FCC REPORT

Applicant: Autel Robotics Co., Ltd.

Address of Applicant: 9th Floor, Bldg. B1,Zhiyuan,1001 Xueyuan Rd., Xili, Nanshan, Shenzhen 518055, China

Equipment Under Test (EUT)

Product Name: Image transmission Module

Model No.: M240958L

Trade mark: AUTEL ROBOTICS

FCC ID: 2AGNTMTBL

Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407

Date of sample receipt: 13 Oct., 2021

Date of Test: 13 Oct., to 01 Nov., 2021

Date of report issued: 02 Nov., 2021

Test Result: PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*02 Nov., 2021*	*Original*

Tested by: Mike.ou ***Date:*** *02 Nov., 2021*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *02 Nov., 2021*

Project Engineer

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4 Test Summary

Test Item	Section in CFR 47	Test Data	Test Result
Antenna requirement	15.203 & 15.407 (a)	See Section 6.1	Pass
AC Power Line Conducted Emission	15.207	See Section 6.2	Pass
Duty Cycle	ANSI C63.10-2013	Appendix A – 5.2G Appendix A – 5.8G	Pass
Conducted Output Power	15.407 (a) (1) (iv) & (a) (3)	Appendix A – 5.2G Appendix A – 5.8G	Pass
26dB Occupied Bandwidth	15.407 (a) (12) & (e)	Appendix A – 5.2G Appendix A – 5.8G	Pass
Power Spectral Density	15.407 (a) (1) (iv) & (a) (3)	Appendix A – 5.2G Appendix A – 5.8G	Pass
Band Edge	15.407(b)	See Section 6.6	Pass
Spurious Emission	15.407 (b) & 15.205 & 15.209	See Section 6.7	Pass
Frequency Stability	15.407(g)	Appendix A – 5.2G Appendix A – 5.8G	Pass

Remark:

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).*

Test Method:	*ANSI C63.10-2013* *KDB 789033 D02 General UNII Test Procedures New Rules v02r01*

5 General Information

5.1 Client Information

Applicant:	Autel Robotics Co., Ltd.
Address:	9th Floor, Bldg. B1, Zhiyuan,1001 Xueyuan Rd., Xili, Nanshan, Shenzhen 518055, China
Manufacturer/ Factory:	Autel Robotics Co., Ltd.
Address:	9th Floor, Bldg. B1, Zhiyuan,1001 Xueyuan Rd., Xili, Nanshan, Shenzhen 518055, China

5.2 General Description of E.U.T.

Product Name:	Image transmission Module
Model No.:	M240958L
Operation Frequency:	5154MHz-5246MHz, 5728.0MHz~5847.0MHz
Channel numbers:	5154MHz-5246MHz: 93 for 1.4MHz Bandwidth 87 for 10 MHz Bandwidth 67 for 20 MHz Bandwidth 5728.0MHz~5847.0MHz 120 for 1.4MHz Bandwidth 110 for 10 MHz Bandwidth 102 for 20 MHz Bandwidth
Channel separation:	1MHz
Modulation technology	QPSK and 16QAM
ANT TXRX Type:	MIMO
Antenna Type:	External Antenna
Antenna gain:	ANT 1: 5.2GHz:-4.3dBi(declare by Applicant) 5.8GHz:-1.8dBi(declare by Applicant) ANT 2: 5.2GHz: -2.1dBi(declare by Applicant) 5.8GHz: 0dBi(declare by Applicant)
Power supply:	DC 12V
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.2GHz:

Operation Frequency each of channel for 1.4MHz Bandwidth					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5154MHz	….	….	….	….
2	5155MHz	48	5201MHz	92	5245MHz
3	5156MHz	….	….	93	5246MHz
Note: *1. Channel 1, 48 & 93 selected as Lowest, Middle and Highest channel.*					

Operation Frequency each of channel for 10MHz Bandwidth					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5157MHz	….	….	….	….
2	5158MHz	45	5201MHz	86	5242MHz
3	5159MHz	….	….	87	5243MHz
Note: *2. Channel 1, 45 & 87 selected as Lowest, Middle and Highest channel.*					

Operation Frequency each of channel for 20MHz Bandwidth					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5167MHz	….	….	….	….
2	5168MHz	35	5201MHz	66	5232MHz
3	5169MHz	….	….	67	5233MHz
Note: *3. Channel 1, 35 & 67 selected as Lowest, Middle and Highest channel.*					

5.8GHz:

Operation Frequency each of channel for 1.4MHz Bandwidth							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5728.0MHz	4	5731.0MHz	….	….	120	5847.0MHz
2	5729.0MHz	5	5732.0MHz	61	5788MHz		
3	5730.0MHz	6	5733.0MHz	….	….		
Note: *1. Channel 1, 61 & 120 selected as Lowest, Middle and Highest channel.*							

Operation Frequency each of channel for 10MHz Bandwidth							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5733.0MHz	4	5736.0MHz	….	….	109	5841.0MHz
2	5734.0MHz	5	5737.0MHz	56	5788.0MHz	110	5842.0MHz
3	5735.0MHz	6	5738.0MHz	….	….		
Note: *1. Channel 1, 56 & 110 selected as Lowest, Middle and Highest channel.*							

Operation Frequency each of channel for 51 for 20MHz Bandwidth							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5738.0MHz	4	5741.0MHz	….	….	50	5838.0MHz
2	5739.0MHz	5	5742.0MHz	52	5789.0MHz	51	5839.0MHz
3	5740.0MHz	6	5743.0MHz	….	….		
Note: *1. Channel 1, 52 & 51 selected as Lowest, Middle and Highest channel.*							

5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Continuously transmitting mode	Keep the EUT in 100% duty cycle transmitting with modulation.
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
The EUT has been tested as an independent unit.				

5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 150KHz) for V-AMN	3.11 dB
Conducted Emission (150kHz ~ 30MHz) for V-AMN	2.62 dB
Conducted Emission (150kHz ~ 30MHz) for AAN	3.54 dB
Radiated Emission (9kHz ~ 30MHz electric field) for 3m SAC	3.13 dB
Radiated Emission (9kHz ~ 30MHz magnetic field) for 3m SAC	3.13 dB
Radiated Emission (30MHz ~ 1GHz) for 3m SAC	4.45 dB
Radiated Emission (1GHz ~ 18GHz) for 3m SAC	5.34 dB
Radiated Emission (18GHz ~ 40GHz) for 3m SAC	5.34 dB
Radiated Emission (30MHz ~ 1GHz) for 10m SAC	4.32 dB

5.6 Additions to, deviations, or exclusions from the method

No

5.7 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.8 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://www.ccis-cb.com

5.10 Test Instruments list

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
3m SAC	ETS	RFD-100	Q1984	04-14-2021	04-13-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	9163-1246	03-07-2021	03-06-2022
Biconical Antenna	SCHWARZBECK	VUBA 9117	9117#359	06-17-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	912D-916	03-07-2021	03-06-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1067	04-02-2021	04-01-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1068	04-02-2021	04-01-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021
Low Pre-amplifier	SCHWARZBECK	BBV9743B	00305	03-07-2021	03-06-2022
High Pre-amplifier	SKET	LNPA_0118G-50	MF280208233	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-1G-NN-8M	JYT3M-1	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-18G-NN-8M	JYT3M-2	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-1G-BB-5M	JYT3M-3	03-07-2021	03-06-2022
Cable	Bost	JYT3M-40G-SS-8M	JYT3M-4	04-02-2021	04-01-2022
EMI Test Software	Tonscend	TS+	Version:3.0.0.1		

Conducted Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
EMI Test Receiver	Rohde & Schwarz	ESCI 3	101189	03-03-2021	03-02-2022
LISN	Rohde & Schwarz	ENV432	101602	04-06-2021	04-05-2022
LISN	Rohde & Schwarz	ESH3-Z5	843862/010	06-18-2020	06-17-2022
RF Switch	TOP PRECISION	RSU0301	N/A	03-03-2021	03-02-2022
Cable	Bost	JYTCE-1G-NN-2M	JYTCE-1	03-03-2021	03-02-2022
Cable	Bost	JYTCE-1G-BN-3M	JYTCE-2	03-03-2021	03-02-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		

Conducted method:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
Spectrum Analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021
Vector Signal Generator	Keysight	N5182B	MY59101009	11-27-2020	11-26-2021
Analog Signal Generator	Keysight	N5173B	MY59100765	11-27-2020	11-26-2021
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-27-2020	11-26-2021
Simulated Station	Rohde & Schwarz	CMW270	102335	11-27-2020	11-26-2021
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A
PDU	MWRF-test	XY-G10	N/A	N/A	N/A
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2021
Temperature Humidity Chamber	ZhongZhi	CZ－C－150D	ZH16491	11-01-2020	10-31-2021
				11-01-2021	10-31-2022
Test Software	MWRF-tes	MTS 8310	Version: 2.0.0.0		

6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:	FCC Part15 E Section 15.203 /407(a)

15.203 requirement:

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, 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.

