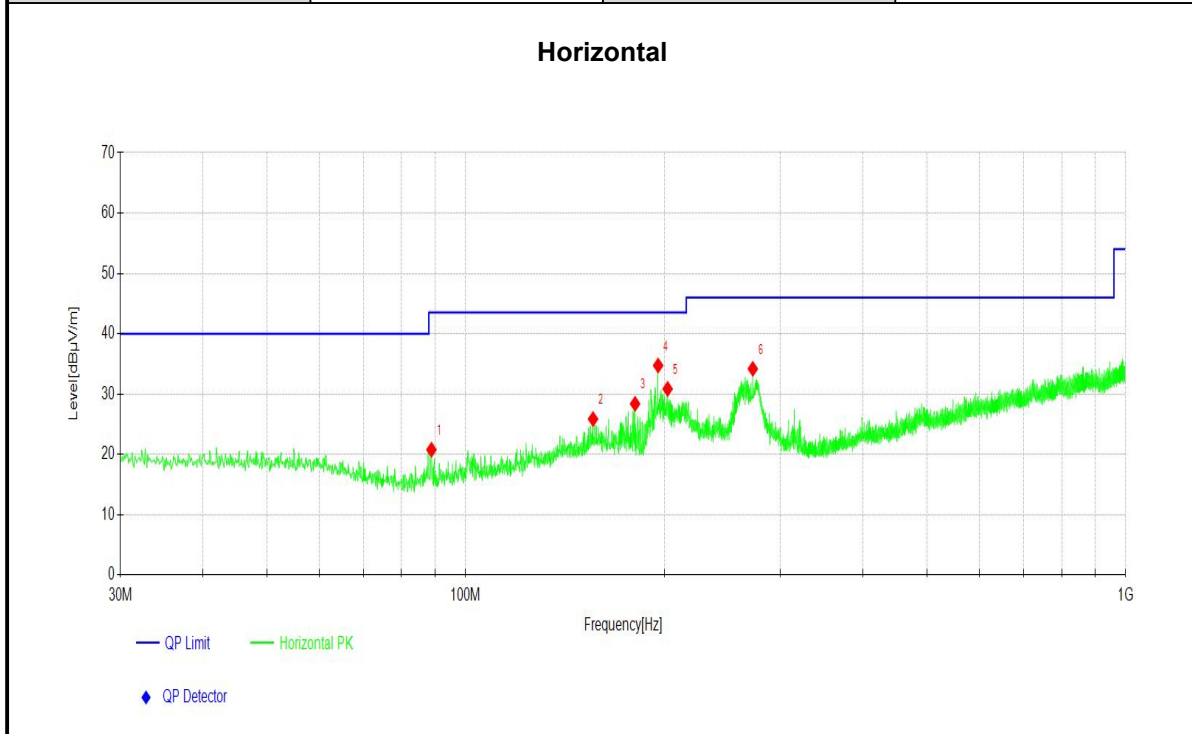
Above 1GHz Test Setup:





3.1.4 Test Results (FCC Below 1GHz)

Test Mode:	Mode 1	Frequency Range	30-1000MHz
Test Voltage	See item 2.3	Detector Function	Quasi-Peak(QP)
Environmental Conditions	24.2deg. C,57% RH	Tested By	Liu ShiWei

