

EUROFINS ELECTRICAL TESTING SERVICE (SHENZHEN) CO., LTD.

# **RADIO TEST - REPORT**

**FCC Compliance Test Report** 

Test Report Number: EFGX20040021-IE-07-E01

The above sample(s) and sample information was/were submitted and identified on behalf of the applicant. Eurofins assures objectivity and impartiality of the test, and fulfills the obligation of confidentiality for applicant's commercial information and technical documents.

Test Report No.: EFGX20040021-IE-07-E01 Eurofins Electrical Testing Service (Shenzhen) Co., Ltd. 1st Floor, Building 2, Chungu, Meisheng Huigu Science and Technology Park, No. 83 Dabao Road, Bao'an District, Shenzhen. P.R.China

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# **1** General Information

# 1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

Eurofins Product Testing Service (Shenzhen) Co., Ltd. is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

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#### **Operator:**

2020-07-28

Bruce Zheng / Project Engineer

Free

Signature

Date

Eurofins-Lab. Name /

Name / Title

Technical responsibility for area of testing:

 2020-07-28
 Tom Tian / Supervisor
 7om Tian

 Date
 Eurofins-Lab.
 Name / Title
 Signature

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# 1.2 Testing laboratory

#### Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

1st Floor, Building 2, Chungu, Meisheng Huigu Science and Technology Park, No. 83 Dabao Road, Bao'an District, Shenzhen. P.R.China.

Telephone : +86-755-82911867

Fax : +86-755-82910749

The Laboratory has passed the Accreditation by the American Association for Laboratory Accreditation (A2LA). The Accreditation number is 5376.01

The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088

## 1.3 Details of approval holder

Name	: FUJIAN BALDR TECHNOLOGY CO., LTD		
Address	:	2F Jin Shan Ya Yuan, No. 36 Jin Rong North Road Fu-	
		zhou,China	
Telephone	:	N/A	
Fax	:	N/A	

# 1.4 Details of Manufacturer

Name	:	FUJIAN BALDR TECHNOLOGY CO., LTD		
Address	:	2F Jin Shan Ya Yuan, No. 36 Jin Rong North Road Fu-		
		zhou,China		
Telephone	:	N/A		
Fax	:	N/A		

## 1.5 Application details

Date of receipt of application	: April 04, 2020
Date of receipt of test item	: April 04, 2020
Date of test	: April 04, 2020 – June 28, 2020
Date of issue	: July 28, 2020

## 1.6 Test item

Product type	:	Water Timer
Model name	:	TTV103WRF
Brand	:	N/A
Serial number	:	N/A
Ratings	:	DC 6V by battery
Test voltage	:	DC 6V by battery
FCC ID	:	2AWDBTTV103WRF
PMN	:	Water Timer
HVIN	:	TTV103WRF
Additional information	:	N/A

#### RadioTechnical data

:	433.05MHz – 434.79MHz
:	N/A
:	1 Channel
:	FSK
:	Internal antenna
	:

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Antenna gain

: 2.0dBi



# 1.7 Test standards

Test Standards				
FCC Part 15 Subpart C	PART 15 - RADIO FREQUENCY DEVICES			
2020 Edition	Subpart C - Intentional Radiators			

#### Test Method

1: ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz. 2: ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.



# 2 Technical test

# 2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.	
or	
The deviations as specified were ascertained in the course of the tests	

2.2 Test environment

performed.

Temperature	: 20	 25°C
Relative humidity content	: 30	 60%
Air pressure	: 100	 101kPa

# 2.3 Measurement uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

System Measurement Uncertainty			
Test Items	Extended Uncertainty		
Uncertainty for Conducted RF test	RF Power Conducted: 1.16dB Frequency test involved: 1.05×10-7 or 1%		
Uncertainty for Radiated Spurious Emission 25MHz-3000MHz	Horizontal: 4.46dB; Vertical: 4.54dB;		
Uncertainty for Radiated Spurious Emission 3000MHz-18000MHz	Horizontal: 4.42dB; Vertical: 4.41dB;		
Uncertainty for Radiated Spurious Emission 18000MHz- 40000MHz	Horizontal: 4.63dB; Vertical: 4.62dB;		

# 2.4 Test mode

The EUT was set at continuously transmitting during the test.