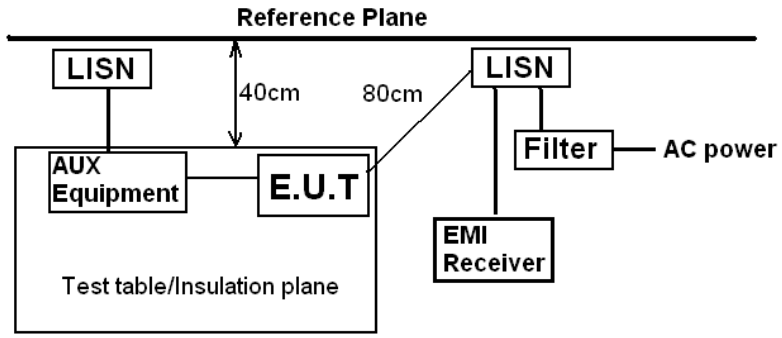
This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and 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.

E.U.T Antenna:	

The antenna cannot replace by end-user, the best case gain of the antenna as bellow:

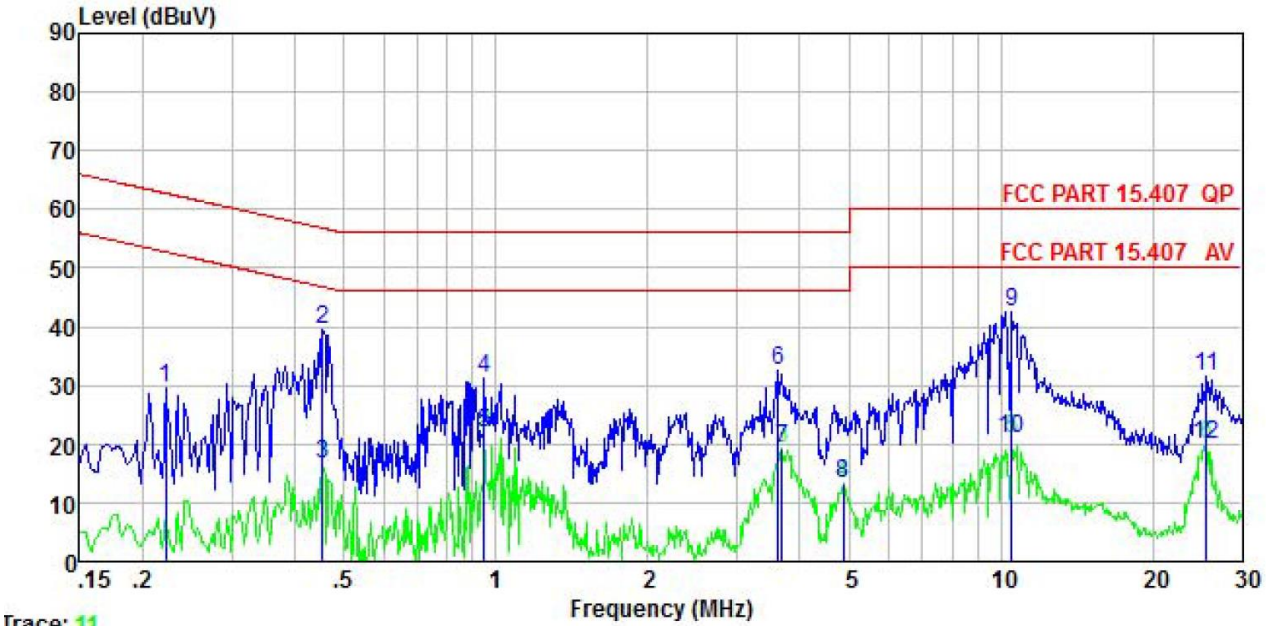
Band	ANT 1 Gain	ANT 2 Gain
5.2GHz	-4.3dBi	-2.1 dBi
5.8GHz	-1.8dBi	0 dBi

6.2 Conducted Emission

Test Requirement:	FCC Part15 C Section 15.207		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	
	0.15-0.5	66 to 56*	0.15-0.5
	0.5-5	56	0.5-5
	5-30	60	5-30
	* Decreases with the logarithm of the frequency.		
Test procedure	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10(latest version) on conducted measurement.		
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*		
Test Instruments:	Refer to section 5.10 for details		
Test mode:	Refer to section 5.3 for details.		
Test results:	Passed		

Measurement Data:

Product name:	Image transmission Module	**Product model:**	M240958L
Test by:	Mike	**Test mode:**	5.2GHz Tx mode
Test frequency:	150 kHz ~ 30 MHz	**Phase:**	Line
Test voltage:	AC 120 V/60 Hz	**Environment:**	Temp: 22.5℃ Huni: 55%

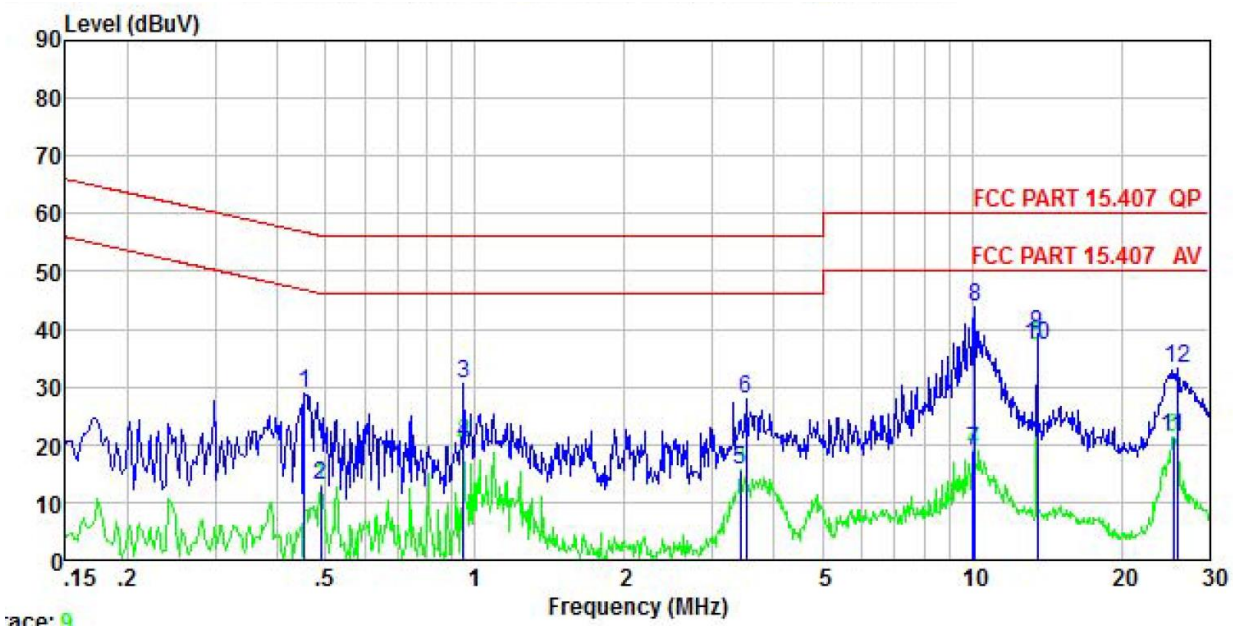


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.222	19.39	10.24	-0.19	0.03	29.47	62.74	-33.27	QP
2	0.454	29.32	10.28	-0.01	0.03	39.62	56.80	-17.18	QP
3	0.454	6.21	10.28	-0.01	0.03	16.51	46.80	-30.29	Average
4	0.948	20.68	10.32	0.32	0.05	31.37	56.00	-24.63	QP
5	0.948	11.27	10.32	0.32	0.05	21.96	46.00	-24.04	Average
6	3.623	22.12	10.38	-0.10	0.08	32.48	56.00	-23.52	QP
7	3.681	8.99	10.38	-0.09	0.08	19.36	46.00	-26.64	Average
8	4.874	2.84	10.42	0.07	0.09	13.42	46.00	-32.58	Average
9	10.508	29.70	10.62	2.15	0.12	42.59	60.00	-17.41	QP
10	10.508	7.90	10.62	2.15	0.12	20.79	50.00	-29.21	Average
11	25.591	19.43	10.98	0.99	0.20	31.60	60.00	-28.40	QP
12	25.591	7.81	10.98	0.99	0.20	19.98	50.00	-30.02	Average

