



# **FCC SDOC TEST REPORT**

**Prepared for :**  
**LawMate International Co., Ltd.**  
**3F, No.34, Lane 60, Wenhua St., Taipei, Taiwan**

**Product:** Car Mount Holder WiFi DVR for Smartphone  
**Trade Name:** LawMate  
**Model Name:** PV-PH10W, Q-PV-PH10W  
**Date of Test:** Sep. 04, 2018- Sep. 11, 2018  
**Date of Report:** Sep. 11, 2018  
**Report Number:** HK1809101007-1ER

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## TEST REPORT VERIFICATION

Applicant : LawMate International Co., Ltd.  
Address : 3F, No.34, Lane 60, Wenhui St., Taipei, Taiwan  
Manufacturer : LawMate International Co., Ltd.  
Address : 3F, No.34, Lane 60, Wenhui St., Taipei, Taiwan  
EUT Description : Car Mount Holder WiFi DVR for Smartphone  
(A) Model No. : PV-PH10W  
(B) Serial No. : Q-PV-PH10W  
(C) Power Supply : DC 5V/1A From Adapter

Standards ..... FCC Part 15 Subpart B  
ANSI C63.4:2014

This device described above has been tested by HUAKE, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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Test Result..... **Pass**

Date of Test: Sep. 04, 2018- Sep. 11, 2018

Testing Engineer:

*Gary Qian*

(Gary Qian)

Technical Manager:

*Eden Hu*

(Eden Hu)

Authorized Signatory:

*Jason Zhou*

(Jason Zhou)





1 . TEST SUMMARY	4
1.1 TEST FACILITY	5
1.2 MEASUREMENT UNCERTAINTY	5
2 . GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	7
2.3 DESCRIPTION OF TEST SETUP	8
2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL	9
2.5 MEASUREMENT INSTRUMENTS LIST	10
3 . EMC EMISSION TEST	11
3.1 CONDUCTED EMISSION MEASUREMENT	11
3.1.1 POWER LINE CONDUCTED EMISSION	11
3.1.2 TEST PROCEDURE	12
3.1.3 TEST SETUP	12
3.1.4 EUT OPERATING CONDITIONS	12
3.1.5 TEST RESULTS	13
3.2 RADIATED EMISSION MEASUREMENT	15
3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	15
3.2.2 TEST PROCEDURE	15
3.2.3 TEST SETUP	16
3.2.4 EUT OPERATING CONDITIONS	16
3.2.5 TEST RESULTS	17
3.2.6 TEST RESULTS(Above 1GHz)	19
4 . EUT TEST PHOTO	20
ATTACHMENT PHOTOGRAPHS OF EUT	21



## 1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
FCC Part 15 Subpart B ANSI C63.4:2014	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.



## 1.1 TEST FACILITY

Shenzhen HUAK Testing Technology Co., Ltd.

Add. : 1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, China

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95** %.

### A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	3.2	

### B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
A01	ANSI	30MHz ~ 1000MHz	4.7	



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Car Mount Holder WiFi DVR for Smartphone	
Model Name	PV-PH10W	
Serial No	Q-PV-PH10W	
Model Difference	All model' s the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: PV-PH10W.	
Product Description	The EUT is a Car Mount Holder WiFi DVR for Smartphone.	
	Operating frequency:	N/A
	Connecting I/O port:	N/A
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
Power Source	DC Voltage	
Power Rating	DC 5V/1A From Adapter	



## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Running

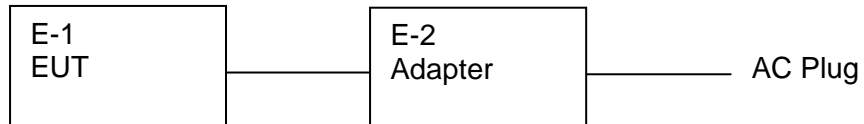
For Conducted Test	
Final Test Mode	Description
Mode 1	Running

For Radiated Test	
Final Test Mode	Description
Mode 1	Running



## 2.3 DESCRIPTION OF TEST SETUP

Mode 1:







## 2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Car Mount Holder WiFi DVR for Smartphone	LawMate	PV-PH10W	N/A	EUT
E-2	Adapter	HUAWEI	HW-051000DFQ	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



## 2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	R&S	ENV216	HKE-002	Dec. 28, 2017	1 Year
2.	Receiver	R&S	ESCI 7	HKE-010	Dec. 28, 2017	1 Year
3.	RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 28, 2017	1 Year
4.	Spectrum analyzer	R&S	FSP40	HKE-025	Dec. 28, 2017	1 Year
5.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 28, 2017	1 Year
6.	Preamplifier	Schwarzbeck	BBV 9743	HKE-006	Dec. 28, 2017	1 Year
7.	EMI Test Receiver	Rohde & Schwarz	ESCI 7	HKE-010	Dec. 28, 2017	1 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	HKE-012	Dec. 28, 2017	1 Year
9.	Loop Antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Dec. 28, 2017	1 Year
10.	Horn Antenna	Schwarzbeck	9120D	HKE-013	Dec. 28, 2017	1 Year
11.	Pre-amplifier	EMCI	EMC05184 5SE	HKE-015	Dec. 28, 2017	1 Year
12.	Pre-amplifier	Agilent	83051A	HKE-016	Dec. 28, 2017	1 Year
13.	EMI Test Software EZ-EMC	Tonscend	JS1120-B Version	HKE-083	Dec. 28, 2017	N/A
14.	Power Sensor	Agilent	E9300A	HKE-086	Dec. 28, 2017	1 Year
15.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 28, 2017	1 Year
16.	Signal generator	Agilent	N5182A	HKE-029	Dec. 28, 2017	1 Year
17.	Signal Generator	Agilent	83630A	HKE-028	Dec. 28, 2017	1 Year
18.	Shielded room	Shiel Hong	4*3*3	HKE-039	Dec. 28, 2017	3 Year



### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

##### 3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

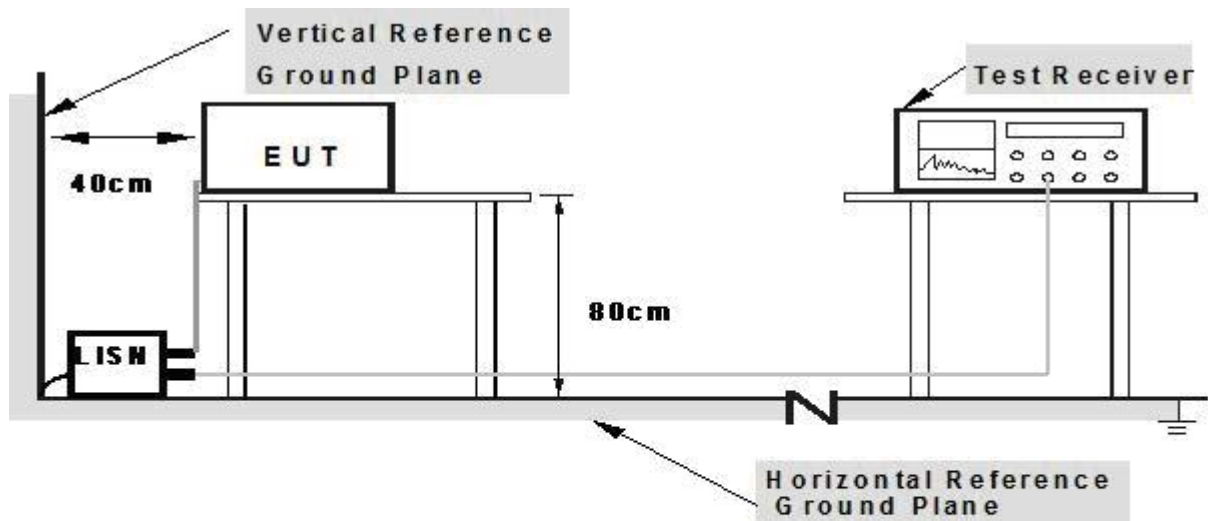
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

