

NCC RADIO TEST REPORT

Product name	3-Axis Stabilized Handheld Gimbal for Camera
Applicant	Vitec Imaging Solutions Spa
Manufacture	Vitec Imaging Solutions Spa
Rating(s)	DC5V from adapter or DC7.4V from battery
Trademark	Manfrotto
Model and/or type reference	MVG220FF, MVG220
Standard	LP0002:2018
Test Result	PASS

Date of receipt : 07-08-2020

Date of Issue : 07-24-2020

signature :



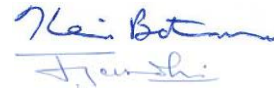
NCC RADIO TEST REPORT

Report Reference No...... : M200708N3

Compiled by (+ signature) Kevin Bothmann

Approved by (+ signature) Jay Gandhi

Date of issue..... : 2020-07-24



Applicant's name : Vitec Imaging Solutions Spa

Address : Via Valsugana 100 36022 Cassola (VI) -Italy

Manufacture's Name : Vitec Imaging Solutions Spa

Address : Via Valsugana 100 36022 Cassola (VI) -Italy

Test specification:

Standard : LP0002: 2018

Test procedure : EIA 603 、ANSI 、FCC/47 CFR/2.1046 、2.1047 、2.1049 、2.1051 、2.1053 and 2.1055

Non-standard test method..... : N/A

Test item description

Product name : 3-Axis Stabilized Handheld Gimbal for Camera

Trademark : Manfrotto

Model and/or type reference : MVG220FF, MVG220

Rating(s) : DC5V from adapter or DC7.4V from battery

Testing Laboratory information:

Testing Laboratory Name : Electro Magnetic Test, Inc.

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Testing..... :

Date of receipt of test item..... : Jul. 08, 2020

Date (s) of performance of tests..... : Jul. 08~ Jul. 24 , 2020

Date of Issue : Jul. 24, 2020

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

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Electro Magnetic Test, Inc., which is an independent testing and consulting firm. The test report is based on testing performed Electro Magnetic Test, Inc. personnel according to the measurement procedure described in the test specification given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

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Electro Magnetic Test, Inc. is recognized by the following agencies for performing EMI/EMC testing:

COUNTRY	AGENCY	IDENTIFYING #
USA	Federal Communications Commission (FCC) (EMT's test site is recognized by the FCC)	Registration Number: 90576
USA, Canada, Taiwan, Australia/New Zealand, European Community	National Voluntary Lab Accreditation Program (NVLAP) (EMT is accredited by NVLAP. A copy of the NVLAP Scope Of Accreditation is available upon request.)	Lab Code: 200147-0
Canada	Industry Canada	File No.: IC 2804
Japan	Voluntary Control Council For Interference (VCCI)	See Below
	Open Field Test Site "A"	R-589
	Mains Conducted Emissions Test Site "A"	C-604
	Telecom Conducted Emissions Test Site "A"	T-1655
	3 Meter Semi-Anechoic Chamber Site "E"	R-3227
	3 Meter Semi-Anechoic Chamber Site "E" (1GHz – 6GHz)	G-219
	Mains Conducted Emissions Test Site "E"	C-35793
	Telecom Conducted Emissions Test Site "E"	T-1715
Korea	Ministry of Information and Communication's Radio Research Laboratory (RRL) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (A copy of the Scope Of Accreditation is available upon request)	US0036
Taiwan	Bureau Of Standards, Metrology and Inspection (BSMI)	Reference Number: SL2-IN-E-1024
Australia / New Zealand	Australian Communications Authority (AUSTEL)	*

***THESE AGENCIES DO NOT ISSUE AN IDENTIFYING NUMBER TO TEST LABS.**

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

LP0002 : 2018			
Standard Section	Test Item	Judgment	Remark
2.3	Conducted Emission	PASS	None
3.10.1.5/2.8	Radiated Spurious Emission	PASS	None
3.10.1.2	Peak Output Power	PASS	None
3.10.1.6	6dB Occupied Bandwidth	PASS	None
3.10.1.6	Power Density	PASS	None
3.10.1.5/2.8	Restricted Bands	PASS	None
3.10.1.5/2.8	ANTENNA CONDUCTED SPURIOUS EMISSION	PASS	None
3.10.1.3	Antenna Requirement	PASS	None
3.10.1.5/2.3/2.8	Receiver Emissions	PASS	None

NOTE:

(1) "N/A" denotes test is not applicable in this test report.

1.1 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Conducted Emission Test	1.38dB
2	Radiated Emission Test	3.17dB
3	RF power,conducted	0.16dB
4	Spurious emissions,conducted	0.21dB
5	All emissions,radiated(<1G)	4.68dB
6	All emissions,radiated(>1G)	4.89dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	3-Axis Stabilized Handheld Gimbal for Camera	
Trade Name	Manfrotto	
Model Name	MVG220FF	
Serial Model Name	MVG220	
Product Description	The EUT is a 3-Axis Stabilized Handheld Gimbal for Camera	
	Operation Frequency:	2412~2462 MHz@802.11b/g/n20
	Modulation Type:	BPSK/QPSK16-QAM/64-QAM
	Bit Rate of Transmitter	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps
	Number Of Channel	Please see Note 2.
	Antenna Designation:	FPC Antenna
	Antenna Gain(Peak)	Antenna: 1.0 dBi
	Output Power:	802.11b: 12.75dBm 802.11g: 12.91dBm 802.11n20: 13.31dBm
Channel List	Please refer to the Note 2.	
Power Rating	DC5V from adapter or DC7.4V from battery	
Connecting I/O Port(s)	Please refer to the User's Manual	
Products Covered	N/A	
EUT Modification(s)	N/A	
Model difference	Only the model name is different.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Channel List							
802.11b/ g/ n(20M)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452	/	/
02	2417	06	2437	10	2457	/	/
03	2422	07	2442	11	2462	/	/
04	2427	08	2447	/	/	/	/

3.

Table for Filed Antenna

Ant	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	Iton Technology Corp	EW232-37	Integer antenna	N/A	1.0 dBi	Antenna

Note:

1 N/A

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	802.11b: All Rate
Mode 2	802.11g: All Rate
Mode 3	802.11n(20M): All Rate
Mode 4	RX

For Conducted Emission	
Final Test Mode	Description
Mode 1	TX(worst case)
Mode 4	RX(worst case)

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b: Rate 1Mbps
Mode 2	802.11g: Rate 6Mbps
Mode 3	802.11n(20M) : Rate 6.5Mbps
Mode 4	RX(worst case)

Note:

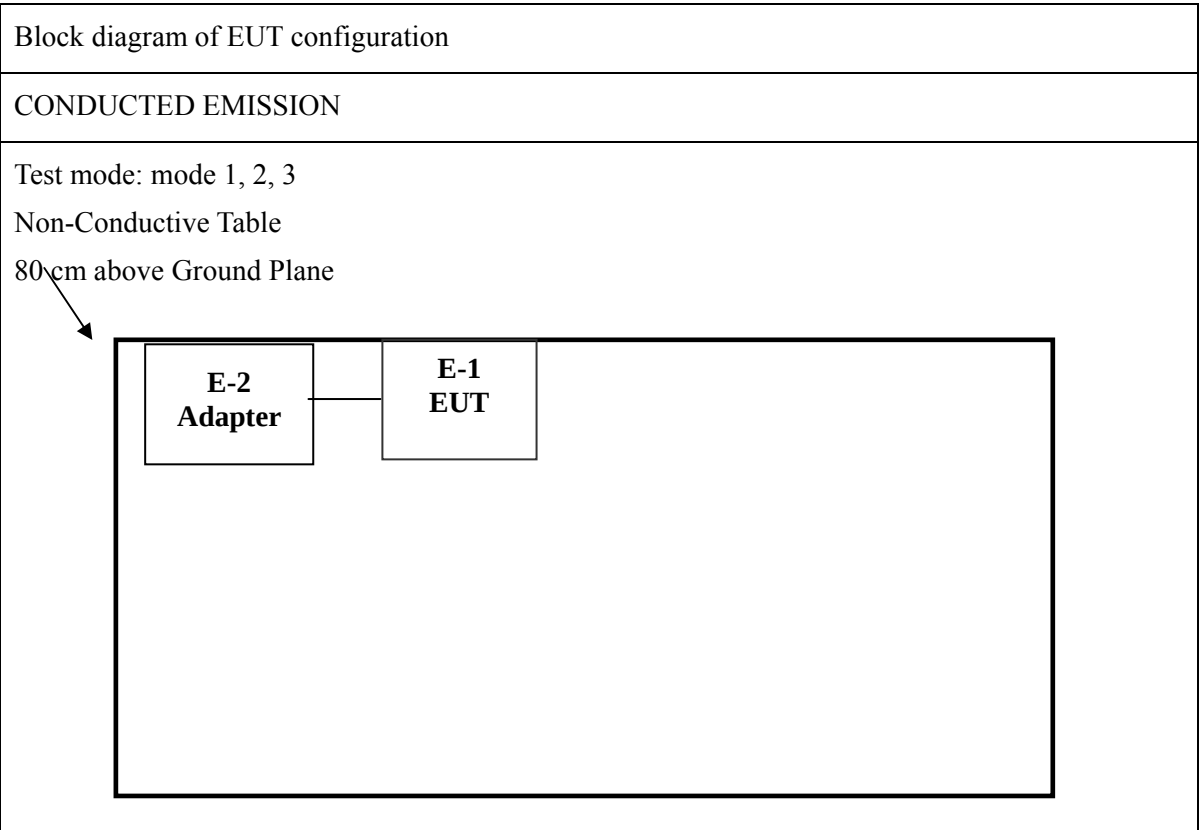
(1) The measurements are performed at the highest, middle, lowest available channels.

2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters.

Test software Version	Test program:CMD		
Frequency	2412 MHz	2437 MHz	2462 MHz

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



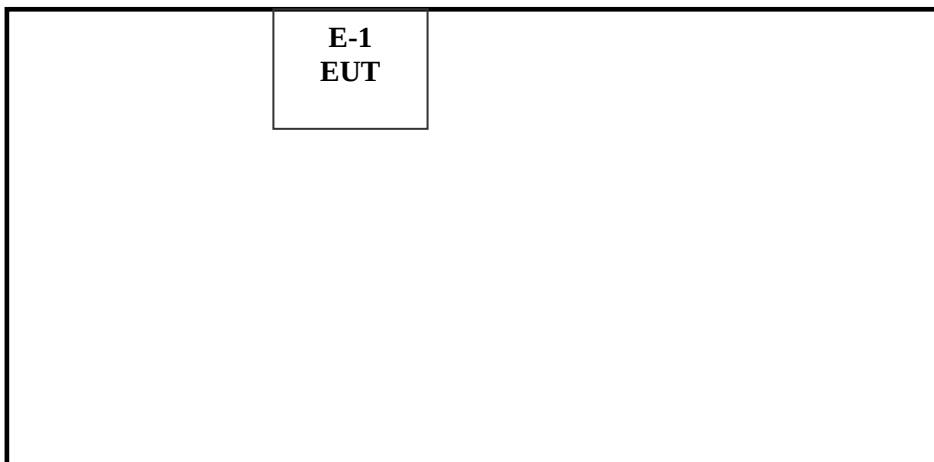
Block diagram of EUT configuration

RADIATED EMISSION

Test mode: mode 1, 2, 3, 4

Non-Conductive Table

80 cm above Ground Plane



2.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	3-Axis Stabilized Handheld Gimbal for Camera	Manfrotto	MVG220FF	N/A	N/A	EUT
E-2	Adapter	NOKIA	FC0302	N/A	N/A	Test Accessory*

Item	Equipment	Mfr/Brand	Model/Type No.	Note
1	Follow Focus	Manfrotto	MVG220FF, MVG220	EUT
2	USB Line	Manfrotto	MVG220FF, MVG220	EUT
3	三腳架	Manfrotto	MVG220FF, MVG220	EUT
4	Type-C Line	Manfrotto	MVG220FF, MVG220	EUT
5	Type-C Line	Manfrotto	MVG220FF, MVG220	EUT
6	電池	HOWELL	18650	EUT

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” or “with ferrite core”; “NO” means “unshielded” or “without ferrite core”
 “*”: In this report, the applicant did not provide the accompanying accessories with the equipment. The accessories were provided by the laboratory (or the applicant) and inspected simultaneously.

2.5.1 EQUIPMENTS LIST FOR ALL TEST ITEMS

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Spectrum Analyzer	Hewlett Packard	8566B	3013A07296	April 29, 2020	1 Year
RF Preselector	Hewlett Packard	85685A	3010A01157	April 29, 2020	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650	2521A00584	April 29, 2020	1 Year
Preamplifier	Com Power	PA-102	1482	April 29, 2020	1 Year
RF Attenuator	Mini-Circuits	CAT-10	Asset #1000	December 8, 2019	1 Year
LISN	Com Power	LI-200	12012	September 10, 2019	1 Year
LISN	Com Power	LI-200	12214	September 10, 2019	1 Year
LISN	Com Power	LI-200	1767	September 10, 2019	1 Year
LISN	Com Power	LI-200	1768	September 10, 2019	1 Year
Biconical Antenna	Com Power	AB-100	01557	December 29, 2019	1 Year
Log Periodic Antenna	Com Power	AL-100	16037	December 22, 2019	1 Year
Horn Antenna	Com Power	AHA-118	711054	December 22, 2019	1 Year
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Dell, Inc.	DHS	DNSV641	N/A	N/A
Printer	Hewlett Packard	C8124A	CN39B2234T	N/A	N/A
Plotter	Hewlett Packard	7470A	2308A96499	N/A	N/A

EMI Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
EMI Receiver	Rohde & Schwarz	ESU40	100127	June 12, 2020	1 Year
BiConiLog Antenna	ETS-Lindgren	3142D	00102183	August 14, 2019	1 Year
Horn Antenna	ETS-Lindgren	3117	00109294	May 6, 2020	1 Year
Preamplifier	Rohde & Schwarz	TS-PR18	100056	June 12, 2020	1 Year
Antenna Mast	ETS-Lindgren	2175	00095727	N/A	N/A
Turntable	ETS-Lindgren	2187-3.0	00118231	N/A	N/A
Computer	Acer	Aspire 8930	85100050123	N/A	N/A
Multi-Function Controller	ETS-Lindgren	2090	00102270	N/A	N/A
Loop Antenna	ARA	PLA-1030/B	1029	May 19, 2020	1 Year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150kHz-30MHz)

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

0.15 -0.5			66 - 56 *	56 - 46 *	LP0002
0.50 -5.0			56.00	46.00	LP0002
5.0 -30.0			60.00	50.00	LP0002

Note:

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

The following table is the setting of the receiver

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

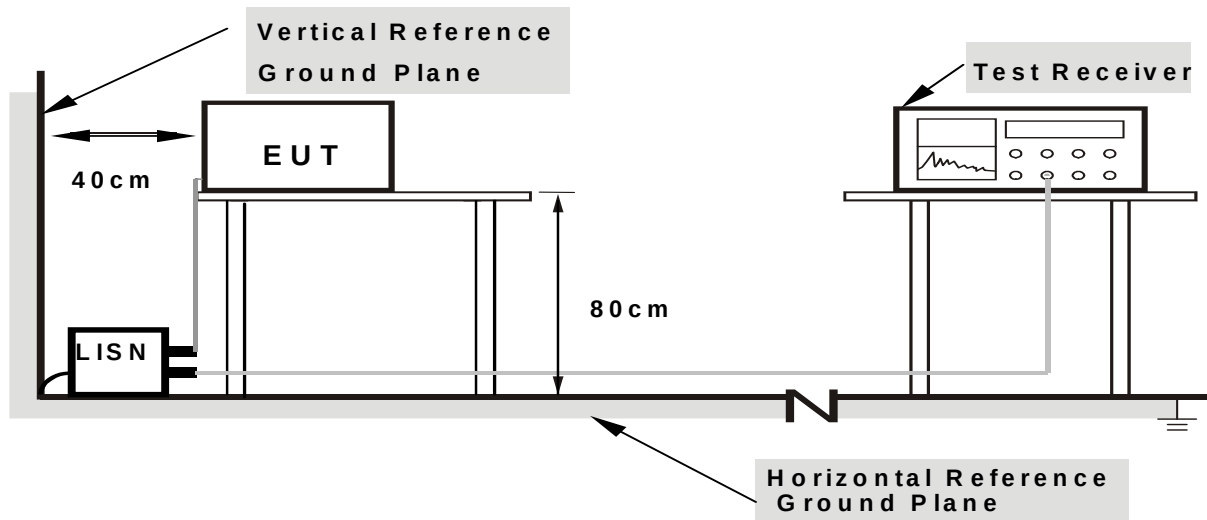
3.1.2 TEST PROCEDURE

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

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

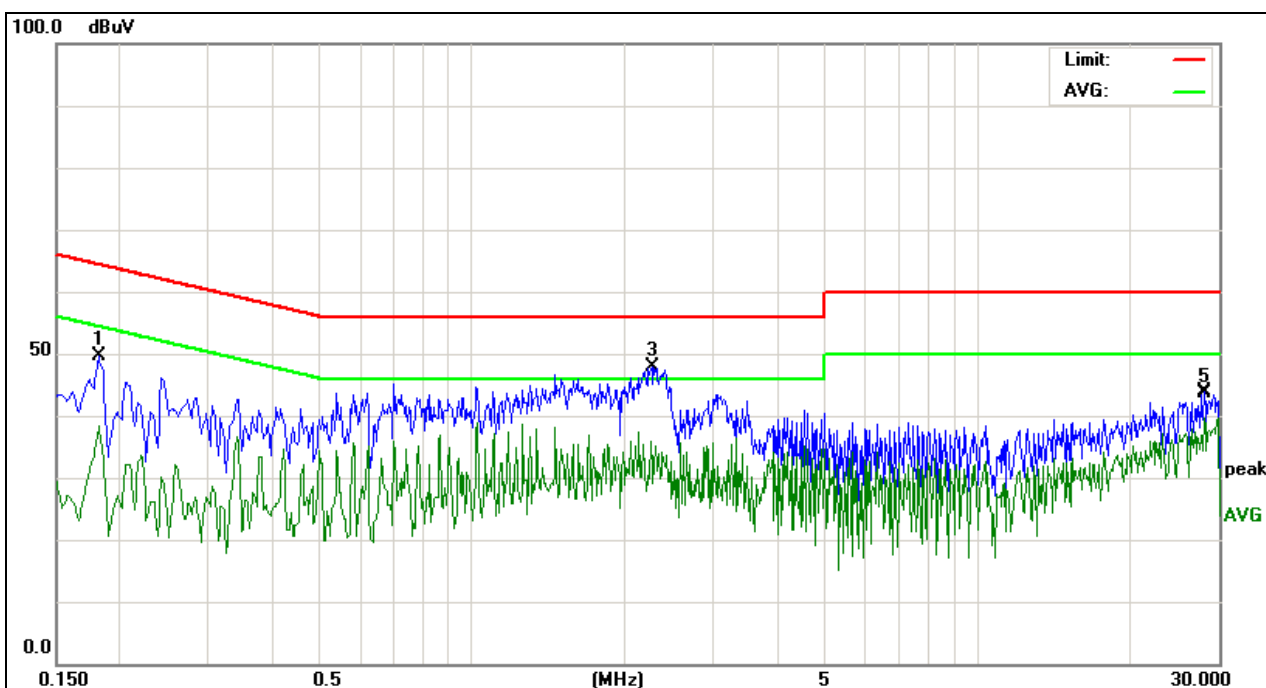
3.1.4 TEST SETUP



- Note:**
- Support units were connected to second LISN.
 - Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.5 TEST RESULTS

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-07-15
Test Mode :	TX(worst case)	Phase :	L
Test Voltage :	DC7.4V from battery		

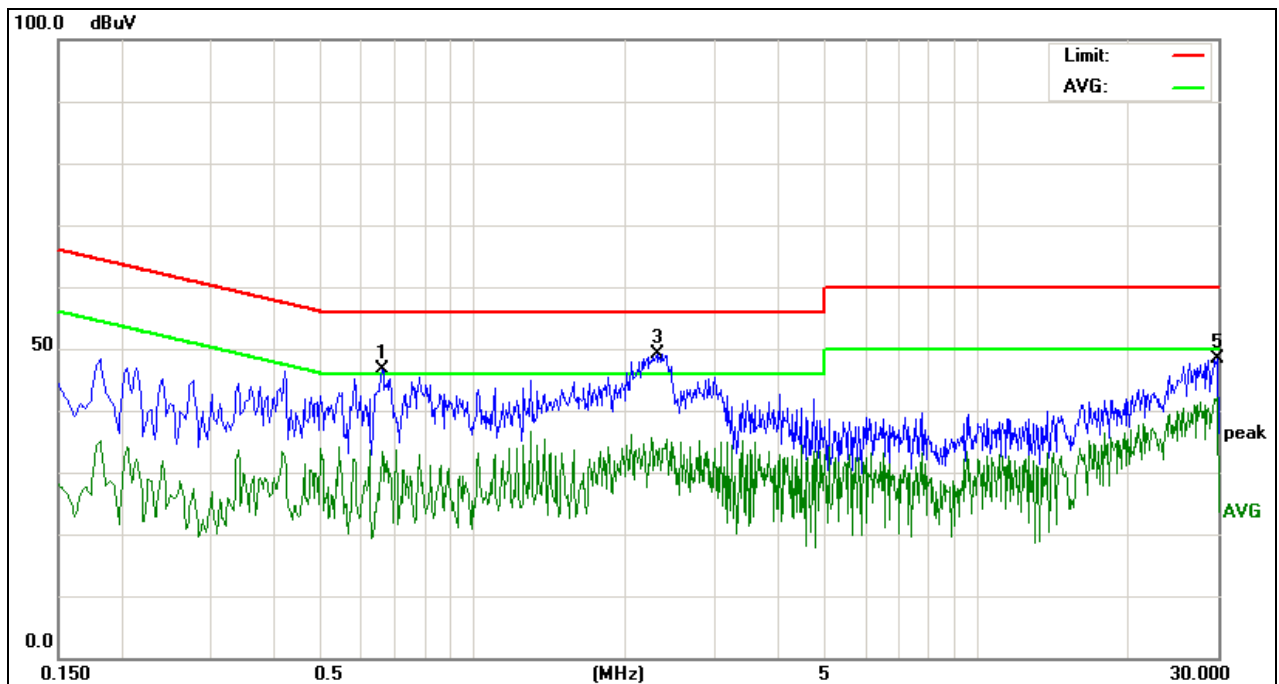


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss + Pulse limiter.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1819	38.21	11.36	49.57	64.39	-14.82	peak
2		0.1819	26.93	11.36	38.29	54.39	-16.10	AVG
3	*	2.2700	37.94	10.00	47.94	56.00	-8.06	peak
4		2.2700	27.49	10.00	37.49	46.00	-8.51	AVG
5		28.0220	32.41	11.34	43.75	60.00	-16.25	peak
6		28.0220	28.31	11.34	39.65	50.00	-10.35	AVG

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-07-15
Test Mode :	TX(worst case)	Phase :	N
Test Voltage :	DC7.4V from battery		



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss + Pulse limiter.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.6580	36.59	9.98	46.57	56.00	-9.43	peak
2		0.6580	23.59	9.98	33.57	46.00	-12.43	AVG
3	*	2.3100	39.20	10.00	49.20	56.00	-6.80	peak
4		2.3100	25.41	10.00	35.41	46.00	-10.59	AVG
5		29.8980	36.97	11.48	48.45	60.00	-11.55	peak
6		29.8980	30.69	11.48	42.17	50.00	-7.83	AVG

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 2.7, then the 2.8 limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to LP0002.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

