

TEST REPORT

Application No.: DNT241031R1492-1

Applicant: YUQI TOYS FACTORY

Address of

Model No.:

Applicant:

CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA

EUT Description: TOY CAR SERIES

MT1248, CQ-601, CQ-602, CQ-603, CQ-605, CQ-606, CQ-608, CQ-609, CQ-610, CQ-611, CQ-612, CQ-613, CQ-615, CQ-616, CQ-617, CQ-618, CQ-619, CQ-620, CQ-621, CQ-622, CQ-623, CQ-629, CQ-008S, CQ-008S-1, CQ-008S-2, CQ-001A, CQ-002A, CQ-003A, CQ-004A, CQ-003B, CQ-010S, CQ-010S-1, CQ-008E-1, CQ-008E-2, CQ-009E-1, CQ-009E-2, CQ-009E-3, CQ-009E-4, CQ-001E, CQ-002E, CQ-008E, CQ-009E, 666-1, 666-2, 666-3, 666-1A, 666-2A, 666-3A, CQ-666A, CQ-666B, CQ-666C, CQ-666D, CQ-666E, CQ-666F, CQ-888-1, CQ-888-2, CQ-888-1A, CQ-888-2A, CQ-888C, CQ-888D, CQ-999A, CQ-999B, CQ-999C, CQ-999D, CQ-999E, CQ-999F, CQ-555A, CQ-555B, CQ-555C, CQ-555D, CQ-555E, CQ-555F, CQ-555G, CQ-555H, CQ-333A, CQ-222-1, CQ-222-

1A, CA-000, CA-111, CA-222, CA-333, CA-444, CA-555, CA-666, CA-777, CA-888, CA-999, CB-00, CB-01, CB-02, CB-03, CB-04, CB-05, CB-06, CB-07, CB-07, CB-08, CB-09, CB

08, CB-09, CB-10, CB-11, CB-00A, CB-01A, CB-02A, CB-03A, CB-04A, CB-05A,

CB-06A, CB-07A, CB-08A, CB-09A, CB-10A, CB-11A, CE-00, CE-01, CE-02,

CE-03, CE-04, CE-05, CE-06, CE-07, CE-08, CE-09, CE-00A, CE-01A, CE-02A,

CE-03A, CE-04A, CE-05A, CE-06A, CE-07A, CE-08A, CE-09A, CF-00, CF-01,

CF-02, CF-03, CF-04, CF-05, CF-06, CF-07, CF-08, CF-09, CG-00, CG-01, CG-

02, CG-03, CG-04, CG-05, CG-06, CG-07, CG-08, CG-09, CG-10, CG-11, CG-

12, CG-13, CG-14, CG-15, CG-16, CG-17, CG-18, CG-19, CG-20, CG-00A, CG-

01A, CG-02A, CG-03A, CG-04A, CG-05A, CG-06A, CG-07, CG-07A, CG-08A,

CG-09A, CG-10A, CG-11A, CG-12A, CG-13A, CG-14A, CG-15A, CG-16A, CG-

17A, CG-18A, CG-19A, CG-20A, CH-00, CH-01, CH-02, CH-03, CH-04, CH-05,

CH-06, CH-07, CH-08, CH-09, CH-10, CH-11, CH-12, CH-13, CH-14, CH-15,

CH-16, CH-17, CH-18, CH-19, CH-20, CD-01, CD-02, CD-03, CD-04, CD-05,

CD-06, CD-07, CD-08, CD-09, CD-10, CD-00A, CD-01A, CD-02A, CD-03A, CD-

04A, CD-05A, CD-06A, CD-07A, CD-08A, CD-09A, CD-10A, CK-01, CK-02, CK-

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03, CK-04, CK-05, CK-06, CK-07, CK-08, CK-09, CK-10, CM-01, CM-02, CM-03,

CM-04, CM-05, CM-06, CM-07, CM-08, CM-09, CM-10

2BGHT-MT1248 FCC ID:

DC 3V From Battery **Power Supply**

Trade Mark:

47 CFR FCC Part 2, Subpart J

Standards: 47 CFR Part 15, Subpart C

ANSI C63.10: 2013

Date of Receipt: 2024/5/23

Date of Test: 2024/5/24 to 2024/5/29

Date of Issue: 2024/5/29

Test Result: PASS

company in writing.

