

# **FCC TEST REPORT**

Report No.: ULC-19OC1446VTSHPB-1

Product: Motorized TV Mount

Test Model: LP66-44M

**Serial Model:** LP66-44M-P01, LP66-46M, LP66-46M-P01

Received: Oct.18, 2019

**ISSUED:** Dec.02, 2019

Applicant: LUMI LEGEND CORPORATION

Address: 22/F., Building 1, Lisi Plaza, Huifeng East Road, Ningbo, China 315100

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Location: No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)

his test report consists of 22 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by A2LA, CNAS, or any government agency. The test results in the report only apply to the tested item. The test results in this report are traceable to the national or international standards.



# **Contents**

1.	TEST	PROGRAM	3
2.	Sumr	nary of Test Procedure and Test Results	4
3.	Test (	Configuration of Equipment under Test	5
	3.1	Manufacturer information	5
	3.2	Feature of Equipment under Test	5
	3.3	Description of support units	5
	3.4	Measurement Uncertainty	6
4	Test o	of Conducted Emission	7
	4.1	Test Limit	7
	4.2	Test Procedures	8
	4.3	Typical Test Setup	8
	4.4	Measurement Equipment	9
	4.5	Test Result and Data	10
	4.6	Test Photographs	12
5	Test o	of Radiated Emission	13
	5.1	Test Limit	13
	5.2	Test Procedures	14
	5.3	Typical Test Setup	14
	5.4	Measurement Equipment	15
	5.5	Test Result and Data (30MHz ~ 1GHz)	16
	5.6	Test Result and Data (1GHz ~ 18GHz)	18
	5.7	Test Photographs (30MHz ~ 1000MHz)	20
	5.8	Test Photographs (1000MHz ~ 18000MHz)	21
6	Photo	ographs of EUT	22



## 1. TEST PROGRAM

**PRODUCT:** Motorized TV Mount

TEST MODEL: LP66-44M

SERIES MODEL: LP66-44M-P01, LP66-46M, LP66-46M-P01

**APPLICANT: LUMI LEGEND CORPORATION** 

TESTED: Oct.28 to Nov.15, 2019

STANDARDS: 47 CFR FCC Part15, Subpart B, Class B

ANSI C63.4:2014

We, BUREAU VERITAS ADT (Shanghai) Corporation, declare that the equipment above has been tested and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

PREPARED BY	:	⇒in	$\sim$	_ ,	DATE:	Dec.02, 2019
		Will YAN			_	

Project Engineer

APPROVED BY : \_\_\_\_\_\_, DATE: \_\_\_\_\_\_ Dec.02, 2019

Daniel Sun RF Supervisor



# 2. Summary of Test Procedure and Test Results

EMISSION (47 CFR FCC Part15, Subpart B)								
Test Item	Normative References	Test Result						
Conducted Emission	47 CFR FCC Part15, Subpart B 15.107	Meets the Class B requirements						
Radiated Emission	47 CFR FCC Part15, Subpart B 15.109	Meets the Class B requirements						

Special Comment: All tests were performed on 120Vac 60Hz.



# 3. Test Configuration of Equipment under Test

# 3.1 Manufacturer information

Manufacturer: LUMI LEGEND CORPORATION

Address : 22/F., Building 1, Lisi Plaza, Huifeng East Road, Ningbo, China 315100

# 3.2 Feature of Equipment under Test

Product Name:	Motorized TV Mount			
Test Model:	LP66-44M			
Series Model:	LP66-44M-P01, LP66-46M, LP66-46M-P01			
Model Discrepancy:				
EUT Power Rating:	RX:5VDC/1.5A with adaptor 100-240Vac~, 50/60Hz TX:DC 3.0V			

Note: Please refer to user manual.