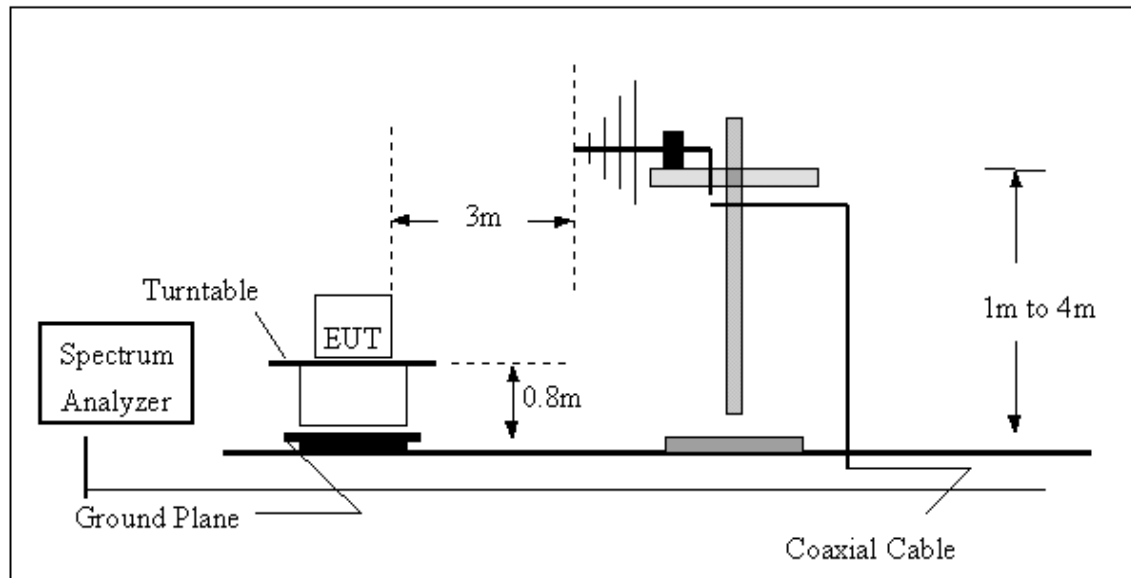
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

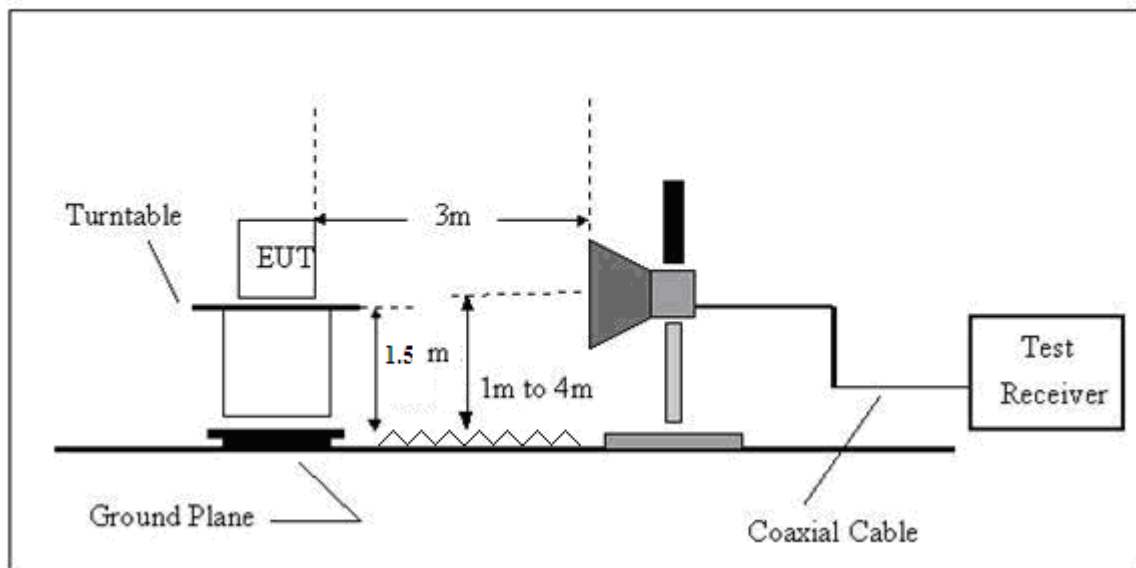
- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



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

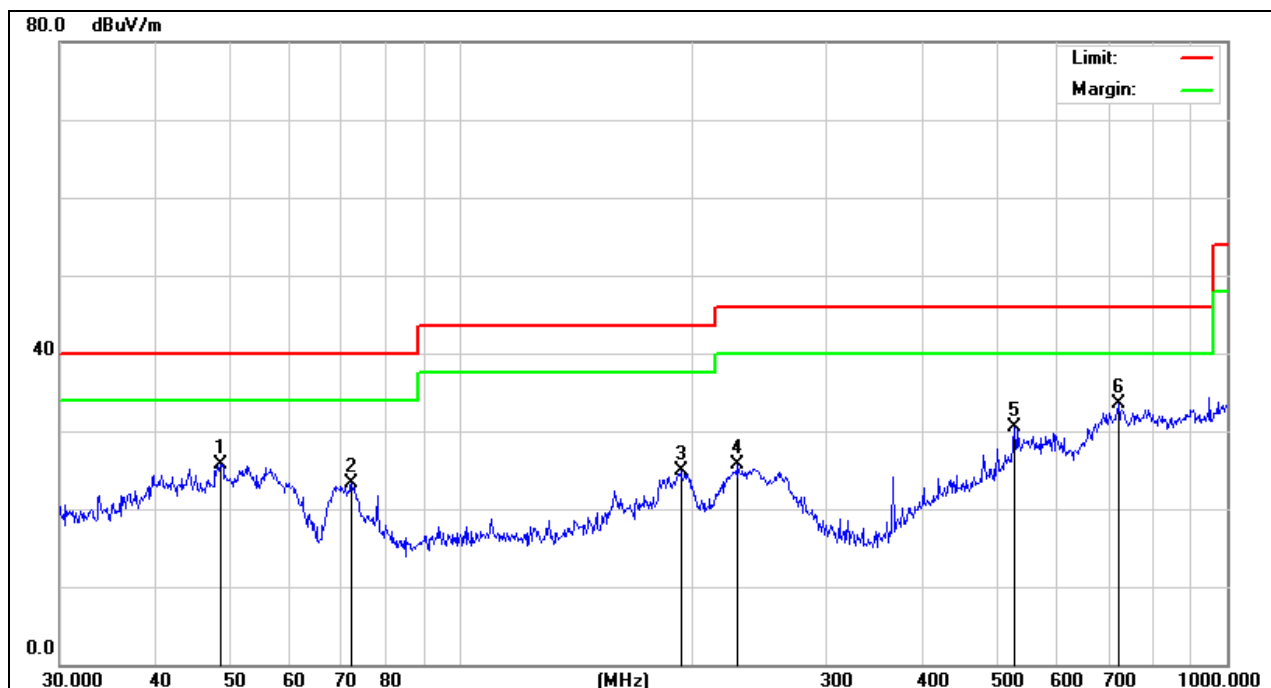


3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 TEST RESULTS (BETWEEN30 – 1000 MHZ)

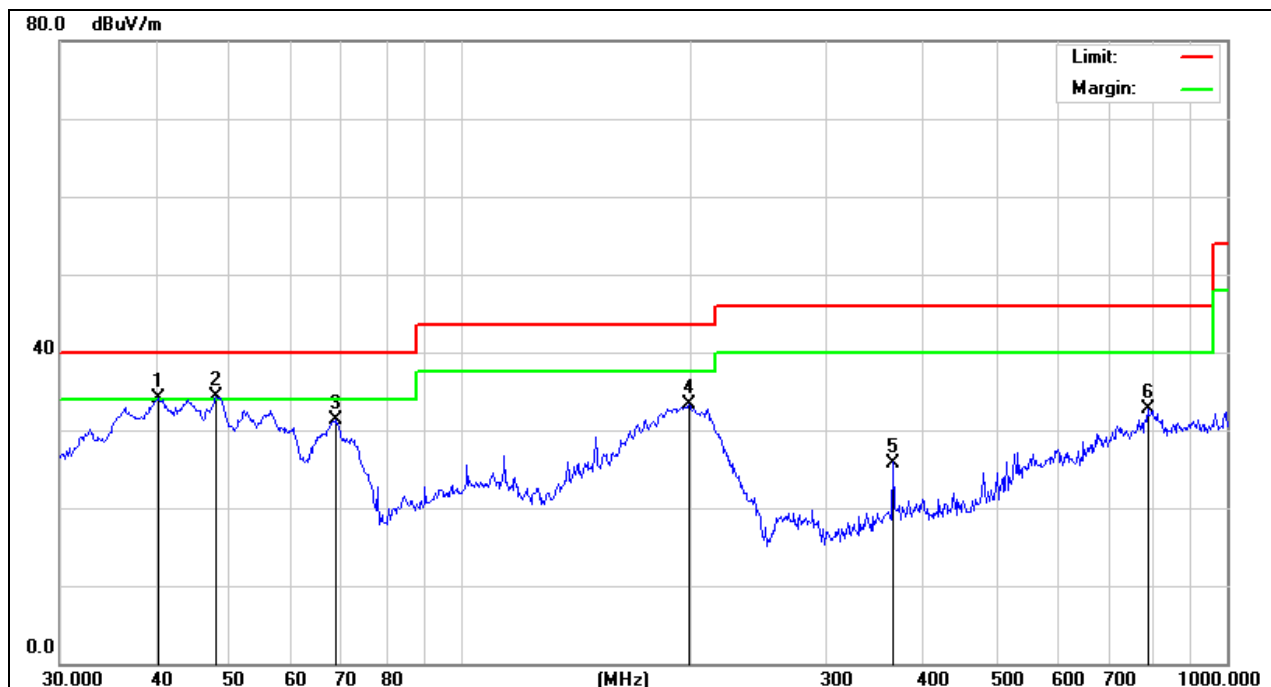
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX 802.11b :Rate 1Mbps (worst case)	Polarization :	Horizontal
Test Power :	DC7.4V from battery		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		48.6719	28.82	-3.07	25.75	40.00	-14.25	peak
2		72.0843	32.49	-9.12	23.37	40.00	-16.63	peak
3		193.7728	32.53	-7.56	24.97	43.50	-18.53	peak
4		230.0985	32.10	-6.48	25.62	46.00	-20.38	peak
5		528.2458	26.70	3.83	30.53	46.00	-15.47	peak
6	*	721.7259	26.19	7.34	33.53	46.00	-12.47	peak

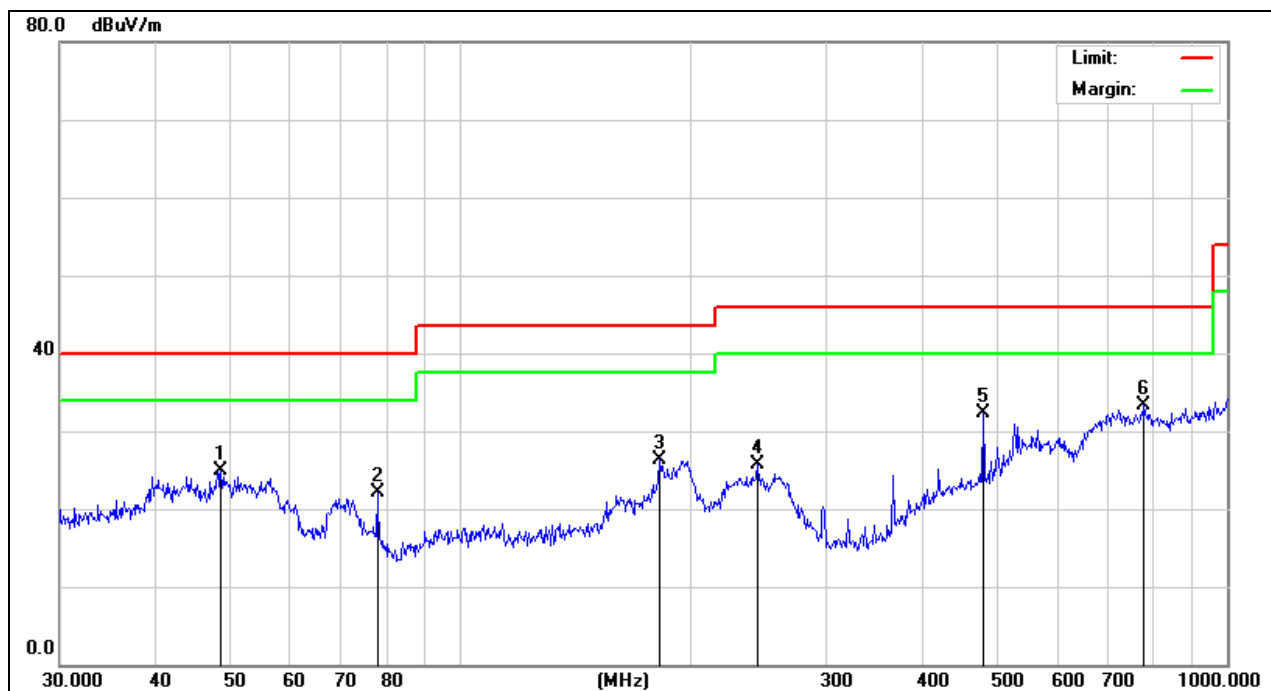
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX 802.11b :Rate 1Mbps (worst case)	Polarization :	Vertical
Test Power :	DC7.4V from battery		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	!	40.4172	38.33	-4.22	34.11	40.00	-5.89	peak
2	*	47.9940	39.72	-5.44	34.28	40.00	-5.72	peak
3		68.8721	41.45	-10.08	31.37	40.00	-8.63	peak
4		198.5880	39.95	-6.69	33.26	43.50	-10.24	peak
5		366.8231	30.06	-4.26	25.80	46.00	-20.20	peak
6		787.8513	25.35	7.41	32.76	46.00	-13.24	peak

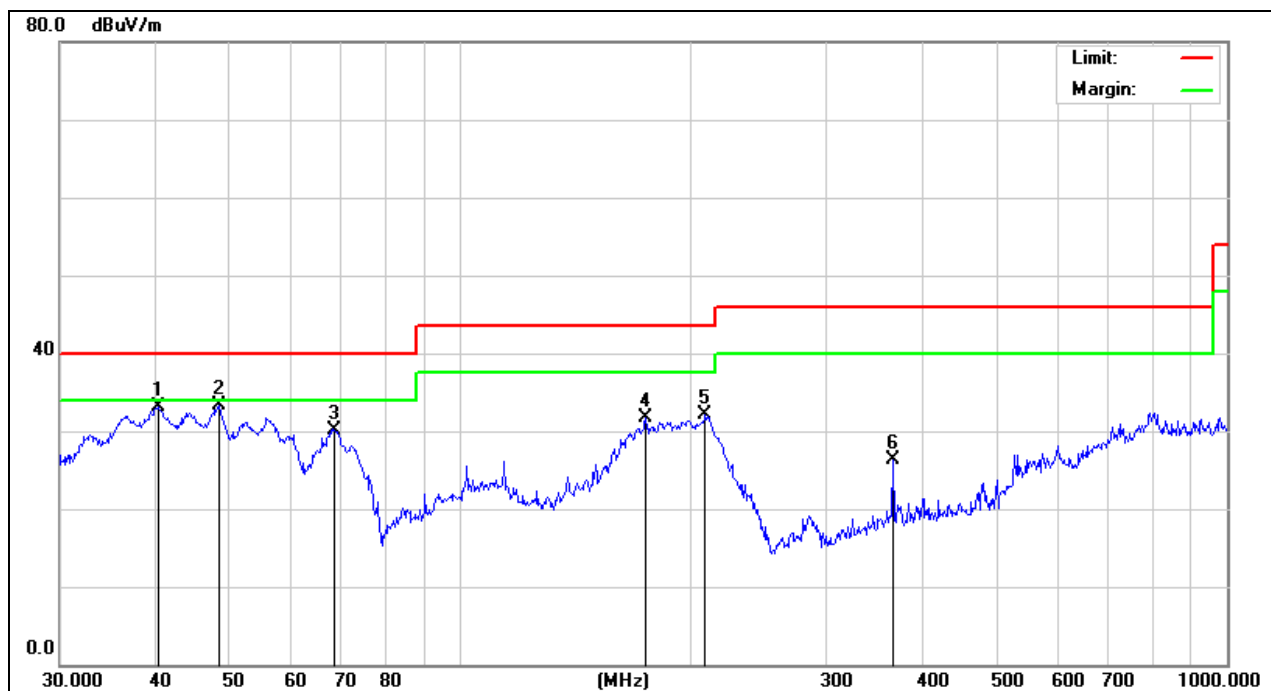
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	RX	Polarization :	Horizontal
Test Power :	DC7.4V from battery		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		48.6719	27.89	-3.07	24.82	40.00	-15.18	peak
2		77.8654	32.75	-10.65	22.10	40.00	-17.90	peak
3		181.9202	31.84	-5.62	26.22	43.50	-17.28	peak
4		244.2321	32.11	-6.49	25.62	46.00	-20.38	peak
5		480.5276	31.73	0.56	32.29	46.00	-13.71	peak
6	*	779.6068	25.85	7.50	33.35	46.00	-12.65	peak

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name. :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	RX	Polarization :	Vertical
Test Power :	DC7.4V from battery		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

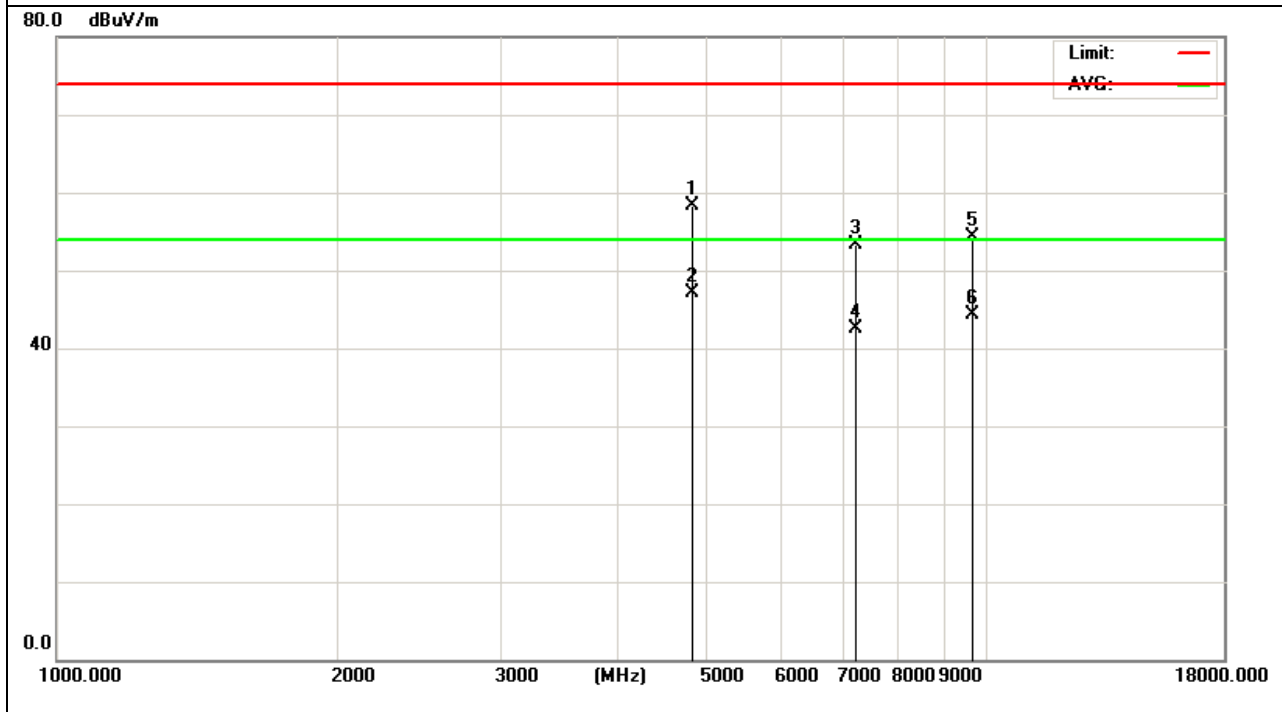
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB Detector
1		40.4172	37.41	-4.22	33.19	40.00	-6.81 peak
2	*	48.5016	38.80	-5.59	33.21	40.00	-6.79 peak
3		68.3908	40.04	-9.93	30.11	40.00	-9.89 peak
4		174.4241	41.20	-9.46	31.74	43.50	-11.76 peak
5		208.5803	36.22	-4.21	32.01	43.50	-11.49 peak
6		366.8231	30.54	-4.26	26.28	46.00	-19.72 peak

3.2.6 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.0000	53.26	5.08	58.34	74.00	-15.66	peak
4824.0000	42.03	5.08	47.11	54.00	-6.89	AVG
7236.0000	46.11	7.16	53.27	74.00	-20.73	peak
7236.0000	35.26	7.16	42.42	54.00	-11.58	AVG
9648.0000	43.41	10.82	54.23	74.00	-19.77	peak
9648.0000	33.46	10.82	44.28	54.00	-9.72	AVG

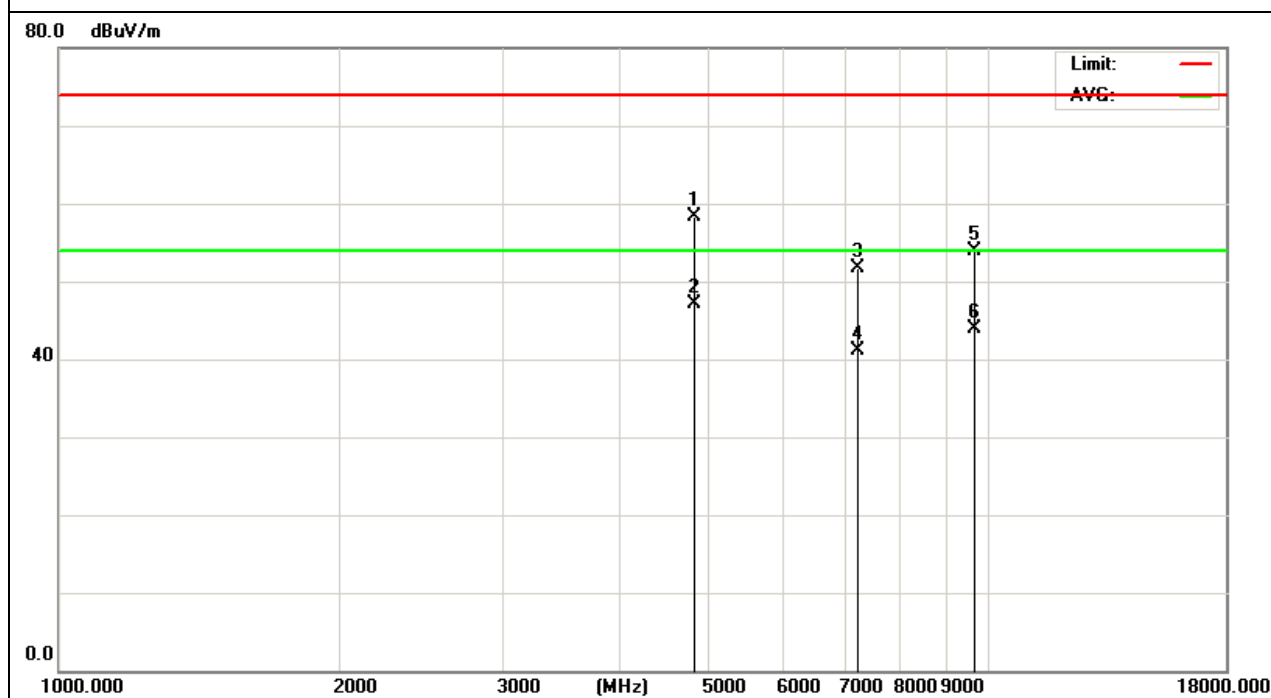
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.000	53.18	5.08	58.26	74.00	-15.74	peak
4824.000	42.02	5.08	47.10	54.00	-6.90	AVG
7236.000	44.64	7.16	51.80	74.00	-22.20	peak
7236.000	33.97	7.16	41.13	54.00	-12.87	AVG
9648.000	43.02	10.82	53.84	74.00	-20.16	peak
9648.000	33.18	10.82	44.00	54.00	-10.00	AVG