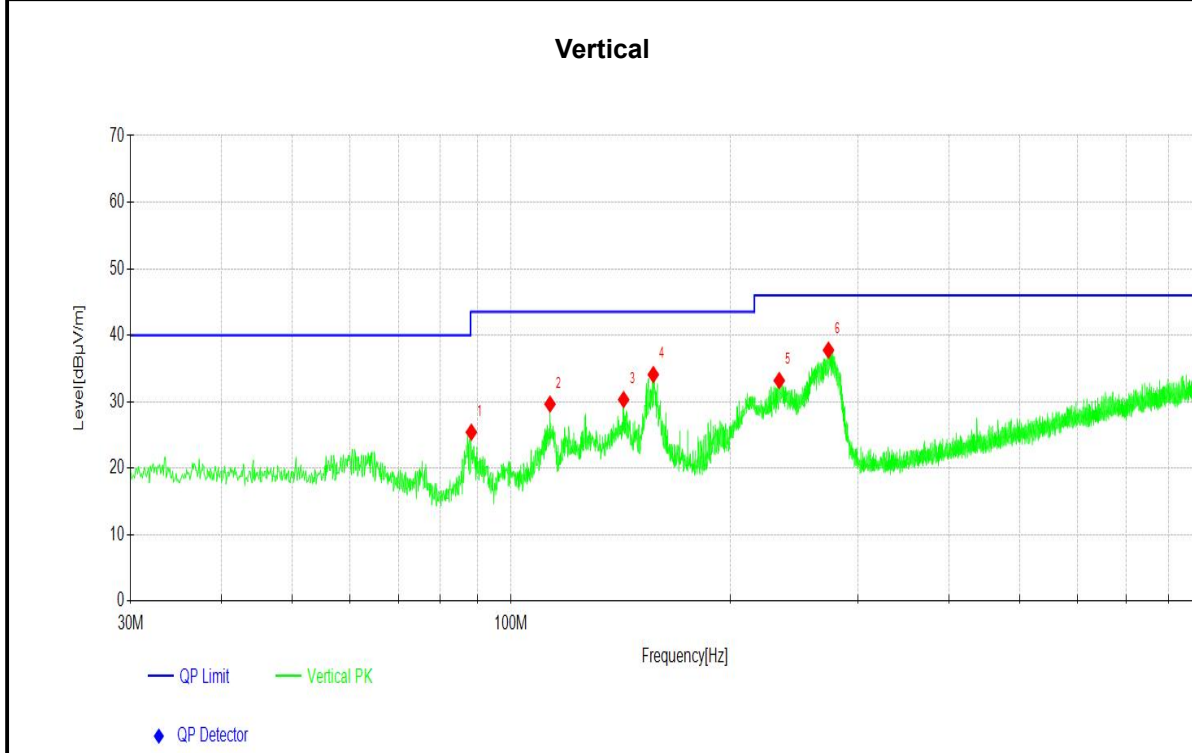


NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle deg
1	88.7879	15.55	5.21	20.76	43.50	22.74	200	32
2	156.0156	20.75	5.10	25.85	43.50	17.65	100	276
3	180.6561	18.34	10.03	28.37	43.50	15.13	100	254
4	195.7896	17.12	17.60	34.72	43.50	8.78	200	100
5	202.3862	17.03	13.81	30.84	43.50	12.66	200	60
6	272.4272	19.11	15.06	34.17	46.00	11.83	100	90

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBµV/m) = Reading (dBµV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBµV/m] - Level [dBµV/m]



Test Mode:	Mode 1	Frequency Range	30-1000MHz
Test Voltage	See item 2.3	Detector Function	Quasi-Peak(QP)
Environmental Conditions	24.2deg. C,57% RH	Tested By	Liu ShiWei



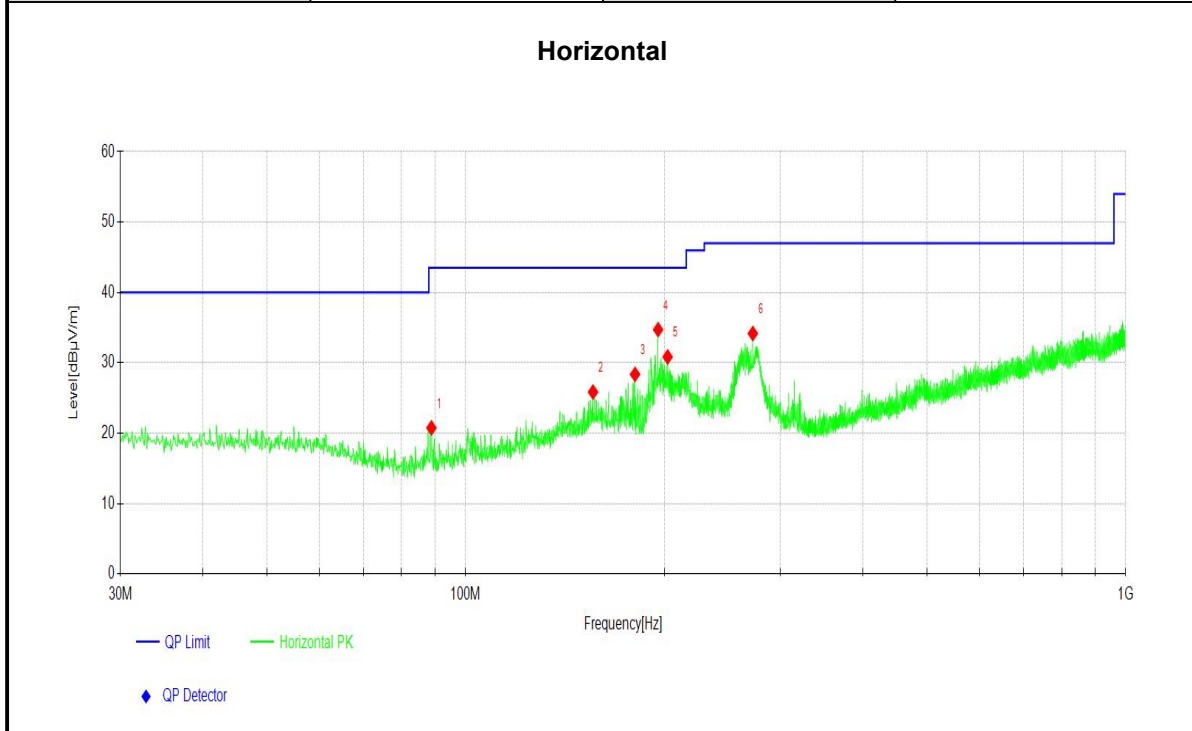
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle deg
1	88.2058	15.52	9.88	25.40	43.50	18.10	100	78
2	113.1373	17.12	12.51	29.63	43.50	13.87	100	2
3	142.8223	19.95	10.35	30.30	43.50	13.20	200	119
4	156.8887	20.80	13.27	34.07	43.50	9.43	100	271
5	233.7204	18.12	15.05	33.17	46.00	12.83	100	339
6	273.1063	19.12	18.62	37.74	46.00	8.26	100	360