# 2.5 Test equipment utilized

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DUE DATE
23-2-13-01	EMI Test Receiver	ESR7	2021-04-04
23-2-13-02	Signal Analyzer	N9020B-544	2021-05-05
23-2-12-01	Active Loop Antenna	FMZB 1519B	2021-04-20
	TRILOG Broadband An-		2021-04-13
23-2-12-02	tenna	VULB9168	
23-2-12-03	Horn Antenna	3117	2021-04-13
23-2-12-04	Horn Antenna	BBHA 9170	2021-04-17
23-2-12-05	Universal Antenna Stand	CLSA0110	2021-04-13
23-2-10-01	Preamplifier	BBV9745	2021-04-15
23-2-10-02	Preamplifier	EMC001330	2021-04-15
23-2-10-03	Preamplifier	EMC051845SE	2021-05-06
23-2-10-14	Switch and Control Unit	ERIT-E-JS0806-SF1	N/A

# 2.6 Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	S/N
N/A	N/A	N/A	N/A

# 2.7 Test software information

Test Software Version	N/A		
Modulation	Setting TX Power	TX Pattern	Packet Type
FSK	Default	Default	Default

Remark: The EUT has one button with same duty cycle and it was setted to continue transmitting by debug software, therefore we pressed one button to transmitting 433.92MHz Fundamental frequency during Testing.

# 2.8 Customized Configurations

EUT Conf.	Signal Description	Operating Frequency	Duty Cycle
TM1	FSK	433.92MHz	51.3 %

## 2.9 Test Environments

Enviroment Parameter	Temperature	Voltage	Relative Humidity
101.5Kpa	<b>25.3</b> ℃	6V DC	54.9%



# 2.10 Test results

⊠ 1<sup>st</sup> test

test after modification

production test

	Technical Requirements				
FCC Part 15 Subpart C					
Test Condition		Test Result	Verdict	Test Site	
§15.207	Conducted emission AC power port		N/A		
§15.231(a)(1)	Automatically Dea- tivate	Page 14	Pass	Site 1	
§15.231(b)(3)	Field strength of fun- damental	Page 21-22	Pass	Site 1	
§15.231(b)(3) §15.209 & §15.205	Field strength of spuri- ous emission	Page 23-26	Pass	Site 1	
§15.231(c)	-20dB Bandwidth	Page 16	Pass	Site 1	
§15.203	Antenna requirement	See note	Pass		

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a PCB antenna, the gain: 2dBi. According to §15.203, it is considered sufficiently to comply with the provisions of this section.



# 3 Technical Requirement

#### 3.1 Conducted Emission

#### **Test Method:**

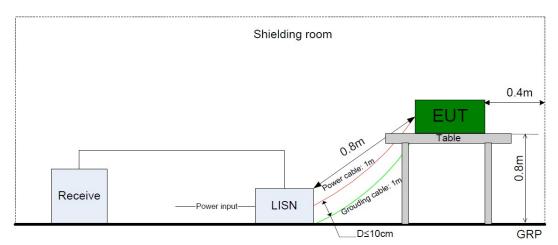
The test method was refered to the subclause 5.2 of ANSI C63.4-2014.

- 1. The EUT was placed on a table, which is 0.8m above ground plane
- 2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3. Maximum procedure was performed to ensure EUT compliance
- 4. A EMI test receiver is used to test the emissions from both sides of AC line

#### **Test Setup:**

The mains cable of the EUT (per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.



Limit:

Frequency MHz	QP Limit dBµV	AV Limit dBμV	
 0.150-0.500	66-56*	56-46*	_
0.500-5	56	46	
5-30	60	50	

Decreasing linear.

#### **Test Result: Not Applicable**



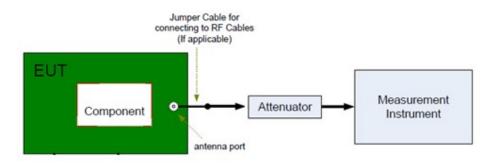
#### 3.2 Automatically Deativate

#### **Test Method**

- 1. Connect EUT test port to spectrum analyzer.
- 2. Set the EUT to transmit maximum output power at 433.92MHz.
- 3. RBW=1MHz, VBW≥3RBW, Span=0MHz, Sweep = 10s, Detector function = Average, Sweep time = single
- 4. Remark transmission time and record test plot.

#### **Test Setup:**

The component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The press a button of the EUT is to emit the specified signals for the purpose of measurements.



#### Limits:

According to §15.231 (a) (1), automatically deactivate limit as below:

(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.