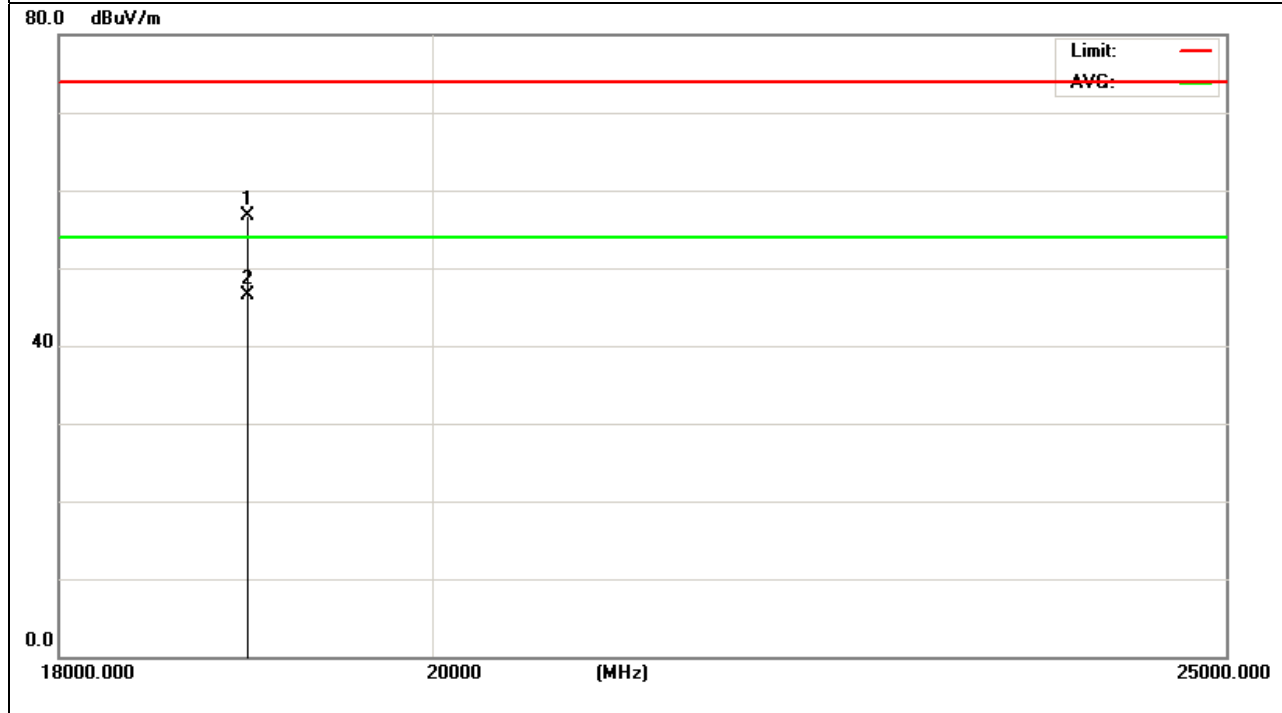
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18984.000	40.26	16.39	56.65	74.00	-17.35	peak
18984.000	30.18	16.39	46.57	54.00	-7.43	AVG

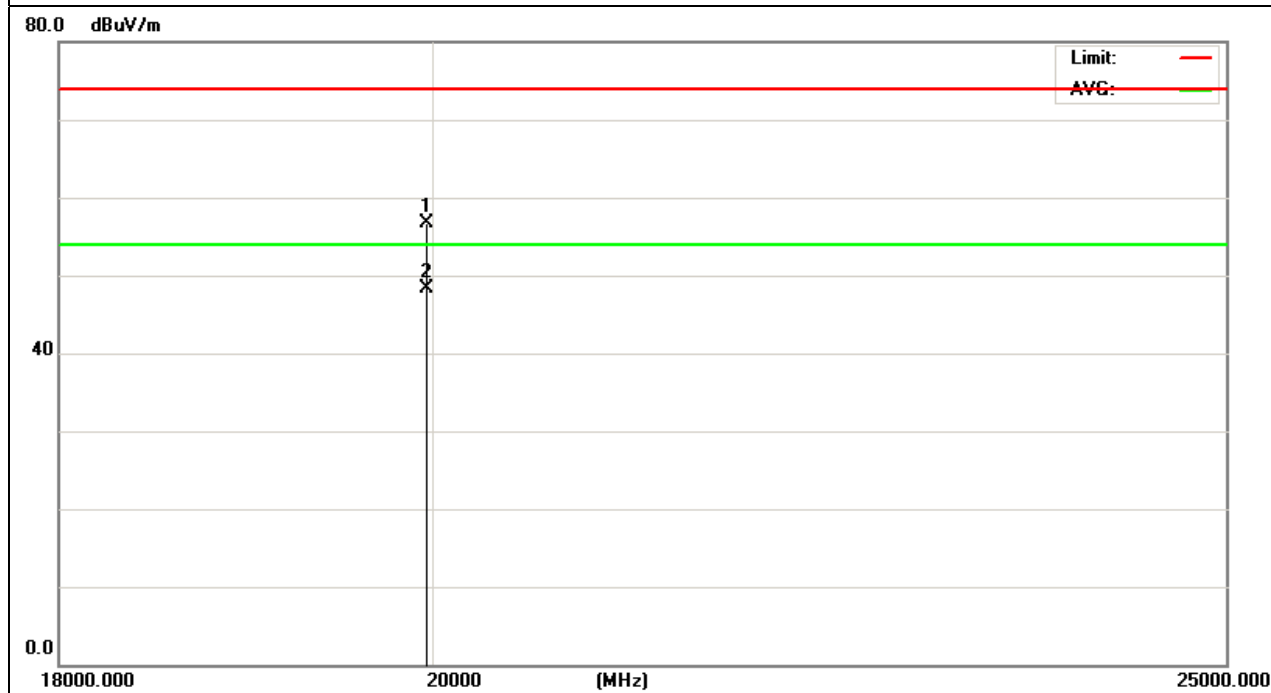
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19964.000	40.02	16.59	56.61	74.00	-17.39	peak
19964.000	31.67	16.59	48.26	54.00	-5.74	AVG

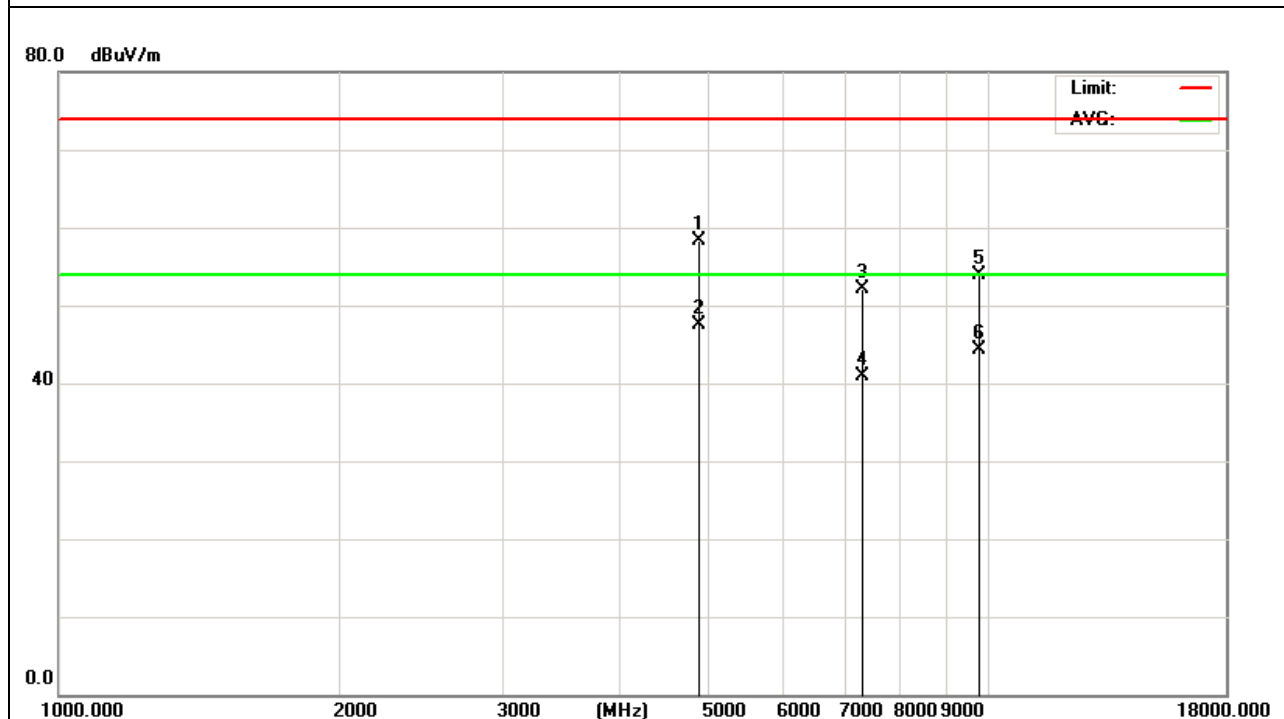
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.0000	53.19	5.13	58.32	74.00	-15.68	peak
4874.0000	42.47	5.13	47.60	54.00	-6.40	AVG
7311.0000	44.59	7.49	52.08	74.00	-21.92	peak
7311.0000	33.46	7.49	40.95	54.00	-13.05	AVG
9748.0000	42.58	11.30	53.88	74.00	-20.12	peak
9748.0000	33.02	11.30	44.32	54.00	-9.68	AVG

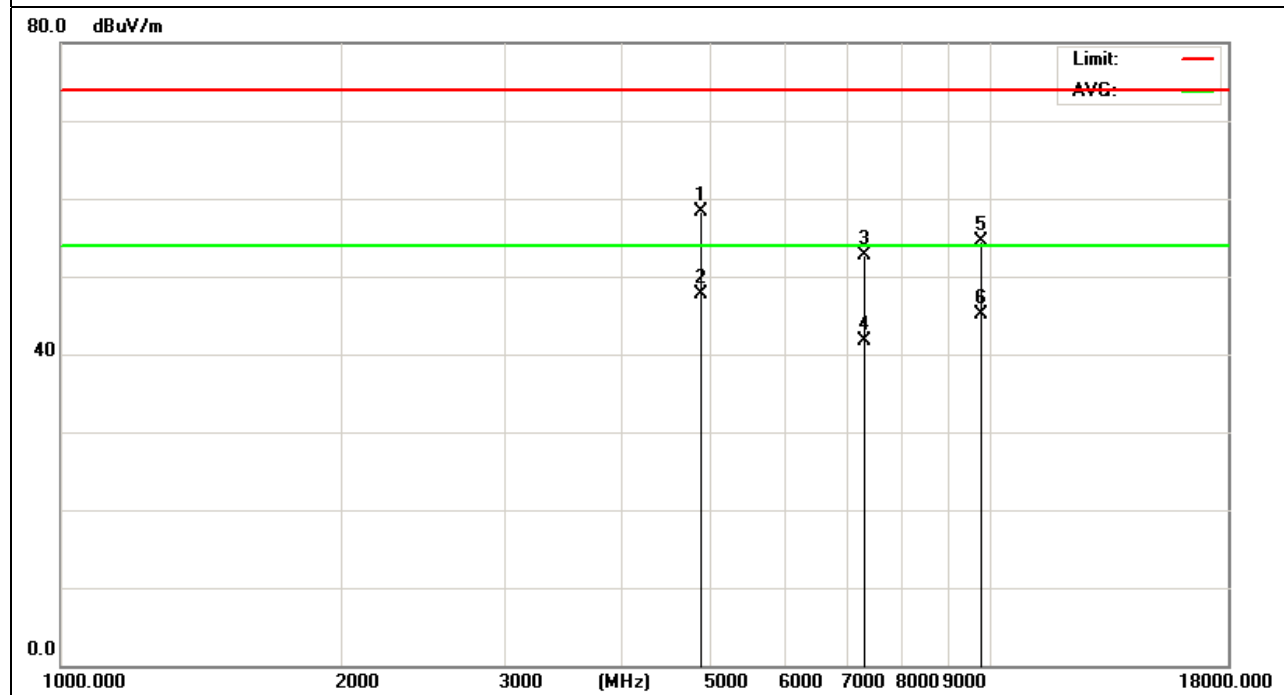
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.0000	53.22	5.13	58.35	74.00	-15.65	peak
4874.0000	42.61	5.13	47.74	54.00	-6.26	AVG
7311.0000	45.26	7.49	52.75	74.00	-21.25	peak
7311.0000	34.24	7.49	41.73	54.00	-12.27	AVG
9748.0000	43.11	11.30	54.41	74.00	-19.59	peak
9748.0000	33.87	11.30	45.17	54.00	-8.83	AVG

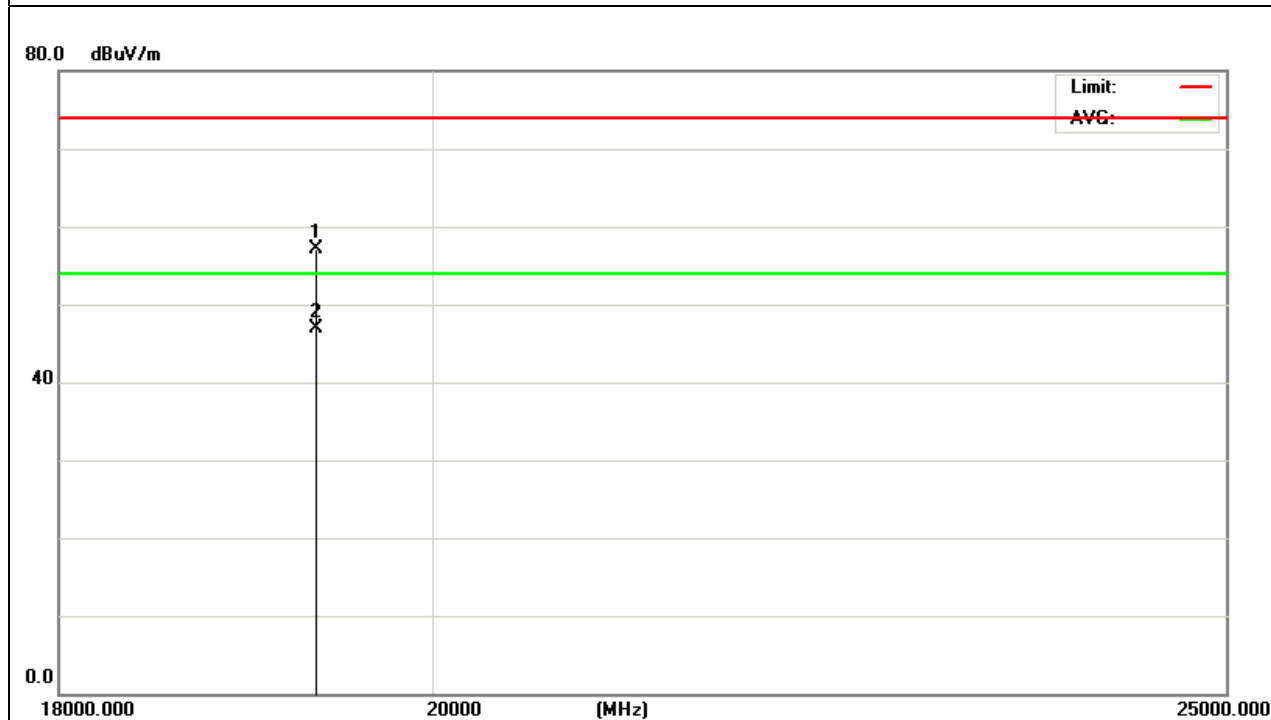
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19348.000	40.56	16.47	57.03	74.00	-16.97	peak
19348.000	30.49	16.47	46.96	54.00	-7.04	AVG

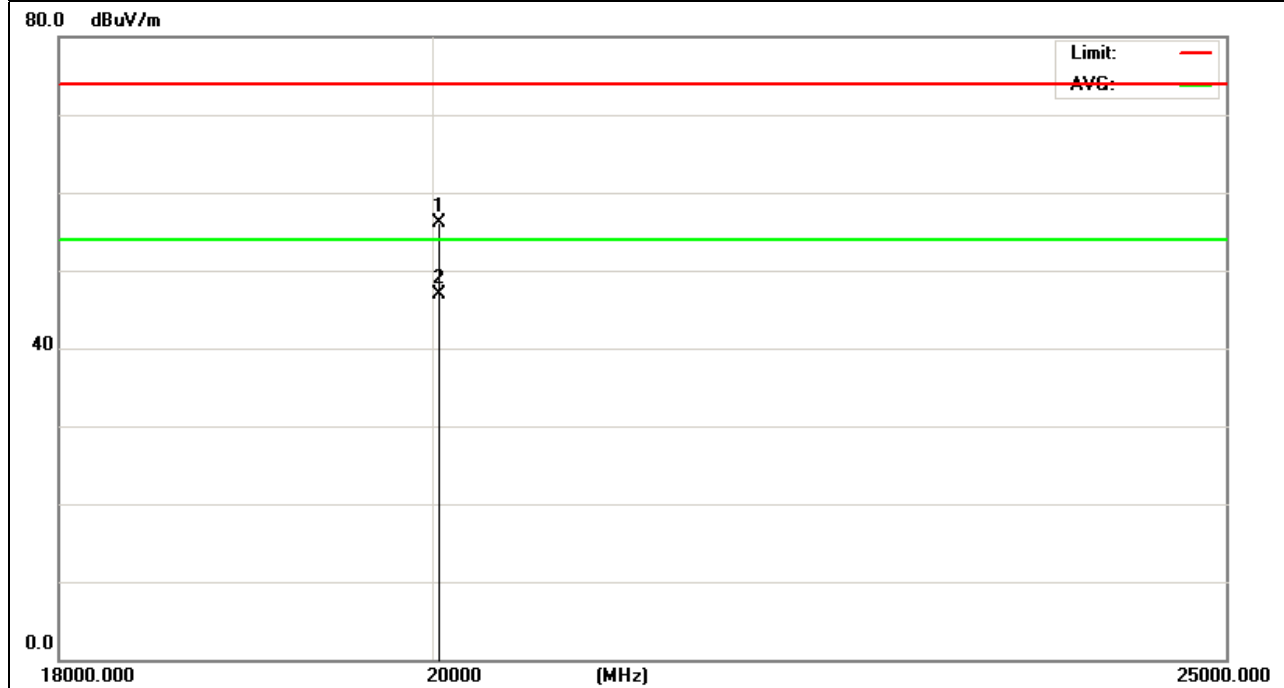
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20034.000	39.54	16.61	56.15	74.00	-17.85	peak
20034.000	30.27	16.61	46.88	54.00	-7.12	AVG

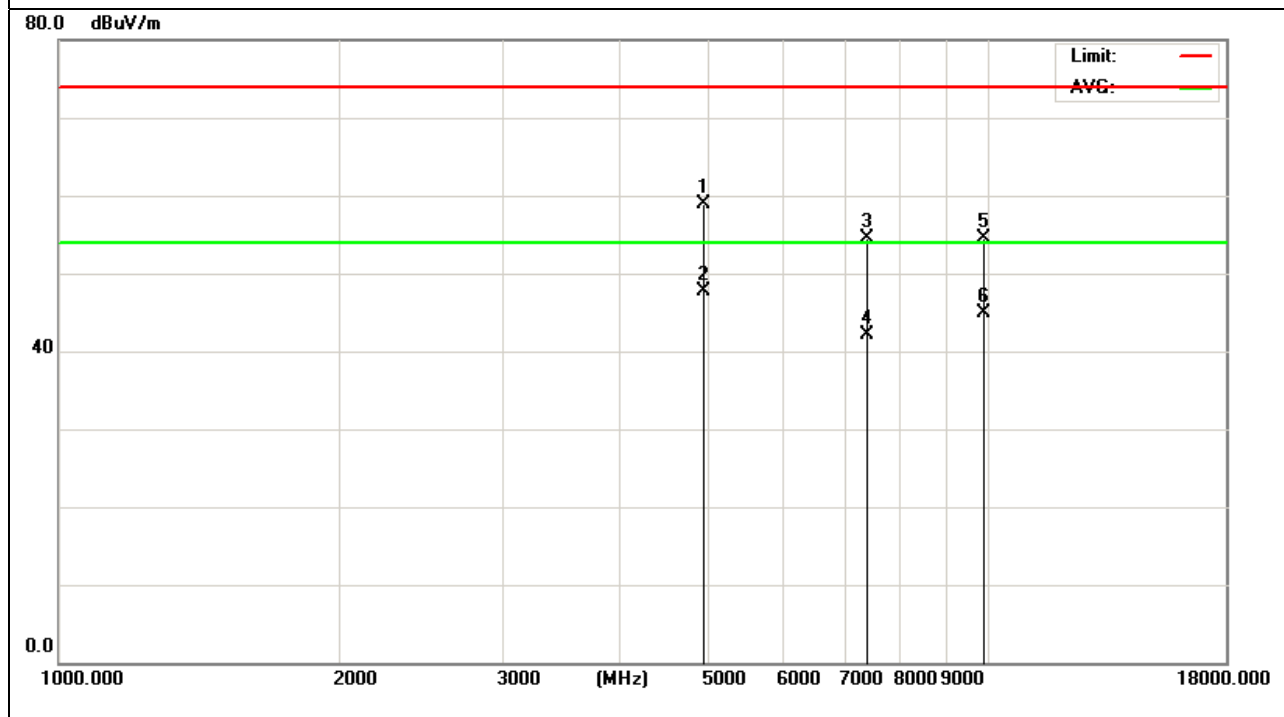
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.0000	53.64	5.18	58.82	74.00	-15.18	peak
4924.0000	42.52	5.18	47.70	54.00	-6.30	AVG
7386.0000	46.62	7.82	54.44	74.00	-19.56	peak
7386.0000	34.34	7.82	42.16	54.00	-11.84	AVG
9848.0000	42.66	11.79	54.45	74.00	-19.55	peak
9848.0000	33.03	11.79	44.82	54.00	-9.18	AVG

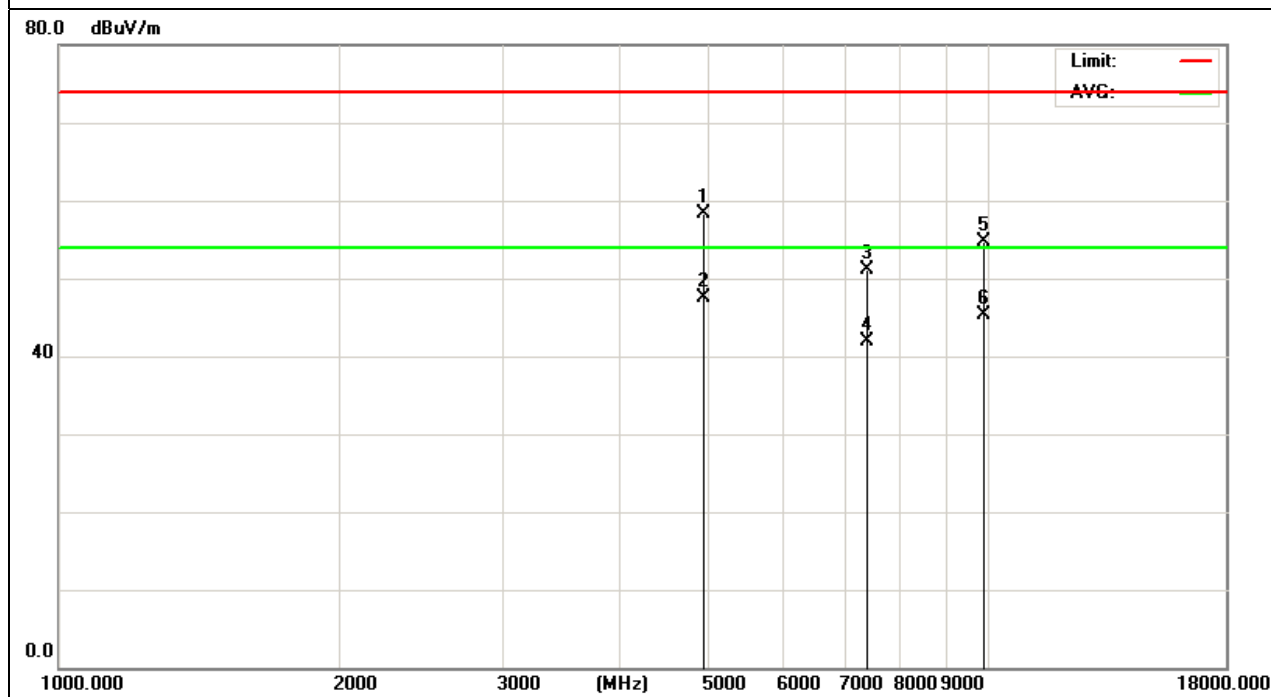
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.0000	53.19	5.18	58.37	74.00	-15.63	peak
4924.0000	42.28	5.18	47.46	54.00	-6.54	AVG
7386.0000	43.26	7.82	51.08	74.00	-22.92	peak
7386.0000	34.18	7.82	42.00	54.00	-12.00	AVG
9848.0000	42.88	11.79	54.67	74.00	-19.33	peak
9848.0000	33.47	11.79	45.26	54.00	-8.74	AVG