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBµV/m) = Reading (dBµV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBµV/m] - Level [dBµV/m]



3.1.5 Test Results (IC Below 1GHz)

Test Mode:	Mode 1	Frequency Range	30-1000MHz
Test Voltage	See item 2.3	Detector Function	Quasi-Peak(QP)
Environmental Conditions	24.2deg. C,57% RH	Tested By	Liu ShiWei

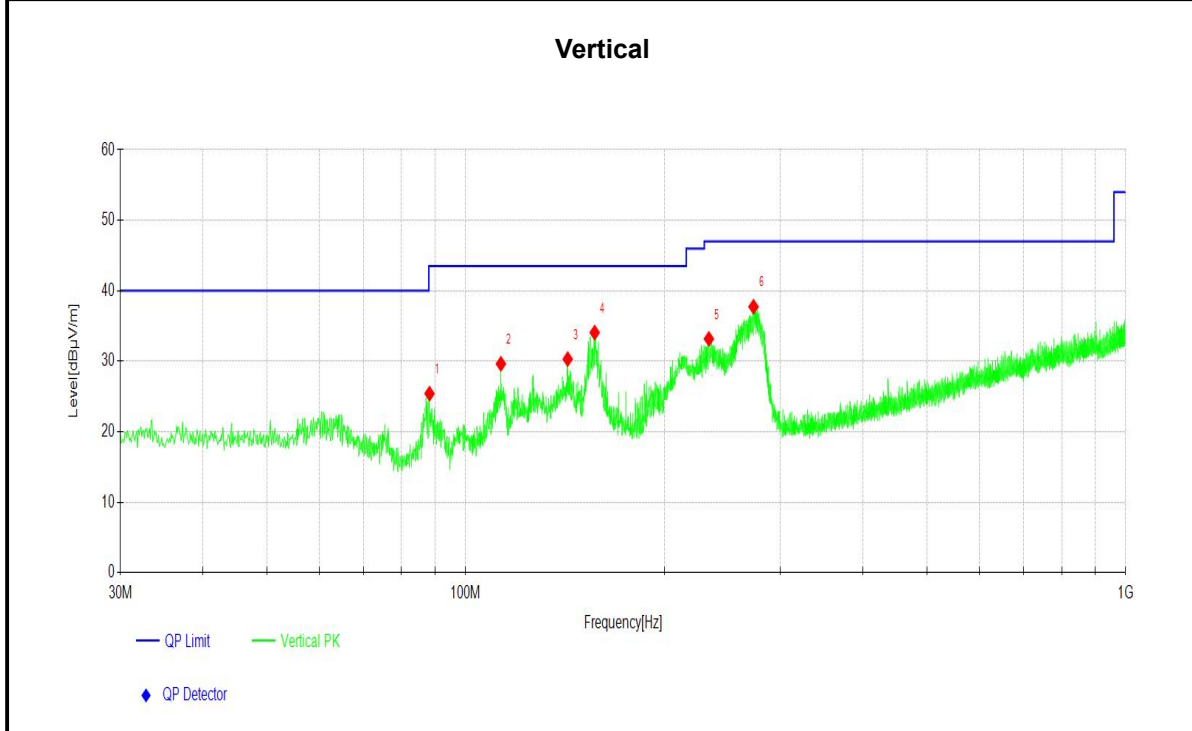


NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]
1	88.7879	15.55	5.21	20.76	43.50	22.74	PK	200
2	156.0156	20.75	5.10	25.85	43.50	17.65	PK	100
3	180.6561	18.34	10.03	28.37	43.50	15.13	PK	100
4	195.7896	17.12	17.60	34.72	43.50	8.78	PK	200
5	202.3862	17.03	13.81	30.84	43.50	12.66	PK	200
6	272.4272	19.11	15.06	34.17	47.00	12.83	PK	100

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBµV/m) = Reading (dBµV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBµV/m] - Level [dBµV/m]