# 3.3 Description of support units

NO.	PRODUCT BRAND		MODEL NO.
1	AC adapter		W52RA198-290018
2	Remote Control		



# 3.4 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Value	
Conducted emission	2.55 dB	
5	30 MHz ~ 1GHz	3.22 dB
Radiated emissions	Above 1GHz	2.89 dB



# 4 Test of Conducted Emission

## 4.1 Test Limit

**TEST STANDARD:** 

CFR 47 FCC Part 15, Subpart B (Section: 15.107)

	Class A	(dBµV)	Class B (dBµV)		
FREQUENCY (MHz)	Quasi-peak	Average	Quasi-peak	Average	
0.15 - 0.5	79	66	66 - 56	56 - 46	
0.50 - 5.0	73	60	56	46	
5.0 - 30.0	73	60	60	50	

**NOTES**: 1. The lower limit shall apply at the transition frequencies.

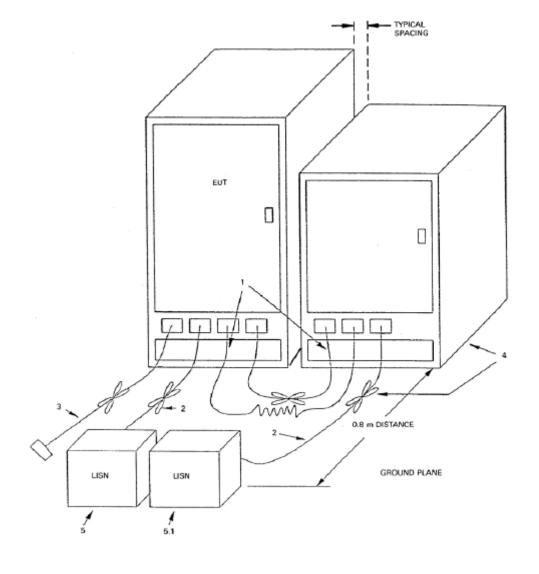
- 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
- 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



# 4.2 Test Procedures

Refer to ANSI.C63.4 Section 6.4

# 4.3 Typical Test Setup





# 4.4 Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	E1R1001	Mar.04, 2020
LISN ROHDE & SCHWARZ	ENV216	E1L1011	Jul.17, 2020
Software ADT	ADT_Cond_V7.3.0	N/A	N/A



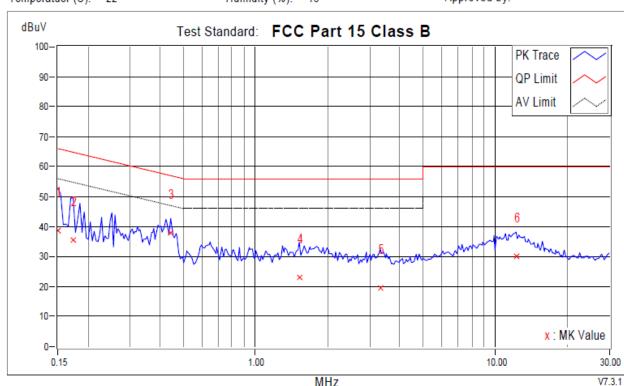
## 4.5 Test Result and Data

## **Conducted Emission Test Data**

Phase: LINE

Location: Conduction 1 Date: 11/4/2019 Time: 8:23:42 PM Phase L1

Temperatuer (C): 22 Humidity (%): 48 Approved by:



	Frequency	Corr. Factor					_	Notes			
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.84	28.64	2.30	38.48	12.14	66.00	56.00	-27.52	-43.86	
2	0.17346	9.85	25.51	0.95	35.36	10.80	64.79	54.79	-29.43	-43.99	
+3	0.44325	9.72	28.36	5.05	38.08	14.77	57.00	47.00	-18.92	-32.23	
4	1.52394	9.68	13.18	-6.17	22.86	3.51	56.00	46.00	-33.14	-42.49	
5	3.32645	9.89	9.45	-8.63	19.34	1.26	56.00	46.00	-36.66	-44.74	
6	12.24825	10.35	19.86	-1.11	30.21	9.24	60.00	50.00	-29.79	-40.76	