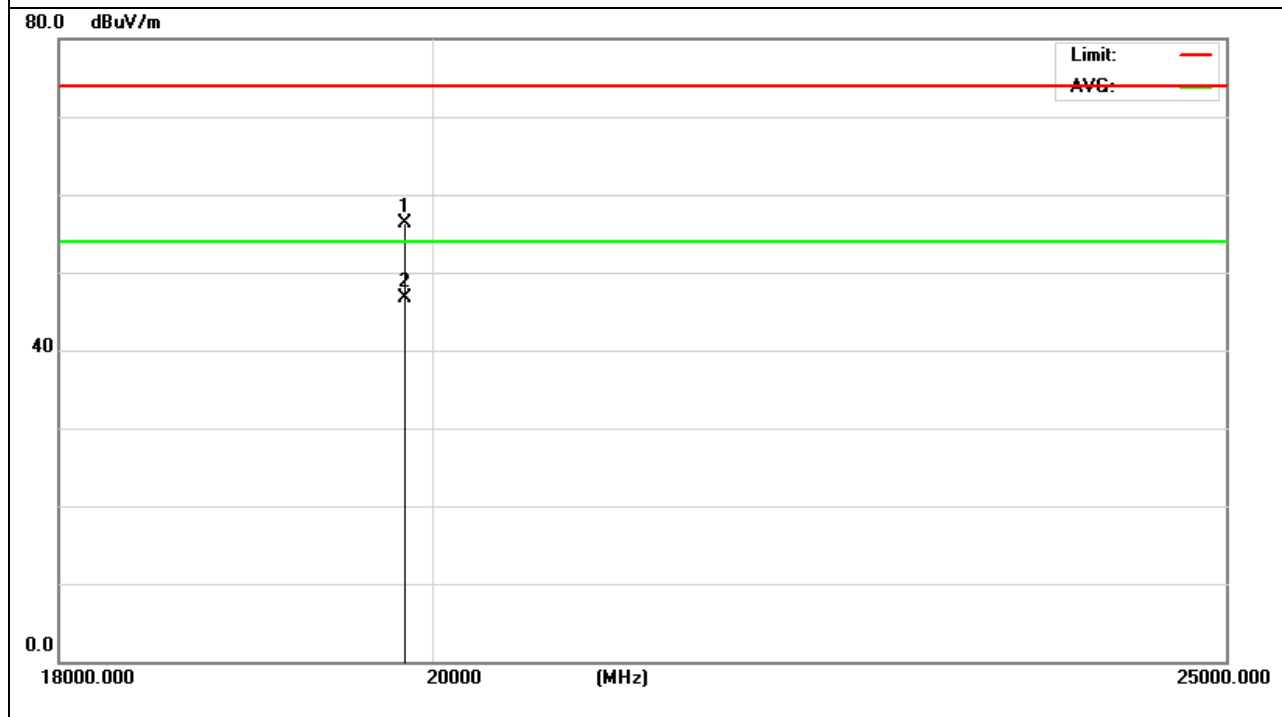
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11b :Rate 1Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19847.000	39.65	16.57	56.22	74.00	-17.78	peak
19847.000	30.11	16.57	46.68	54.00	-7.32	AVG

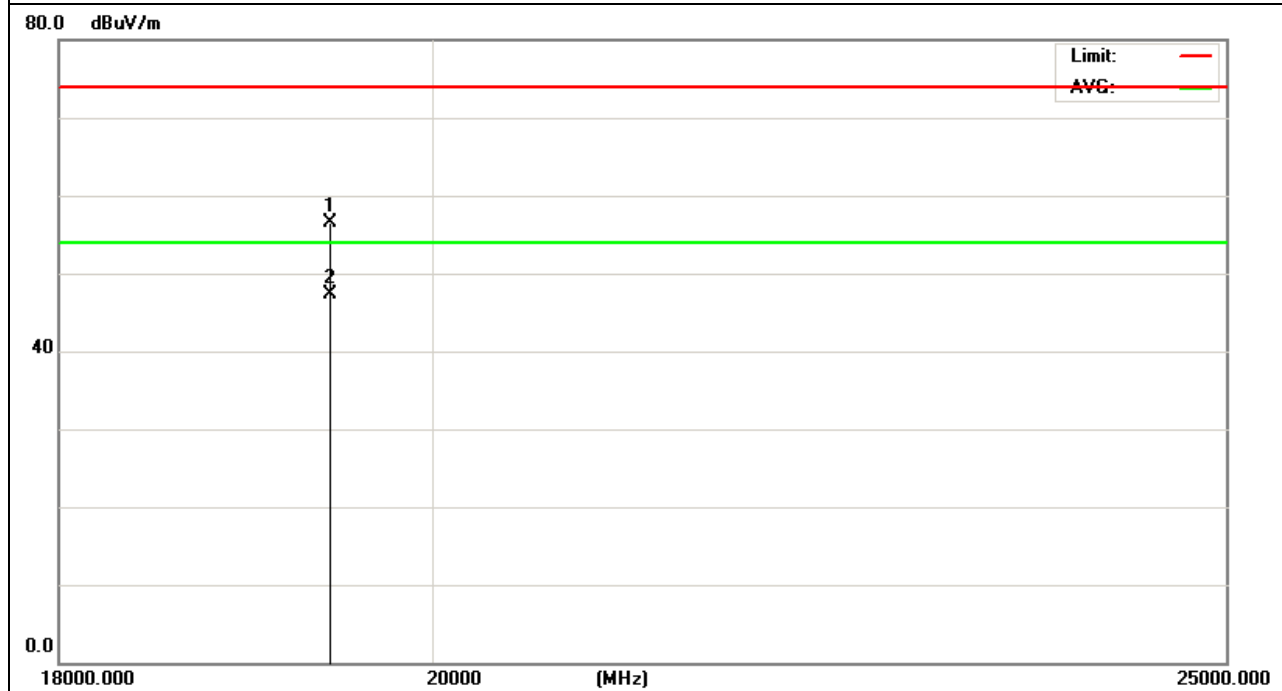
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11b :Rate 1Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19422.000	40.03	16.49	56.52	74.00	-17.48	peak
19422.000	30.84	16.49	47.33	54.00	-6.67	AVG

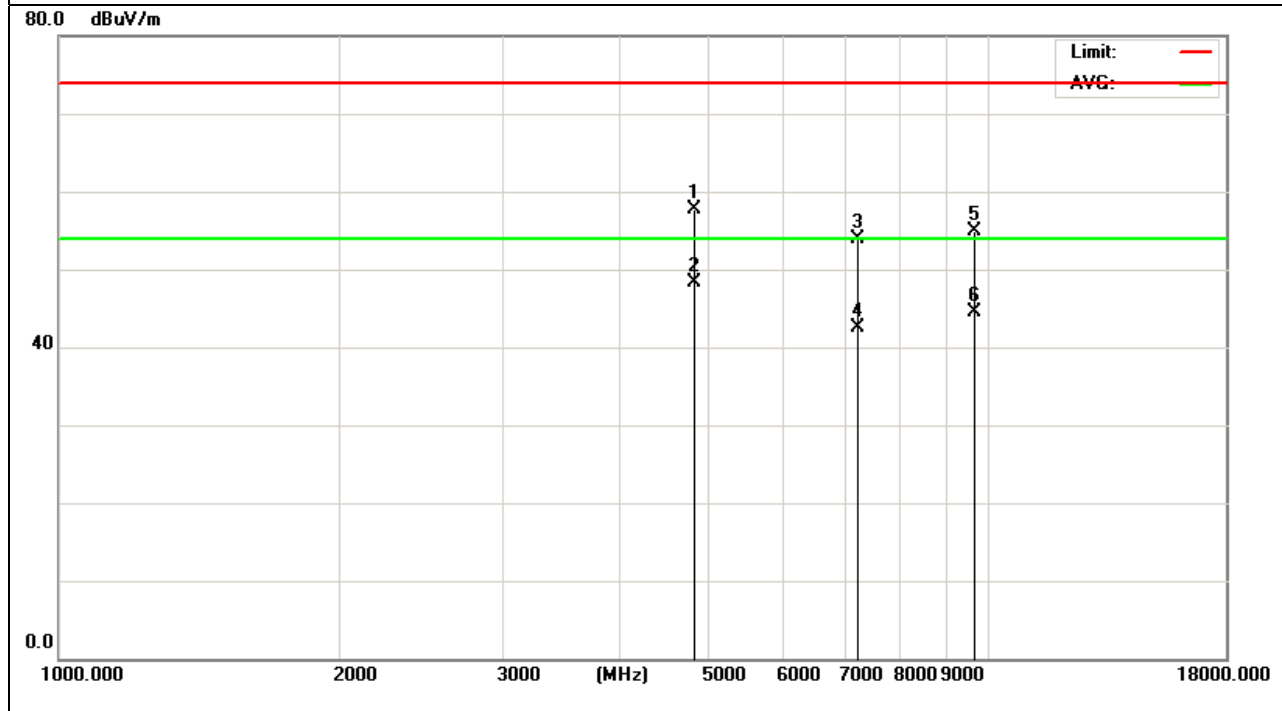
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11g; Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.0000	52.59	5.08	57.67	74.00	-16.33	peak
4824.0000	43.21	5.08	48.29	54.00	-5.71	AVG
7236.0000	46.79	7.16	53.95	74.00	-20.05	peak
7236.0000	35.26	7.16	42.42	54.00	-11.58	AVG
9648.0000	44.02	10.82	54.84	74.00	-19.16	peak
9648.0000	33.63	10.82	44.45	54.00	-9.55	AVG

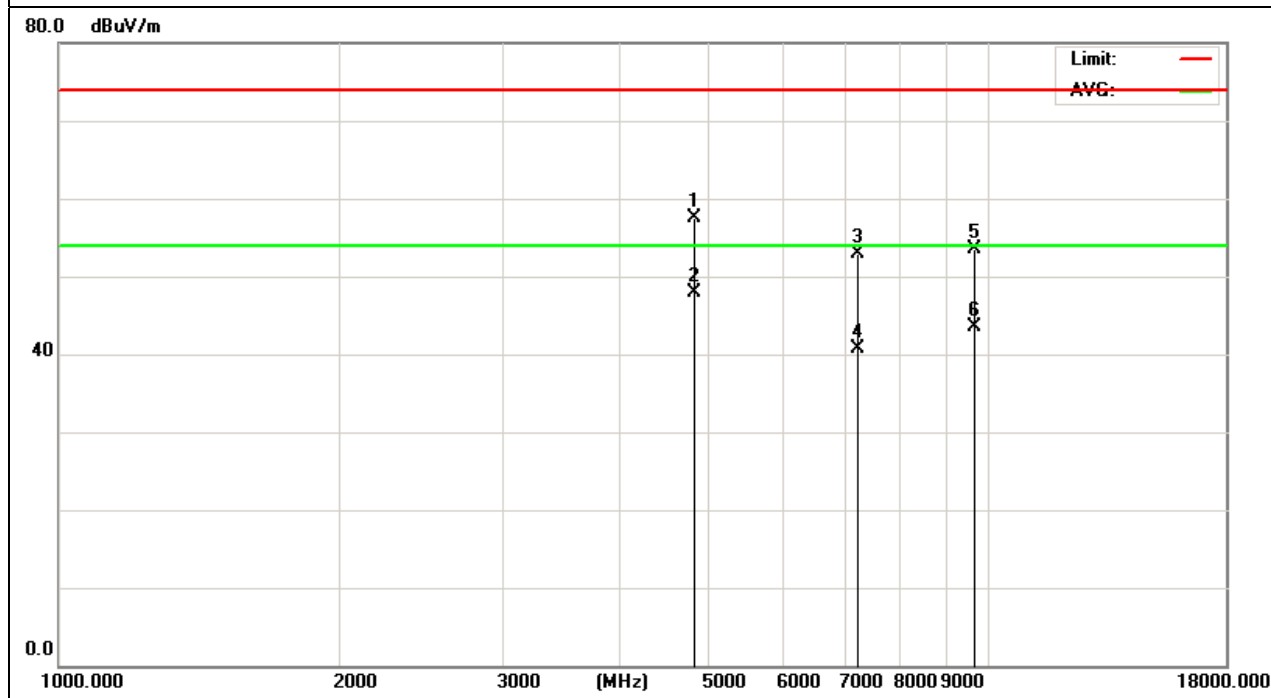
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.0000	52.49	5.08	57.57	74.00	-16.43	peak
4824.0000	42.84	5.08	47.92	54.00	-6.08	AVG
7236.0000	45.65	7.16	52.81	74.00	-21.19	peak
7236.0000	33.59	7.16	40.75	54.00	-13.25	AVG
9648.0000	42.78	10.82	53.60	74.00	-20.40	peak
9648.0000	32.61	10.82	43.43	54.00	-10.57	AVG

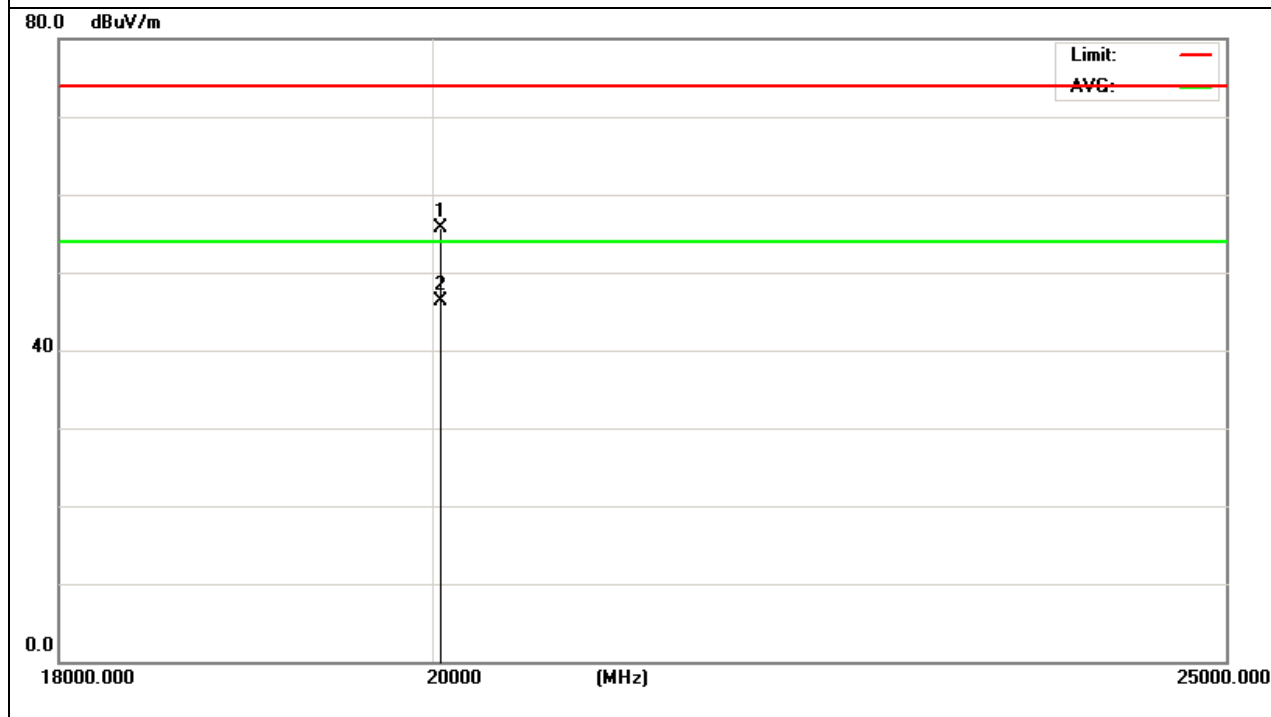
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11g; Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20044.000	39.03	16.61	55.64	74.00	-18.36	peak
20044.000	29.64	16.61	46.25	54.00	-7.75	AVG

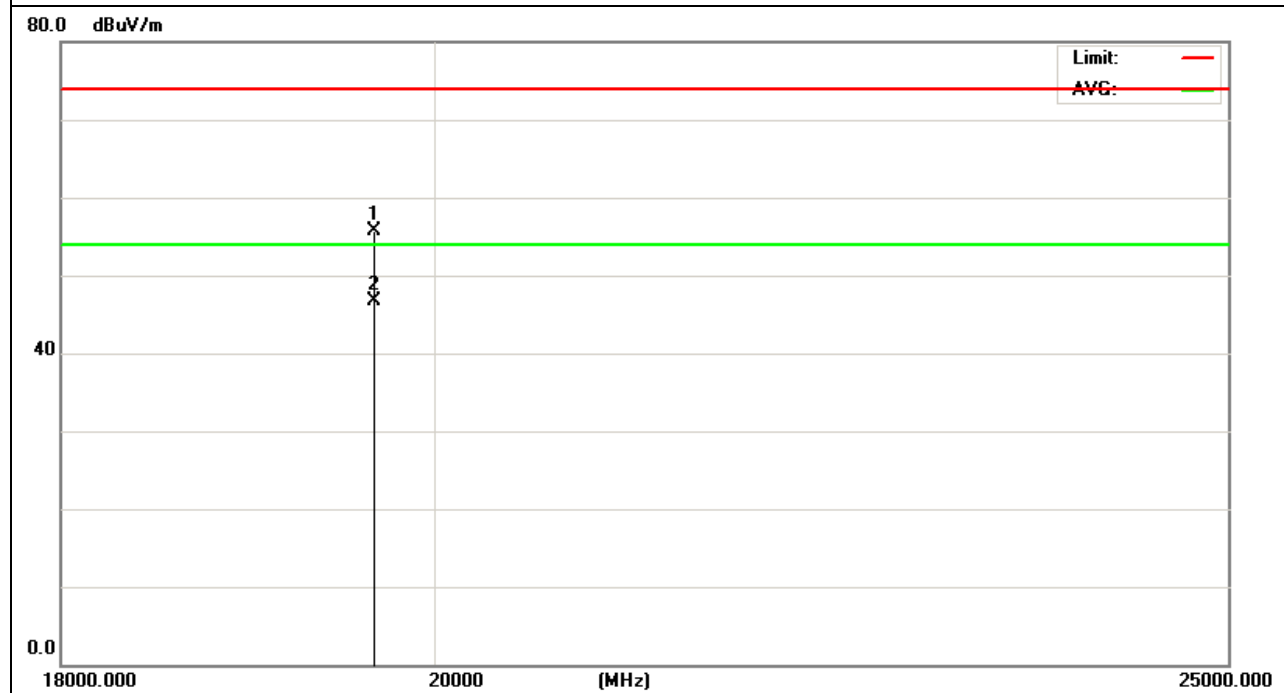
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19658.000	39.16	16.53	55.69	74.00	-18.31	peak
19658.000	30.22	16.53	46.75	54.00	-7.25	AVG

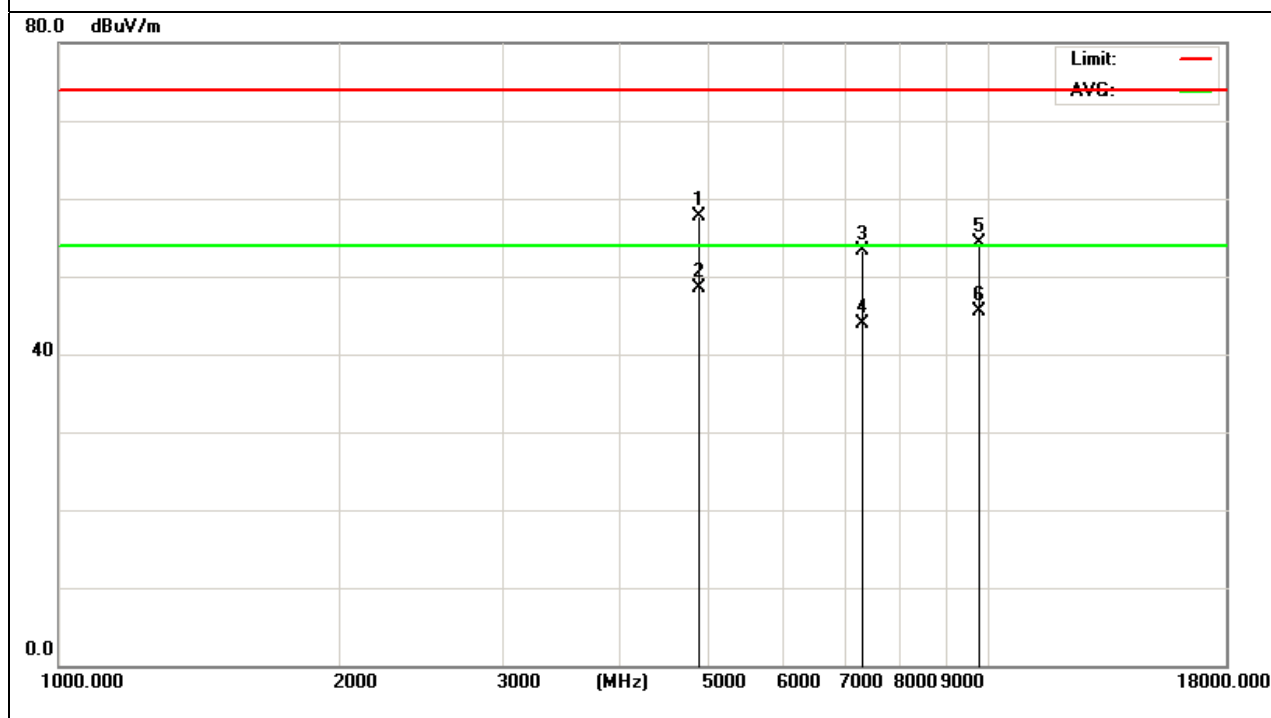
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11g; Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.000	52.56	5.13	57.69	74.00	-16.31	peak
4874.000	43.44	5.13	48.57	54.00	-5.43	AVG
7311.000	45.87	7.49	53.36	74.00	-20.64	peak
7311.000	36.49	7.49	43.98	54.00	-10.02	AVG
9748.000	43.02	11.30	54.32	74.00	-19.68	peak
9748.000	34.11	11.30	45.41	54.00	-8.59	AVG

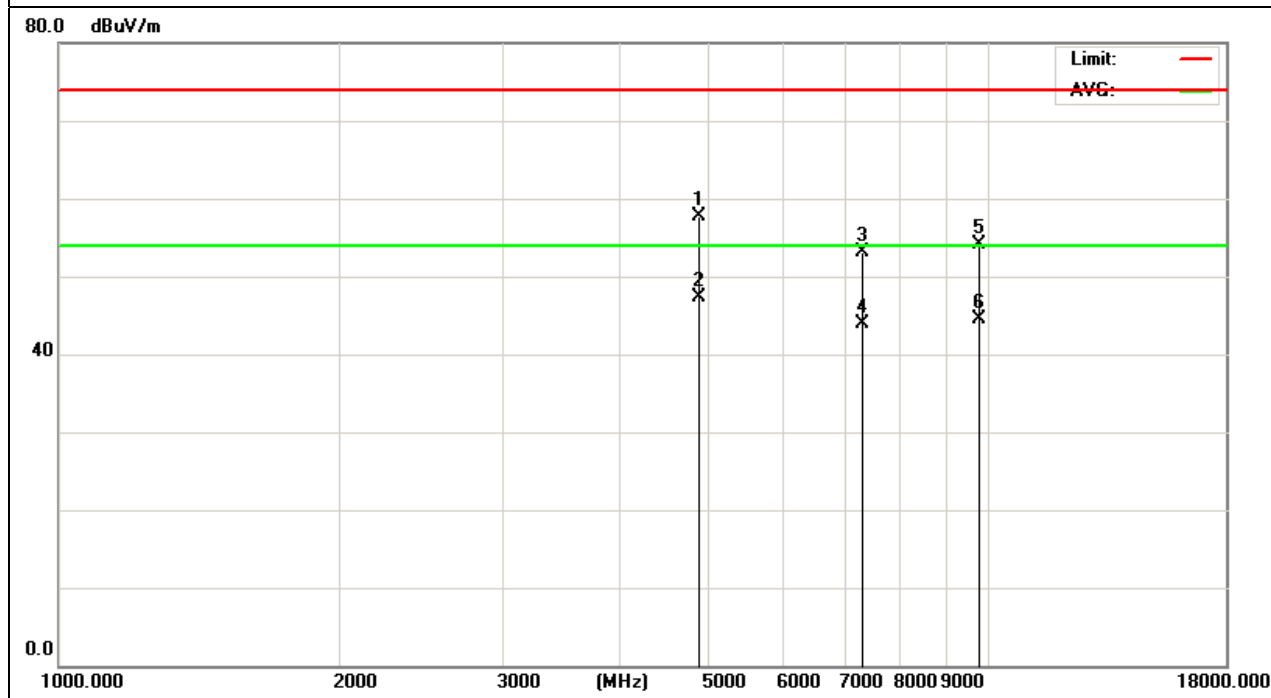
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.000	52.63	5.13	57.76	74.00	-16.24	peak
4874.000	42.10	5.13	47.23	54.00	-6.77	AVG
7311.000	45.69	7.49	53.18	74.00	-20.82	peak
7311.000	36.51	7.49	44.00	54.00	-10.00	AVG
9748.000	42.89	11.30	54.19	74.00	-19.81	peak
9748.000	33.26	11.30	44.56	54.00	-9.44	AVG

