FCC PART 15B

TEST REPORT

For

SZ DJI TECHNOLOGY CO., LTD

14th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan, Shenzhen, Guangdong, China

FCC ID: SS3-M1X1708

Report Type:	**Product Type:**
Original Report	Mavic Pro Platinum

Report Number:	RDG170729002-00C
Report Date:	2017-08-17
Reviewed By:	Allen Qiao RF Supervisor
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *SZ DJI TECHNOLOGY CO., LTD*'s product, model number: *M1X* ***(FCC ID: SS3-M1X1708)*** (the "EUT") in this report was a *Mavic Pro Platinum*, rated input voltage: DC11.4V from lithium battery, the battery can remove from the EUT and charged by adapter. The highest operation frequency is 5825MHz.

Adapter 1 information:
Manufacturer: AcTel Electronic (Dong guan) Co., Ltd./China
Model: F1C50
Input: AC 100-240V, 1.4A, 50-60Hz
Total Output Power: 50W Max;
Output: DC13.05V, 3.83A(Main); DC5.0V, 2.0A Total(USB)

Adapter 2 information:
Manufacturer: Shenzhen Huntkey Electronics Co., Ltd.
Model: F1C50
Input: AC 100-240V, 1.4A, 50-60Hz
Total Output Power: 50W Max;
Output: DC13.05V, 3.83A(Main); DC5.0V, 2.0A Total(USB)

Battery 1 information:
Manufacturer: Sunwoda Electronic Co., LTD.
Model: FB1-3830 mAh-11.4V
Max Charge Voltage: 13.05V
Nominal Voltage:11.4V
Rated Capacity: 3830mAh

Battery 2 information:
Manufacturer: Dongguan Amperex Technology Limited
Model: FB1-3830 mAh-11.4V
Max Charge Voltage: 13.05V
Nominal Voltage:11.4V
Rated Capacity: 3830mAh, 43.6Wh

All measurement and test data in this report was gathered from production sample serial number: 170729002 (Assigned by BACL, Dongguan). The EUT was received on 2017-07-29.

Objective

This report is prepared on behalf of *SZ DJI TECHNOLOGY CO., LTD* in accordance with FCC Part 15B Part 2, Part J, and Part 15, Subpart A and B of the Federal Communications Commission's rules..

The objective is to determine the compliance of EUT with:FCC Part 15B Class B.

Related Submittal(s)/Grant(s)

FCC Part 15E NII submissions with FCC ID: SS3-M1X1708.
FCC Part 15C DTS submissions with FCC ID: SS3-M1X1708.
Part of system granted with FCC ID: SS3-GL200A1606.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

Measurement Uncertainty

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical 200M~1GHz: 4.83 dB for Horizontal, 5.85 dB for Vertical 1G~6GHz: 4.45 dB, 6G~40GHz: 5.23 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China.

Bay Area Compliance Laboratories Corp. (Dongguan) has been accredited to ISO 17025 by CNAS(Lab code: L5662). And accredited to ISO 17025 by NVLAP(Test Laboratory Accreditation Certificate Number 500069-0), the FCC Designation No. CN5002 under the KDB 974614 D01.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Bay Area Compliance Laboratories Corp. (Dongguan) was registered with ISED Canada under ISED Canada Registration Number 3062D.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion(as normally used by a typical user).

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

The software “winthrax.exe” was used during test.