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

Product name:	Image transmission Module	Product model:	M240958L
Test by:	Mike	Test mode:	5.2GHz Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

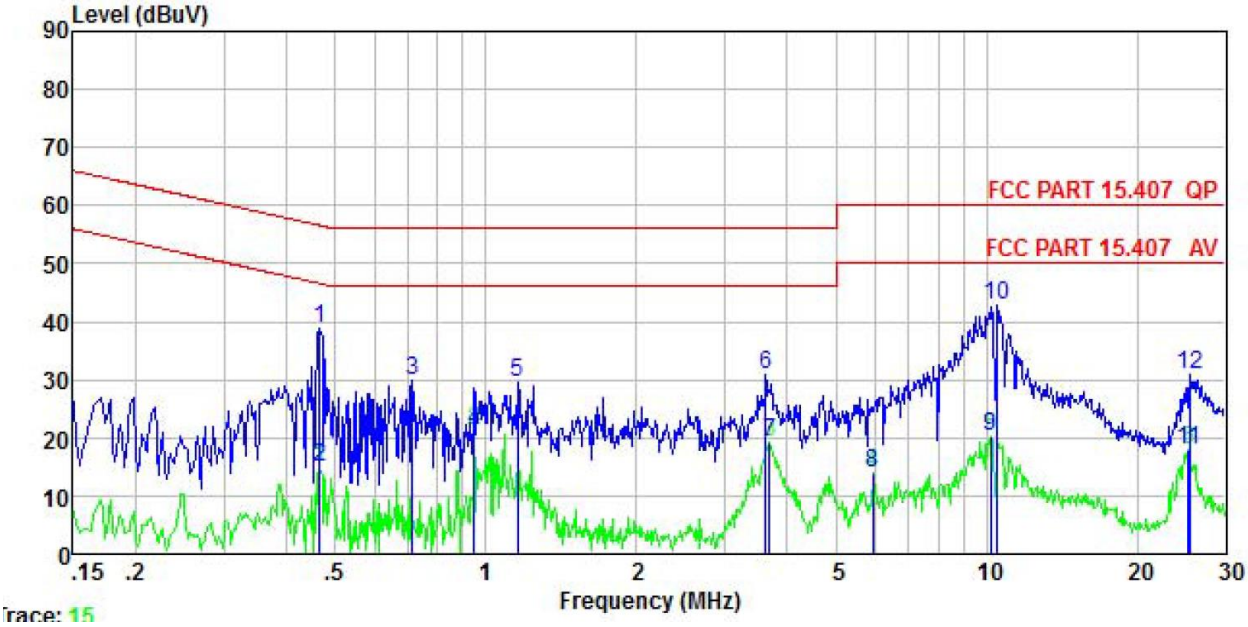


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.454	18.45	10.27	-0.01	0.03	28.74	56.80	-28.06	QP
2	0.489	2.64	10.28	0.02	0.03	12.97	46.19	-33.22	Average
3	0.948	20.24	10.31	0.07	0.05	30.67	56.00	-25.33	QP
4	0.948	9.92	10.31	0.07	0.05	20.35	46.00	-25.65	Average
5	3.417	4.69	10.36	0.40	0.07	15.52	46.00	-30.48	Average
6	3.509	17.20	10.36	0.42	0.08	28.06	56.00	-27.94	QP
7	10.072	6.66	10.59	1.40	0.13	18.78	50.00	-31.22	Average
8	10.125	31.65	10.59	1.43	0.13	43.80	60.00	-16.20	QP
9	13.551	25.68	10.69	2.67	0.12	39.16	60.00	-20.84	QP
10	13.551	23.74	10.69	2.67	0.12	37.22	50.00	-12.78	Average
11	25.456	9.47	10.90	0.77	0.20	21.34	50.00	-28.66	Average
12	25.864	21.25	10.90	0.81	0.21	33.17	60.00	-26.83	QP

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

Product name:	Image transmission Module	Product model:	M240958L
Test by:	Mike	Test mode:	5.8GHz Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

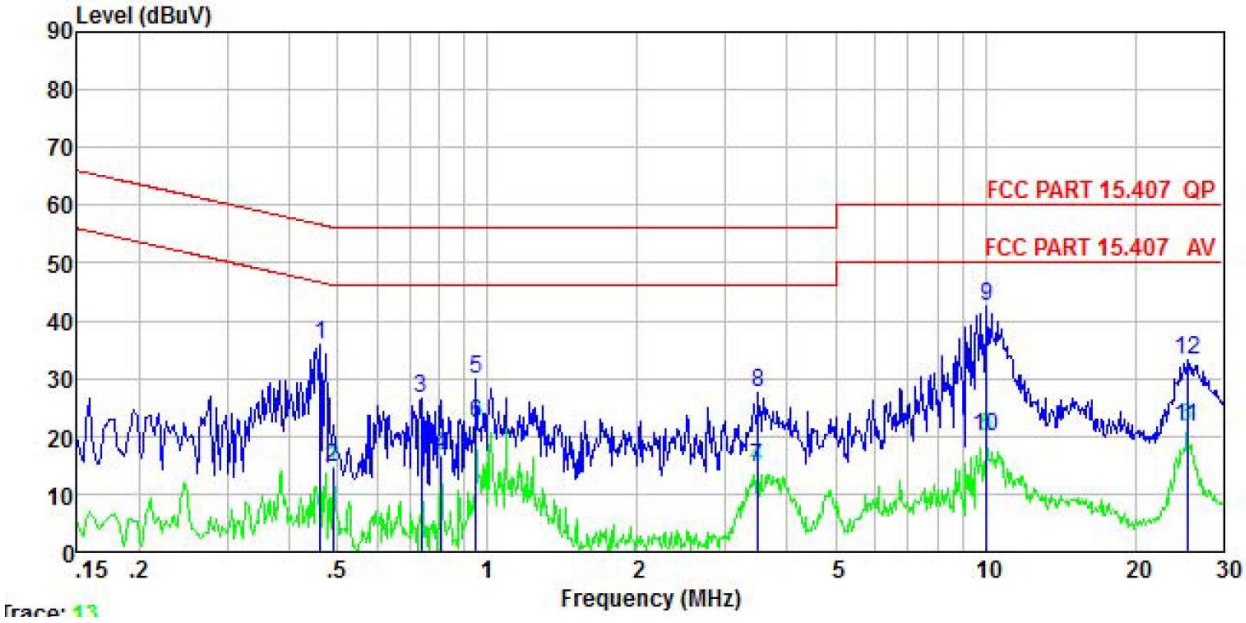


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.466	28.70	10.29	-0.12	0.03	38.90	56.58	-17.68	QP
2	0.466	4.70	10.29	-0.12	0.03	14.90	46.58	-31.68	Average
3	0.712	20.02	10.30	-0.36	0.03	29.99	56.00	-26.01	QP
4	0.948	10.49	10.32	0.32	0.05	21.18	46.00	-24.82	Average
5	1.160	18.76	10.32	0.29	0.08	29.45	56.00	-26.55	QP
6	3.623	20.38	10.38	-0.10	0.08	30.74	56.00	-25.26	QP
7	3.681	9.04	10.38	-0.09	0.08	19.41	46.00	-26.59	Average
8	5.929	2.53	10.45	0.71	0.09	13.78	50.00	-36.22	Average
9	10.179	7.39	10.61	2.02	0.13	20.15	50.00	-29.85	Average
10	10.508	29.80	10.62	2.15	0.12	42.69	60.00	-17.31	QP
11	25.321	5.70	10.97	0.98	0.20	17.85	50.00	-32.15	Average
12	25.591	18.88	10.98	0.99	0.20	31.05	60.00	-28.95	QP