Prepared By: (Testing Engineer)

Reviewed By: (Project Engineer)

Approved By: (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	1	May.29, 2024	Valid	Original Report



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1 Test Summary

Test Item	Standard Section	Test Result	Result
Antenna Requirement	15.203	Clause 3.1	PASS
20 dB Bandwidth	15.215(c)	Clause 3.2	PASS
Field Strength	15.227; 15.35	Clause 3.3	PASS
Radiated Spurious Emissions	15.209	Clause 3.4	PASS



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2 General Information

2.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfa Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

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2.2 General Description of EUT

Manufacturer:	YUQI TOYS FACTORY
Address of Manufacturer:	CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA
EUT Description:	TOY CAR SERIES
Test Model No.:	MT1248
·	
	CK-08, CK-09, CK-10, CM-01, CM-02, CM-03, CM-04, CM-05, CM-06,
	CM-07, CM-08, CM-09, CM-10
Power Supply	DC 3V From Battery
Chip Type:	TX-2A

Report No.: DNT241031R1492-1 Date:May 29, 2024 Page: 8/22 Serial number: PR241031R1492 Trade Mark: V1.0 Hardware Version: V1.0 Software Version: 27.145MHz Operation Frequency: **ASK** Type of Modulation: Sample Type: Prototype production ☐ External, ☐ Integrated Antenna Type: Antenna Ports \bowtie Ant 1, \sqcap Ant 2, \sqcap Ant 3 Antenna Gain*: 0.17dBi RF Cable*: 0.5dB(0.6~1GHz); 0.8dB(1.4~2GHz); 1.0dB(2.1~2.7GHz); 1.5dB(3~4GHz); 1.8dB(4.4~6GHz);

Remark:

^{*}All models are just color differences, motherboard, PCB circuit board, chip, electronic components, appearance is all the same.

^{*}Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



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2.3 Power Setting of Test Software

Software Name	N/A
Frequency(MHz)	27.145
Setting	Default

2.4 Test Environment and Mode

Operating Environment:	
Temperature:	20~25.0 °C
Humidity:	45~56 % RH
Atmospheric Pressure:	101.0~101.30 KPa
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

2.5 Channel List

Operation Frequency of each channel (SRD)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	27.145MHz		, 0,			0) (

2.6 Description of Support Units

The EUT has been tested independent unit.



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2.7 Test Facility

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

Lab A:

· FCC, USA

Designation Number: CN1348

• A2LA (Certificate No. 7050.01)

DONGGUAN DN TESTING CO., LTD.

• Innovation, Science and Economic Development Canada

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

IC#: 31026.

2.8 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty		
1	Total RF power, conducted	±0.41dB		
2	RF power density, conducted	±1.96dB		

No.	Item Measurement Uncerta		
1.	Conduction Emission	± 3.0dB (150kHz to 30MHz)	
	4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4	± 4.8dB (Below 1GHz)	
	Dedicted Engineers	± 4.8dB (1GHz to 6GHz)	
2	Radiated Emission	± 4.5dB (6GHz to 18GHz)	
		± 5.02dB (Above 18GHz)	



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2.9 Equipment List

Test E	quipment for I	Radiated Emi	ssion(below	1000MHz	
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Receiver	R&S	ESR7	102497	2023-10-24	2024-10-23
Test Software	ETS-LINDGREN	TiLE-FULL	NA	NA	NA
RF Cable	ETS-LINDGREN	RFC-NMS-100- NMS-350-IN	NA	2023-10-24	2024-10-23
Log periodic antenna	ETS-LINDGREN	VULB 9168	01475	2023-10-24	2024-10-23
Pre-amplifier	Schwarzbeck	BBV9743B	00423	2023-10-24	2024-10-23
Single ring magnetic	ETS-LINDGREN	6502	6502	2023-10-24	2024-10-23



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2.10 Assistant equipment used for test