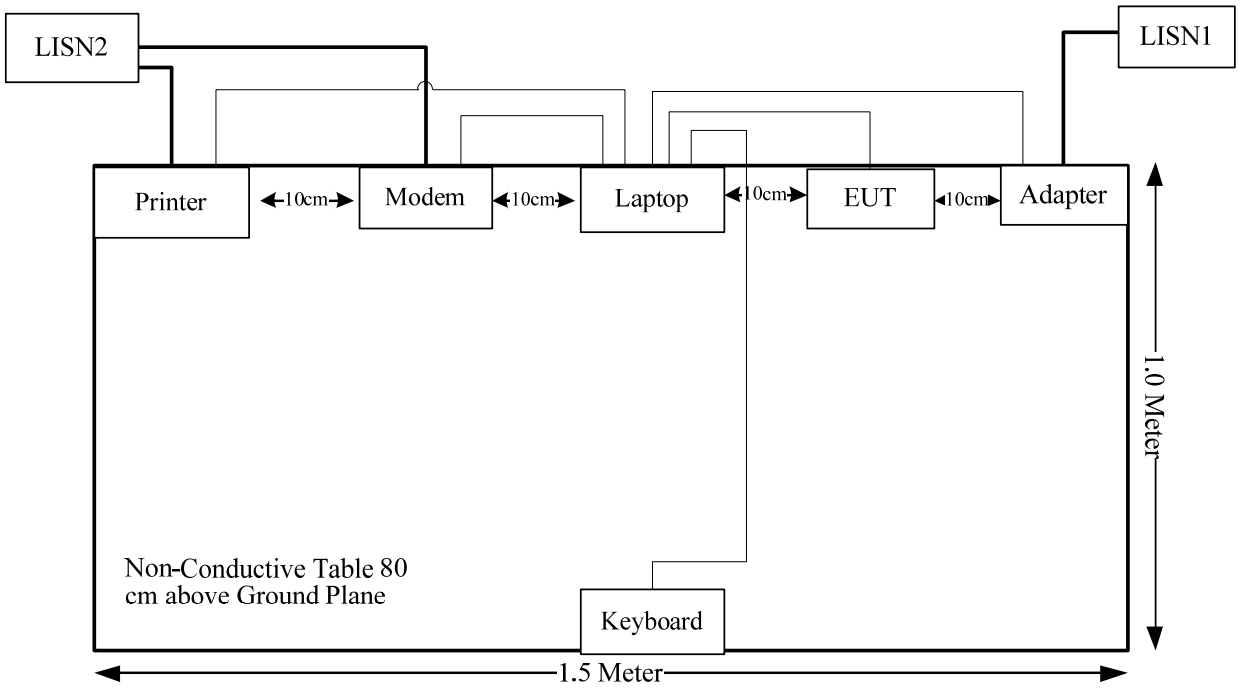
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	0293

External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Serial Cable	Yes	No	1.2	Serial Port of Laptop	Modem
Parallel Cable	Yes	No	1.2	Parallel Port of Laptop	Printer
Keyboard Cable	Yes	Yes	1.8	USB Port of Laptop	Keyboard
USB Cable	Yes	Yes	1.08	USB Port of Laptop	EUT

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2016-12-08	2017-12-08
R&S	L.I.S.N	ESH2-Z5	892107/021	2016-09-01	2017-09-01
R&S	Two-line V-network	ENV 216	3560.6550.12	2016-12-08	2017-12-08
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
Unknown	Coaxial Cable	2m	N/A	2016-09-01	2017-09-01
R&S	EMI Test Receiver	ESCI	100224	2016-09-01	2017-08-31
Sunol Sciences	Antenna	JB3	A060611-1	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2016-09-01	2017-09-01
R&S	Spectrum Analyzer	FSU 26	200256	2016-12-08	2017-12-08
R&S	Spectrum Analyzer	FSP 38	100478	2016-12-08	2017-12-08
ETS-Lindgren	Horn Antenna	3115	000 527 35	2016-01-05	2019-01-04
Ducommun Technolagies	Horn Antenna	ARH-4223-02	1007726-02 1304	2017-06-16	2020-06-15
Ducommun Technolagies	Horn Antenna	ARH-2823-02	1007726-01 1302	2016-11-18	2019-11-18
Mini-Circuit	Amplifier	ZVA-213-S+	SN054201245	2017-02-19	2018-02-19
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2016-09-06	2017-09-06
Unknown	Coaxial Cable	Chamber A-1	4m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber B-1	0.75m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber A-2	10m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber B-2	8m	2016-09-01	2017-09-01
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Environmental Conditions