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

Product name:	Image transmission Module	Product model:	M240958L
Test by:	Mike	Test mode:	5.8GHz Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

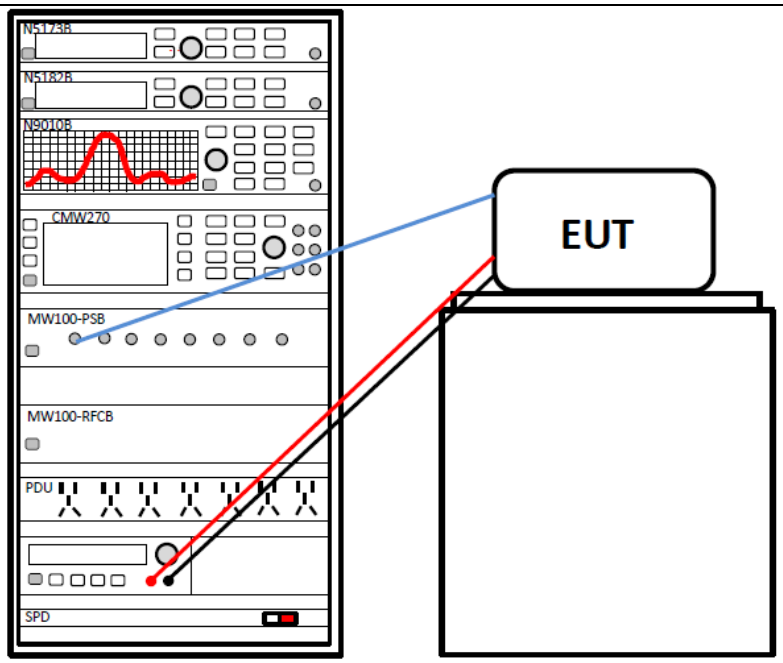


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.461	25.46	10.28	0.00	0.03	35.77	56.67	-20.90	QP
2	0.489	4.28	10.28	0.02	0.03	14.61	46.19	-31.58	Average
3	0.735	16.13	10.30	0.05	0.03	26.51	56.00	-29.49	QP
4	0.809	6.33	10.30	0.06	0.03	16.72	46.00	-29.28	Average
5	0.948	19.58	10.31	0.07	0.05	30.01	56.00	-25.99	QP
6	0.948	11.88	10.31	0.07	0.05	22.31	46.00	-23.69	Average
7	3.472	3.90	10.36	0.41	0.08	14.75	46.00	-31.25	Average
8	3.491	16.64	10.36	0.42	0.08	27.50	56.00	-28.50	QP
9	10.072	30.53	10.59	1.40	0.13	42.65	60.00	-17.35	QP
10	10.072	7.71	10.59	1.40	0.13	19.83	50.00	-30.17	Average
11	25.456	9.75	10.90	0.77	0.20	21.62	50.00	-28.38	Average
12	25.591	21.37	10.90	0.77	0.20	33.24	60.00	-26.76	QP

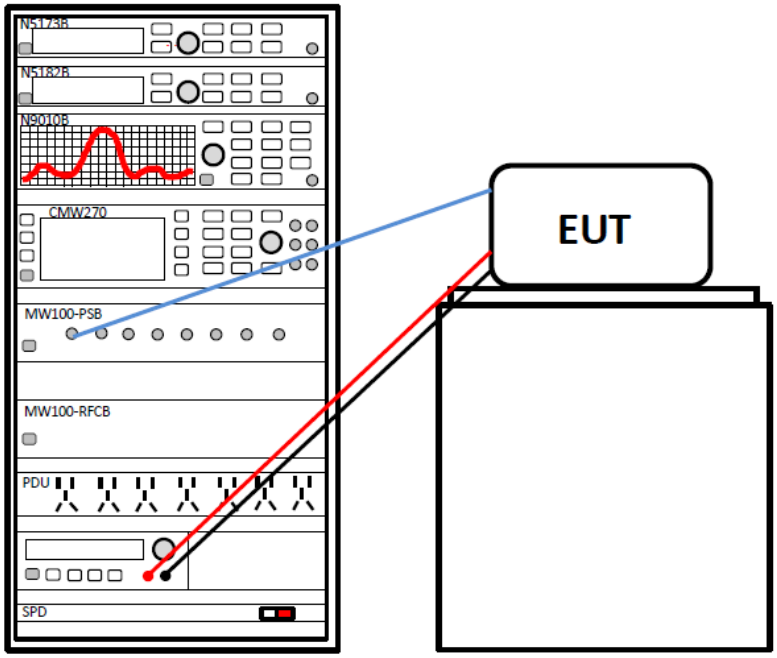
Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

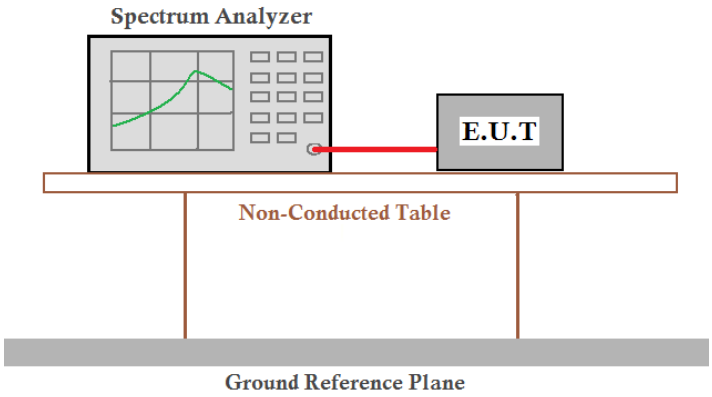
6.3 Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a) (3)
Limit:	Band 1: 24dBm Band 4: 30dBm
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	**Refer to Appendix A - 5.2 GHz and Appendix A - 5.8 GHz**

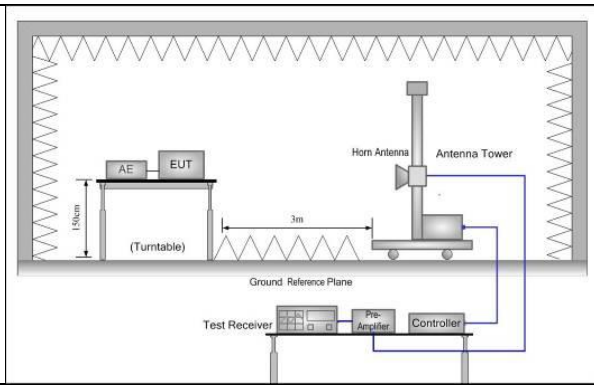
6.4 Occupy Bandwidth

Test Requirement:	FCC Part15 E Section 15.407 (a) (12) and Section 15.407 (e)
Limit:	Band 1/4: N/A (26dB Emission Bandwidth and 99% Occupy Bandwidth) Band 4: >500kHz (6dB Bandwidth)
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	**Refer to Appendix A - 5.2 GHz and Appendix A - 5.8 GHz**

6.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a) (3)
Limit:	Band 1: 11 dBm/MHz Band 4: 30 dBm/500kHz
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	**Refer to Appendix A - 5.2 GHz and Appendix A - 5.8 GHz**

6.6 Band Edge

<table>
<tr><td>Test Requirement:</td><td colspan="4">FCC Part 15 E Section 15.407 (b)</td></tr>
<tr><td rowspan="4">Receiver setup:</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td rowspan="3">Limit:</td><td>Band</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td rowspan="2">5.2GHz</td><td colspan="2">68.20</td><td>Peak Value</td></tr>
<tr><td colspan="2">54.00</td><td>Average Value</td></tr>
<tr><td colspan="4">Remark:
1. 5.2GHz limit:
E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.
2. Band 4 limit:
E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=105.2 dBuV/m, for EIPR[dBm]=10dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=110.8 dBuV/m, for EIPR[dBm]=15.6dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=122.2 dBuV/m, for EIPR[dBm]=27dBm.</td></tr>
<tr><td>Test Procedure:</td><td colspan="4">1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. 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 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.
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 was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. 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 re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td colspan="4"> 
</td></tr>
<tr><td>Test Instruments:</td><td colspan="4">Refer to section 5.10 for details</td></tr>
<tr><td>Test mode:</td><td colspan="4">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="4">Passed</td></tr>
</table>

