

Date : 2016-11-17 Page 1 of 28 No. : DMA000285

Applicant : Eggplant Technologies Ltd.

Flat/Rm 1903 19/F, Lee Garden One, 33 Hysan Avenue, Causeway

Bay, Hong Kong

Supplier / Manufacturer : Eggplant Technologies Ltd.

Flat/Rm 1903 19/F, Lee Garden One, 33 Hysan Avenue, Causeway

Bay, Hong Kong

Description of Sample(s): Submitted sample(s) said to be

Product: Move It
Brand Name: Move It
Model No.: MVHD0001

FCC ID: 2AKDVMVHDXX0001

Date Samples Received : 2016-11-07

Date Tested : 2016-11-08 to 2016-11-14

Investigation Requested : Perform ElectroMagnetic Interference measurement in accordance

with FCC 47CFR [Codes of Federal Regulations] Part 15: 2015 and

ANSI C63.10: 2013 for FCC Certification.

Conclusions : The submitted product <u>COMPLIED</u> with the requirements of Federal

Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described

above and on Section 2.2 in this Test Report.

Remarks : ---



ElectroMagnetic Compatibility Department
For and on behalf of
The Hong Kong Standards and Testing Centre Ltd.

The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong
Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong
Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org



Date No.	: 2016-11-17 : DMA000285	Page 2 of 28
CONT	TENT:	
	Cover Content	Page 1 of 28 Page 2 of 28
<u>1.0</u>	General Details	
1.1	Test Laboratory	Page 3 of 28
1.2	Equipment Under Test [EUT] Description of EUT operation	Page 3 of 28
1.3	Date of Order	Page 3 of 28
1.4	Submitted Sample(s)	Page 3 of 28
1.5	Test Duration	Page 3 of 28
1.6	Country of Origin	Page 3 of 28
<u>2.0</u>	Technical Details	
2.1	Investigations Requested	Page 4 of 28
2.2	Test Standards and Results Summary	Page 4 of 28
<u>3.0</u>	Test Results	
3.1	Emission	Page 5-19 of 28
3.2	Bandwidth Measurement	Page 20-23 of 28
Apper	ndix A	
List of	Measurement Equipment	Page 24 of 28
Apper	ndix B	
Photog	graph(s) of Product	Page 25-28 of 28

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



Date : 2016-11-17 Page 3 of 28

No. : DMA000285

1.0 General Details

1.1 Test Laboratory

The Hong Kong Standards and Testing Centre Ltd.

EMC Laboratory

10 Dai Wang Street, Taipo Industrial Estate, New Territories, Hong Kong

Telephone: 852 2666 1888 Fax: 852 2664 4353

1.2 Equipment Under Test [EUT]

Description of Sample(s)

Product: Move It

Manufacturer: Eggplant Technologies Ltd.

Flat/Rm 1903 19/F, Lee Garden One, 33 Hysan Avenue,

Causeway Bay, Hong Kong

Brand Name: Move It
Model Number: MVHD0001
Rating: Battery: 3.7Vd.c.

1.2.1 Description of EUT Operation

The Equipment Under Test (EUT) is a Move It. It is a transceiver operating at 2407MHz~2477MHz and the RF signal was modulated by IC.

1.3 Date of Order

2016-11-07

1.4 Submitted Sample(s):

1 Sample

1.5 Test Duration

2016-11-08 to 2016-11-14

1.6 Country of Origin

China



Date : 2016-11-17 Page 4 of 28 No. : DMA000285

<u>2.0</u> Technical Details

2.1 Investigations Requested

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2015 Regulations and ANSI C63.10: 2013 for FCC Certification. The device was realized by test software.

2.2 Test Standards and Results Summary Tables

	EMISSION Results Summary										
Test Condition	Test Requirement	Test Method	Class /	Т	est Result						
			Severity	Pass	Failed	N/A					
Field Strength of Fundamental & Harmonics Emissions	FCC 47CFR 15.249	ANSI C63.10: 2013	N/A								
Radiated Emissions	FCC 47CFR 15.209	ANSI C63.10: 2013	N/A								
AC Mains Conducted Emissions	FCC 47CFR 15.207	ANSI C63.10: 2013	N/A								
Antenna requirement	FCC 47CFR 15.203	N/A	N/A	\boxtimes							

Note: N/A - Not Applicable



Date : 2016-11-17 Page 5 of 28

No. : DMA000285

3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions

Test Requirement: FCC 47CFR 15.249 & FCC 47CFR 15.209

Test Method: ANSI C63.10:2013

Test Date: 2016-11-11 to 2016-11-14

Mode of Operation: Tx mode

Test Method:

For emission measurements at or below 1 GHz, the sample was placed 0.8m above the ground plane of semi-anechoic Chamber*. For emission measurements above 1 GHz, the sample was placed 1.5m above the ground plane of semi-anechoic Chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

* Semi-Anechoic chamber located on the G/F of The Hong Kong Standards and Testing Centre Ltd. with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 607756.