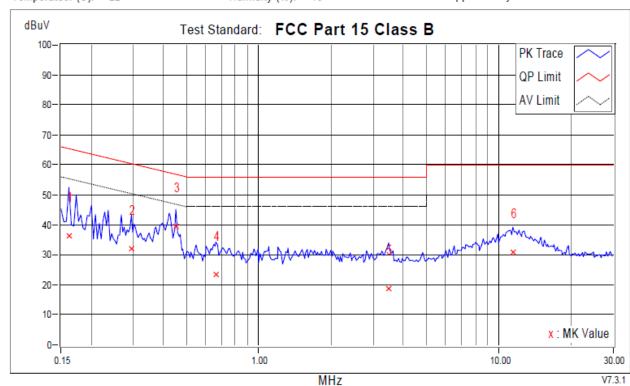
- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.



## Phase: NEUTRAL

Location: Conduction 1 Date: 11/4/2019 Time: 8:33:05 PM Phase N

Temperatuer (C): 22 Humidity (%): 48 Approved by:



	Frequency	Corr. Factor		iding BuV	ı	ssion BuV		mit BuV	Mar d	gins B	Notes
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.16173	9.84	26.63	1.58	36.47	11.42	65.37	55.37	-28.91	-43.96	
2	0.29467	9.87	22.31	0.24	32.18	10.11	60.39	50.39	-28.22	-40.29	
+3	0.45107	9.85	29.43	6.62	39.28	16.47	56.86	46.86	-17.57	-30.38	
4	0.66221	9.82	13.52	-6.61	23.34	3.21	56.00	46.00	-32.66	-42.79	
5	3.48285	9.96	8.64	-9.39	18.60	0.57	56.00	46.00	-37.40	-45.43	
6	11.46625	10.49	20.56	0.02	31.05	10.51	60.00	50.00	-28.95	-39.49	

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.



# 4.6 Test Photographs





# 5 Test of Radiated Emission

## **5.1 Test Limit**

**TEST STANDARD:** 

CFR 47 FCC Part 15, Subpart B (Section: 15.109)

# FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A	(at 10m)	Class B (at 3m)			
FREQUENCY (MINZ)	μV/m	dBμV/m	μV/m	dΒμV/m		
30 – 88	90	39.1	100	40.0		
88 – 216	150	43.5	150	43.5		
216 – 960	210	46.4	200	46.0		
960 – 1000	300	49.5	500	54.0		

# LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

EDECLIENCY (MU-)	Class A (dB <sub>k</sub>	uV/m) (at 3m)	Class B (dBµV/m) (at 3m)		
FREQUENCY (MHz)	PEAK AVERAGE		PEAK	AVERAGE	
Above 1000	80.0	60.0	74.0	54.0	

**Note:** (1) The lower limit shall apply at the transition frequencies.

- (2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
- (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.

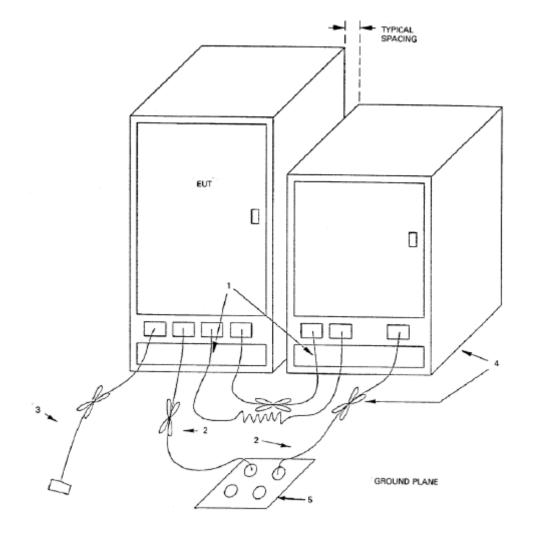
Report No.:ULC-19OC1446VTSHPB-1 Page 13 of 23 FCC/IC-ITE V1.1