Measurement Data (worst case):

5.2GHz:

BW 1.4MHz-QPSK							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.23	15.49	54.72	68.20	13.48	Horizontal	Peak
5150.00	44.55	15.49	60.04	68.20	8.16	Vertical	Peak
5150.00	31.53	15.49	47.02	54.00	6.98	Horizontal	Average
5150.00	35.19	15.49	50.68	54.00	3.32	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	39.04	16.44	55.48	68.20	12.72	Horizontal	Peak
5350.00	39.25	16.44	55.69	68.20	12.51	Vertical	Peak
5350.00	30.51	16.44	46.95	54.00	7.05	Horizontal	Average
5350.00	31.61	16.44	48.05	54.00	5.95	Vertical	Average

BW 1.4MHz-16QAM							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.37	15.49	54.86	68.20	13.34	Horizontal	Peak
5150.00	44.70	15.49	60.19	68.20	8.01	Vertical	Peak
5150.00	31.43	15.49	46.92	54.00	7.08	Horizontal	Average
5150.00	35.05	15.49	50.54	54.00	3.46	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	39.99	16.44	56.43	68.20	11.77	Horizontal	Peak
5350.00	39.95	16.44	56.39	68.20	11.81	Vertical	Peak
5350.00	32.12	16.44	48.56	54.00	5.44	Horizontal	Average
5350.00	33.19	16.44	49.63	54.00	4.37	Vertical	Average

Remark:

1. Final Level = Receiver Read level + Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

BW 10MHz-QPSK							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.08	15.49	54.57	68.20	13.63	Horizontal	Peak
5150.00	44.84	15.49	60.33	68.20	7.87	Vertical	Peak
5150.00	31.62	15.49	47.11	54.00	6.89	Horizontal	Average
5150.00	35.67	15.49	51.16	54.00	2.84	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	38.60	16.44	55.04	68.20	13.16	Horizontal	Peak
5350.00	39.04	16.44	55.48	68.20	12.72	Vertical	Peak
5350.00	30.98	16.44	47.42	54.00	6.58	Horizontal	Average
5350.00	31.20	16.44	47.64	54.00	6.36	Vertical	Average

BW 10MHz-16QAM							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.62	15.49	55.11	68.20	13.09	Horizontal	Peak
5150.00	44.51	15.49	60.00	68.20	8.2	Vertical	Peak
5150.00	31.08	15.49	46.57	54.00	7.43	Horizontal	Average
5150.00	35.05	15.49	50.54	54.00	3.46	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	39.89	16.44	56.33	68.20	11.87	Horizontal	Peak
5350.00	40.36	16.44	56.80	68.20	11.4	Vertical	Peak
5350.00	32.57	16.44	49.01	54.00	4.99	Horizontal	Average
5350.00	33.37	16.44	49.81	54.00	4.19	Vertical	Average

Remark:

1. Final Level = Receiver Read level + Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

BW 20MHz-QPSK							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.50	15.49	54.99	68.20	13.21	Horizontal	Peak
5150.00	45.07	15.49	60.56	68.20	7.64	Vertical	Peak
5150.00	31.41	15.49	46.90	54.00	7.1	Horizontal	Average
5150.00	35.65	15.49	51.14	54.00	2.86	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	38.56	16.44	55.00	68.20	13.2	Horizontal	Peak
5350.00	38.91	16.44	55.35	68.20	12.85	Vertical	Peak
5350.00	31.45	16.44	47.89	54.00	6.11	Horizontal	Average
5350.00	31.06	16.44	47.50	54.00	6.5	Vertical	Average

BW 20MHz-16QAM							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5150.00	39.24	15.49	54.73	68.20	13.47	Horizontal	Peak
5150.00	44.22	15.49	59.71	68.20	8.49	Vertical	Peak
5150.00	31.50	15.49	46.99	54.00	7.01	Horizontal	Average
5150.00	35.04	15.49	50.53	54.00	3.47	Vertical	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Polarity
5350.00	40.23	16.44	56.67	68.20	11.53	Horizontal	Peak
5350.00	39.94	16.44	56.38	68.20	11.82	Vertical	Peak
5350.00	31.37	16.44	47.81	54.00	6.19	Horizontal	Average
5350.00	31.37	16.44	47.81	54.00	6.19	Vertical	Average

Remark:

1. Final Level = Receiver Read level + Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

5.8GHz:

BW 1.4MHz-QPSK						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	39.37	18.87	58.24	68.20	9.96	Horizontal
5700.00	39.51	19.05	58.56	105.20	46.64	Horizontal
5720.00	43.06	19.00	62.06	110.80	48.74	Horizontal
5725.00	52.55	18.99	71.54	122.20	50.66	Horizontal
5650.00	38.99	18.87	57.86	68.20	10.34	Vertical
5700.00	41.75	19.05	60.80	105.20	44.40	Vertical
5720.00	53.91	19.00	72.91	110.80	37.89	Vertical
5725.00	62.47	18.99	81.46	122.20	40.74	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	39.93	19.10	59.03	122.20	63.17	Horizontal
5855.00	38.80	19.12	57.92	110.80	52.88	Horizontal
5875.00	39.53	19.23	58.76	105.20	46.44	Horizontal
5925.00	38.40	19.39	57.79	68.20	10.41	Horizontal
5850.00	38.23	19.10	57.33	122.20	64.87	Vertical
5855.00	39.56	19.12	58.68	110.80	52.12	Vertical
5875.00	38.62	19.23	57.85	105.20	47.35	Vertical
5925.00	39.47	19.39	58.86	68.20	9.34	Vertical

Remark:

1. *Final Level = Receiver Read level + Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

BW 1.4MHz-16QAM						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	39.21	18.87	58.08	68.20	10.12	Horizontal
5700.00	41.17	19.05	60.22	105.20	44.98	Horizontal
5720.00	46.11	19.00	65.11	110.80	45.69	Horizontal
5725.00	53.33	18.99	72.32	122.20	49.88	Horizontal
5650.00	39.35	18.87	58.22	68.20	9.98	Vertical
5700.00	41.16	19.05	60.21	105.20	44.99	Vertical
5720.00	54.43	19.00	73.43	110.80	37.37	Vertical
5725.00	63.81	18.99	82.80	122.20	39.40	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	41.22	19.10	60.32	122.20	61.88	Horizontal
5855.00	38.13	19.12	57.25	110.80	53.55	Horizontal
5875.00	39.50	19.23	58.73	105.20	46.47	Horizontal
5925.00	38.87	19.39	58.26	68.20	9.94	Horizontal
5850.00	48.87	19.10	67.97	122.20	54.23	Vertical
5855.00	38.96	19.12	58.08	110.80	52.72	Vertical
5875.00	38.42	19.23	57.65	105.20	47.55	Vertical
5925.00	39.24	19.39	58.63	68.20	9.57	Vertical

Remark:

3. Final Level = Receiver Read level + Factor.

4. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

BW 10MHz-QPSK						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	39.36	18.87	58.23	68.20	9.97	Horizontal
5700.00	40.55	19.05	59.60	105.20	45.60	Horizontal
5720.00	43.30	19.00	62.30	110.80	48.50	Horizontal
5725.00	52.55	18.99	71.54	122.20	50.66	Horizontal
5650.00	40.30	18.87	59.17	68.20	9.03	Vertical
5700.00	41.01	19.05	60.06	105.20	45.14	Vertical
5720.00	54.52	19.00	73.52	110.80	37.28	Vertical
5725.00	64.04	18.99	83.03	122.20	39.17	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	38.78	19.10	57.88	122.20	64.32	Horizontal
5855.00	39.02	19.12	58.14	110.80	52.66	Horizontal
5875.00	39.55	19.23	58.78	105.20	46.42	Horizontal
5925.00	40.00	19.39	59.39	68.20	8.81	Horizontal
5850.00	44.22	19.10	63.32	122.20	58.88	Vertical
5855.00	38.07	19.12	57.19	110.80	53.61	Vertical
5875.00	40.20	19.23	59.43	105.20	45.77	Vertical
5925.00	37.81	19.39	57.20	68.20	11.00	Vertical