Date : 2016-11-17 Page 6 of 28 No. : DMA000285

Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av) RBW: 10kHz

VBW: 30kHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

30MHz - 1GHz (QP) RBW: 120kHz

VBW: 120kHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

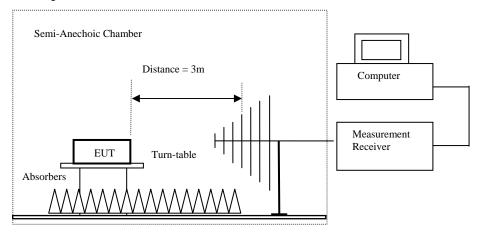
Above 1GHz (Pk & Av) RBW: 1MHz

VBW: 1MHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

Test Setup:



Ground Plane

- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used, 9kHz to 30MHz loop antennas are used.



Date : 2016-11-17 Page 7 of 28 No. : DMA000285

Limits for Field Strength of Fundamental & Harmonics Emissions [FCC 47CFR 15.249]:

Frequency Range of Fundamental	Field Strength of Fundamental Emission	Field Strength of Harmonics Emission
[MHz]	[microvolts/meter]	[microvolts/meter]
902-928	50,000 [QP]	500 [Average]
2400-2483.5	50,000 [AV]	500 [Average]

Results of Tx mode (Lowest Frequency Channel-2407 MHz): Pass

Field Strength of Fundamental Emissions										
			Peak Value							
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field				
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m					
2407.00	49.8	36.8	86.6	21,379.6	500,000	Vertical				
2407.00	48.6	36.4	85.0	17,782.8	500,000	Horizontal				

	Field Strength of Fundamental Emissions										
	Average Value										
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field					
	Level @3m	Factor	Strength	Strength		Polarity					
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m						
2407.00	38.0	36.8	74.8	5,495.4	50,000	Vertical					
2407.00	38.7	36.4	75.1	5,688.5	50,000	Horizontal					

Field Strength of Harmonics Emission										
			Peak Value							
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field				
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m					
4814.0	14.8	41.5	56.3	653.1	5,000	Vertical				
4814.0	13.1	42.4	55.5	595.7	5,000	Horizontal				
7221.0	8.4	45.1	53.5	473.2	5,000	Vertical				
7221.0	7.9	46.2	54.1	507.0	5,000	Horizontal				
9628.0	8.3	48.0	56.3	653.1	5,000	Vertical				
9628.0	6.2	48.8	55.0	562.3	5,000	Horizontal				



Date : 2016-11-17 Page 8 of 28

No. : DMA000285

Field Strength of Harmonics Emission										
		A	Average Valu	e						
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field				
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m					
4814.0	-2.4	41.5	39.1	90.2	500	Vertical				
4814.0	-2.6	42.4	39.8	97.7	500	Horizontal				
7221.0	-6.0	45.1	39.1	90.2	500	Vertical				
7221.0	-7.0	46.2	39.2	91.2	500	Horizontal				
9628.0	-6.6	48.0	41.4	117.5	500	Vertical				
9628.0	-8.4	48.8	40.4	104.7	500	Horizontal				

Results of Tx mode (Middle Frequency Channel- 2438MHz): Pass

Field Strength of Fundamental Emissions									
	Peak Value								
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field			
	Level @3m	Factor	Strength	Strength		Polarity			
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m				
2438.00	49.3	36.8	86.1	20,183.7	500,000	Vertical			
2438.00	49.3	36.4	85.7	19,275.2	500,000	Horizontal			

Field Strength of Fundamental Emissions Average Value										
Frequency Measured Correction Field Field Limit @3m E-Field										
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m	_				
2438.00	39.0	36.8	75.8	6,166.0	50,000	Vertical				
2438.00	39.5	36.4	75.9	6,237.3	50,000	Horizontal				