Code	Equipment	Manufacturer	Model No.	Equipment No.
1	1	/	1	1



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3 Test results and Measurement Data

3.1 Antenna requirements

Standard requirement: 47 CFR Part 15C Section 15.203 /247(c)

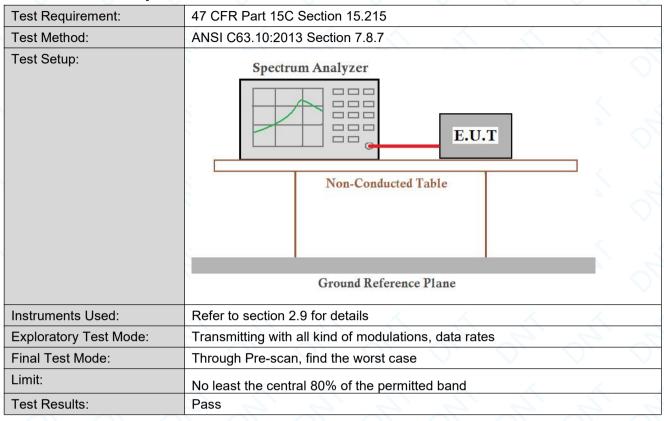
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

The antenna is a rod antenna and no consideration of replacement. The best case gain of the antenna is 0.17dBi.



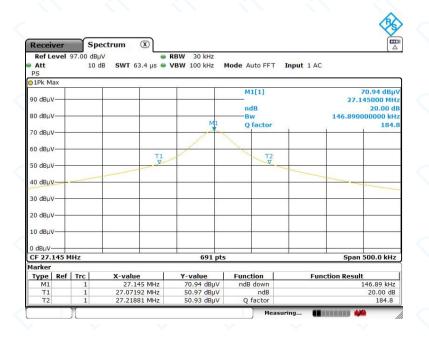
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3.2 20dB Occupied Bandwidth



Test Data:

Test Frequency (MHz)	20dB Bandwidth (KHz)	Result
27.145	146.89	Pass





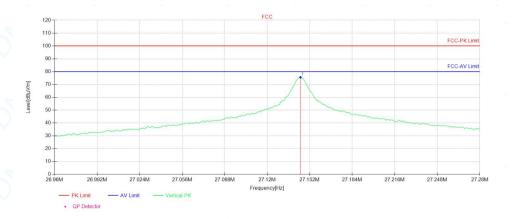
3.3 Field Strength

Test Requirement:	47 CFR Part 15C Section	15.227							
Test Method:	ANSI C63.10 :2020 Section 11.12								
Test Setup:	Antenna Tower 3m or 10m Ground Reference Plane Test Receiver Pie- Amplifer Controlles								
Test Instruments:	Refer to section 2.9 for det	ails	9, 9, 6						
Exploratory Test Mode:	Transmitting with all kind o	f modulations, data rates	\bigcirc , \bigcirc , \bigcirc						
Final Test Mode:	Through Pre-scan, find the	worst case							
Limit:	Frequency(MHz)	Limit(d	BuV/m)						
		Peak	AV						
	26.96-27.28	100	80						
Test Configuration:	RBW: ≥OBW VBW: 3XRBW Start frequency: 26.96 Stop frequency: 27.28 Sweep Time: Auto Detector: PEAK/AVG Trace Mode: Max Hold	MHz							
Test Procedure:	a 3 meter semi-aned determine the position b. The EUT was set 3 which was mounted or c. The antenna height is to determine the may vertical polarizations o d. For each suspected er the antenna was tun frequency of below 30 rotatable table was tur reading. e. The test-receiver sys Bandwidth with Maxim f. If the emission level of specified, then testing be reported. Otherwise	choic camber. The table was of the highest radiation meters away from the into the top of a variable-height varied from one meter to fiximum value of the field so the antenna are set to make mission, the EUT was arranged to heights from 1 med MHz, the antenna was tuned from 0 degrees to 360 tem was set to Peak Deum Hold Mode. The EUT in peak mode would be stopped and the peet the emissions that did not using peak, quasi-peak or	our meters above the ground trength. Both horizontal and						

	r.	Repeat above procedures until all frequencies measured was complete.
Test Results:		Pass