### 3.1.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.1.3 TEST SETUP



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

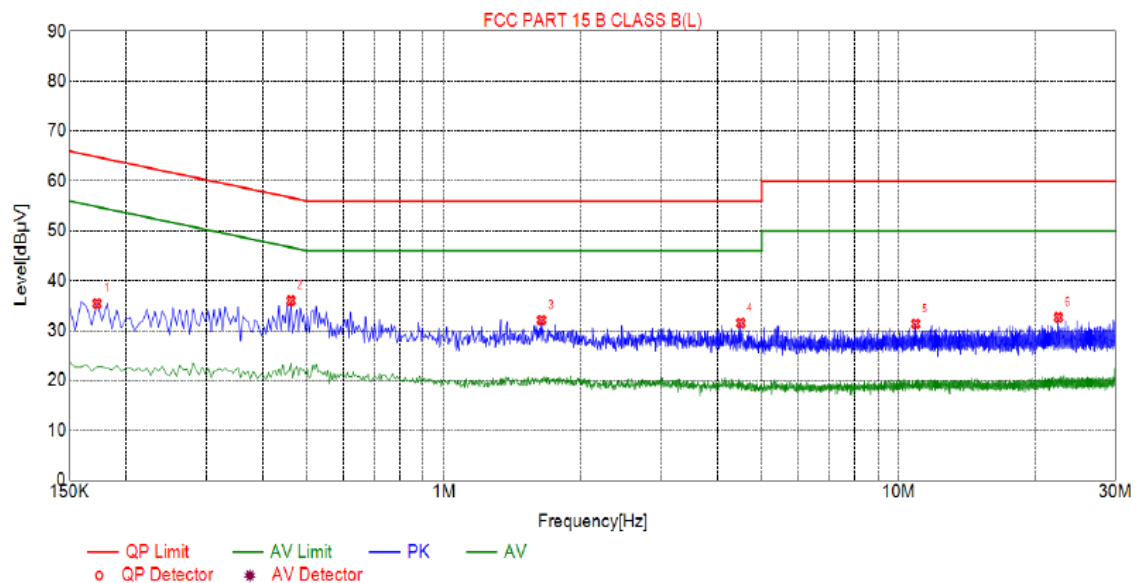
### 3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



## 3.1.5 TEST RESULTS

EUT :	Car Mount Holder WiFi DVR for Smartphone	Model Name. :	PV-PH10W
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2018-09-07
Test Mode :	Running	Phase :	L
Test Voltage :	DC5V From Adapter		