Field Strength of Harmonics Emission										
			Peak Value							
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field				
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m					
4876.0	13.5	41.6	55.1	568.9	5,000	Vertical				
4876.0	13.2	42.5	55.7	609.5	5,000	Horizontal				
7314.0	8.2	45.2	53.4	467.7	5,000	Vertical				
7314.0	9.4	46.3	55.7	609.5	5,000	Horizontal				
9752.0	6.4	48.1	54.5	530.9	5,000	Vertical				
9752.0	6.7	48.9	55.6	602.6	5,000	Horizontal				



Date : 2016-11-17 Page 9 of 28 No. : DMA000285

	Field Strength of Harmonics Emission										
		Ā	Avarage Valu	e							
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field					
	Level @3m	Factor	Strength	Strength		Polarity					
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m						
4876.0	-1.2	41.6	40.4	104.7	500	Vertical					
4876.0	-1.6	42.5	40.9	110.9	500	Horizontal					
7314.0	-6.7	45.2	38.5	84.1	500	Vertical					
7314.0	-6.4	46.3	39.9	98.9	500	Horizontal					
9752.0	-7.3	48.1	40.8	109.6	500	Vertical					
9752.0	-8.8	48.9	40.1	101.2	500	Horizontal					

Results of Tx mode (Highest Frequency Channel – 2477MHz): Pass

Results of 1x mode (fighest Frequency Channel – 247/19112). Lass										
Field Strength of Fundamental Emissions										
Peak Value										
Frequency	Frequency Measured Correction Field Field Limit @3m E-Field									
	Level @3m	Factor	Strength	Strength		Polarity				
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m					
2477.00	2477.00 49.3 36.8 86.1 20,183.7 500,000 Vertical									
2477.00	49.3	36.4	85.7	19,275.2	500,000	Horizontal				

Field Strength of Fundamental Emissions							
Average Value							
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field	
	Level @3m	Factor	Strength	Strength		Polarity	
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m		
2477.00	39.9	36.8	76.7	6,839.1	50,000	Vertical	
2477.00	38.7	36.4	75.1	5,688.5	50,000	Horizontal	



Date : 2016-11-17 Page 10 of 28 No. : DMA000285

Field Strength of Harmonics Emission							
			Peak Value				
Frequency	Measured	Correction	Field	Field	Limit @3m	E-Field	
	Level @3m	Factor	Strength	Strength		Polarity	
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m		
4954.0	14.7	41.4	56.1	638.3	5,000	Vertical	
4954.0	13.0	42.7	55.7	609.5	5,000	Horizontal	
7431.0	8.5	45.6	54.1	507.0	5,000	Vertical	
7431.0	8.6	46.5	55.1	568.9	5,000	Horizontal	
9908.0	7.0	48.6	55.6	602.6	5,000	Vertical	
9908.0	6.5	49.7	56.2	645.7	5,000	Horizontal	

	Field Strength of Harmonics Emission							
		A	Avarage Valu	e				
Frequency	Measured Correction Field Field Limit @3m E-							
	Level @3m	Factor	Strength	Strength		Polarity		
MHz	dBμV/m	dBμV/m	dBμV/m	μV/m	μV/m			
4954.0	-0.4	41.4	41.0	112.2	500	Vertical		
4954.0	-3.1	42.7	39.6	95.5	500	Horizontal		
7431.0	-6.9	45.6	38.7	86.1	500	Vertical		
7431.0	-7.0	46.5	39.5	94.4	500	Horizontal		
9908.0	-8.2	48.6	40.4	104.7	500	Vertical		
9908.0	-7.8	49.7	41.9	124.5	500	Horizontal		

Remarks:

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement (9kHz-30MHz): 2.0dB uncertainty (30MHz -1GHz): 4.9dB (1GHz -6GHz): 4.02dB

(6GHz -26.5GHz): 4.03dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

^{*} Denotes restricted band of operation.



Date : 2016-11-17 Page 11 of 28

No. : DMA000285

Radiated Emissions Measurement:

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).