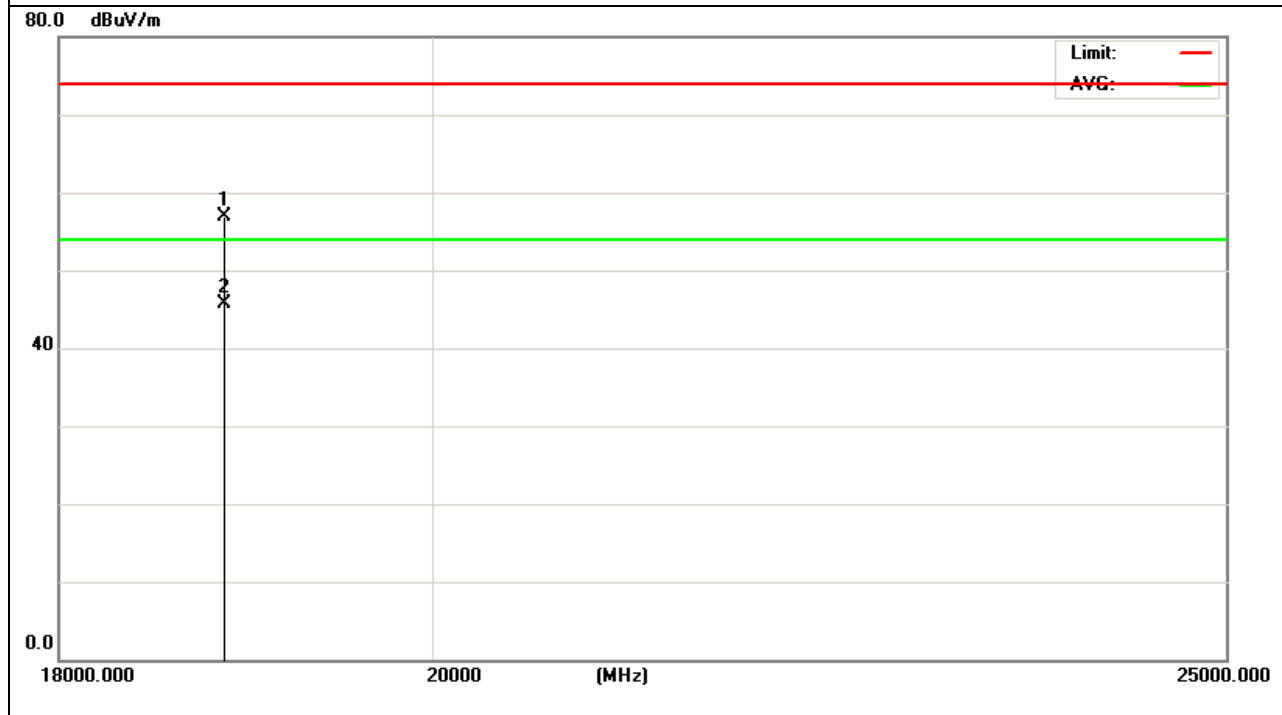
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11g; Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18857.000	40.56	16.27	56.83	74.00	-17.17	peak
18857.000	29.41	16.27	45.68	54.00	-8.32	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20347.000	39.66	16.67	56.33	74.00	-17.67	peak
20347.000	29.06	16.67	45.73	54.00	-8.27	AVG

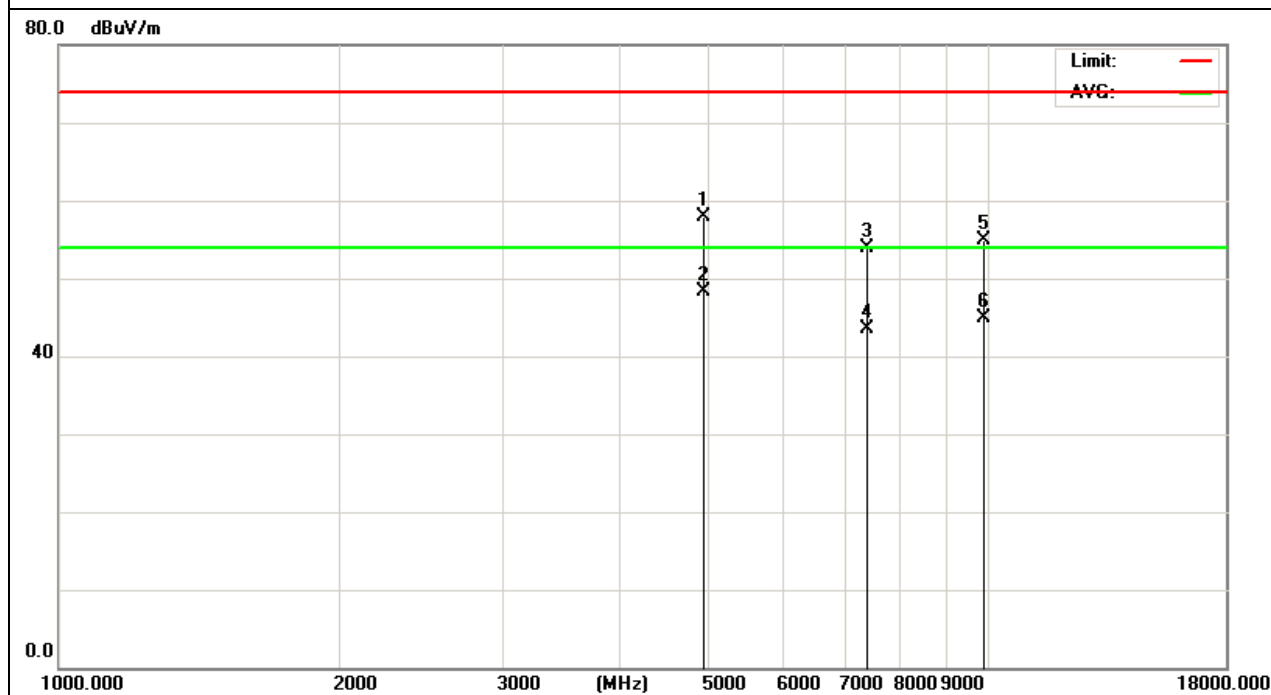
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11g: Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.0000	52.67	5.18	57.85	74.00	-16.15	peak
4924.0000	43.21	5.18	48.39	54.00	-5.61	AVG
7386.0000	46.02	7.82	53.84	74.00	-20.16	peak
7386.0000	35.67	7.82	43.49	54.00	-10.51	AVG
9848.0000	43.06	11.79	54.85	74.00	-19.15	peak
9848.0000	33.14	11.79	44.93	54.00	-9.07	AVG

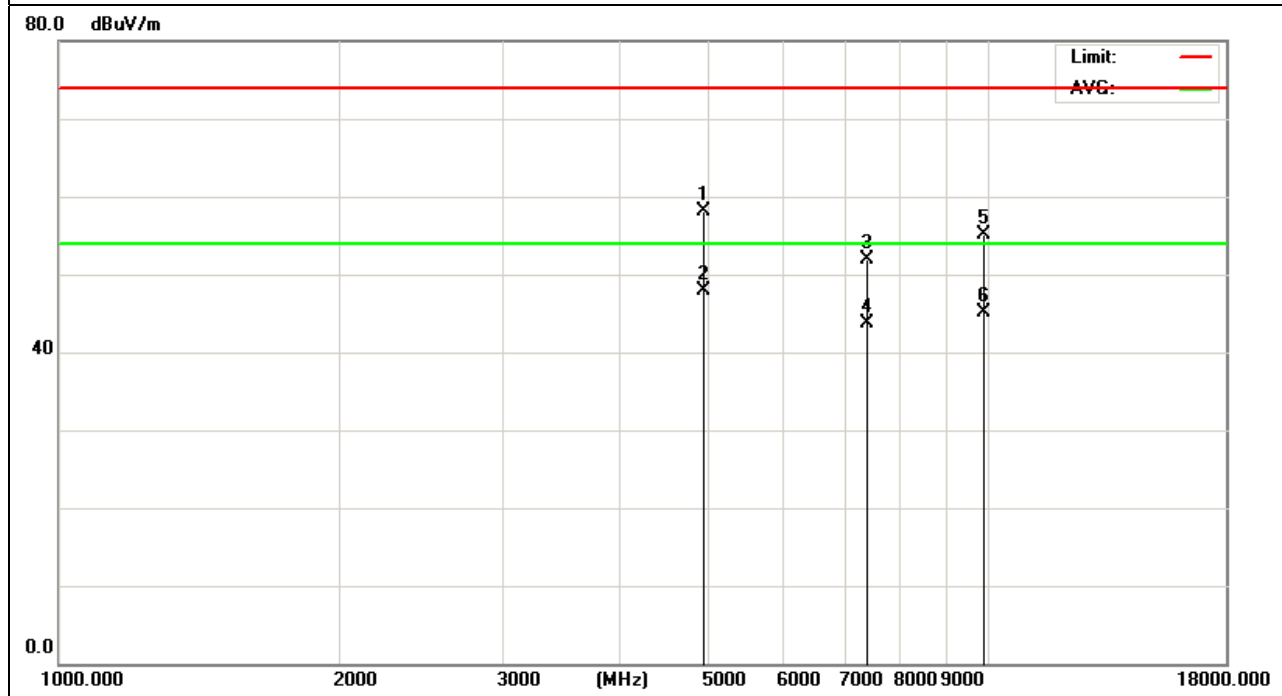
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.0000	52.91	5.18	58.09	74.00	-15.91	peak
4924.0000	42.63	5.18	47.81	54.00	-6.19	AVG
7386.0000	44.02	7.82	51.84	74.00	-22.16	peak
7386.0000	35.87	7.82	43.69	54.00	-10.31	AVG
9848.0000	43.26	11.79	55.05	74.00	-18.95	peak
9848.0000	33.27	11.79	45.06	54.00	-8.94	AVG

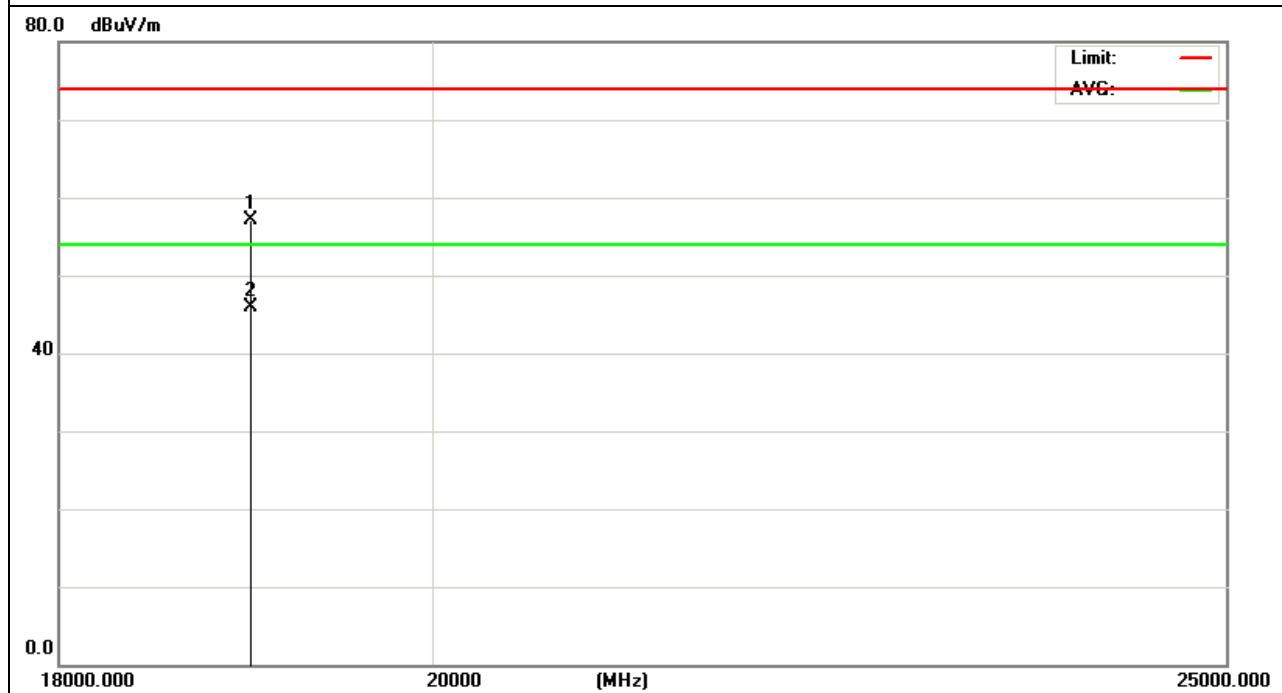
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11g; Rate 6Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18996.000	40.69	16.41	57.10	74.00	-16.90	peak
18996.000	29.47	16.41	45.88	54.00	-8.12	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11g; Rate 6Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20331.000	39.03	16.67	55.70	74.00	-18.30	peak
20331.000	29.11	16.67	45.78	54.00	-8.22	AVG

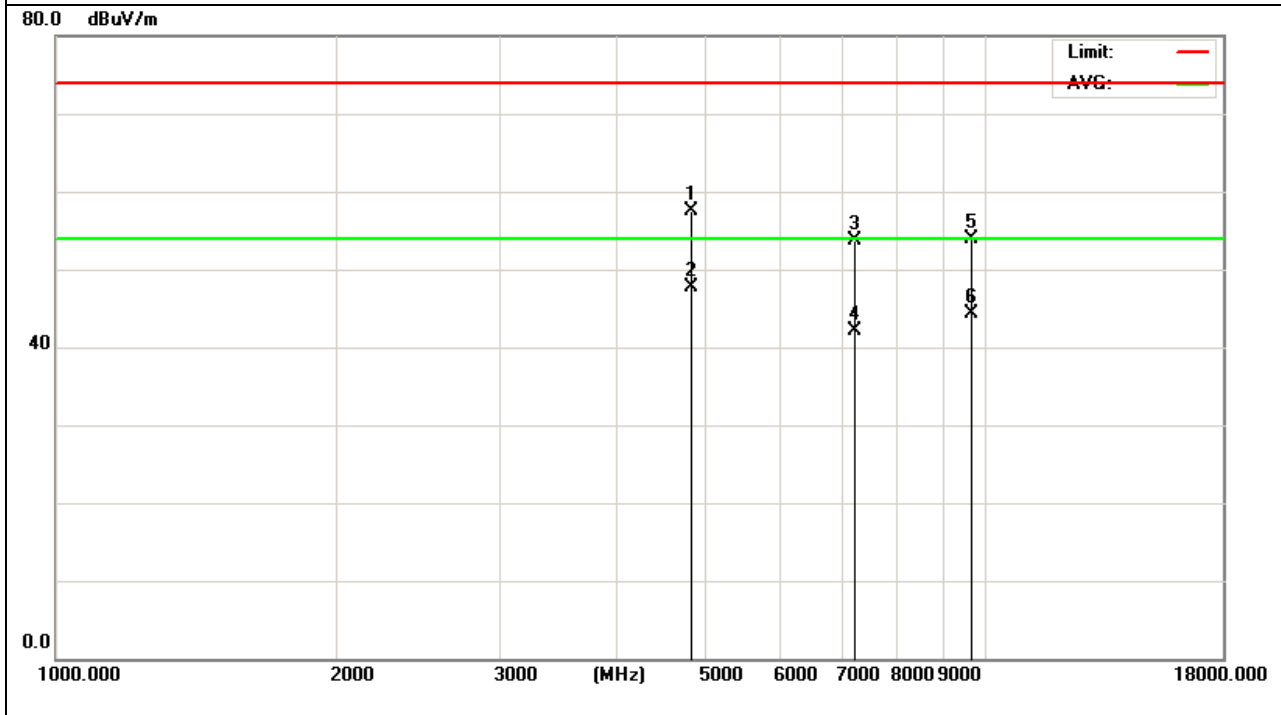
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.0000	52.49	5.08	57.57	74.00	-16.43	peak
4824.0000	42.67	5.08	47.75	54.00	-6.25	AVG
7236.0000	46.55	7.16	53.71	74.00	-20.29	peak
7236.0000	35.02	7.16	42.18	54.00	-11.82	AVG
9648.0000	43.07	10.82	53.89	74.00	-20.11	peak
9648.0000	33.56	10.82	44.38	54.00	-9.62	AVG

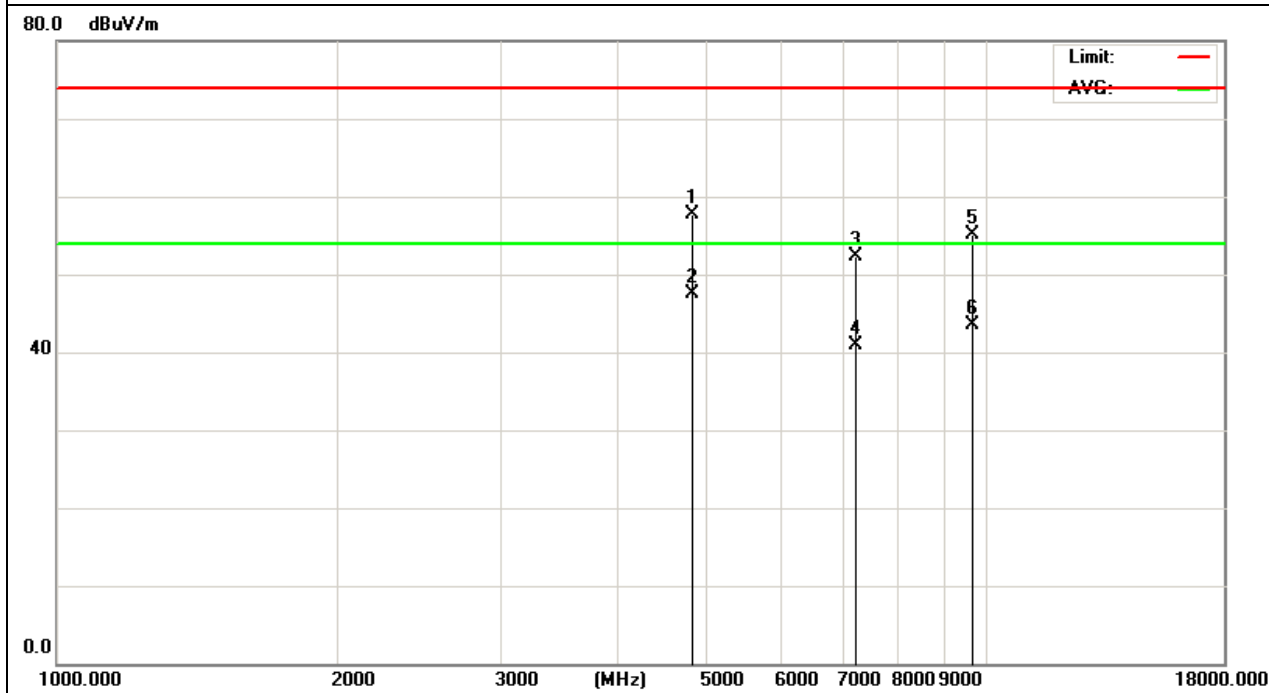
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.0000	52.61	5.08	57.69	74.00	-16.31	peak
4824.0000	42.52	5.08	47.60	54.00	-6.40	AVG
7236.0000	45.14	7.16	52.30	74.00	-21.70	peak
7236.0000	33.69	7.16	40.85	54.00	-13.15	AVG
9648.0000	44.21	10.82	55.03	74.00	-18.97	peak
9648.0000	32.64	10.82	43.46	54.00	-10.54	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18987.000	40.25	16.40	56.65	74.00	-17.35	peak
18987.000	29.64	16.40	46.04	54.00	-7.96	AVG

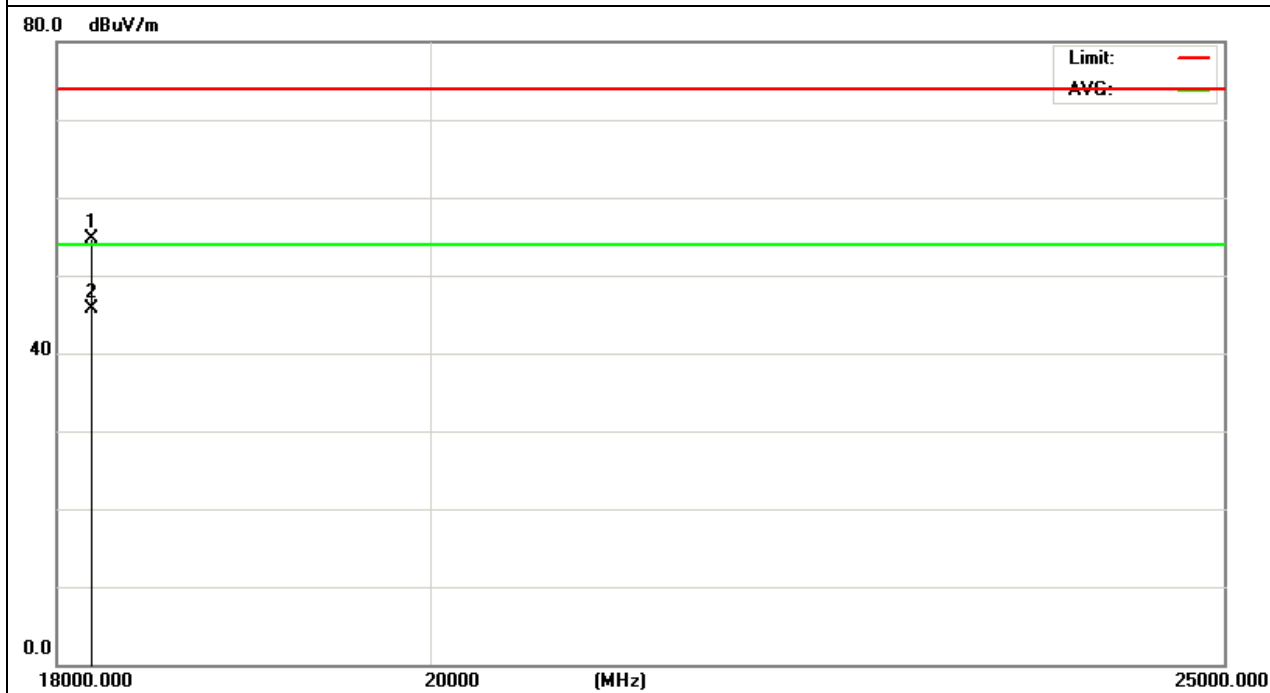
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH01 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18182.000	39.08	15.57	54.65	74.00	-19.35	peak
18182.000	30.17	15.57	45.74	54.00	-8.26	AVG

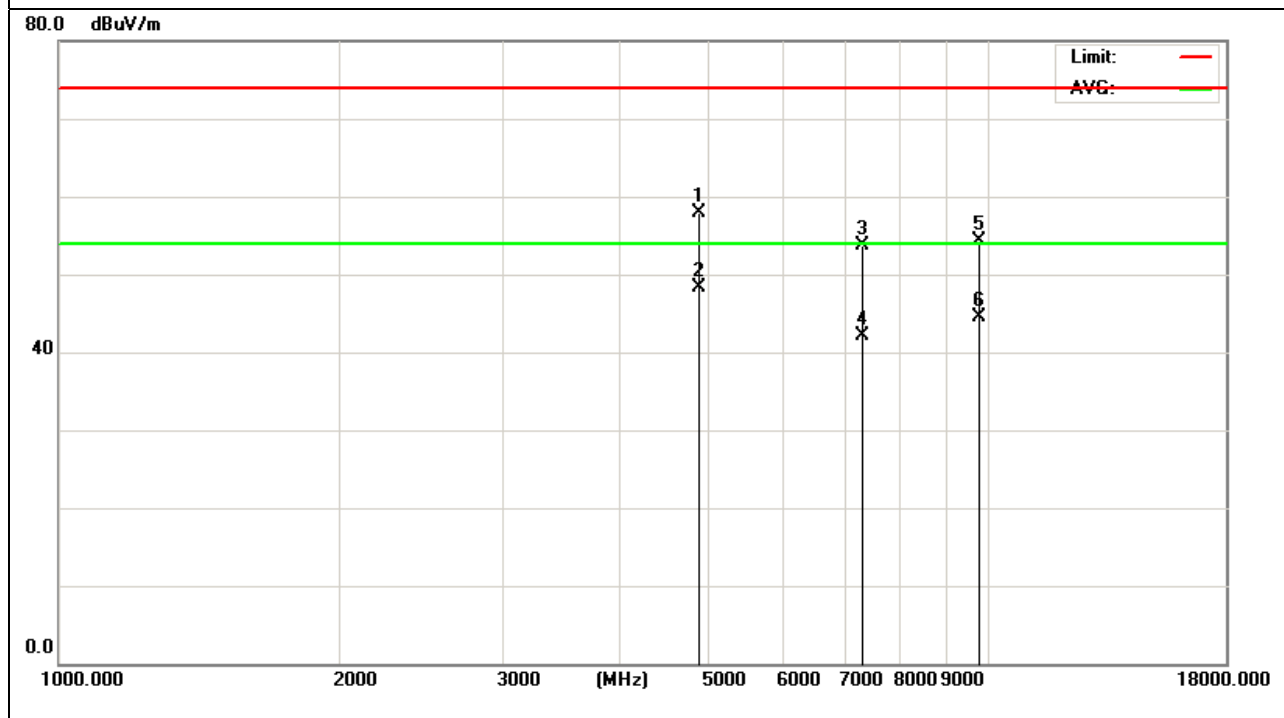
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.0000	52.71	5.13	57.84	74.00	-16.16	peak
4874.0000	43.26	5.13	48.39	54.00	-5.61	AVG
7311.0000	46.18	7.49	53.67	74.00	-20.33	peak
7311.0000	34.59	7.49	42.08	54.00	-11.92	AVG
9748.0000	43.02	11.30	54.32	74.00	-19.68	peak
9748.0000	33.16	11.30	44.46	54.00	-9.54	AVG