Remark:

1. *Final Level = Receiver Read level + Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

BW 10MHz-16QAM						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	40.21	18.87	59.08	68.20	9.12	Horizontal
5700.00	38.93	19.05	57.98	105.20	47.22	Horizontal
5720.00	44.21	19.00	63.21	110.80	47.59	Horizontal
5725.00	51.88	18.99	70.87	122.20	51.33	Horizontal
5650.00	38.88	18.87	57.75	68.20	10.45	Vertical
5700.00	39.50	19.05	58.55	105.20	46.65	Vertical
5720.00	53.66	19.00	72.66	110.80	38.14	Vertical
5725.00	58.24	18.99	77.23	122.20	44.97	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	40.41	19.10	59.51	122.20	62.69	Horizontal
5855.00	38.17	19.12	57.29	110.80	53.51	Horizontal
5875.00	38.77	19.23	58.00	105.20	47.20	Horizontal
5925.00	38.33	19.39	57.72	68.20	10.48	Horizontal
5850.00	42.63	19.10	61.73	122.20	60.47	Vertical
5855.00	39.72	19.12	58.84	110.80	51.96	Vertical
5875.00	39.21	19.23	58.44	105.20	46.76	Vertical
5925.00	38.31	19.39	57.70	68.20	10.50	Vertical

Remark:

1. Final Level = Receiver Read level + Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

BW 20MHz-QPSK						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	41.63	18.87	60.50	68.20	7.70	Horizontal
5700.00	39.55	19.05	58.60	105.20	46.60	Horizontal
5720.00	45.05	19.00	64.05	110.80	46.75	Horizontal
5725.00	56.99	18.99	75.98	122.20	46.22	Horizontal
5650.00	40.57	18.87	59.44	68.20	8.76	Vertical
5700.00	40.14	19.05	59.19	105.20	46.01	Vertical
5720.00	55.22	19.00	74.22	110.80	36.58	Vertical
5725.00	62.33	18.99	81.32	122.20	40.88	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	43.82	19.10	62.92	122.20	59.28	Horizontal
5855.00	39.36	19.12	58.48	110.80	52.32	Horizontal
5875.00	39.55	19.23	58.78	105.20	46.42	Horizontal
5925.00	39.36	19.39	58.75	68.20	9.45	Horizontal
5850.00	57.63	19.10	76.73	122.20	45.47	Vertical
5855.00	49.16	19.12	68.28	110.80	42.52	Vertical
5875.00	38.36	19.23	57.59	105.20	47.61	Vertical
5925.00	38.73	19.39	58.12	68.20	10.08	Vertical

Remark:

1. *Final Level = Receiver Read level + Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

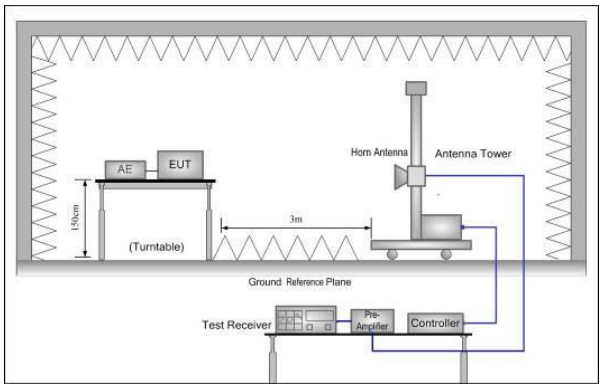
BW 20MHz-16QAM						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5650.00	39.85	18.87	58.72	68.20	9.48	Horizontal
5700.00	40.00	19.05	59.05	105.20	46.15	Horizontal
5720.00	44.81	19.00	63.81	110.80	46.99	Horizontal
5725.00	53.11	18.99	72.10	122.20	50.10	Horizontal
5650.00	39.79	18.87	58.66	68.20	9.54	Vertical
5700.00	39.69	19.05	58.74	105.20	46.46	Vertical
5720.00	53.54	19.00	72.54	110.80	38.26	Vertical
5725.00	64.22	18.99	83.21	122.20	38.99	Vertical
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization
5850.00	39.75	19.10	58.85	122.20	63.35	Horizontal
5855.00	39.26	19.12	58.38	110.80	52.42	Horizontal
5875.00	38.64	19.23	57.87	105.20	47.33	Horizontal
5925.00	38.10	19.39	57.49	68.20	10.71	Horizontal
5850.00	55.35	19.10	74.45	122.20	47.75	Vertical
5855.00	41.60	19.12	60.72	110.80	50.08	Vertical
5875.00	37.76	19.23	56.99	105.20	48.21	Vertical
5925.00	38.69	19.39	58.08	68.20	10.12	Vertical

Remark:

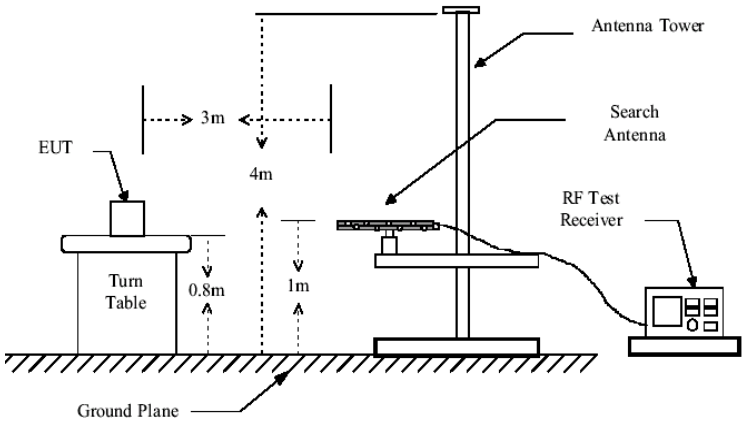
1. *Final Level = Receiver Read level + Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

6.7 Spurious Emission

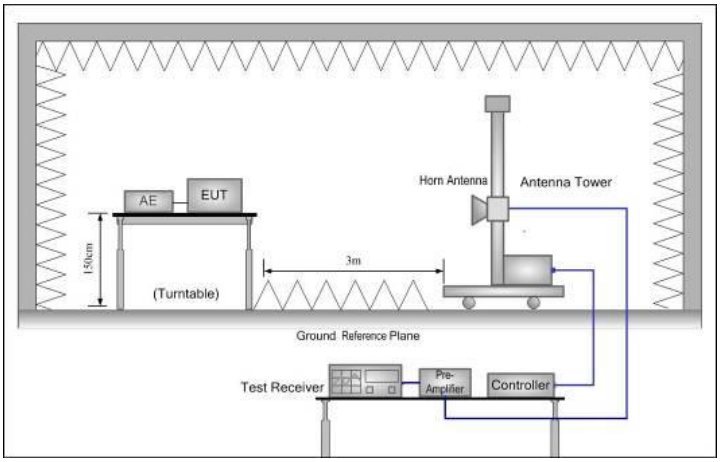
6.7.1 Restricted Band

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part15 E Section 15.407(b)</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">4.5 GHz to 5.15 GHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m</td></tr>
<tr><td rowspan="4">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td></td><td colspan="4"></td></tr>
<tr><td rowspan="3">Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">74.00</td><td>Peak Value</td></tr>
<tr><td colspan="2">54.00</td><td>Average Value</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. 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 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.
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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. 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 re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td colspan="5"> 
</td></tr>
<tr><td>Test Instruments:</td><td colspan="5">Refer to section 5.10 for details</td></tr>
<tr><td>Test mode:</td><td colspan="5">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="5">Passed(Refer to section 6.6)</td></tr>
</table>

6.7.2 Unwanted Emissions out of the Restricted Bands

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part 15 C Section 15.209 and 15.205</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">9kHz to 40GHz</td></tr>
<tr><td>Test Distance:</td><td colspan="5">3m</td></tr>
<tr><td>Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td></td><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td></td><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td>Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td></td><td colspan="2">30MHz-88MHz</td><td colspan="2">40.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">88MHz-216MHz</td><td colspan="2">43.5</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">216MHz-960MHz</td><td colspan="2">46.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">960MHz-1GHz</td><td colspan="2">54.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.0</td><td>Average Value</td></tr>
<tr><td></td><td colspan="2">74.0</td><td>Peak Value</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter chamber. 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 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.
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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. 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 re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td colspan="5">Below 1GHz
 