Temperature:	26.6~27.6 °C
Relative Humidity:	30~48%
ATM Pressure:	99.9~100.3 kPa
Tester:	Gaochao Gong(CE); Steven Zuo(RE)
Test Date:	2017.08.11~2017.08.15

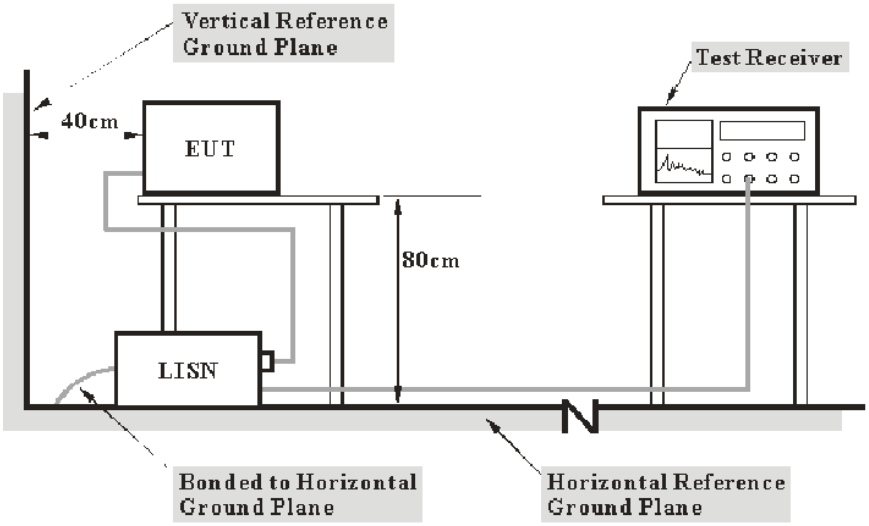
SUMARY OF TEST RESULTS

FCC Part 15B

Clause	Description of Test	Test Result
§15.107	Conducted emissions	Compliance
§15.109	Radiated emissions	Compliance

FCC PART 15B §15.107 – CONDUCTED EMISSIONS

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the Adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result (QuasiPeak or Average) = Meter Reading + Corr.

Note:
Corr. = Cable loss + Factor of coupling device

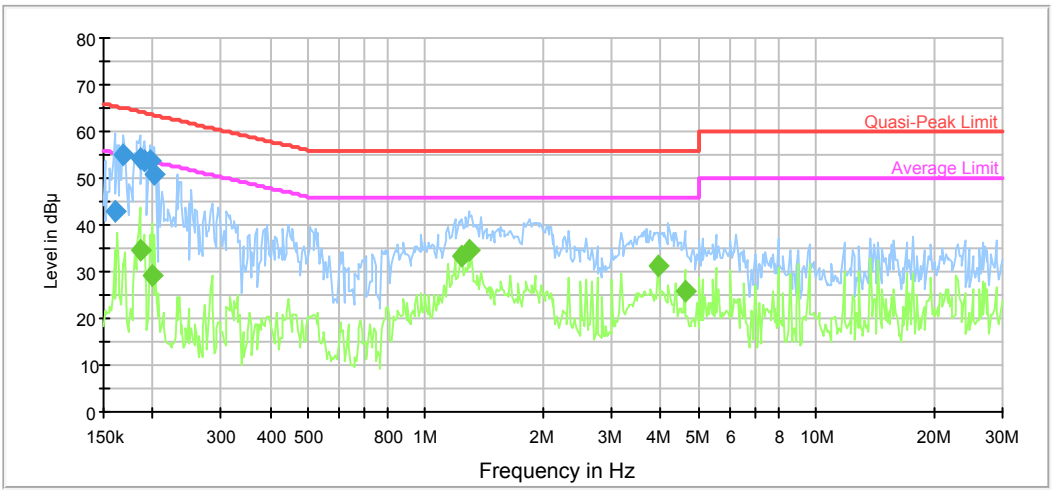
The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Limit – Result

Test Data

Please refer to following table and plots:

Model Number:	M1X
Port:	L
Test Mode:	Downloading
Power Source:	AC 120V/60Hz



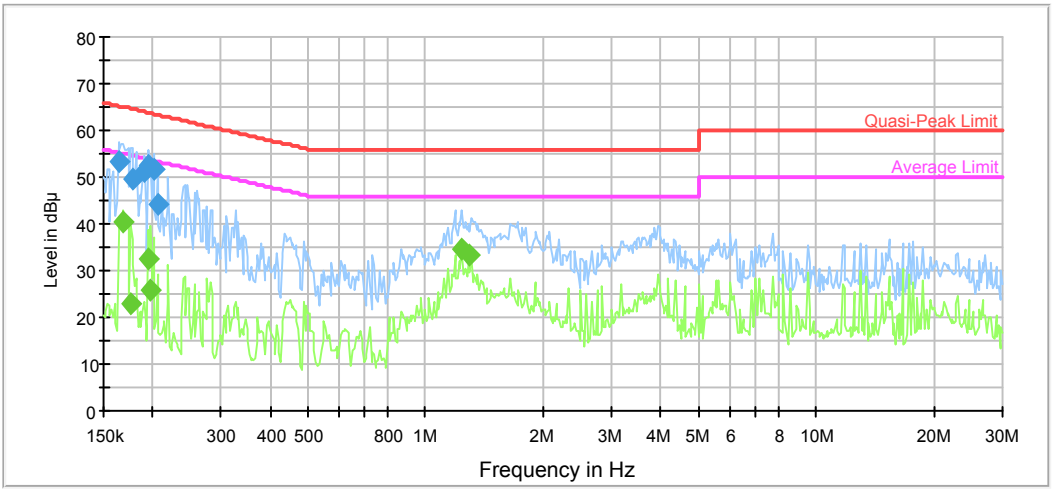
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159873	43.1	9.000	L1	11.0	22.4	65.5
0.169044	54.9	9.000	L1	10.9	10.1	65.0
0.186006	54.2	9.000	L1	10.7	10.0	64.2
0.190505	53.9	9.000	L1	10.7	10.1	64.0
0.196675	53.8	9.000	L1	10.6	9.9	63.7
0.203045	51.0	9.000	L1	10.6	12.5	63.5

Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186006	34.7	9.000	L1	10.7	19.5	54.2
0.199835	29.4	9.000	L1	10.6	24.2	53.6
1.239175	33.4	9.000	L1	9.7	12.6	46.0
1.289541	34.5	9.000	L1	9.7	11.5	46.0
3.934683	31.1	9.000	L1	9.8	14.9	46.0
4.614454	25.6	9.000	L1	9.8	20.4	46.0

Model Number: M1X
Port: N
Test Mode: Downloading
Power Source: AC 120V/60Hz



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163741	53.5	9.000	N	11.0	11.8	65.3
0.177322	49.8	9.000	N	10.8	14.8	64.6
0.190505	51.4	9.000	N	10.7	12.6	64.0
0.195114	52.5	9.000	N	10.6	11.3	63.8
0.201433	51.8	9.000	N	10.6	11.8	63.6
0.206306	44.2	9.000	N	10.6	19.2	63.4