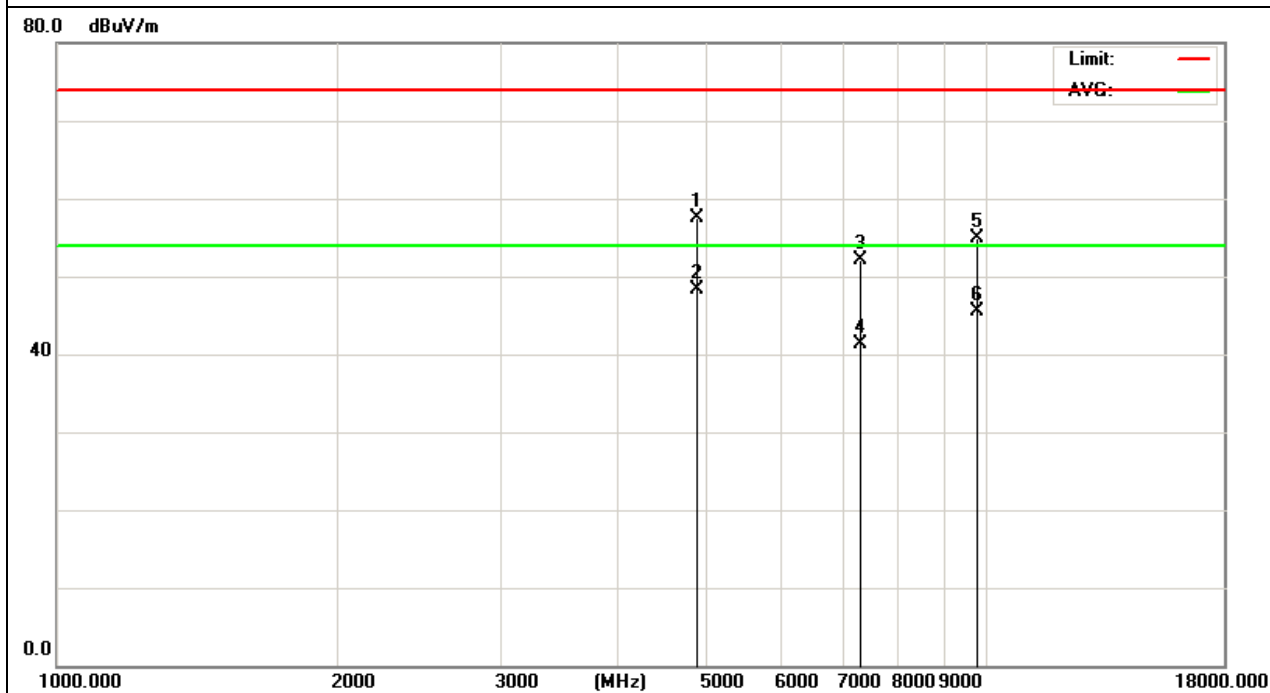
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.0000	52.42	5.13	57.55	74.00	-16.45	peak
4874.0000	43.09	5.13	48.22	54.00	-5.78	AVG
7311.0000	44.59	7.49	52.08	74.00	-21.92	peak
7311.0000	33.87	7.49	41.36	54.00	-12.64	AVG
9748.0000	43.65	11.30	54.95	74.00	-19.05	peak
9748.0000	34.19	11.30	45.49	54.00	-8.51	AVG

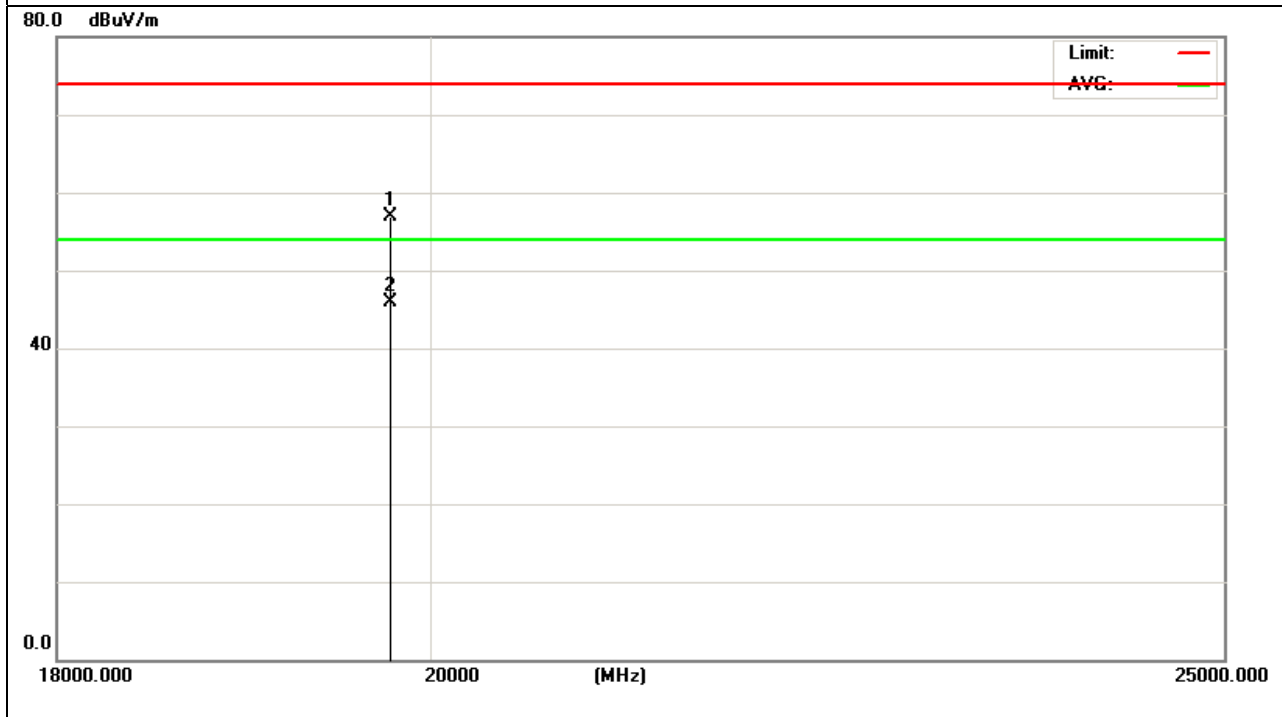
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19775.000	40.25	16.56	56.81	74.00	-17.19	peak
19775.000	29.31	16.56	45.87	54.00	-8.13	AVG

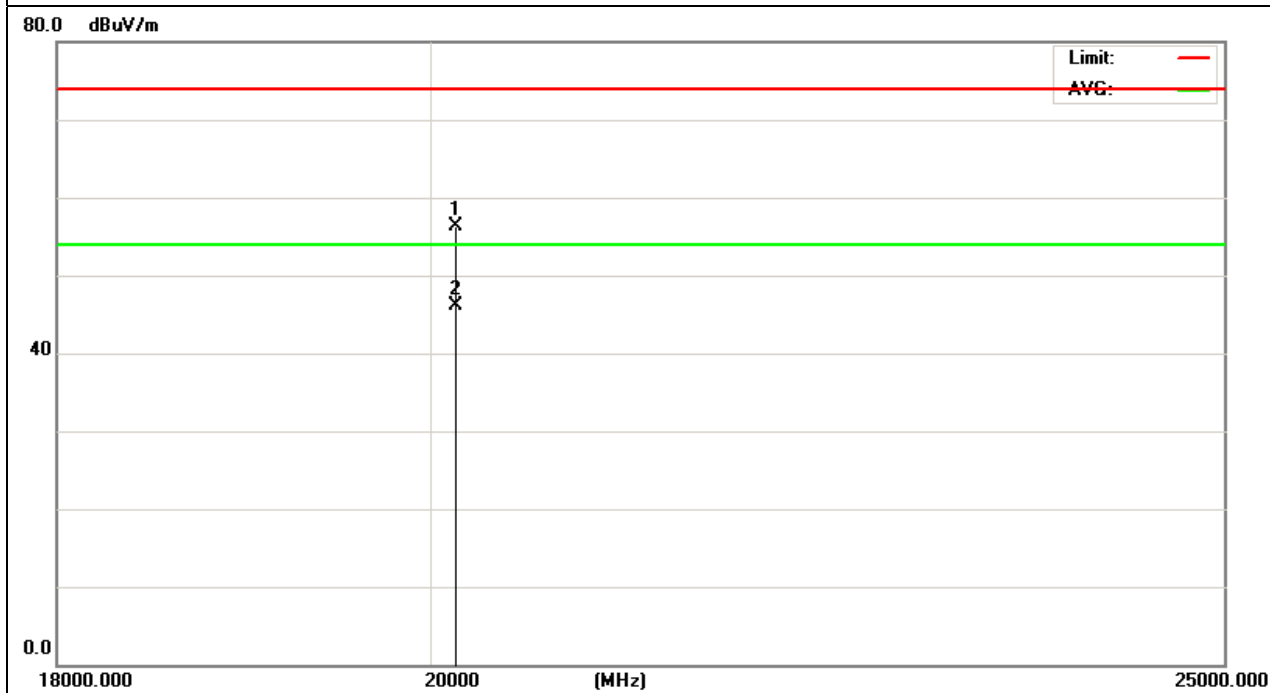
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH06 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
.20142.000	39.67	16.63	56.30	74.00	-17.70	peak
20142.000	29.49	16.63	46.12	54.00	-7.88	AVG

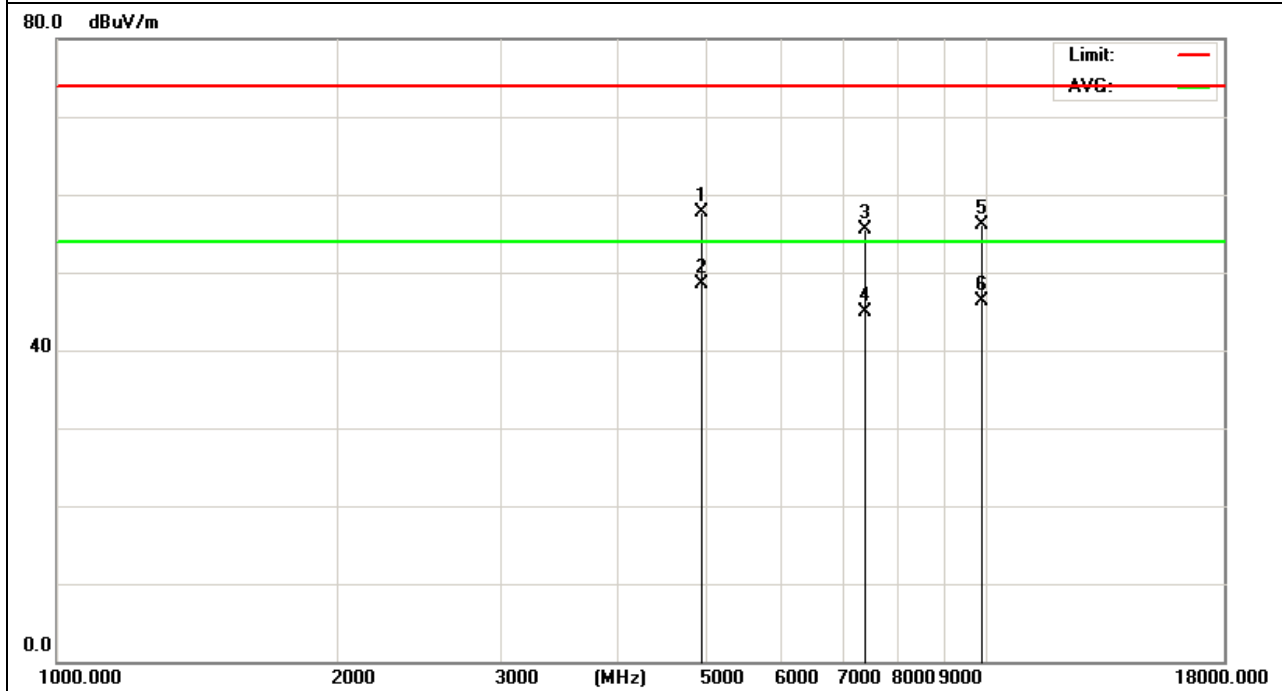
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.0000	52.57	5.18	57.75	74.00	-16.25	peak
4924.0000	43.26	5.18	48.44	54.00	-5.56	AVG
7386.0000	47.59	7.82	55.41	74.00	-18.59	peak
7386.0000	37.01	7.82	44.83	54.00	-9.17	AVG
9848.0000	44.26	11.79	56.05	74.00	-17.95	peak
9848.0000	34.61	11.79	46.40	54.00	-7.60	AVG

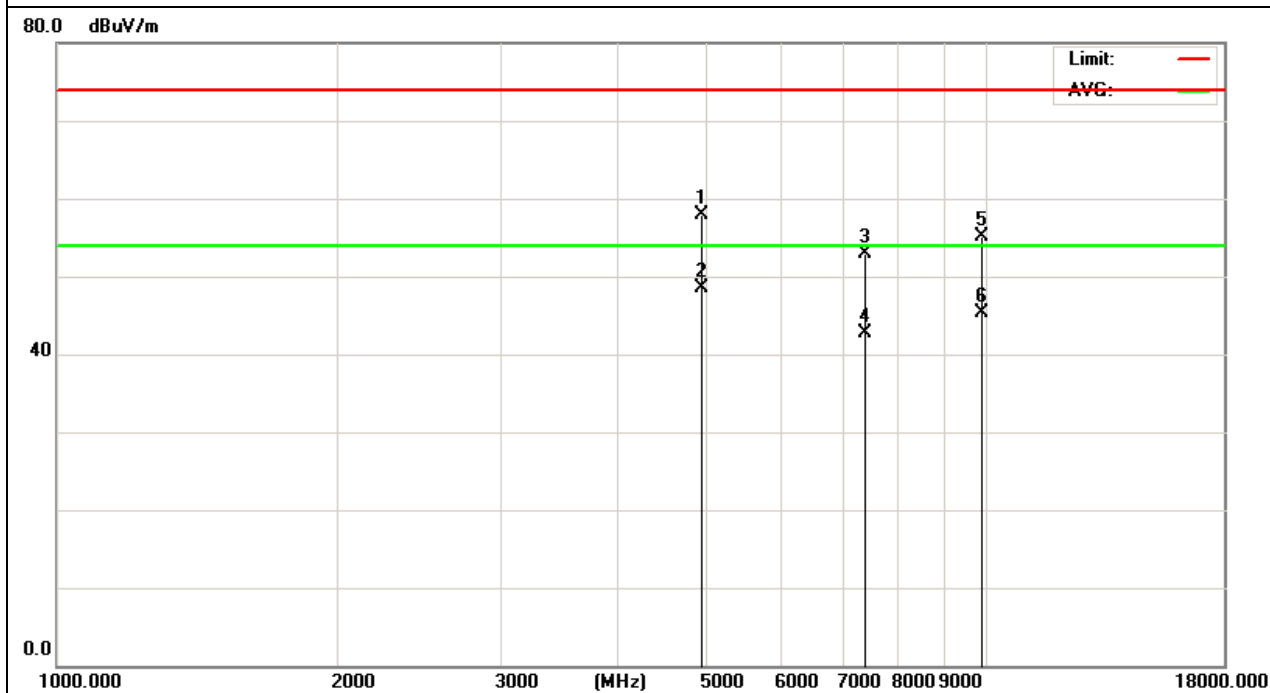
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	DC 5V from adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.0000	52.63	5.18	57.81	74.00	-16.19	peak
4924.0000	43.26	5.18	48.44	54.00	-5.56	AVG
7386.0000	45.14	7.82	52.96	74.00	-21.04	peak
7386.0000	34.87	7.82	42.69	54.00	-11.31	AVG
9848.0000	43.22	11.79	55.01	74.00	-18.99	peak
9848.0000	33.56	11.79	45.35	54.00	-8.65	AVG

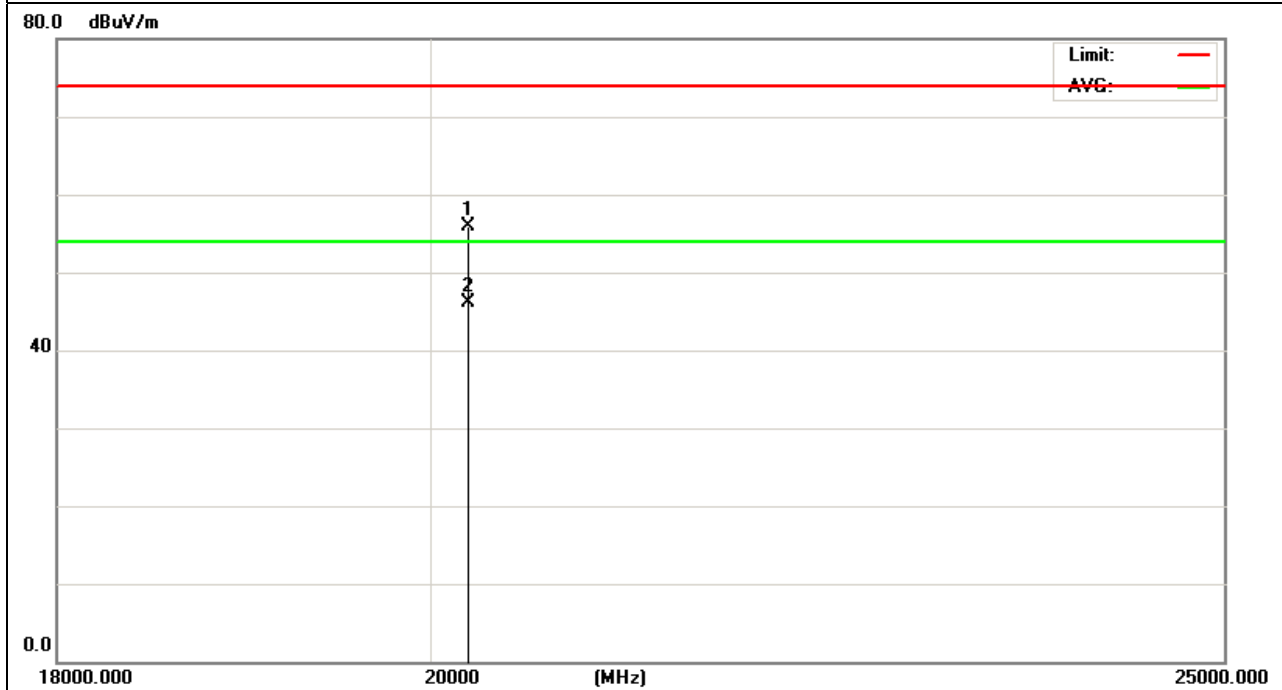
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11n20 : Rate 6.5Mbps)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
20214.000	39.32	16.64	55.96	74.00	-18.04	peak
20214.000	29.45	16.64	46.09	54.00	-7.91	AVG

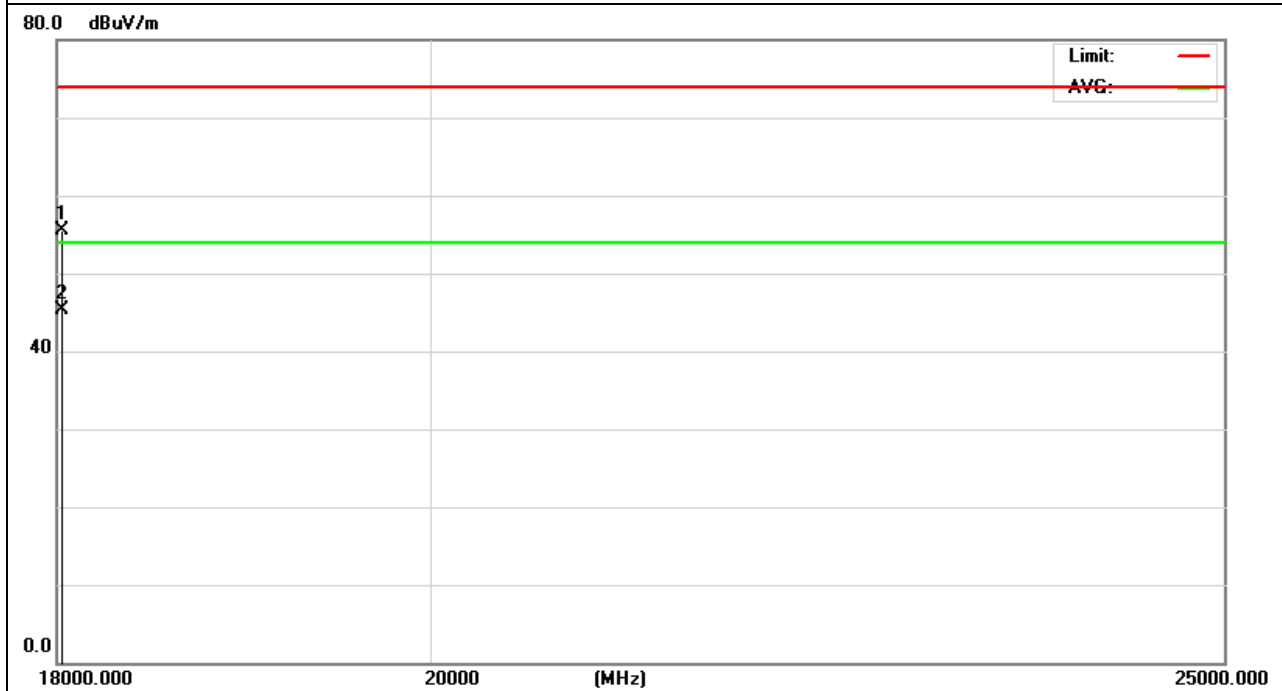
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-07-15
Test Mode :	TX CH11 (802.11n20 : Rate 6.5Mbps)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC 5V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18026.000	40.02	15.41	55.43	74.00	-18.57	peak
18026.000	29.98	15.41	45.39	54.00	-8.61	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