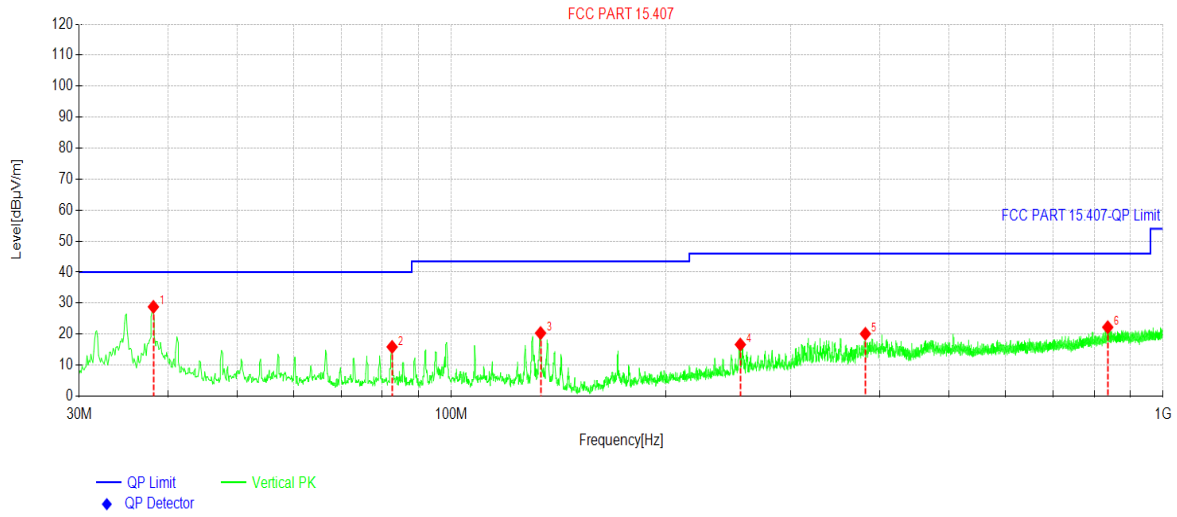
Above 1GHz</td></tr>
</table>

	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 2. 9 kHz to 30MHz is lower than the limit 20dB, so only shows the data of above 30MHz in this report. 3. Pre-scan all kind of Bandwidth and Modulation and found the 1.4MHz and QPSK is the worst case.

Measurement Data (worst case):

Below 1GHz

Product Name:	Image transmission Module	**Product Model:**	M240958L
Test By:	Mike	**Test mode:**	5.2GHz Tx mode
Test Frequency:	30 MHz ~ 1 GHz	**Polarization:**	Vertical
Test Voltage:	DC 11.4V	**Environment:**	Temp: 24℃ Huni: 57%



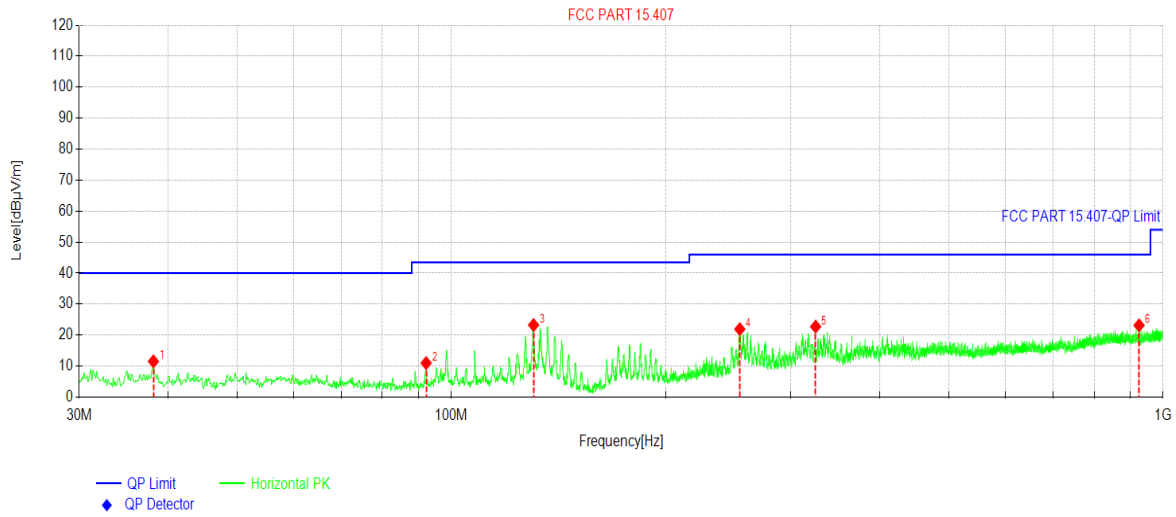
Suspected Data List

NO.	Freq. [MHz]	Reading[dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Polarity
1	38.1488	45.80	28.80	-17.00	40.00	11.20	PK	Vertical
2	82.5793	35.40	15.87	-19.53	40.00	24.13	PK	Vertical
3	133.509	39.89	20.34	-19.55	43.50	23.16	PK	Vertical
4	254.771	31.71	16.64	-15.07	46.00	29.36	PK	Vertical
5	381.757	32.75	20.11	-12.64	46.00	25.89	PK	Vertical
6	836.247	26.77	22.22	-4.55	46.00	23.78	PK	Vertical

Remark:

1. *Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Product Name:	Image transmission Module	Product Model:	M240958L
Test By:	Mike	Test mode:	5.2GHz Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	DC 11.4V	Environment:	Temp: 24℃ Huni: 57%



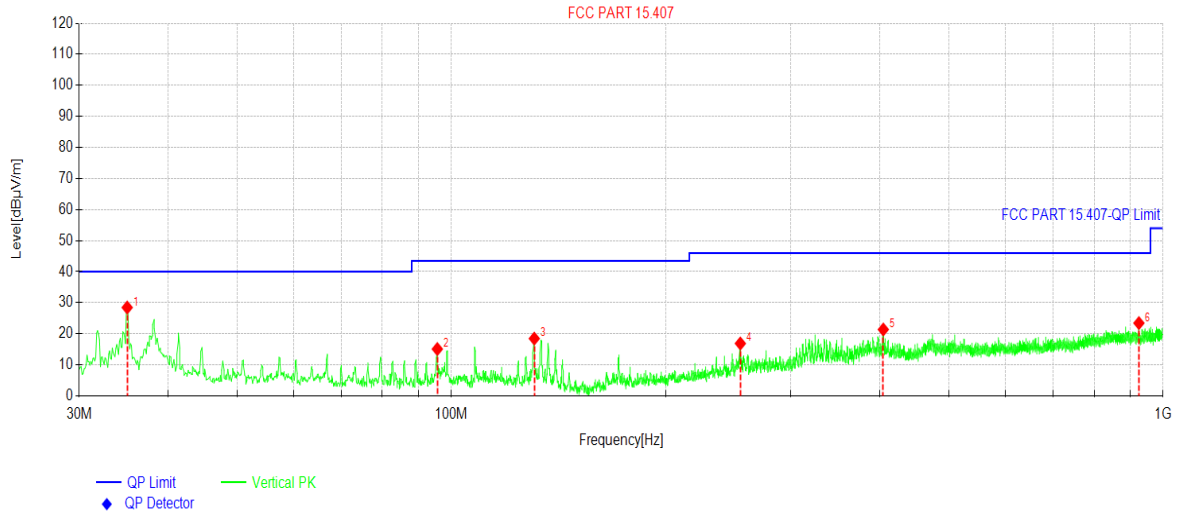
Suspected Data List

NO.	Freq. [MHz]	Reading[dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Polarity
1	38.1488	28.54	11.54	-17.00	40.00	28.46	PK	Horizontal
2	92.1832	30.38	10.98	-19.40	43.50	32.52	PK	Horizontal
3	130.502	42.58	23.26	-19.32	43.50	20.24	PK	Horizontal
4	254.286	37.02	21.93	-15.09	46.00	24.07	PK	Horizontal
5	325.006	36.14	22.76	-13.38	46.00	23.24	PK	Horizontal
6	925.302	27.04	23.17	-3.87	46.00	22.83	PK	Horizontal