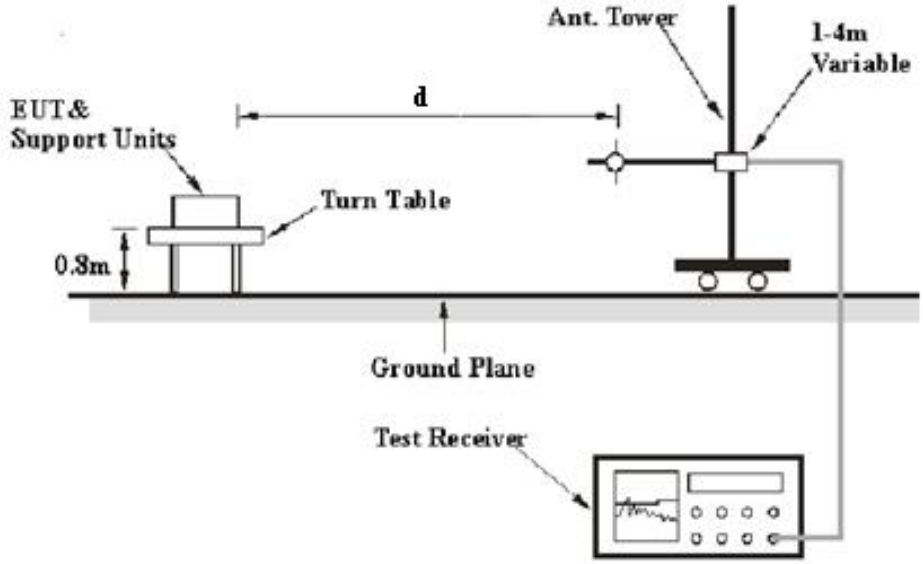
Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.169044	40.3	9.000	N	10.9	14.7	55.0
0.175915	22.9	9.000	N	10.8	31.8	54.7
0.195114	32.3	9.000	N	10.6	21.5	53.8
0.198249	25.6	9.000	N	10.6	28.1	53.7
1.239175	34.4	9.000	N	9.7	11.6	46.0
1.289541	33.5	9.000	N	9.7	12.5	46.0

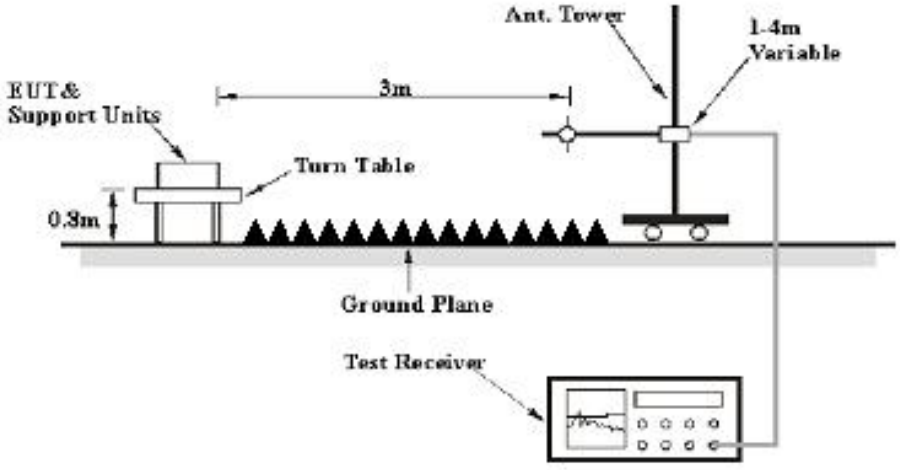
FCC PART 15B §15.109 – RADIATED EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed at the 3 meters distance, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 30 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	10Hz	/	AVG

Test Procedure

During the radiated emissions, the adapter of laptop was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Meter Reading+ Corrected

Note:
Corrected = Antenna Factor + Cable Loss - Amplifier Gain
or
Corrected = Antenna Factor + Cable Loss + Insertion loss of attenuator - Amplifier Gain