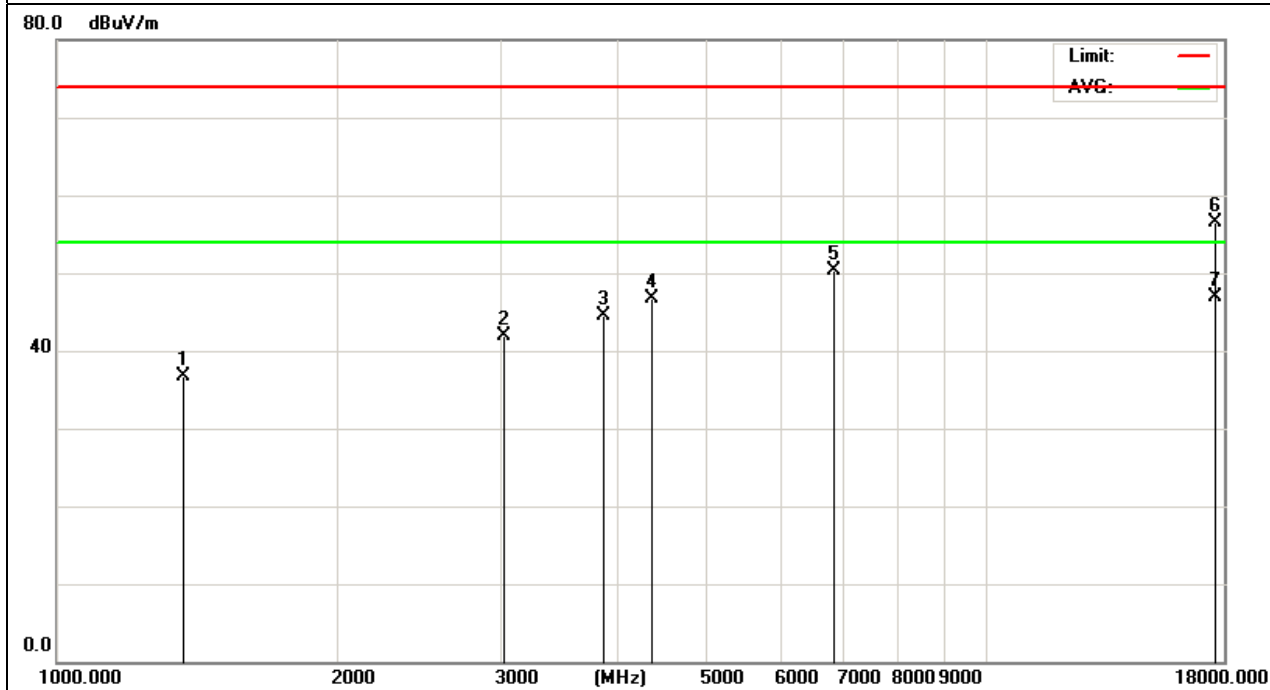


EUT :	Tablet PC	Model Name :	TVE1021G
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-06-14
Test Mode :	RX	Polarization :	Horizontal
Measurement Distance	3 m	Frenquency Range	1GHz to 18GHz
Test Power :	DC12V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1366.594	46.94	-10.30	36.64	74.00	-37.36	peak
3016.657	43.51	-1.64	41.87	74.00	-32.13	peak
3863.521	41.63	2.84	44.47	74.00	-29.53	peak
4359.955	42.32	4.45	46.77	74.00	-27.23	peak
6843.063	44.25	6.08	50.33	74.00	-23.67	peak
17554.19	31.47	25.00	56.47	74.00	-17.53	peak
17554.19	21.86	25.00	46.86	54.00	-7.14	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

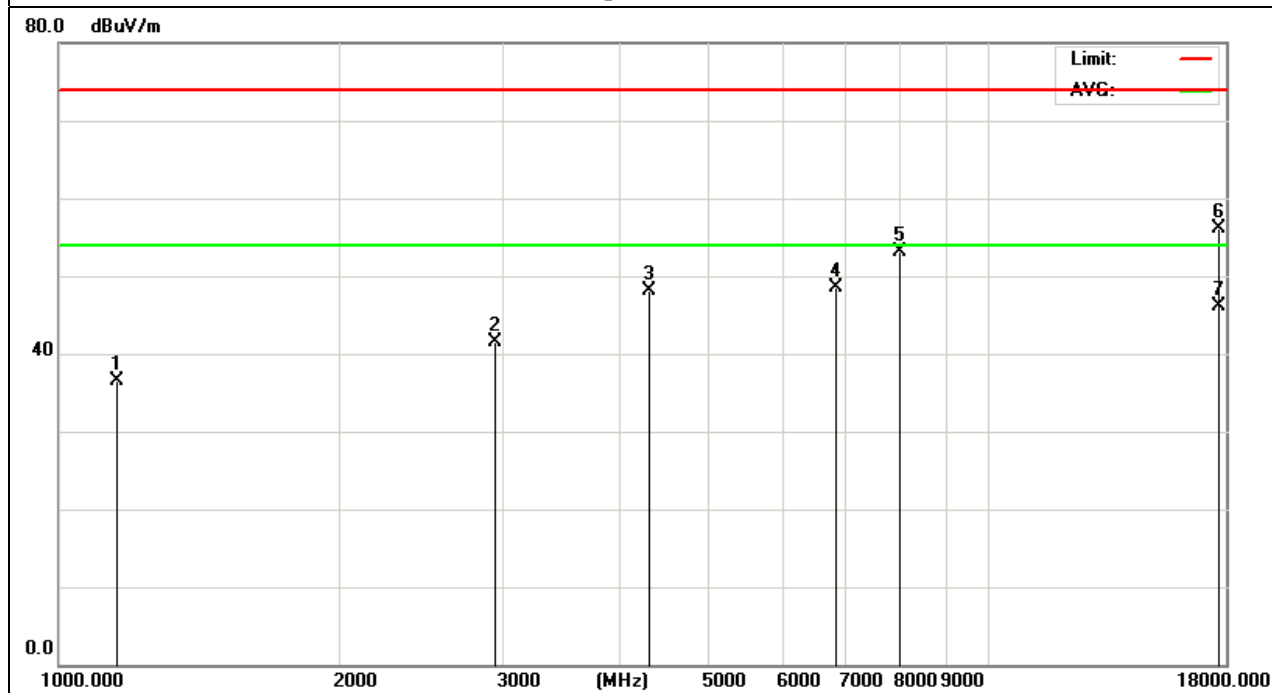


EUT :	Tablet PC	Model Name :	TVE1021G
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-06-14
Test Mode :	RX	Polarization :	Vertical
Measurement Distance	3 m	Frenquency Range	1GHz to 18GHz
Test Power :	DC12V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1154.165	47.29	-10.70	36.59	74.00	-37.41	peak
2946.658	43.54	-2.05	41.49	74.00	-32.51	peak
4312.418	43.76	4.36	48.12	74.00	-25.88	peak
6844.149	42.39	6.08	48.47	74.00	-25.53	peak
7996.487	42.75	10.37	53.12	74.00	-20.88	peak
17688.80	31.16	24.90	56.06	74.00	-17.94	peak
17688.80	21.24	24.90	46.14	54.00	-7.86	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

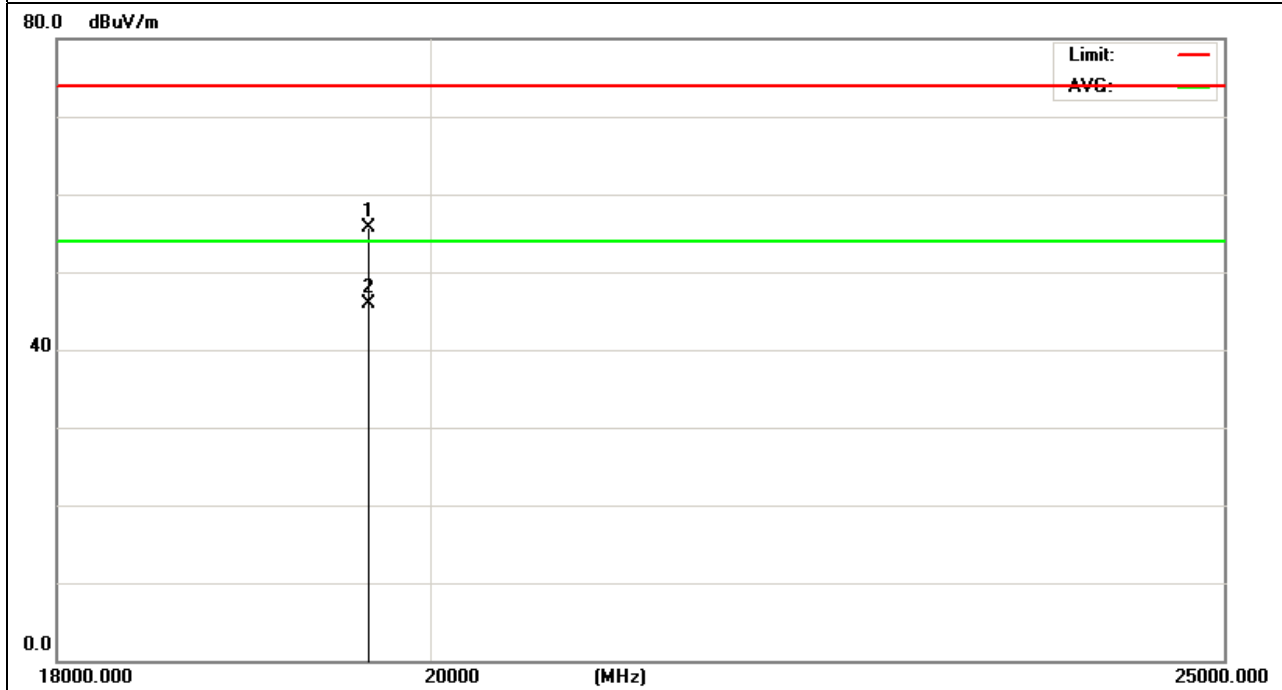


EUT :	Tablet PC	Model Name :	TVE1021G
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-06-14
Test Mode :	RX	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC12V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
19651.00	39.25	16.53	55.78	74.00	-18.22	peak
19651.00	29.36	16.53	45.89	54.00	-8.11	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

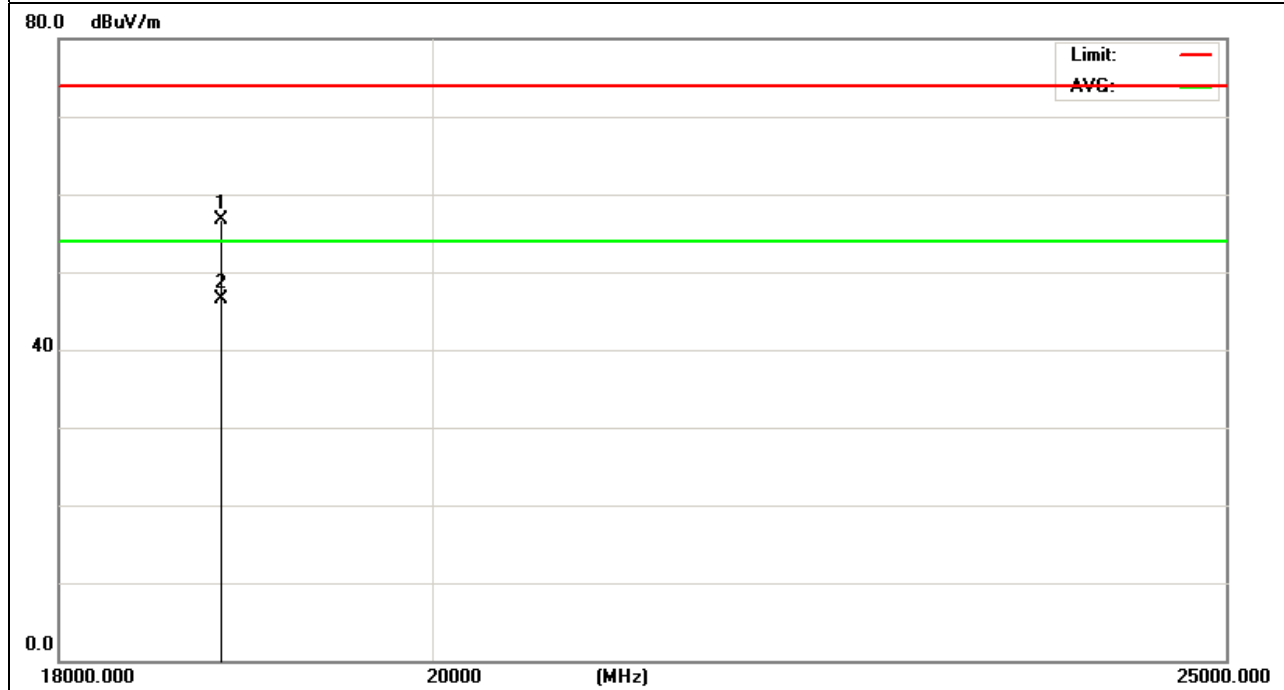


EUT :	Tablet PC	Model Name :	TVE1021G
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2020-06-14
Test Mode :	RX	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	DC12V from adapter		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
18842.00	40.36	16.25	56.61	74.00	-17.39	peak
18842.00	30.24	16.25	46.49	54.00	-7.51	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.2.7 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

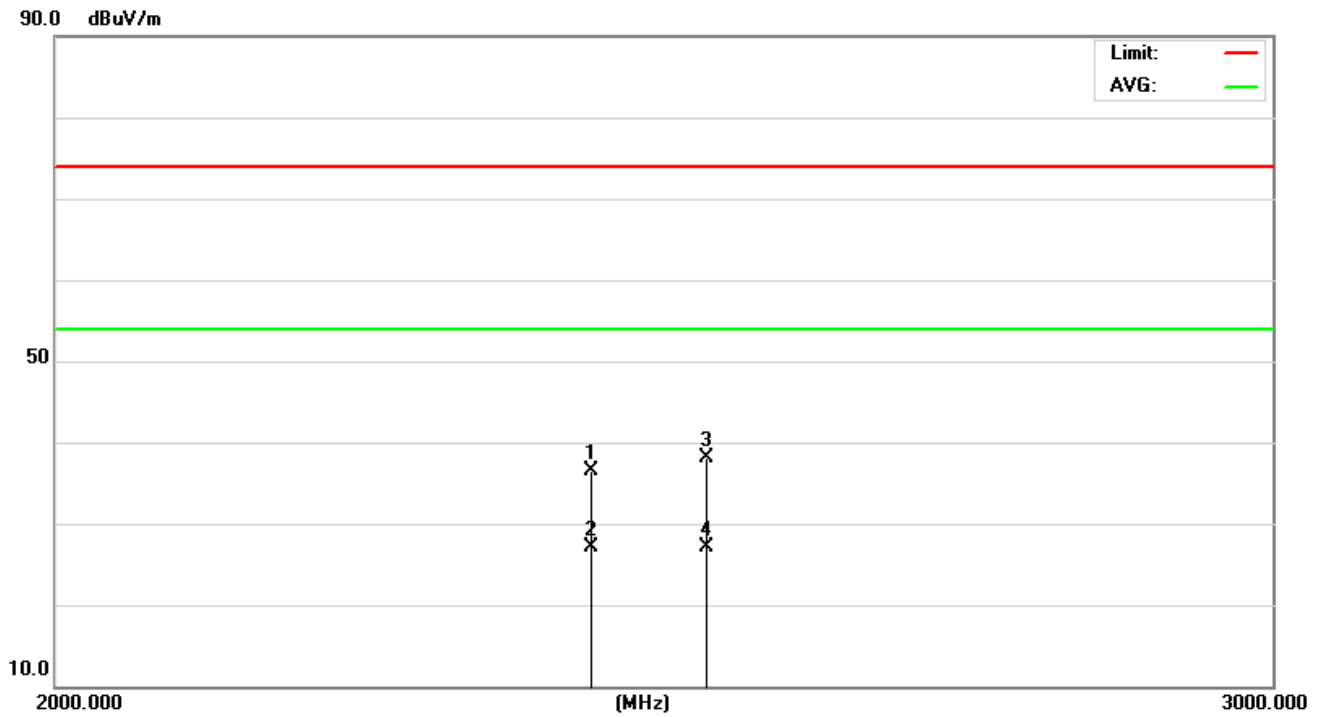
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Date :	2020-07-15		
Test Mode :	802.11b Data rate 1Mbps		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. 3. The data of 2390MHz and 2483.5MHz was the worst.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant/CF CF(dB)	Act		Limit		Note
		Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)	
2390.00	H	43.24	32.65	-5.79	37.45	26.86	74.00	54.00	CH01
2390.00	V	43.51	33.76	-5.79	37.72	27.97	74.00	54.00	CH01
2483.50	H	43.63	28.22	-4.98	38.65	23.24	74.00	54.00	CH11
2483.50	V	43.47	32.35	-4.98	38.49	27.37	74.00	54.00	CH11

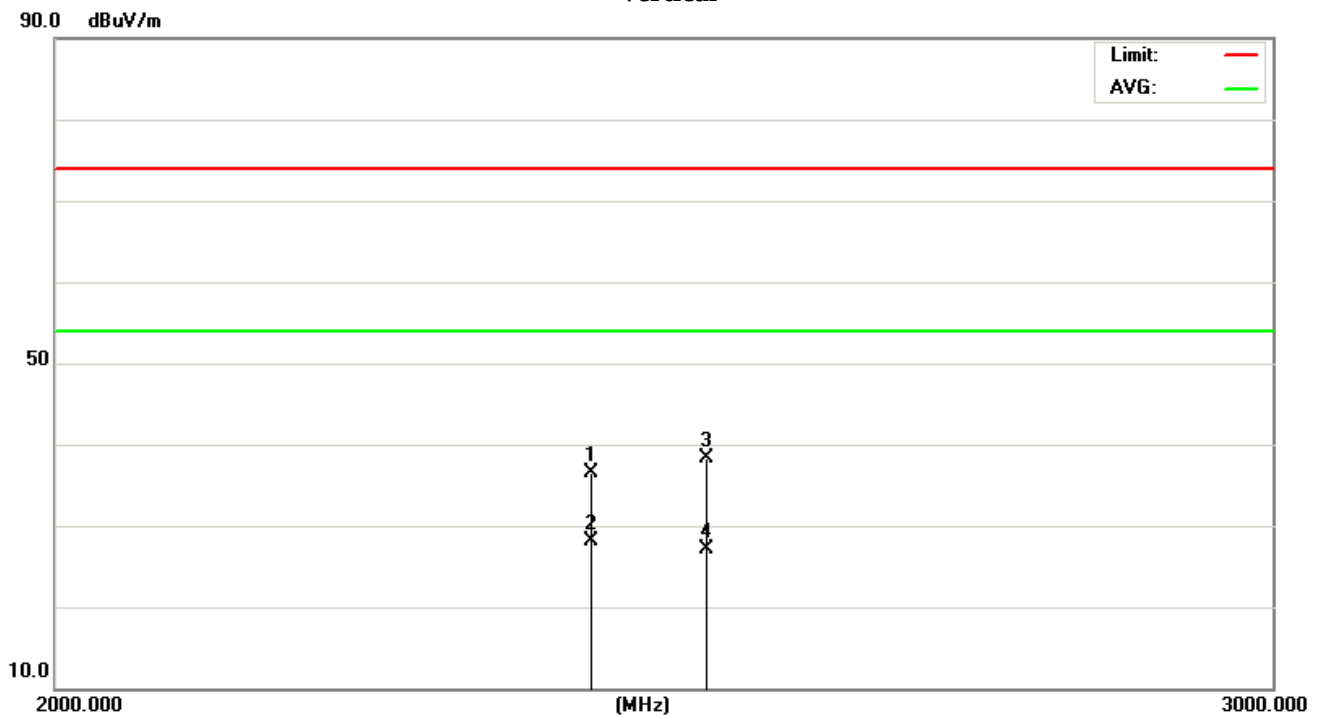
Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode
- (2) EUT Orthogonal Axis :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (4) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Horizontal



Vertical



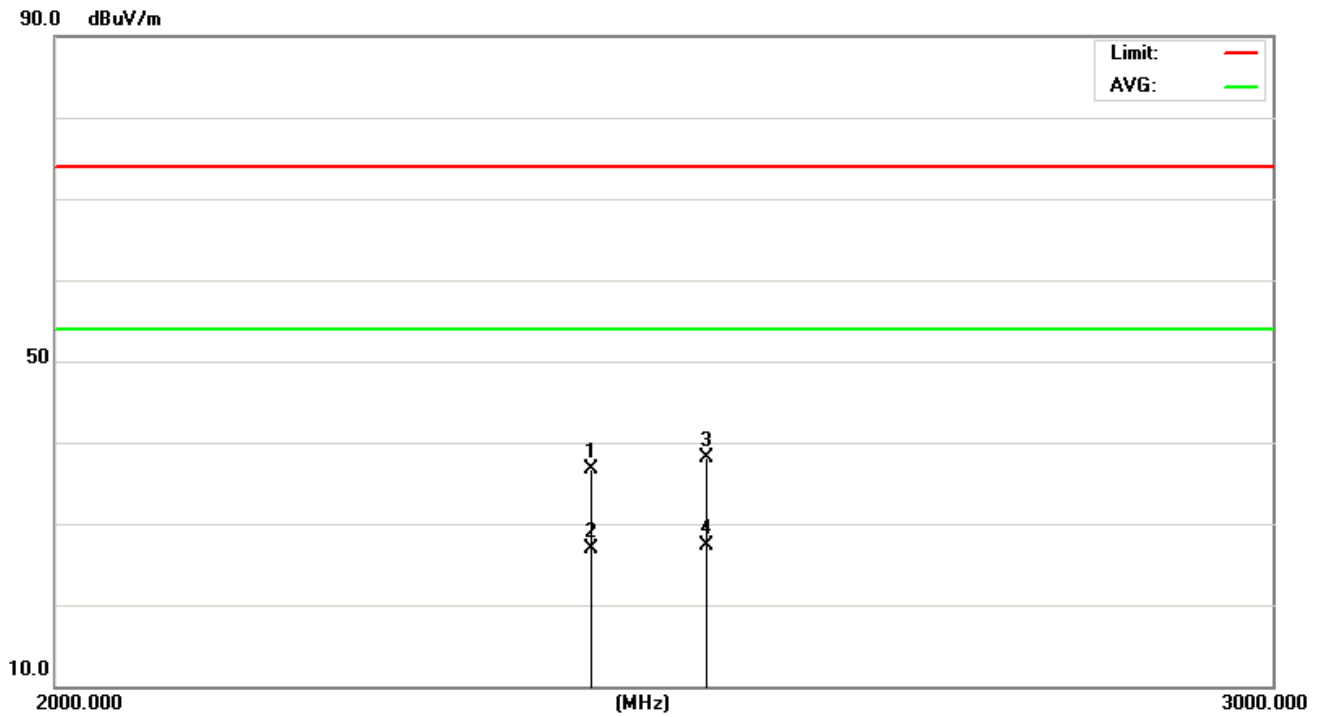
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Date :	2020-07-15		
Test Mode :	802.11g Data rate 6Mbps		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. 3. The data of 2390MHz and 2483.5MHz was the worst.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant/CF CF(dB)	Act		Limit		Note
		Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)	
2390.00	H	42.36	32.49	-5.79	36.57	26.70	74.00	54.00	CH01
2390.00	V	43.41	33.58	-5.79	37.62	27.79	74.00	54.00	CH01
2483.50	H	43.25	27.61	-4.98	38.27	22.63	74.00	54.00	CH11
2483.50	V	43.33	32.27	-4.98	38.35	27.29	74.00	54.00	CH11

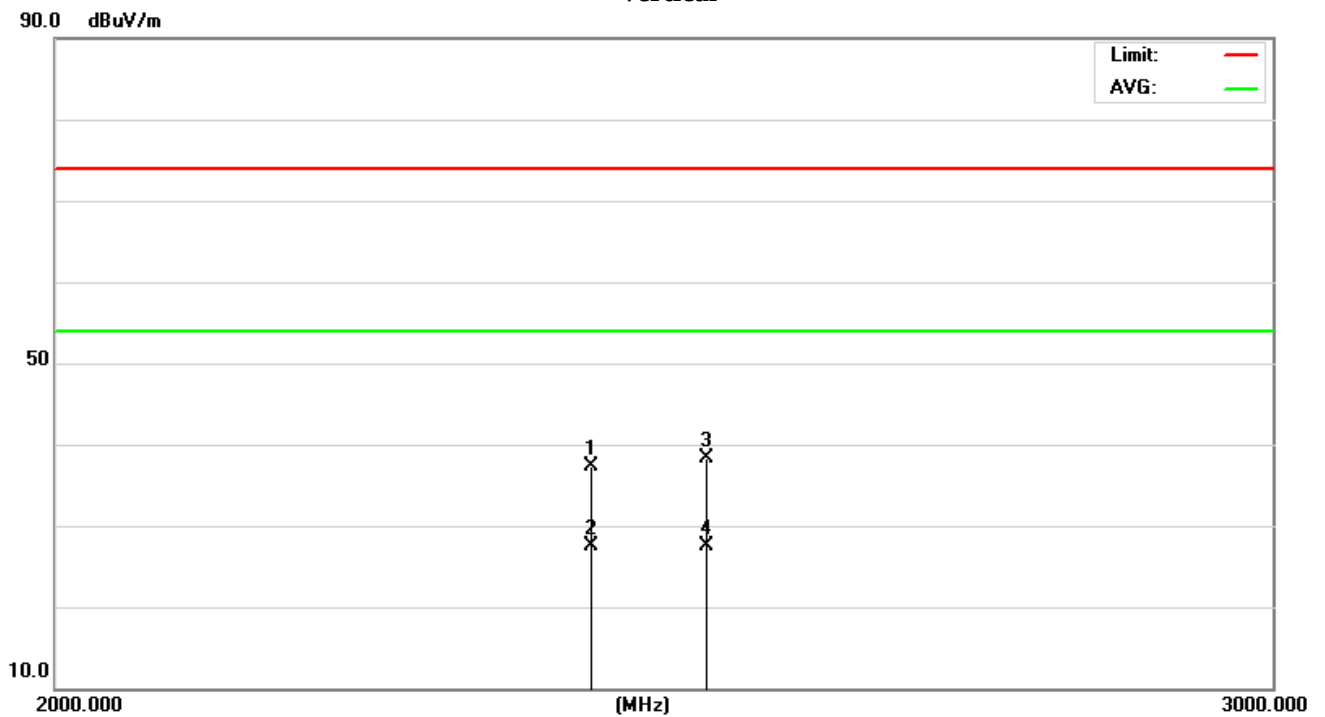
Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode
- (2) EUT Orthogonal Axis :
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (4) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Horizontal