Result: RF Radiated Emissions (1GHz-26GHz)(worse data) (Lowest)-GFSK

Field Strength of Band-edge Compliance							
Peak Value							
Frequency	Measured	Correction	Field	Limit	Margin	E-Field	
	Level @3m	Factor	Strength	@3m		Polarity	
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dBμV/m		
2400.0	5.9	36.8	42.7	74.0	31.3	Vertical	
2400.0	4.6	36.4	41.0	74.0	33.0	Horizontal	

Field Strength of Band-edge Compliance							
	Average Value						
Frequency	Measured	Correction	Field	Limit	Margin	E-Field	
	Level @3m	Factor	Strength	@3m		Polarity	
MHz	dΒμV	dB/m	dBμV/m	dBμV/m	dBμV/m		
2400.0	-1.8	36.8	35.0	54.0	19.0	Vertical	
2400.0	-2.9	36.4	33.5	54.0	20.5	Horizontal	

Result: RF Radiated Emissions (1GHz-26GHz)(worse data) (Highest) -GFSK

result: At Radiated Emissions (10112-200112)(Worse data) (Highest) -0151x							
Field Strength of Band-edge Compliance							
Peak Value							
Frequency	Measured	Correction	Field	Limit	Margin	E-Field	
	Level @3m	Factor	Strength	@3m		Polarity	
MHz	dΒμV	dB/m	dBμV/m	$dB\muV/m$	$dB\mu V/m$		
2483.5	5.6	36.4	42.0	74.0	32.0	Horizontal	
2483.5	5.1	36.8	41.9	74.0	32.1	Vertical	

Field Strength of Band-edge Compliance							
	Average Value						
Frequency	Measured	Correction	Field	Limit	Margin	E-Field	
	Level @3m	Factor	Strength	@3m		Polarity	
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dBμV/m		
2483.5	-0.9	36.4	35.5	54.0	18.5	Horizontal	
2483.5	-2.0	36.8	34.8	54.0	19.2	Vertical	



Date : 2016-11-17 Page 12 of 28 No. : DMA000285

Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

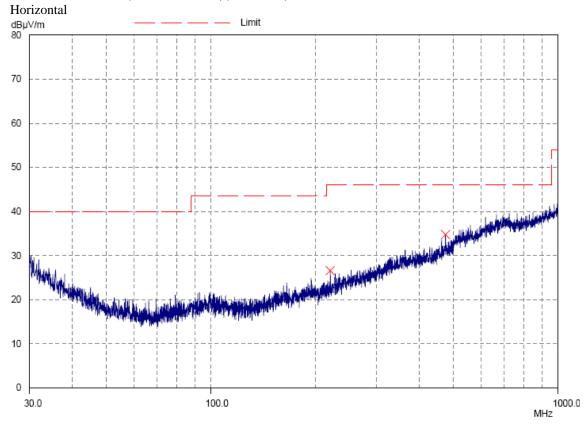
Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of TX mode (9kHz - 30MHz): PASS

Emissions detected are more than 20 dB below the FCC Limits

Results of TX mode (30MHz - 1GHz)(2407MHz): PASS





Date : 2016-11-17 Page 13 of 28 No. : DMA000285

Results of TX mode (30MHz - 1GHz) (2407MHz): PASS

Radiated Emissions							
	Quasi-Peak						
Emission	E-Field	Level	Limit	Level	Limit		
Frequency	Polarity	@3m	@3m	@3m	@3m		
MHz		dBμV/m	dBμV/m	μV/m	μV/m		
220.9	Horizontal	26.6	46.0	21.4	200		
474.6	Horizontal	34.8	46.0	55.0	200		

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



Date : 2016-11-17 Page 14 of 28 No. : DMA000285

Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

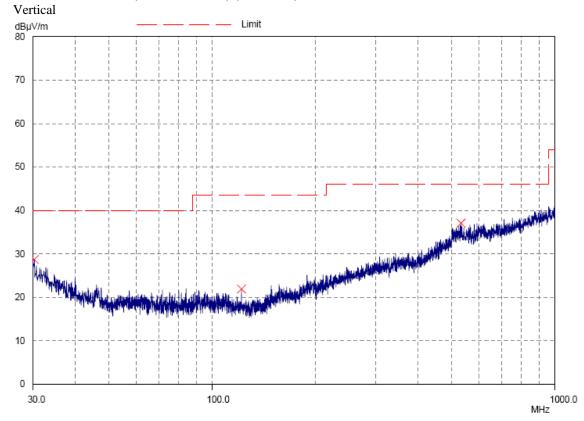
Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of TX mode (9kHz - 30MHz): PASS

Emissions detected are more than 20 dB below the FCC Limits

Results of TX mode (30MHz - 1GHz) (2407MHz): PASS



The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong
Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong
Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited. For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



Date : 2016-11-17 Page 15 of 28

No. : DMA000285

Results of TX mode (30MHz - 1GHz) (2407MHz): PASS

Radiated Emissions Ouasi-Peak						
Emission	E-Field	Level	Limit	Level	Limit	
Frequency	Polarity	@3m	@3m	@3m	@3m	
MHz	-	dBμV/m	dBμV/m	μV/m	μV/m	
30.3	Vertical	28.7	40.0	27.2	100	
121.9	Vertical	21.9	43.5	12.4	150	
533.0	Vertical	37.1	46.0	71.6	200	

Remarks:

Calculated measurement uncertainty (30MHz - 1GHz): 4.9dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.