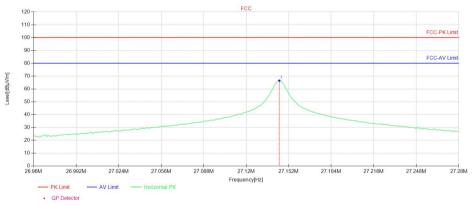
Test Data

Vertical:



NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dB µ V/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	27.145	68.49	7.09	75.58	100.00	24.42	100	240	PK

Horizontal:



NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	27.145	59.38	7.09	66.47	100.00	33.53	100	270	PK

Note

- The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including LISN Factor and the Cable Factor etc.), The basic equation is as follows:
 Result Level= Reading Level + Correct Factor(including Ant.Factor, Cable Factor etc.)
- 2. The amplitude spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.



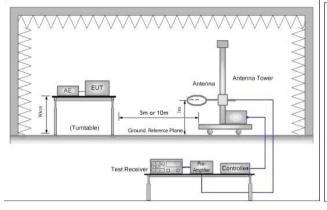
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3.4 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Sectio	n 15.209						
Test Method:	ANSI C63.10 :2020 Sect	tion 11.12		0	0			
Test Site:	Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)							
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark			
	0.009MHz-0.090MHz	Peak	300Hz	300Hz	Peak			
	0.009MHz-0.090MHz	Average	300Hz	300Hz	Average			
	0.090MHz-0.110MHz	Quasi-peak	300Hz	300Hz	Quasi-peak			
	0.110MHz-0.150MHz	Peak	300Hz	300Hz	Peak			
	0.110MHz-0.150MHz	Average	300Hz	300Hz	Average			
	0.150MHz -30MHz	Quasi-peak	300Hz	300Hz	Quasi-peak			
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak			
	Above 1GHz	Peak	1MHz	3MHz	Peak			
Limit:		15.209 Radiated	l emission	limits				
	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)			
	0.009MHz-0.490MHz	2400/F(kHz)	-/-	V-	300			
	0.490MHz-1.705MHz	24000/F(kHz)	- /	- /	_ 30			
	1.705MHz-30MHz	30		-7	30			
	30MHz-88MHz	100	40.0	Quasi-peak	3			
	88MHz-216MHz	150	43.5	Quasi-peak	3			
	216MHz-960MHz	200	46.0	Quasi-peak	3			
	960MHz-1GHz	500	54.0	Quasi-peak	3			
	Above 1GHz	500	54.0	Average	3			
	Remark:Unless otherwis emissions is 20dB above applicable to the equipm emission level radiated but the limits on the field strong the fundamental frequent attenuated to the average table or to the general limits strength.	e the maximum per ent under test. This by the device. rength of the spurio uency of the intention te (or, alternatively,	mitted avera s peak limit a ous emission onal radiator CISPR qua	nge emission lir applies to the to s in the below to Spurious emi- si-peak) limits s	able are based ssions shall be shown in this			



Test Setup:



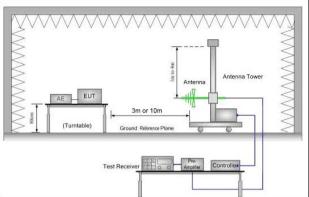


Figure 1. Below 30MHz

Figure 2. 30MHz to 1GHz

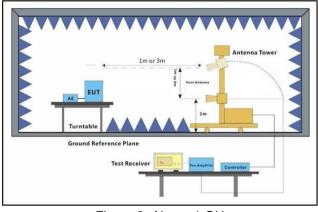


Figure 3. Above 1 GHz

Test Procedure:

- h. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- i. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation
- j. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- k. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- I. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters(for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- m. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- n. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- o. Test the EUT in the lowest channel, the middle channel ,the Highest channel.
- p. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.
- g. Repeat above procedures until all frequencies measured was complete.

Dongguan DN Testing Co., Ltd.

Exploratory Test Mode:

Final Test Mode:

Pretest the EUT at Transmitting mode.