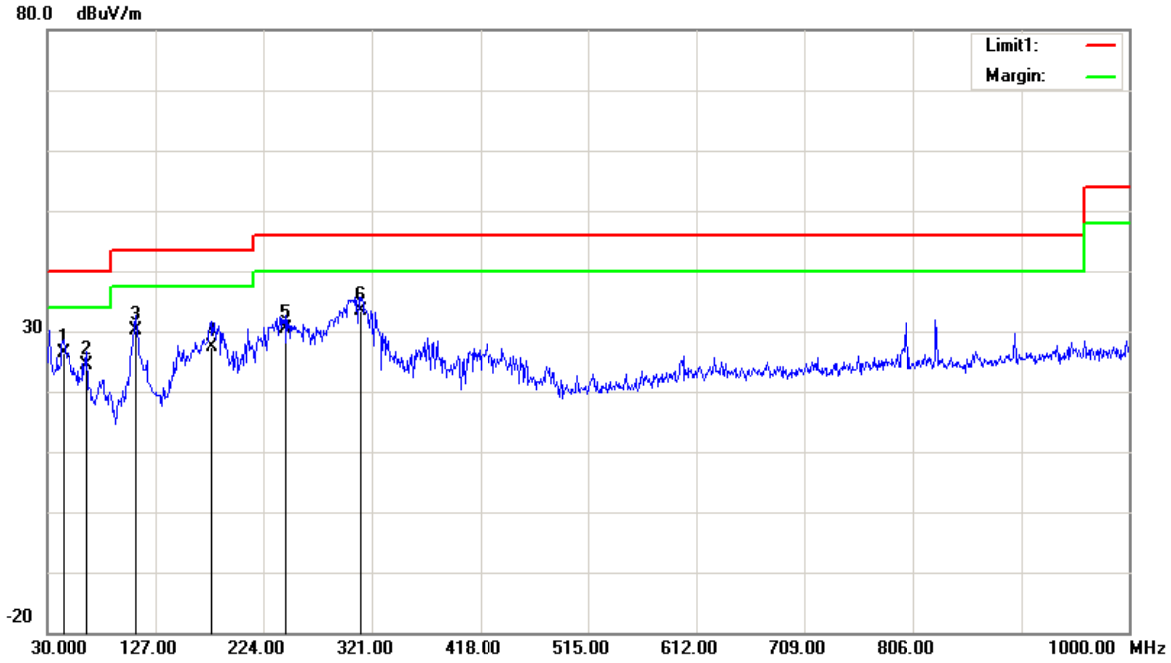
The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Result

Test Data

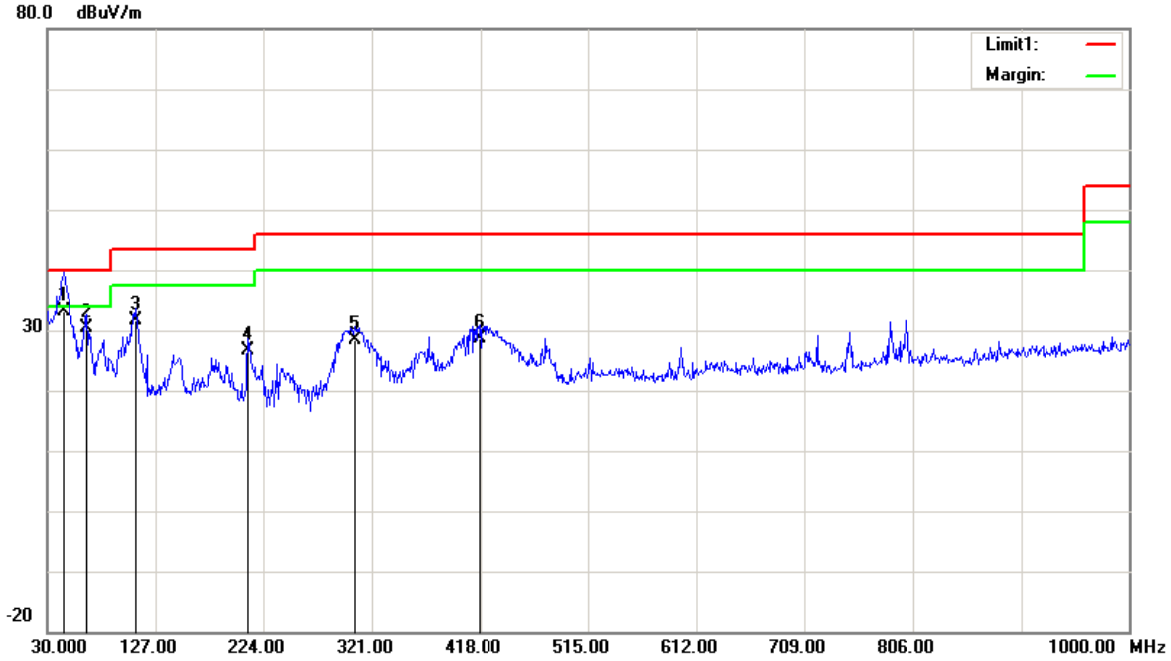
Please refer to following table and plots:

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Horizontal**
EUT:	**Mavic Pro Platinum**	**Power:**	**120V/60Hz**
Model:	**M1X**	**Distance:**	3m
Test Mode:	**downloading**		
Note:			



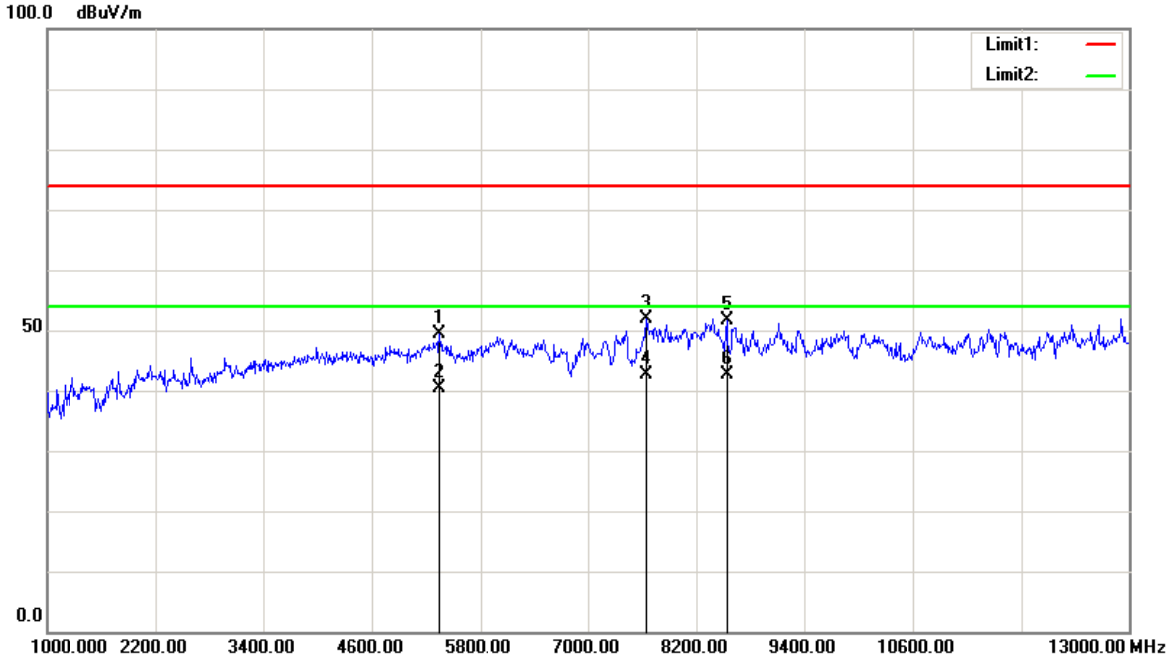
No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	44.5500	41.53	QP	-15.13	26.40	40.00	13.60
2	65.8900	42.27	QP	-17.77	24.50	40.00	15.50
3	109.5400	42.77	QP	-12.67	30.10	43.50	13.40
4	177.4400	40.42	QP	-13.12	27.30	43.50	16.20
5	243.4000	42.43	QP	-12.13	30.30	46.00	15.70
6	311.3000	43.18	QP	-9.78	33.40	46.00	12.60

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Vertical**
EUT:	**Mavic Pro Platinum**	**Power:**	**120V/60Hz**
Model:	**M1X**	**Distance:**	3m
Test Mode:	**downloading**		
Note:			



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	44.5500	48.33	QP	-15.13	33.20	40.00	6.80
2	65.8900	48.27	QP	-17.77	30.50	40.00	9.50
3	109.5400	44.27	QP	-12.67	31.60	43.50	11.90
4	210.4200	40.27	QP	-13.57	26.70	43.50	16.80
5	306.4500	38.38	QP	-9.88	28.50	46.00	17.50
6	417.0300	36.49	QP	-7.79	28.70	46.00	17.30