#### Test Data:

Time of Transmitting (ms)	Limit (sec)	Result
610	5	Pass



**Test Result: Pass** 



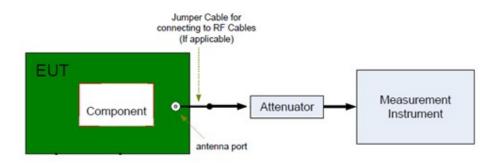
#### 3.3 20dB bandwidth

#### **Test Method:**

- 1. Connect EUT test port to spectrum analyzer.
- 2. Set the EUT to transmit maximum output power at 433.92MHz.
- 3. Then set the EUT to transmit at high, middle and low frequency separately.
- 4. Set Span = approximately 1.5 to 5 times the 99% bandwidth.
- 5. Set RBW  $\geq$  1% to 5% of the 99% bandwidth, VBW  $\geq$  RBW.
- 6. Set Sweep = auto.
- 7. Set Detector function = Average.
- 8. Allow the trace to stabilize.
- 9. Repeat above procedures until all frequencies measured were complete.

#### **Test Setup:**

The component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The press a button of the EUT is to emit the specified signals for the purpose of measurements.



#### Limit:

According to §15.231 (c), automatically deactivate limit as below:

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz.

:



### **Test Result**

	20dB Ba	ndwidth (k		Lim	it (KHz)	F	Result	
			(112)		. /		Pass	
		182.70		IL	)84.80		Pass	
		_						
Occupied		ł				<b>*</b>	Trace	- * 影
KEYSI RL	GHT Input: RF Coupling: AC	Input Z: 50 Ω Corrections: Off	Atten: 10 dB Preamp: Off	Trig: Free Run Gate: Off	Center Freq: 433.920000 N Avg Hold:>10/10	1Hz Tra	асе Туре	Trace Control
	Align: Off	Freq Ref: Int (S)		#IF Gain: Low	Radio Std: None		Clear / Write	
1 Graph	•						Trace Average	Detector
Log	iv 10.0 dB	F	Ref Value -30.00 (	dBm		o	Max Hold	
-40.0 -50.0			- A A				Min Hold	
-60.0 -70.0			,îwî,					
-80.0				hard a start a			Restart Max Hold	
-100	การประทั่งสาวสถารัตร์เหตุการการสุดการไ	penterformative hopestatespen sign	www.ender	Miglanningnassansprag	ويستريدهم وتدريده كالمرجوع والمراجع المرجعة معاوو	and the second		
-120								
	33.920 MHz V 5.1000 kHz	#	Video BW 15.000	kHz*	S Sweep 143 ms	pan 3 MHz (1001 pts)		
2 Metrics								
	Occupied Bandwidth	8 kHz		T-4-1 D	10.0 -10			
		-2.713 kH	_	Total Power % of OBW Pow	-42.8 dBi			
	Transmit Freq Error x dB Bandwidth	-2.713 KH 182.7 kH		x dB	-20.00 d			
	$\overline{2}$	Apr 28, 2020 1:38:03 PM	$\rightarrow \wedge$					
		1:38:03 PM						



#### 3.4 Field strength of fundamental and Field strength of spurious emission for transmitter

#### **Test Method:**

1: The EUT was place on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

2: The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.

3: The height of antenna 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.

4: 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

5: Use the following spectrum analyzer settings According to C63.10:

#### For Above 1GHz

Span = wide enough to capture the peak level of the in-band emission and all spurious RBW = 1MHz, VBW≥RBW for peak measurement and VBW = 10Hz for average measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 1GHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious RBW = 100 KHz, VBW≥RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 30MHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious RBW = 200 Hz, VBW  $\geq$  RBW from 9KHz to 0.15MHz, RBW 9KHz VBW  $\geq$  RBW from 0.15MHz to 30MHz for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

#### Note:

1: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.

2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.

3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (20log(1/duty cycle)).

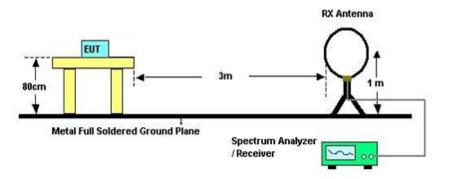
4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.

#### Test Setup:

#### Test Setup 1: Radiated Emission test below 30MHz

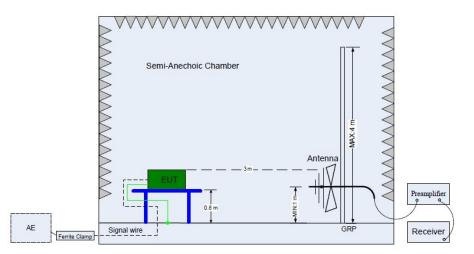
The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.





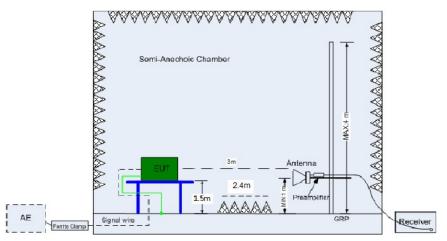
#### Test Setup 2: Radiated Emission test below 1GHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.