Through Pre-scan, find the worst case.

Instruments Used:

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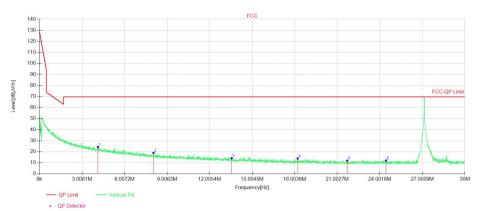
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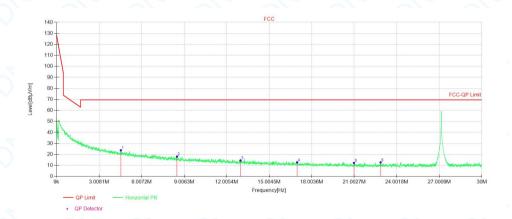
For 9k-30MHz TX

Vertical:



NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4.126	14.65	9.60	24.25	69.54	45.29	100	0	Peak
2	8.043	9.28	9.57	18.85	69.54	50.69	100	60	Peak
3	13.55	4.96	9.19	14.15	69.54	55.39	100	140	Peak
4	18.21	5.19	8.68	13.87	69.54	55.67	100	70	Peak
5	21.71	3.70	8.15	11.85	69.54	57.69	100	160	Peak
6	24.440	4.29	7.65	11.94	69.54	57.60	100	10	Peak

Horizontal:



	NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
	1	4.544	14.17	9.62	23.79	69.54	45.75	100	40	Peak
	2	8.503	8.57	9.55	18.12	69.54	51.42	100	340	Peak
	3	12.982	5.37	9.23	14.60	69.54	54.94	100	290	Peak
-	4	16.97	4.03	8.85	12.88	69.54	56.66	100	50	Peak
	5	20.983	4.03	8.26	12.29	69.54	57.25	100	120	Peak
	6	22.864	4.90	7.96	12.86	69.54	56.68	100	340	Peak

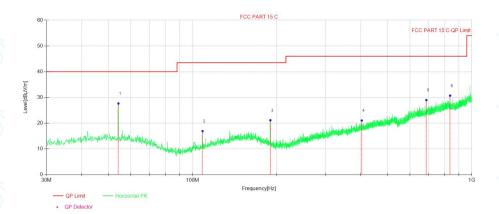


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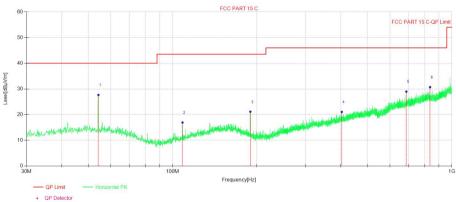
For 30-1000MHz TX

Vertical:



NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	54.252	35.89	-8.22	27.67	40.00	12.33	200	94	QP
2	108.57	28.33	-11.39	16.94	43.50	26.56	200	100	QP
3	189.96	31.69	-10.53	21.16	43.50	22.34	100	282	QP
4	403.58	25.33	-4.27	21.06	46.00	24.94	200	11	QP
5	687.53	26.83	2.16	28.99	46.00	17.01	100	291	QP
6	836.053	26.16	4.55	30.71	46.00	15.29	200	211	QP

Horizontal



NO.	Freq. [MHz]	Reading Level [dBµV]	Correct Factor [dB/m]	Result Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	54.25	35.89	-8.22	27.67	40.00	12.33	200	94	QP
2	108.57	28.33	-11.39	16.94	43.50	26.56	200	100	QP
3	189.96	31.69	-10.53	21.16	43.50	22.34	100	282	QP
4	403.58	25.33	-4.27	21.06	46.00	24.94	200	11	QP
5	687.53	26.83	2.16	28.99	46.00	17.01	100	291	QP
6	836.053	26.16	4.55	30.71	46.00	15.29	200	211	QP



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Note:

1. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Measurement Level= Reading Level + Correct Factor(including LISN Factor, Cable Factor etc.)

2. Average Level=Peak Level + 20log(Duty cycle)

---END OF REPORT---