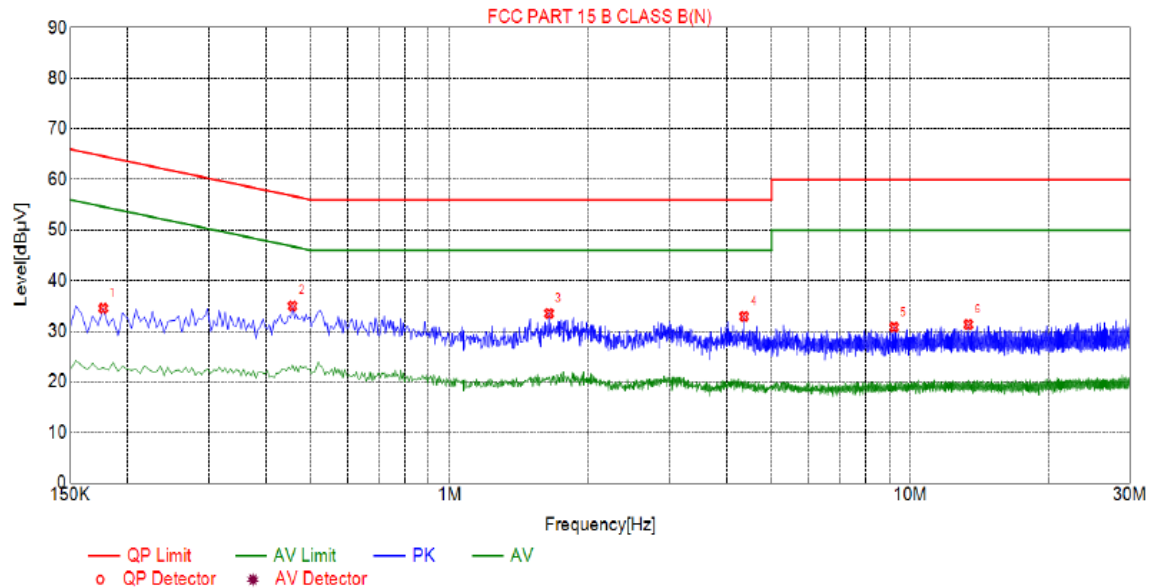


## Suspected List

Suspected List						
N O.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Detector
1	0.1725	35.44	10.04	64.84	29.40	PK
2	0.4605	36.01	10.04	56.68	20.67	PK
3	1.6395	32.14	10.12	56.00	23.86	PK
4	4.4925	31.53	10.25	56.00	24.47	PK
5	10.900	31.35	10.02	60.00	28.65	PK
6	22.456	32.64	10.17	60.00	27.36	PK



EUT :	Car Mount Holder WiFi DVR for Smartphone	Model Name. :	PV-PH10W
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2018-09-07
Test Mode :	Running	Phase :	N
Test Voltage :	DC5V From Adapter		



## Suspected List

Suspected List						
N O.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Detec tor
1	0.1770	34.52	10.05	64.63	30.11	PK
2	0.4560	34.98	10.04	56.77	21.79	PK
3	1.6440	33.53	10.12	56.00	22.47	PK
4	4.3575	32.92	10.25	56.00	23.08	PK
5	9.2175	30.79	10.10	60.00	29.21	PK
6	13.366	31.32	9.96	60.00	28.68	PK



### 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

Notes:

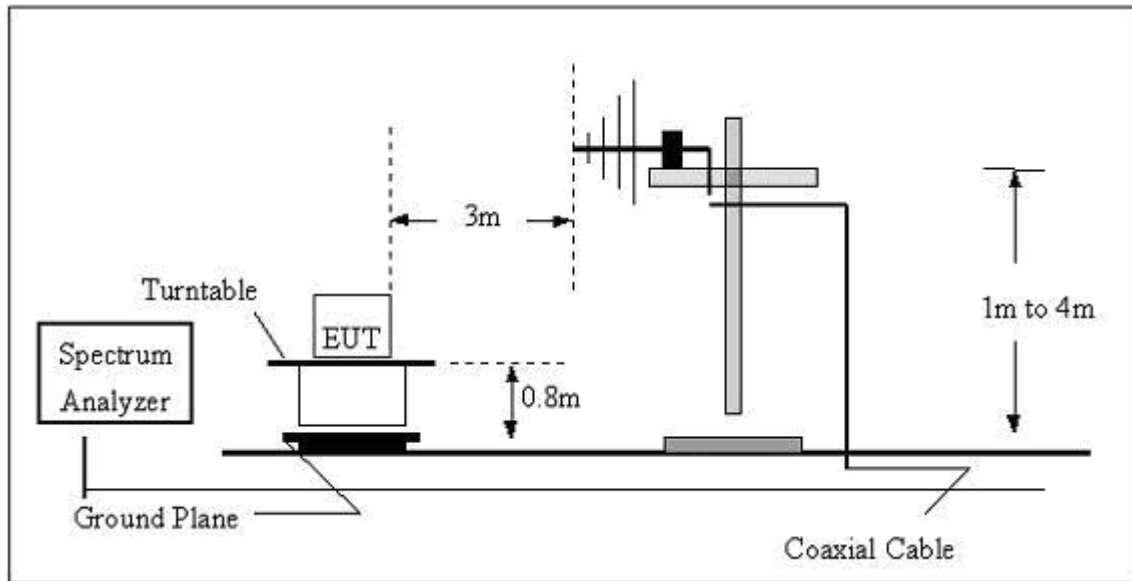
- (1) The limit for radiated test was performed according to as following:  
FCC PART 15B /ICES-003.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### 3.2.2 TEST PROCEDURE