# 5.2 Test Procedures

Refer to ANSI.C63.4 Section 6.4

# **5.3 Typical Test Setup**





# **5.4 Measurement Equipment**

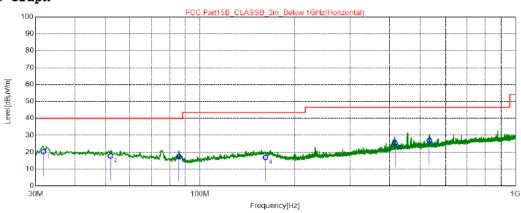
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
EMI Test Spectrum ROHDE & SCHWARZ	ESR7	E1R1005	Dec.03, 2019
Spectrum Analyzer Keysight	N9030B	E1S1003	Jul.22, 2020
Broad-Band Antenna Schwarzbeck	VULB9168	E1A1012	Aug.25, 2020
Double Riaged Vroadband Horn Antenna Schwarzbeck	BBHA9120D	E1A1017	Jan.26, 2020
Preamplifier Agilent	8447D	E1A2001	Oct.13, 2020
Preamplifier Agilent	EMC051845SE	E1A2009	Jul.18, 2020



# 5.5 Test Result and Data (30MHz ~ 1GHz)

Position: Horizontal

Test Graph



QP Detector

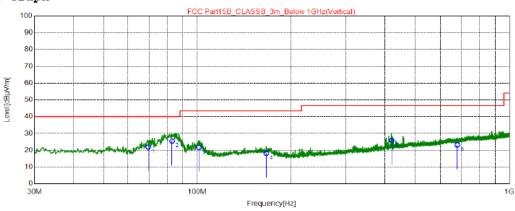
NO.	Freq.	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	31.74	30.69	-10.49	20.20	40.00	19.80	100	99	Horizontal
2	51.92	27.54	-9.87	17.67	40.00	22.33	100	240	Horizontal
3	85.67	31.56	-14.18	17.38	40.00	22.62	200	285	Horizontal
4	161.3	25.76	-8.99	16.77	43.50	26.73	100	114	Horizontal
5	416.2	33	-7.52	25.48	46.50	21.02	100	93	Horizontal
6	535.5	32.24	-5.25	26.99	46.50	19.51	200	303	Horizontal

- 1. Q.P. is abbreviation of quasi-peak individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. QP Margin value = QP Limit value QP value.
- 4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
- 5. QP value = Factor + Reading Value.



## Position: Vertical

## Test Graph



#### QP Detector

NO.	Freq.	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	69.57	33.92	-12.04	21.88	40.00	18.12	100	85	Vertical
2	82.96	39.38	-13.98	25.40	40.00	14.60	100	23	Vertical
3	101.1	34.92	-13.30	21.62	43.50	21.88	100	343	Vertical
4	166.5	27.32	-9.22	18.10	43.50	25.40	100	328	Vertical
5	421.1	33.21	-7.41	25.80	46.50	20.70	100	243	Vertical
6	679.9	26.12	-2.98	23.14	46.50	23.36	200	64	Vertical

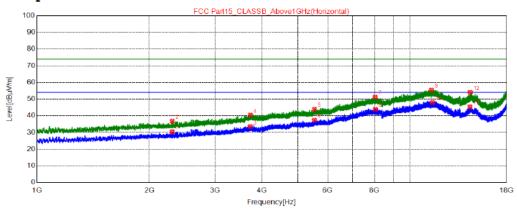
- 1. Q.P. is abbreviation of quasi-peak individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. QP Margin value = QP Limit value QP value
- 4. Factor = Antenna Factor + Amplifier Factor + Cable loss
- 5. QP value = Factor + Reading Value.