Test Mode:	Mode 1	Frequency Range	30-1000MHz
Test Voltage	See item 2.3	Detector Function	Quasi-Peak(QP)
Environmental Conditions	24.2deg. C,57% RH	Tested By	Liu ShiWei

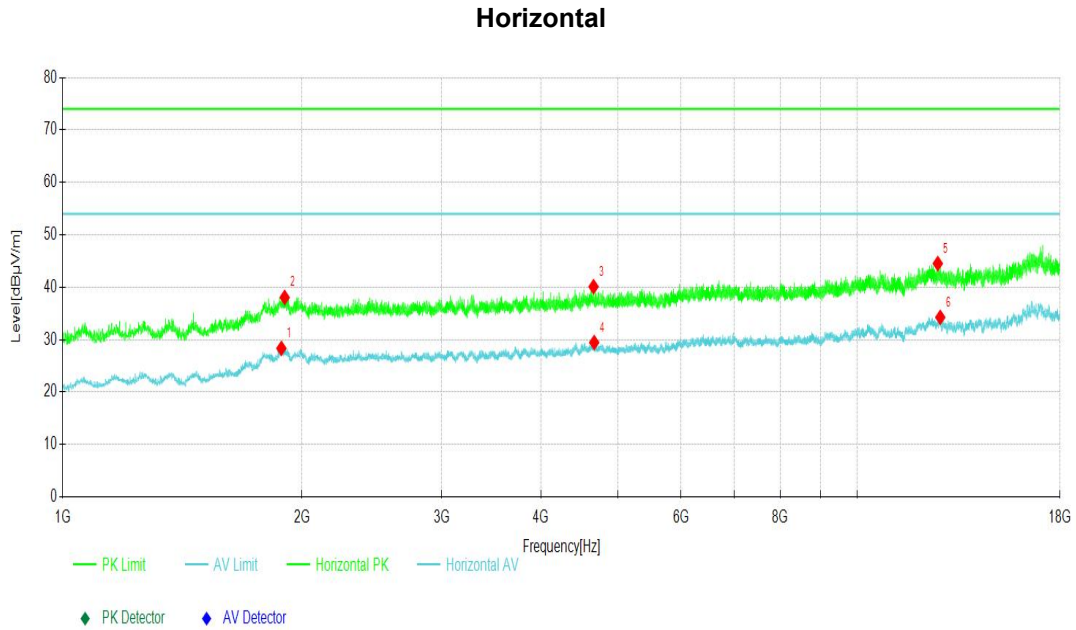


NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]
1	88.2058	15.52	9.88	25.40	43.50	18.10	PK	100
2	113.1373	17.12	12.51	29.63	43.50	13.87	PK	100
3	142.8223	19.95	10.35	30.30	43.50	13.20	PK	200
4	156.8887	20.80	13.27	34.07	43.50	9.43	PK	100
5	233.7204	18.12	15.05	33.17	47.00	13.83	PK	100
6	273.1063	19.12	18.62	37.74	47.00	9.26	PK	100

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBµV/m) = Reading (dBµV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBµV/m] - Level [dBµV/m]

3.1.6 Test Results (FCC&IC Above 1GHz)

Test Mode:	Mode 1	Frequency Range	Above 1GHz
Test Voltage	See item 2.3	Detector Function	PK/AV
Environmental Conditions	22.7deg. C,50% RH	Tested By	Liu ShiWei