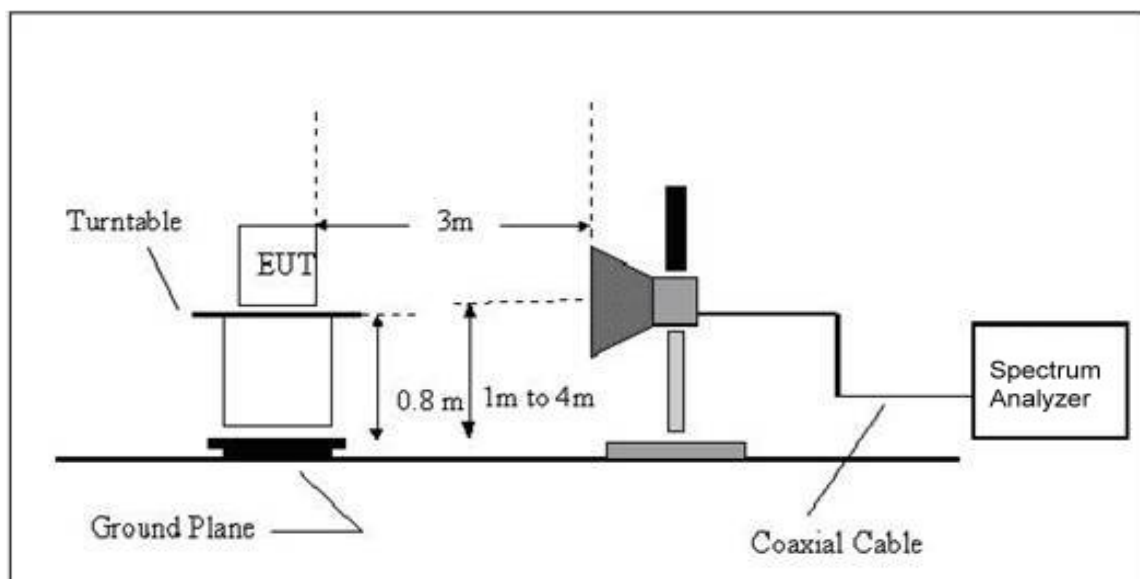
- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.2.3 TEST SETUP

#### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



#### (B) Radiated Emission Test Set-Up Frequency Above 1GHz



### 3.2.4 EUT OPERATING CONDITIONS

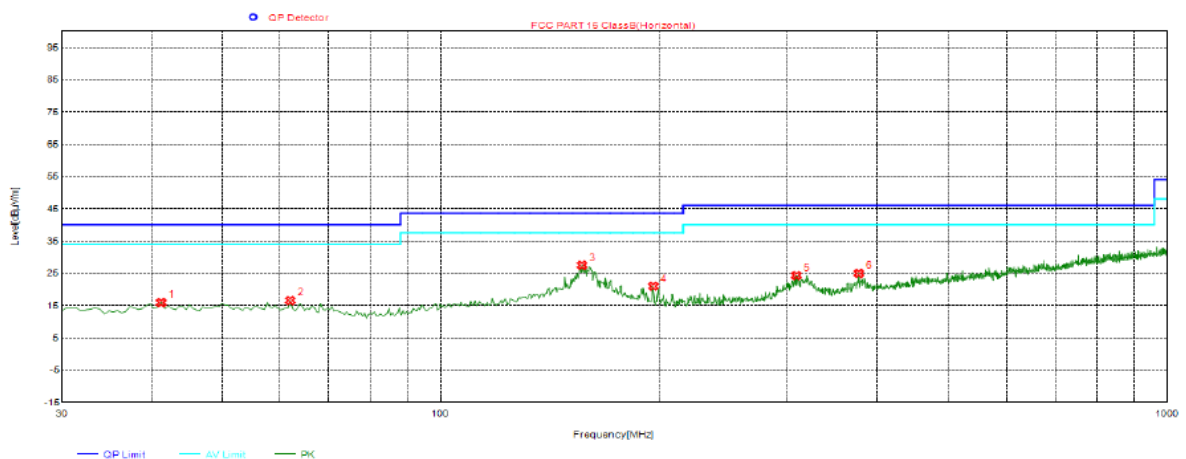
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.