Date : 2016-11-17 Page 16 of 28

No. : DMA000285

3.1.2 AC Mains Conducted Emissions (0.15MHz to 30MHz)

Test Requirement: FCC 47CFR 15.249 & FCC 47CFR 15.207

Test Method: ANSI C63.10:2013

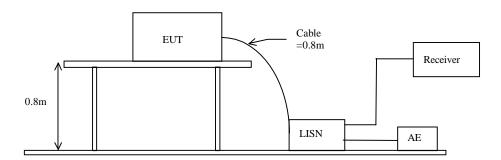
Test Date: 2016-11-14

Mode of Operation: Charge mode
Test Voltage: 120Va.c. 60Hz

Test Method:

The test was performed in accordance with ANSI ANSI C63.10:2013, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:





Date : 2016-11-17 Page 17 of 28

No. : DMA000285

Limits for Conducted Emissions (FCC 47 CFR 15.207):

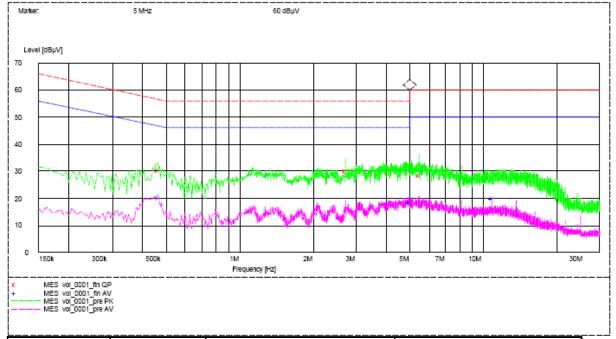
Frequency Range	Quasi-Peak Limits	Average
[MHz]	[dBµV]	[dBµV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

^{*} Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram. NOTE: test mode is only charger , no Transmit

Results of Charge mode (L): PASS

Please refer to the following diagram for individual results.



		Quasi-peak		Average	
Conductor	Frequency	Level	Limit	Level	Limit
Live or Neutral	MHz	dΒμV	dΒμV	dΒμV	dΒμV
Live	0.460	30.5	57.0	_*_	_*_
Live	2.725	30.0	56.0	_*_	_*_
Live	5.450	28.6	60.0	_*_	_*_
Live	0.460	_*_	_*_	20.3	47.0
Live	4.960	_*_	_*_	18.6	46.0
Live	10.890	_*_	_*_	19.9	50.0

The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org



Date : 2016-11-17 Page 18 of 28

No. : DMA000285

Frequency Range	Quasi-Peak Limits	Average	
[MHz]	[dBµV]	[dBµV]	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5.0	56	46	
5.0-30.0	60	50	

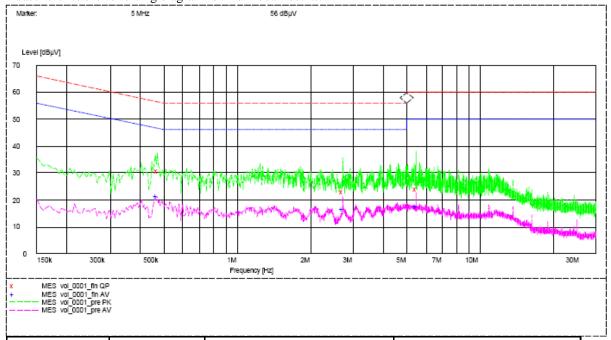
^{*} Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

NOTE: test mode is only charger, no Transmit

Results of Charge mode (N): PASS

Please refer to the following diagram for individual results.