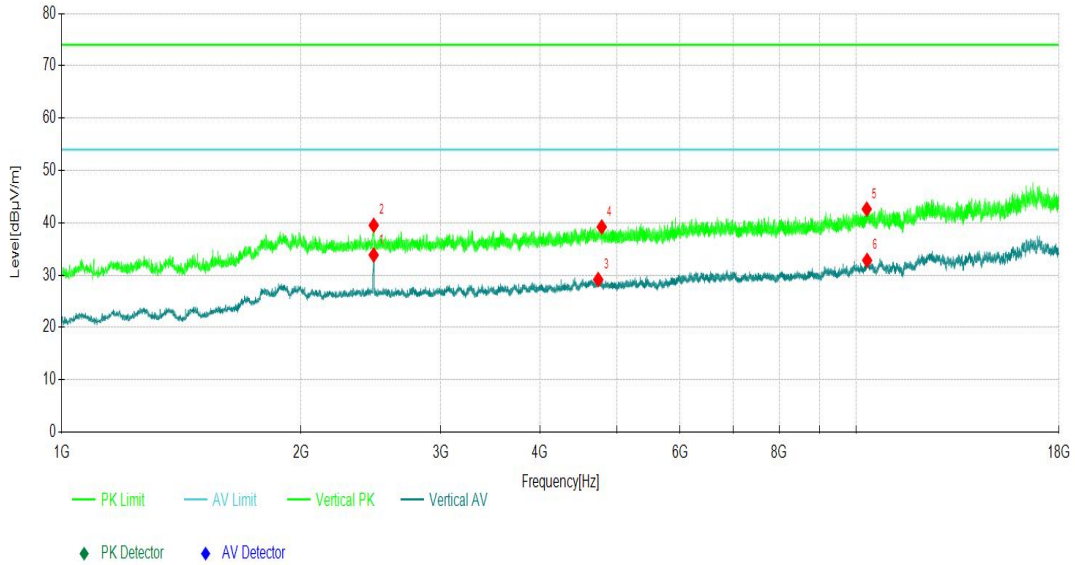
NO.	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	1885.0885	39.75	28.33	-11.42	54.00	25.67	100	84	AV
2	1903.0903	49.34	38.04	-11.30	74.00	35.96	200	130	PK
3	4657.9658	49.24	40.10	-9.14	74.00	33.90	200	162	PK
4	4666.3666	38.60	29.44	-9.16	54.00	24.56	100	3	AV
5	12630.3630	42.85	44.51	1.66	74.00	29.49	200	108	PK
6	12720.5721	32.88	34.25	1.37	54.00	19.75	200	108	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]



Test Mode:	Mode 1	Frequency Range	Above 1GHz
Test Voltage	See item 2.3	Detector Function	PK/AV
Environmental Conditions	22.7deg. C,50% RH	Tested By	Liu ShiWei

Vertical



NO.	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2470.1470	46.82	33.84	-12.98	54.00	20.16	100	96	AV
2	2470.7471	52.49	39.51	-12.98	74.00	34.49	200	182	PK
3	4734.7735	38.36	29.14	-9.22	54.00	24.86	200	200	AV
4	4783.9784	48.33	39.20	-9.13	74.00	34.80	100	349	PK
5	10309.1309	43.99	42.61	-1.38	74.00	31.39	200	36	PK
6	10321.2321	34.12	32.82	-1.30	54.00	21.18	200	2	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).
 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]

4. PHOTOGRAPHS OF TEST SETUP



RADIATED EMISSION TEST (Below 1GHz)



RADIATED EMISSION TEST (Above 1GHz)



5. PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos and Internal Photos).



Important

- (1) The test report is valid with the official seal of the laboratory and the signatures of Test engineer, Author and Reviewer simultaneously.
- (2) The test report is invalid if altered.
- (3) Any photocopies or part photocopies in the test report are forbidden without the written permission from the laboratory.
- (4) Objections to the test report must be submitted to the laboratory within 15 days.
- (5) Generally, commission test is responsible for the tested samples only.
- (6) Any photocopies or part photocopies of the test report are forbidden without the written permission from CVC;

Address of the laboratory:

CVC Testing Technology Co., Ltd.

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Post Code: 510663

Tel: 020-32293888

FAX: 020-32293889

E-mail: office@cvc.org.cn