Remark:

1. *Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Product Name:	Image transmission Module	Product Model:	M240958L
Test By:	Mike	Test mode:	5.8GHz Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	DC 11.4V	Environment:	Temp: 24℃ Huni: 57%



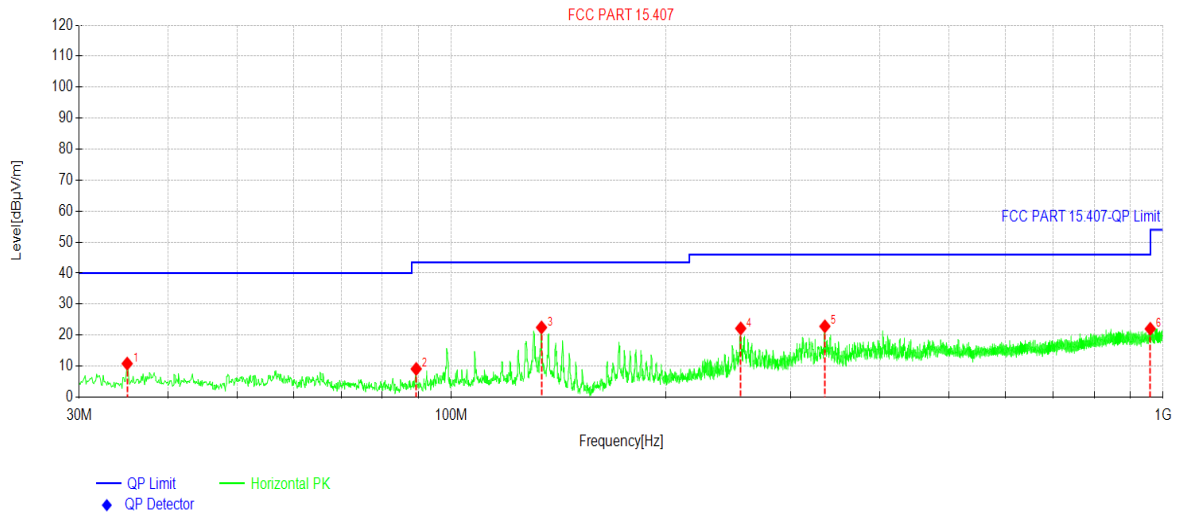
Suspected Data List

NO.	Freq. [MHz]	Reading[dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Polarity
1	35.0445	45.78	28.45	-17.33	40.00	11.55	PK	Vertical
2	95.5786	34.12	15.08	-19.04	43.50	28.42	PK	Vertical
3	130.793	37.80	18.46	-19.34	43.50	25.04	PK	Vertical
4	254.771	31.94	16.87	-15.07	46.00	29.13	PK	Vertical
5	404.554	33.71	21.38	-12.33	46.00	24.62	PK	Vertical
6	924.914	27.31	23.44	-3.87	46.00	22.56	PK	Vertical

Remark:

1. *Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Product Name:	Image transmission Module	Product Model:	M240958L
Test By:	Mike	Test mode:	5.8GHz Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	DC 11.4V	Environment:	Temp: 24℃ Huni: 57%



Suspected Data List

NO.	Freq. [MHz]	Reading[dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Polarity
1	35.0445	28.14	10.81	-17.33	40.00	29.19	PK	Horizontal
2	89.2729	28.68	9.09	-19.59	43.50	34.41	PK	Horizontal
3	133.897	42.05	22.47	-19.58	43.50	21.03	PK	Horizontal
4	255.062	37.21	22.16	-15.05	46.00	23.84	PK	Horizontal
5	334.901	36.13	22.84	-13.29	46.00	23.16	PK	Horizontal
6	959.547	25.41	22.04	-3.37	46.00	23.96	PK	Horizontal

Remark:

1. *Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

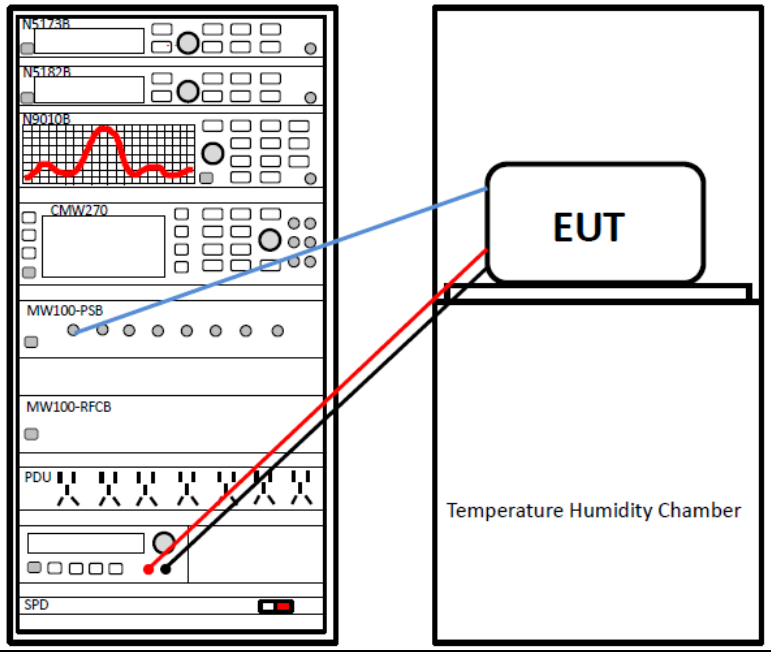
Above 1GHz:

5.2G-20M-QPSK							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
10334.00	53.47	5.59	59.06	74.00	14.94	Vertical	Peak
10334.00	52.23	5.59	57.82	74.00	16.18	Horizontal	Peak
10334.00	44.42	5.59	50.01	54.00	3.99	Vertical	Average
10334.00	44.06	5.59	49.65	54.00	4.35	Horizontal	Average
Test channel: Middle channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
10402.00	52.17	5.33	57.50	74.00	16.50	Vertical	Peak
10402.00	53.20	5.33	58.53	74.00	15.47	Horizontal	Peak
10402.00	45.18	5.33	50.51	54.00	3.49	Vertical	Average
10402.00	45.02	5.33	50.35	54.00	3.65	Horizontal	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
10466.00	52.32	5.86	58.18	74.00	15.82	Vertical	Peak
10466.00	52.63	5.86	58.49	74.00	15.51	Horizontal	Peak
10466.00	44.51	5.86	50.37	54.00	3.63	Vertical	Average
10466.00	44.90	5.86	50.76	54.00	3.24	Horizontal	Average
5.8G-20M-QPSK							
Test channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
11476.00	53.41	7.14	60.55	74.00	13.45	Vertical	Peak
11476.00	52.19	7.14	59.33	74.00	14.67	Horizontal	Peak
11476.00	44.67	7.14	51.81	54.00	2.19	Vertical	Average
11476.00	44.70	7.14	51.84	54.00	2.16	Horizontal	Average
Test channel: Middle channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
11580.00	53.90	6.82	60.72	74.00	13.28	Vertical	Peak
11580.00	51.83	6.82	58.65	74.00	15.35	Horizontal	Peak
11580.00	44.01	6.82	50.83	54.00	3.17	Vertical	Average
11580.00	44.40	6.82	51.22	54.00	2.78	Horizontal	Average
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin [dB]	Polarization	Trace
11678.00	54.23	7.29	61.52	74.00	12.48	Vertical	Peak
11678.00	52.07	7.29	59.36	74.00	14.64	Horizontal	Peak
11678.00	44.31	7.29	51.60	54.00	2.40	Vertical	Average
11678.00	44.09	7.29	51.38	54.00	2.62	Horizontal	Average

Remark:

1. *Final Level = Receiver Read level + Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

6.8 Frequency stability

Test Requirement:	FCC Part15 E Section 15.407 (g)
Limit:	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
Test setup:	
Test procedure:	1. The EUT is installed in an environment test chamber with external power source. 2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT. 3. A sufficient stabilization period at each temperature is used prior to each frequency measurement. 4. When temperature is stabled, measure the frequency stability. 5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	**Refer to Appendix A - 5.2 GHz and Appendix A - 5.8 GHz**