# 5.6 Test Result and Data (1GHz ~ 18GHz)

Position: Horizontal

Test Graph



### ★ AV Detector

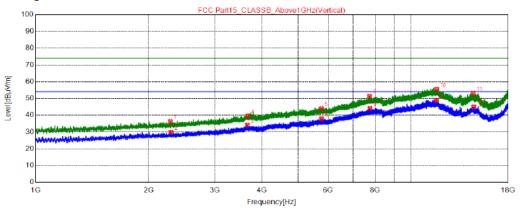
	1	1		ı		ı	ı		
NO.	Freq.	Reading	Factor	Level	Limit	Margin	Height	Angle	Polarity
	[MHz]	[dB µ V/m]	[dB]	$[dB \mu V/m]$	$[dB \mu V/m]$	[dB]	[cm]	[°]	FOIAIICY
1	2301.	31.65	-1.26	30.39	54.00	23.61	155	140	Horizontal
2	2303.	38.01	-1.26	36.75	74.00	37.25	155	233	Horizontal
3	3719.	30.66	2.94	33.60	54.00	20.40	155	202	Horizontal
4	3725.	37.44	2.96	40.40	74.00	33.60	155	233	Horizontal
5	5528.	36.44	7.50	43.94	74.00	30.06	155	325	Horizontal
6	5529.	29.87	7.50	37.37	54.00	16.63	155	294	Horizontal
7	8037.	36.58	14.65	51.23	74.00	22.77	155	109	Horizontal
8	8049.	29.27	14.63	43.90	54.00	10.10	155	171	Horizontal
9	11366	35.44	19.99	55.43	74.00	18.57	155	325	Horizontal
10	11443	27.92	20.06	47.98	54.00	6.02	155	109	Horizontal
11	14352	22.85	22.48	45.33	54.00	8.67	155	17	Horizontal
12	14375	31.55	22.52	54.07	74.00	19.93	155	325	Horizontal

- 1. The emission levels of other frequencies were very low against the limit.
- 2. Margin = Limit -Level



# Position: Vertical

## Test Graph



### ★ AV Detector

	Freq.	Reading	Factor	Level	Limit	Margin	Height	Angle	- 1
NO.	[MHz]	[dB $\mu$ $\nabla/m$ ]	[dB]	$[dB \mu \nabla/m]$	[dB $\mu$ $\nabla/m$ ]	[dB]	[cm]	[°]	Polarity
1	2285.	37.70	-1.30	36.40	74.00	37.60	155	65	Vertical
2	2293.	31.17	-1.28	29.89	54.00	24.11	155	281	Vertical
3	3658.	31.42	2.77	34.19	54.00	19.81	155	312	Vertical
4	3673.	36.88	2.81	39.69	74.00	34.31	155	96	Vertical
5	5760.	35.87	8.12	43.99	74.00	30.01	155	96	Vertical
6	5764.	29.71	8.13	37.84	54.00	16.16	155	250	Vertical
7	7732.	37.18	14.15	51.33	74.00	22.67	155	343	Vertical
8	7760.	29.92	14.22	44.14	54.00	9.86	155	343	Vertical
9	11633	29.01	19.92	48.93	54.00	5.07	155	219	Vertical
10	11679	35.72	19.85	55.57	74.00	18.43	155	34	Vertical
11	14525	30.60	22.62	53.22	74.00	20.78	155	96	Vertical
12	14571	22.49	22.48	44.97	54.00	9.03	155	96	Vertical

- 1. The emission levels of other frequencies were very low against the limit.
- 2. Margin = Limit -Level



# 5.7 Test Photographs (30MHz ~ 1000MHz)



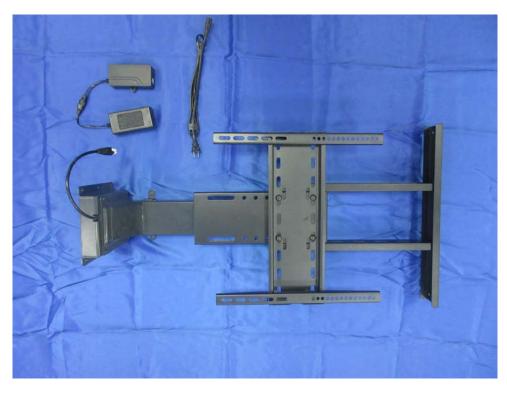


# 5.8 Test Photographs (1000MHz ~ 18000MHz)





# 6 Photographs of EUT







VERITAS									
END	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	l								
	ı								