		Quasi-peak		Average	
Conductor	Frequency	Level	Limit	Level	Limit
Live or Neutral	MHz	dΒμV	dBμV	dΒμV	dΒμV
Neutral	0.470	30.8	57.0	_*_	_*_
Neutral	2.730	23.2	56.0	_*_	_*_
Neutral	5.455	24.0	60.0	_*_	_*_
Neutral	0.465	_*_	_*_	21.1	47.0
Neutral	2.730	_*_	_*_	16.7	46.0
Neutral	5.455	_*_	_*_	17.5	50.0

Remarks:

Calculated measurement uncertainty (0.15MHz - 30MHz): 3.25dB

The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited. For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

^{-*-} Emission(s) that is far below the corresponding limit line.



Date : 2016-11-17 Page 19 of 28 No. : DMA000285

3.1.3 Antenna Requirement

Test Requirements: § 15.203

Test Specification:

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.

Test Results:

This is single strand antenna. There is no external antenna, the antenna gain = 3dBi. User is unable to remove or changed the Antenna.



Date : 2016-11-17 Page 20 of 28 No. : DMA000285

3.2 20dB Bandwidth of Fundamental Emission

Test Requirement: FCC 47 CFR 15.249
Test Method: ANSI C63.10:2013

Test Date: 2016-11-08 Mode of Operation: Tx mode

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Test Setup:

As Test Setup of clause 3.1.1 in this test report.

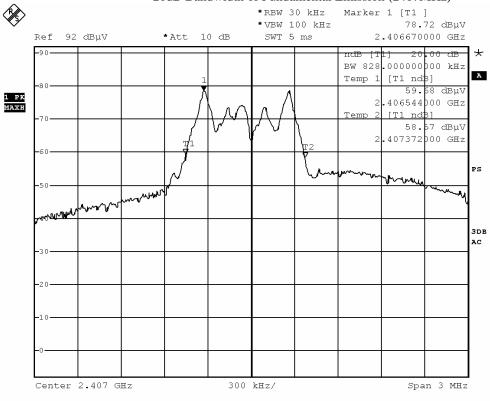


Date : 2016-11-17 Page 21 of 28 No. : DMA000285

Limits for 20dB Bandwidth of Fundamental Emission (Low Frequency Channel):

Frequency Range	20dB Bandwidth
[MHz]	[KHz]
2407.0	828.0

20dB Bandwidth of Fundamental Emission (2407MHz)



ВМР

Date: 8.NOV.2016 11:35:14

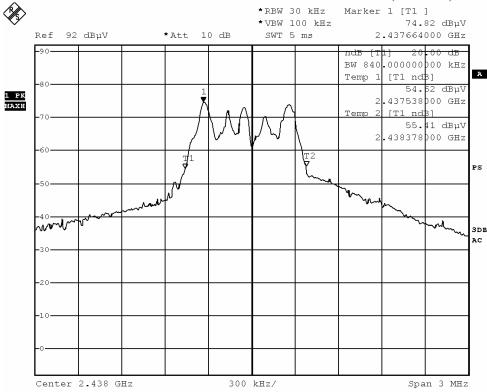


Date : 2016-11-17 Page 22 of 28 No. : DMA000285

Limits for 20dB Bandwidth of Fundamental Emission (Middle Frequency Channel):

Frequency Range	20dB Bandwidth
[MHz]	[KHz]
2438.0	840.0

20dB Bandwidth of Fundamental Emission (2438MHz)



ВМР

Date: 8.NOV.2016 11:30:48

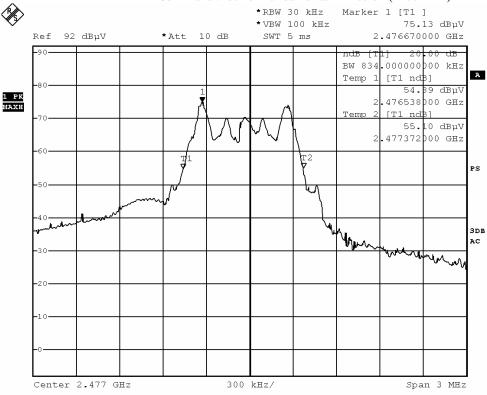


Date : 2016-11-17 Page 23 of 28 No. : DMA000285

Limits for 20dB Bandwidth of Fundamental Emission (High Frequency Channel):

Frequency Range	20dB Bandwidth
[MHz]	[KHz]
2477.0	834.0

20dB Bandwidth of Fundamental Emission (2477MHz)