#### Test Setup 3: Radiated Emission test above 1GHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.





#### Limit:

Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

#### § 15.209

Frequency	Field Strength	Field Strength	Detector
MHz	uV/m	dBµV/m	
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK
	MHz 30-88 88-216 216-960 960-1000 Above 1000	MHzuV/m30-8810088-216150216-960200960-1000500Above 1000500	MHzuV/mdBμV/m30-881004088-21615043.5216-96020046960-100050054Above 100050054

§15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

#### RSS-GEN 8.10

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	1660 - 1710	9.0 - 9.2
0.495 - 0.505	16.69475 - 16.69525	1718.8 - 1722.2	9.3 - 9.5
2.1735 - 2.1905	25.5 - 25.67	2200 - 2300	10.6 - 12.7
3.020 - 3.026	37.5 - 38.25	2310 - 2390	13.25 - 13.4
4.125 - 4.128	73 - 74.6	2483.5 - 2500	14.47 - 14.5
4.17725 - 4.17775	74.8 - 75.2	2655 - 2900	15.35 - 16.2
.20725 - 4.20775	108 – 138	3260 – 3267	17.7 - 21.4
5.677 - 5.683	149.9 - 150.05	3332 - 3339	22.01 - 23.12
6.215 - 6.218	156.52475 - 156.52525	3345.8 - 3358	23.6 - 24.0
6.26775 - 6.26825	156.7 - 156.9	3500 - 4400	31.2 - 31.8
6.31175 - 6.31225	162.0125 - 167.17	4500 - 5150	36.43 - 36.5
8.291 - 8.294	167.72 - 173.2	5350 - 5460	Above 38.6
8.362 - 8.366	240 – 285	7250 - 7750	
8.37625 - 8.38675	322 - 335.4	8025 – 8500	
8.41425 - 8.41475	399.9 - 410		
12.29 - 12.293	608 - 614		
12.51975 - 12.52025	960 - 1427		



12.57675 - 12.57725	1435 - 1626.5	
13.36 - 13.41	1645.5 - 1646.5	

§15.231 (b) In addition to the provisions of §15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	<sup>1</sup> 1,250 to 3,750	<sup>1</sup> 125 to 375
174-260	3,750	375
260-470	<sup>1</sup> 3,750 to 12,500	<sup>1</sup> 375 to 1,250
Above 470	12,500	1,250

\* Linear interpolation with frequency, f, in MHz:

Field Strength of the Fundamental Emissions

The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit.

Fundamental Average (dBµV/m) = 20log (10966.6)=80.82dBuV/m (Average)

Fundamental Peak  $(dB\mu V/m) = 80.82dBuV/m + 20 = 100.82dBuV/m$ 

#### Remark:

- (1) "\*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.
- (2) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Above 1GHz: Corrector factor = Antenna Factor + Cable Loss Amplifier Gain.
- (4) Below 1GHz: Corrector factor = Antenna Factor + Cable Loss Amplifier Gain.
- (5) Note: The low frequency, which started from 9 kHz to 30MHz with X/Y/Z axis, was prescanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



# Field Strength of the Fundamental Emissions Horizontal

PK

Freq. [MHz]	PK Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Result
433.9239	73.60	100.82	27.22	100	226	Horizontal	Pass

AV

Freq. [MHz]	PK Level [dBµV/m]	Duty Factor (dB)	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Result
432.9530	73.60	-5.79	80.82	13.01	100	226	Horizontal	Pass

Vertical

PK							
Freq. [MHz]	PK Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Result
433.9239	68.57	100.82	32.25	100	17	Vertical	Pass

AV

Freq. [MHz]	PK Level [dBµV/m]	Duty Factor (dB)	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Result
433.9239	68.57	-5.79	80.82	18.04	100	17	Vertical	Pass

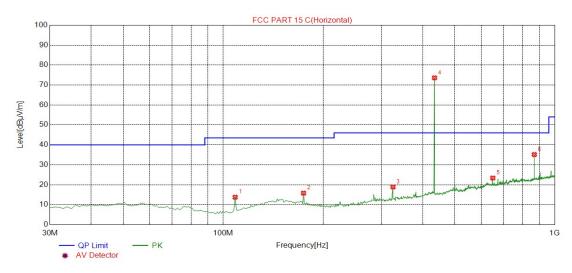
Result of PK=Reading Level + Factor (-12.29 dB) . Result of AV= PK Level + Duty factor. Duty factor=20 log (0.618/1.204)=-5.79dB