## 3.2.5 TEST RESULTS

EUT :	Car Mount Holder WiFi DVR for Smartphone	Model Name :	PV-PH10W
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-09-07
Test Mode :	Running	Polarization :	Horizontal
Test Power :	DC5V From Adapter		

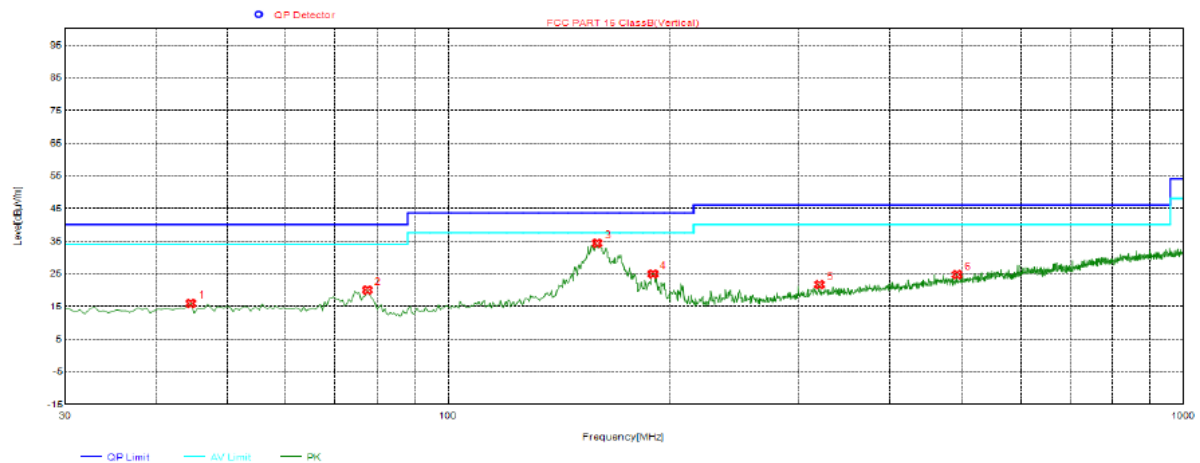


## Suspected List

NO.	Freq. [MHz]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	41.1550	15.87	-16.56	40.00	24.13	PK	100	264	Horizontal
2	62.0100	16.52	-16.56	40.00	23.48	PK	100	223	Horizontal
3	156.5850	27.47	-9.78	43.50	16.03	PK	100	32	Horizontal
4	196.3550	20.95	-15.14	43.50	22.55	PK	100	64	Horizontal
5	309.3600	24.30	-13.00	46.00	21.70	PK	100	250	Horizontal
6	377.2600	24.95	-11.12	46.00	21.05	PK	100	293	Horizontal



EUT :	Car Mount Holder WiFi DVR for Smartphone	Model Name :	PV-PH10W
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2018-09-07
Test Mode :	Running	Polarization :	Vertical
Test Power :	DC5V From Adapter		



### Suspected List

NO.	Freq. [MHz]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	44.5500	15.84	-16.59	40.00	24.16	PK	100	91	Vertical
2	77.5300	19.96	-18.90	40.00	20.04	PK	100	328	Vertical
3	159.4950	34.27	-9.22	43.50	9.23	PK	100	28	Vertical
4	190.0500	24.91	-14.42	43.50	18.59	PK	100	111	Vertical
5	320.5150	21.67	-12.43	46.00	24.33	PK	100	194	Vertical
6	493.6600	24.71	-8.38	46.00	21.29	PK	100	131	Vertical