ВМР

Date: 8.NOV.2016 11:39:42



Date : 2016-11-17 Page 24 of 28 No. : DMA000285

Appendix A

List of Measurement Equipment

Radiated Emission

Rudiated Emission						
EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM299	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3115	00114120	2016/04/27	2018/04/27
EM300	Pyramidal Standard Gain Horn Antenna	ETS-Lindgren	3160-09	00130130	2016/05/13	2018/05/13
EM301	Pyramidal Standard Gain Horn Antenna	ETS-Lindgren	3160-10	00130988	2016/05/13	2018/05/13
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM216	MINI MAST SYSTEM	EMCO	2075	00026842	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3		2016/04/24	2017/04/24
EM355	Biconilog Antenna	ETS-Lindgren	3143B	00094856	2016/03/03	2018/03/03
EM353	LOOP ANTENNA	ETS_LINDGREN	6502	00206533	2016/03/16	2018/03/16
EM229	EMI TEST RECEIVER	R&S	ESIB40	100248	2016/06/01	2017/06/01
RE01	Cable	N/A	N/A	N/A	2016-9-28	2018-9-27

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM119	LISN	R & S	ESH3-Z5	0831.5518.52	2016/10/23	2017/10/23
EM145	EMI TEST RECEIVER	R & S	ESCS 30	830245/021	2016/06/01	2017/06/01
EM179	IMPULSE LIMITER	ROHDE & SCHWARZ	ESH3-Z2	357-8810.52/54	2016/01/12	2017/01/12
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057- 99A	2012/02/03	2017/02/03
RE02	CABLE	N/A	N/A	N/A	2016-9-28	2018-9-27

Remarks:-

CM Corrective Maintenance

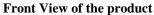
N/A Not Applicable
TBD To Be Determined



Date : 2016-11-17 Page 25 of 28 No. : DMA000285

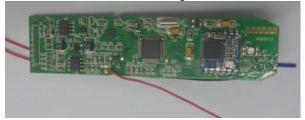
Appendix B

Photographs of EUT

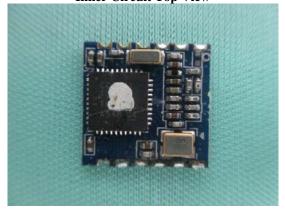




Inner Circuit Top View



Inner Circuit Top View



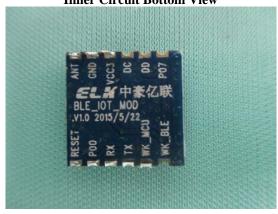
Rear View of the product



Inner Circuit Bottom View



Inner Circuit Bottom View





Date : 2016-11-17 Page 26 of 28 No. : DMA000285

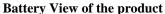
Photographs of EUT

Inner Circuit Top View







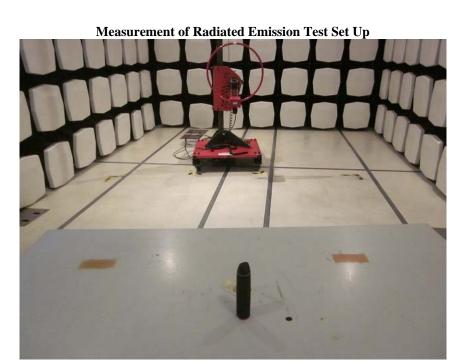






Date : 2016-11-17 Page 27 of 28 No. : DMA000285

Photographs of EUT





The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



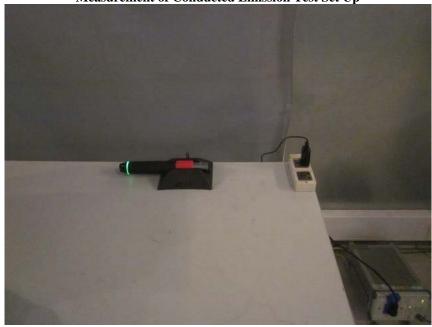
Date : 2016-11-17 Page 28 of 28 No. : DMA000285

Photographs of EUT

Measurement of Radiated Emission Test Set Up



Measurement of Conducted Emission Test Set Up



***** End of Test Report *****

The Hong Kong Standards and Testing Centre Limited

Head Office: 10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Unit B, 10/F, Block 1, Tai Ping Industrial Centre, No. 57 Ting Kok Road, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by the Company as a result of this application for testing service (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders
- 4. The Report refers only to the sample tested and does not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
- 5. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 6. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 7. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
- 10. Issuance records of the Report are available on the internet at www.stc-group.org. Further enquiry of validity or verification of the Reports should be addressed to the Company.