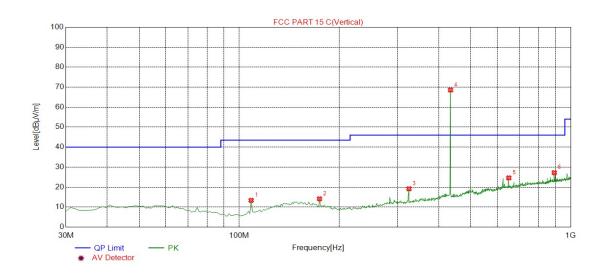


#### Field strength of spurious emission for transmitter 30MHz - 1GHz

Freq. [MHz]	Level [dBµV/ m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
108.6486	13.78	-19.46	43.50	29.72	100	105	Horizontal	PK
174.6747	15.81	-15.78	43.50	27.69	100	333	Horizontal	PK
325.1752	18.90	-14.72	46.00	27.10	100	62	Horizontal	PK
433.9239	73.60	-12.29	46.00	-27.60	100	226	Horizontal	PK
650.4505	23.38	-8.12	46.00	22.62	100	343	Horizontal	PK
867.9479	35.15	-5.80	46.00	10.85	100	170	Horizontal	PK

Result of PK=Reading Level + Factor





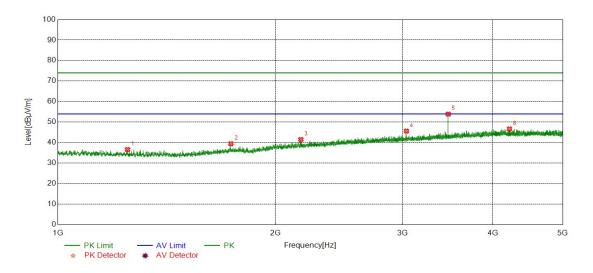
Freq. [MHz]	Level [dBµV/ m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
108.6486	13.38	-19.46	43.50	30.12	100	220	Vertical	PK
174.6747	14.13	-15.78	43.50	29.37	100	17	Vertical	PK
325.1752	19.17	-14.72	46.00	26.83	100	180	Vertical	PK
433.9239	68.57	-12.29	46.00	-22.57	100	17	Vertical	PK
650.4505	24.62	-8.12	46.00	21.38	100	198	Vertical	PK
892.2222	27.22	-5.35	46.00	18.78	100	94	Vertical	PK

Result of PK=Reading Level + Factor



Field strength of spurious emission for transmitter above 1GHz

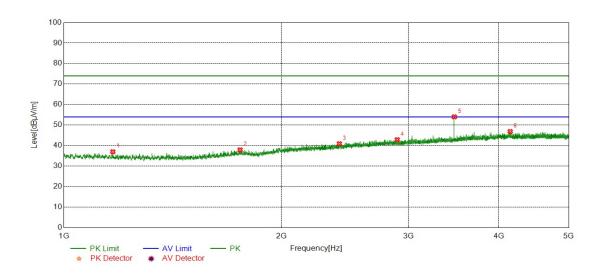
According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.



Freq. [MHz]	Level [dBµV/ m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1248.4248	36.64	-29.78	74.00	37.36	150	325	Horizontal	PK
1736.0736	39.44	-28.07	74.00	34.56	150	1	Horizontal	PK
2169.7170	41.50	-25.03	74.00	32.50	150	114	Horizontal	PK
3037.8038	45.62	-21.51	74.00	28.38	150	139	Horizontal	PK
3471.0471	53.90	-20.08	74.00	20.10	150	139	Horizontal	PK
4219.1219	46.66	-17.88	74.00	27.34	150	139	Horizontal	PK

Result of PK=Reading Level + Factor





Freq. [MHz]	Level [dBµV/ m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1168.8169	37.01	-29.66	74.00	36.99	150	318	Vertical	PK
1754.0754	37.94	-27.90	74.00	36.06	150	135	Vertical	PK
2406.9407	40.92	-24.10	74.00	33.08	150	273	Vertical	PK
2894.1894	42.89	-22.19	74.00	31.11	150	299	Vertical	PK
3471.8472	54.04	-20.08	74.00	19.96	150	215	Vertical	PK
4149.1149	46.87	-17.65	74.00	27.13	150	347	Vertical	PK

Result of PK=Reading Level + Factor

PK with Duty factor (AV)

Freq. [MHz]	PK Level [dBµV/ m]	Factor (dB)	Duty Factor (dB)	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
3471.8472	54.04	-20.08	-5.79	60.82	12.57	150	215	Vertical

END