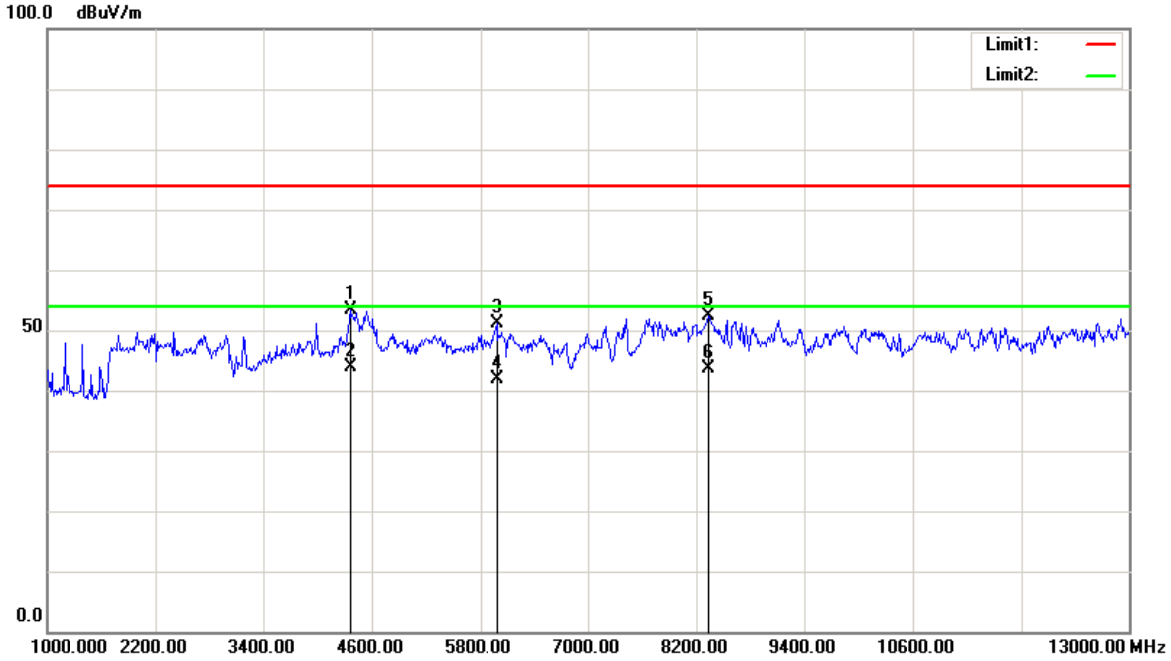
Condition:	**FCC Part 15 Class B**	**Polarization:**	**Horizontal**
EUT:	**Mavic Pro Platinum**	**Power:**	**120V/60Hz**
Model:	**M1X**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	5350.000	46.55	peak	2.71	49.26	74.00	24.74
2	5350.000	37.64	AVG	2.71	40.35	54.00	13.65
3	7654.000	45.58	peak	6.21	51.79	74.00	22.21
4	7654.000	36.49	AVG	6.21	42.70	54.00	11.30
5	8536.000	44.24	peak	7.35	51.59	74.00	22.41
6	8536.000	35.16	AVG	7.35	42.51	54.00	11.49

Note: No Emission was detected in the range 13-30GHz.

Condition:	**FCC Part 15 Class B**	**Polarization:**	**Vertical**
EUT:	**Mavic Pro Platinum**	**Power:**	**120V/60Hz**
Model:	**M1X**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	4360.000	52.29	peak	1.18	53.47	74.00	20.53
2	4360.000	42.67	AVG	1.18	43.85	54.00	10.15
3	5998.000	48.00	peak	3.12	51.12	74.00	22.88
4	5998.000	38.69	AVG	3.12	41.81	54.00	12.19
5	8332.000	45.31	peak	7.06	52.37	74.00	21.63
6	8332.000	36.54	AVG	7.06	43.60	54.00	10.40

Note: No Emission was detected in the range 13-30GHz.

*******END OF REPORT*******