## 3.2.6 TEST RESULTS(Above 1GHz)

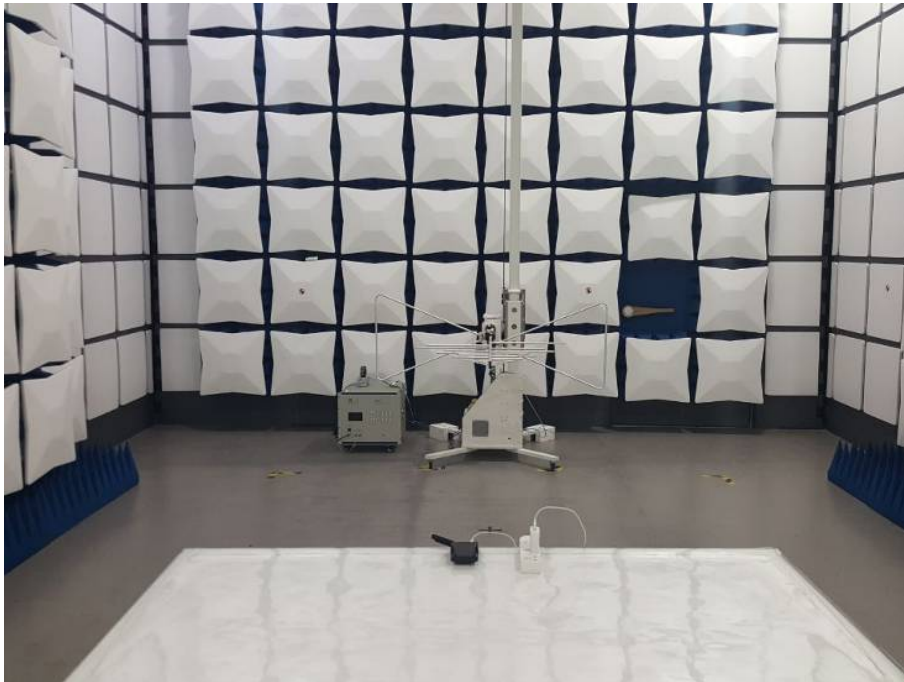
EUT :	Car Mount Holder WiFi DVR for Smartphone	Model Name :	PV-PH10W
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	N/A
Test Mode :	N/A		
Test Power :	N/A		

## Note:

- 1) N/A - denotes test is not applicable in this test report
- 2) There was not any unintentional transmission in standby mode



#### 4. EUT TEST PHOTO



## ATTACHMENT PHOTOGRAPHS OF EUT

Photo 1



Photo 2





Photo 3



Photo 4

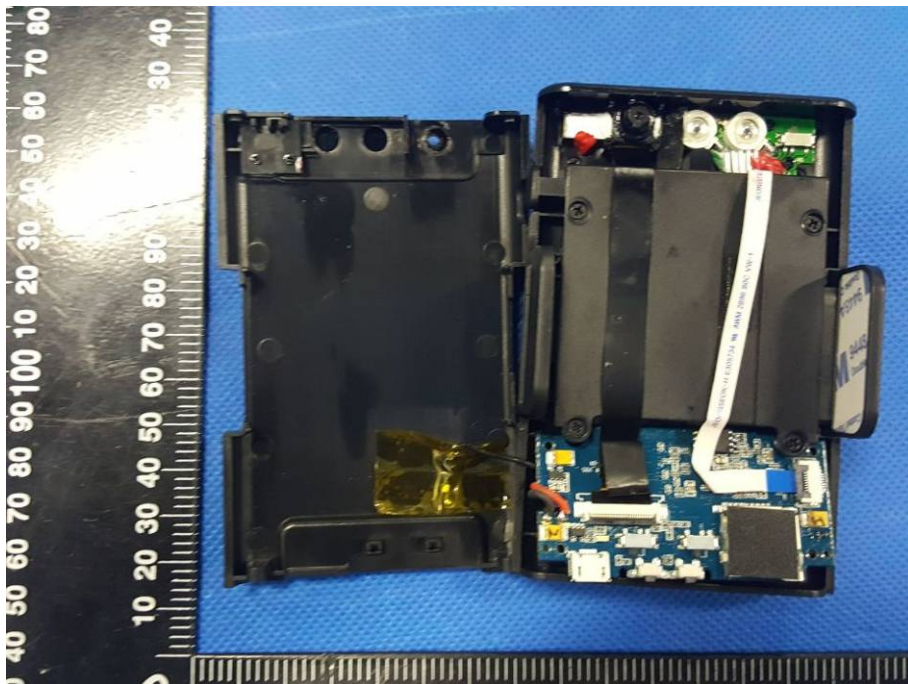


Photo 5

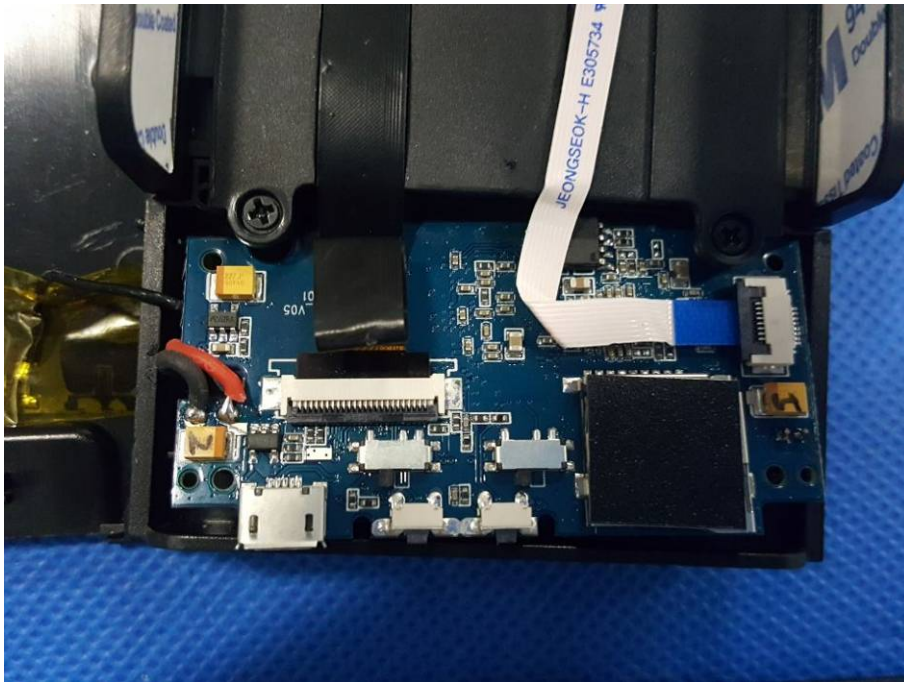
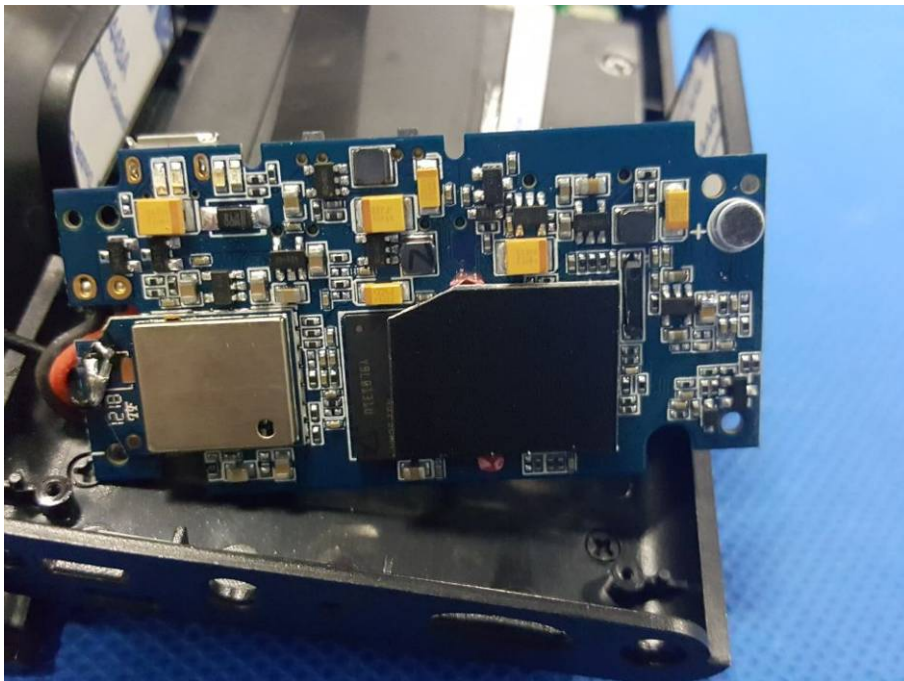


Photo 6



.....End of Report.....