Vertical



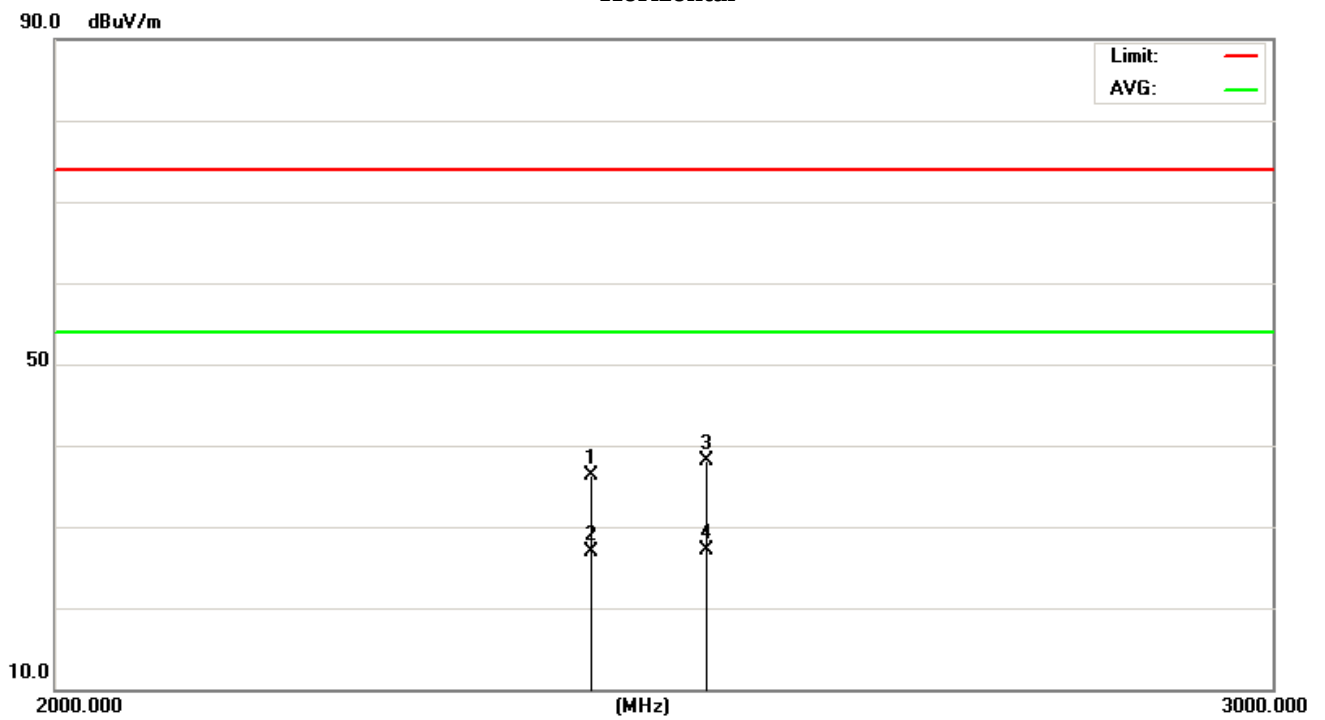
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	24 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Date :	2020-07-15		
Test Mode :	802.11n20 Data rate 6.5Mbps		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. 3. The data of 2390MHz and 2483.5MHz was the worst.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant/CF CF(dB)	Act		Limit		Note
		Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)	
2390.00	H	42.53	32.37	-5.79	36.74	26.58	74.00	54.00	CH01
2390.00	V	42.46	33.49	-5.79	36.67	27.7	74.00	54.00	CH01
2483.50	H	43.37	32.56	-4.98	38.39	27.58	74.00	54.00	CH11
2483.50	V	43.54	32.28	-4.98	38.56	27.30	74.00	54.00	CH11

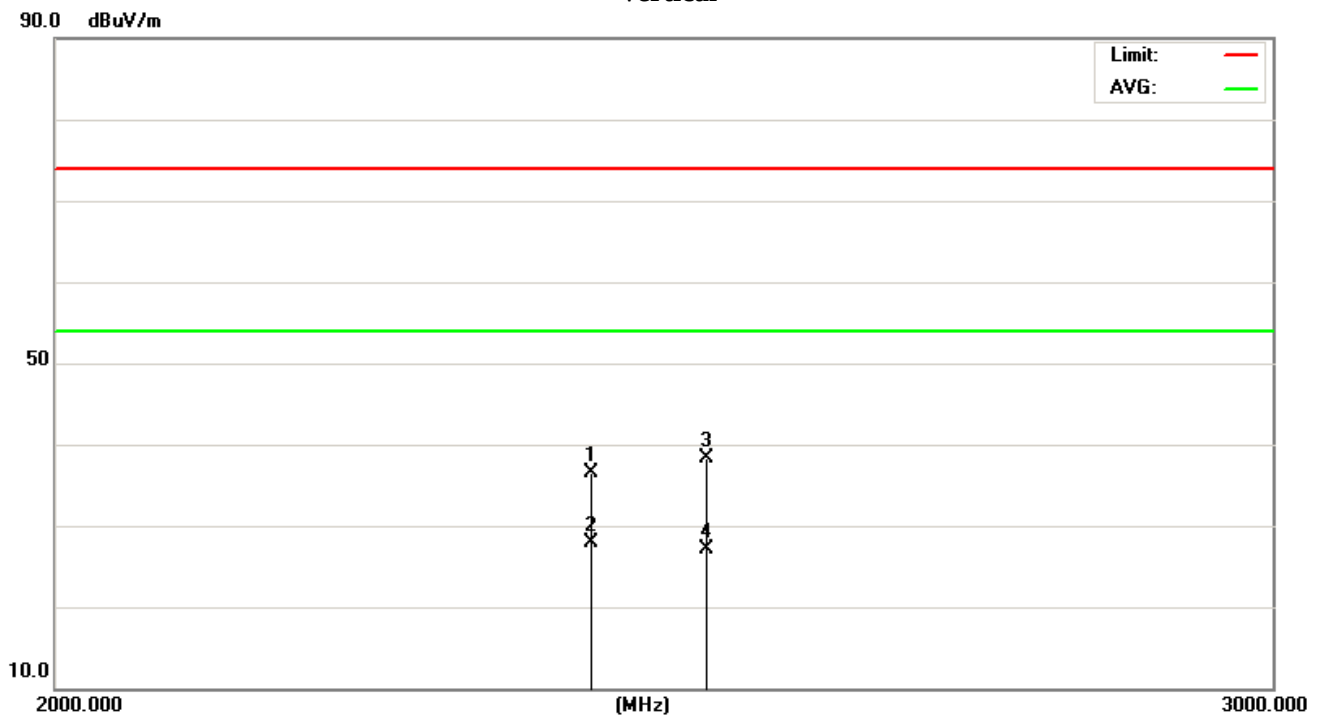
Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode
- (2) EUT Orthogonal Axis :
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (4) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Horizontal



Vertical



4. OCCUPIED BANDWIDTH TEST

4.1 APPLIED PROCEDURES / LIMIT

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
3.10.1(6.2.1)	Bandwidth	$\geq 500\text{kHz}$ (6dB bandwidth)	2400-2483.5	PASS

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	$>$ Measurement Bandwidth or Channel Separation
RB	100 kHz (6dB Bandwidth) / 100 kHz (Channel Separation)
VB	300 kHz (6dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 100kHz, VBW=300kHz, Sweep time = Auto.

4.1.2 TEST SETUP



4.1.3 EUT OPERATION CONDITIONS

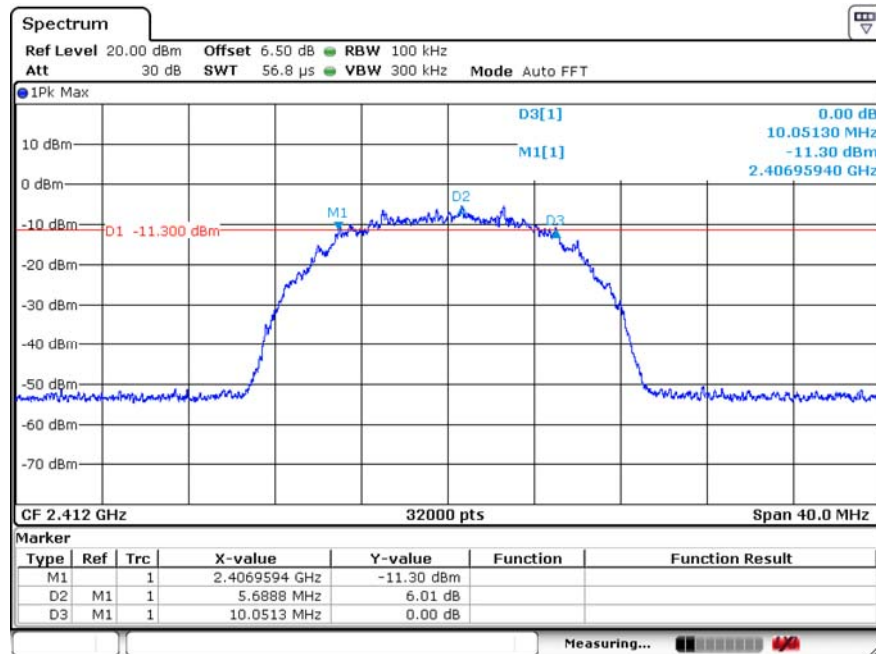
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.4 TEST RESULTS

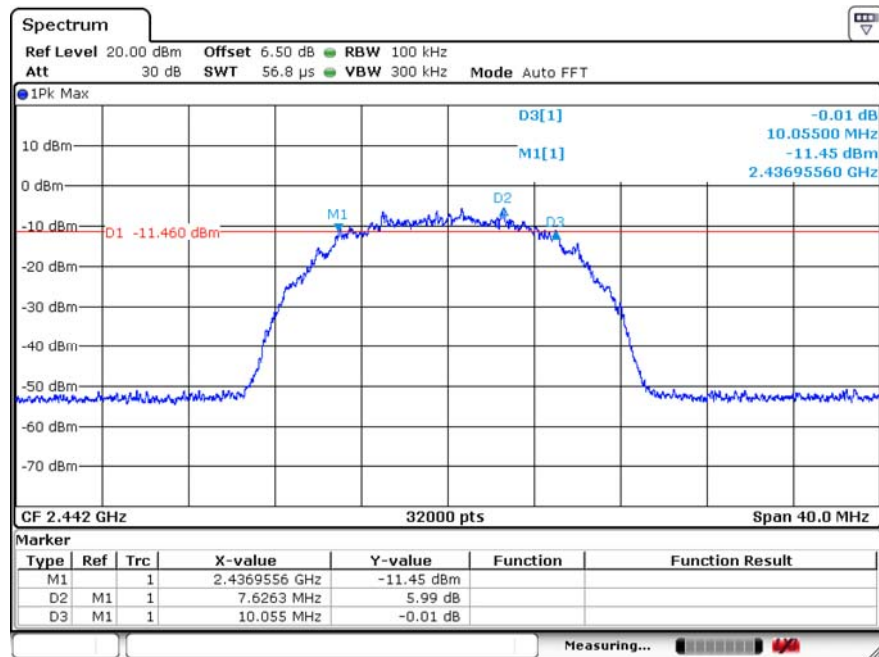
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 / CH06 /CH11(802.11b Data rate 1Mbps)		
Test Date :	2020-07-15		

Frequency	6dB Bandwidth (MHz)	Limit (kHz)	Result
2412 MHz	10.0513	≥ 500	Pass
2437 MHz	10.0550	≥ 500	Pass
2462 MHz	10.0213	≥ 500	Pass

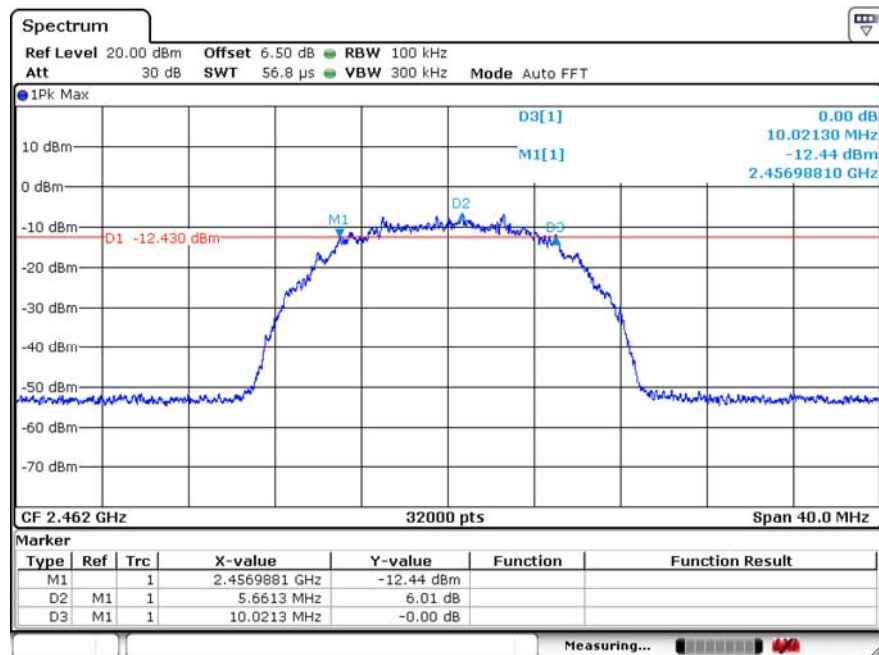
CH01



CH06



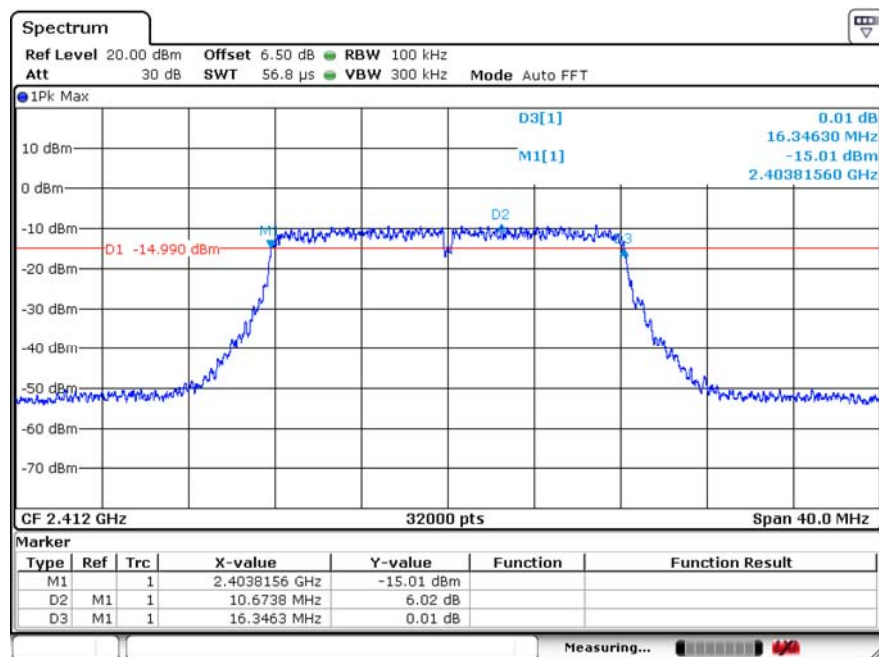
CH11



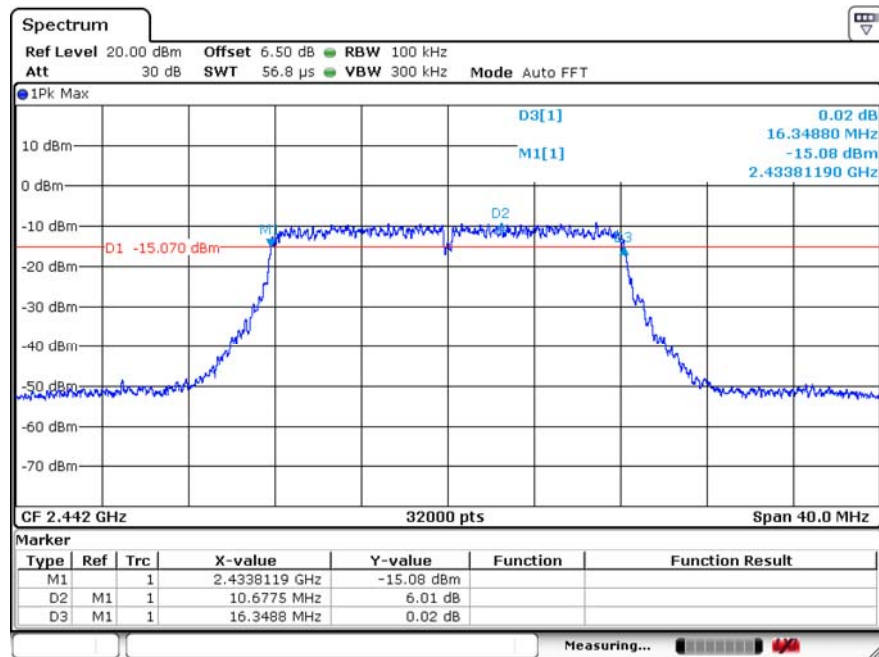
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 / CH06 / CH11(802.11g Data rate 6Mbps)		
Test Date :	2020-07-15		

Frequency	6dB Bandwidth (MHz)	Limit (kHz)	Result
2412 MHz	16.3463	≥ 500	Pass
2437 MHz	16.3488	≥ 500	Pass
2462 MHz	16.3438	≥ 500	Pass

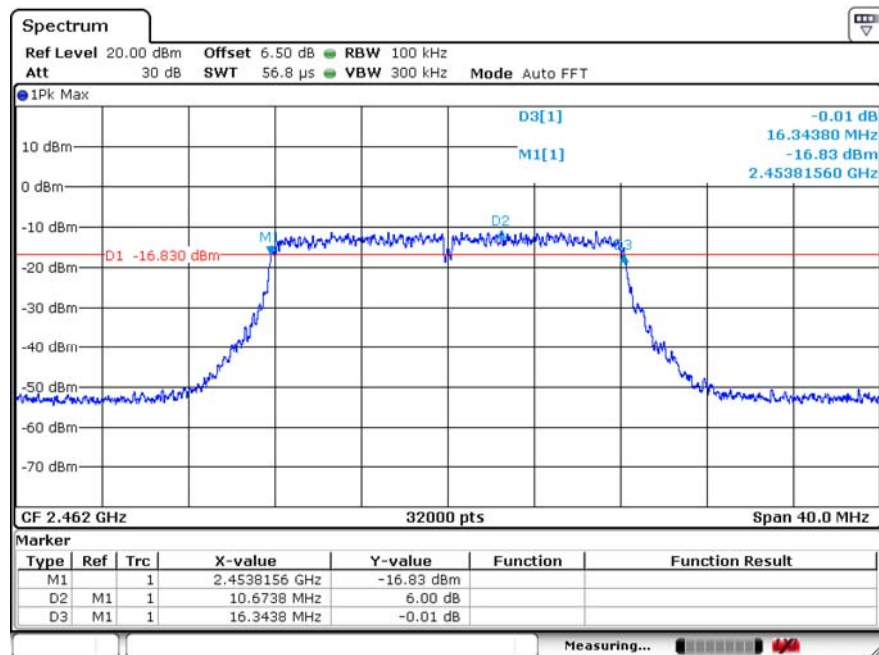
CH01



CH06



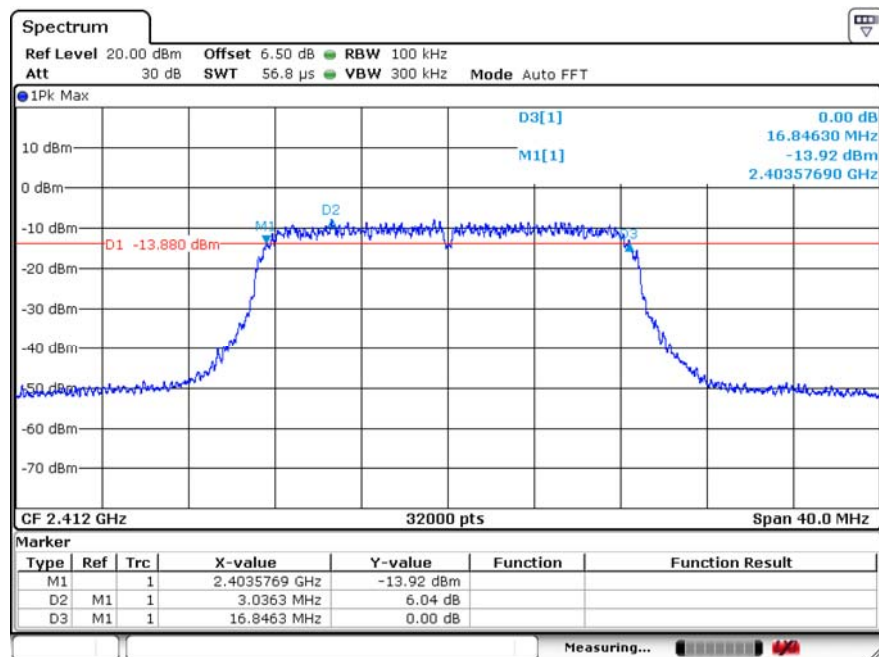
CH11



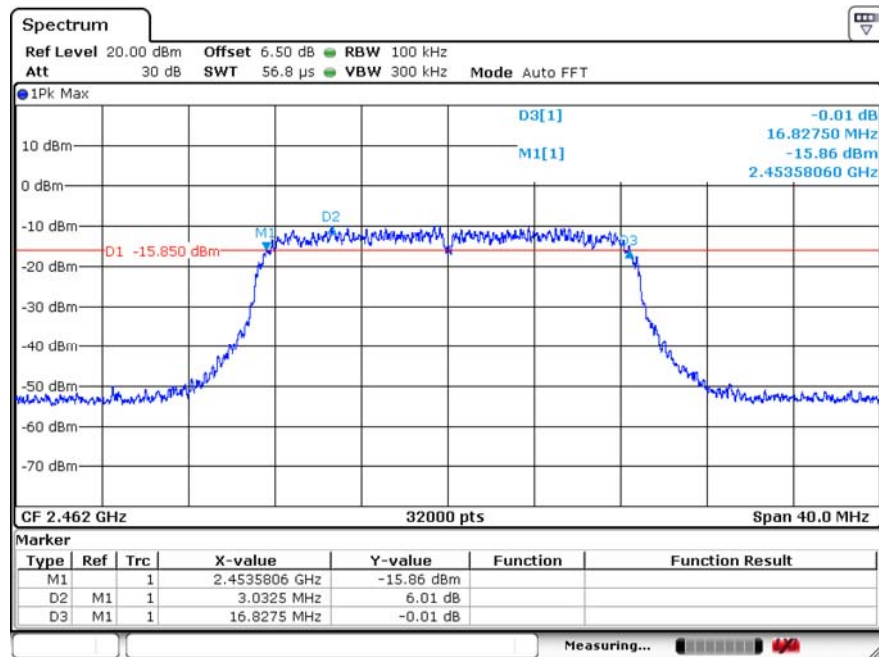
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 / CH06/ CH11(802.11n20 Data rate 6.5Mbps)		
Test Date :	2020-07-15		

Frequency	6dB Bandwidth (MHz)	Limit (kHz)	Result
2412 MHz	16.8463	≥ 500	Pass
2437 MHz	16.8275	≥ 500	Pass
2462 MHz	16.8413	≥ 500	Pass

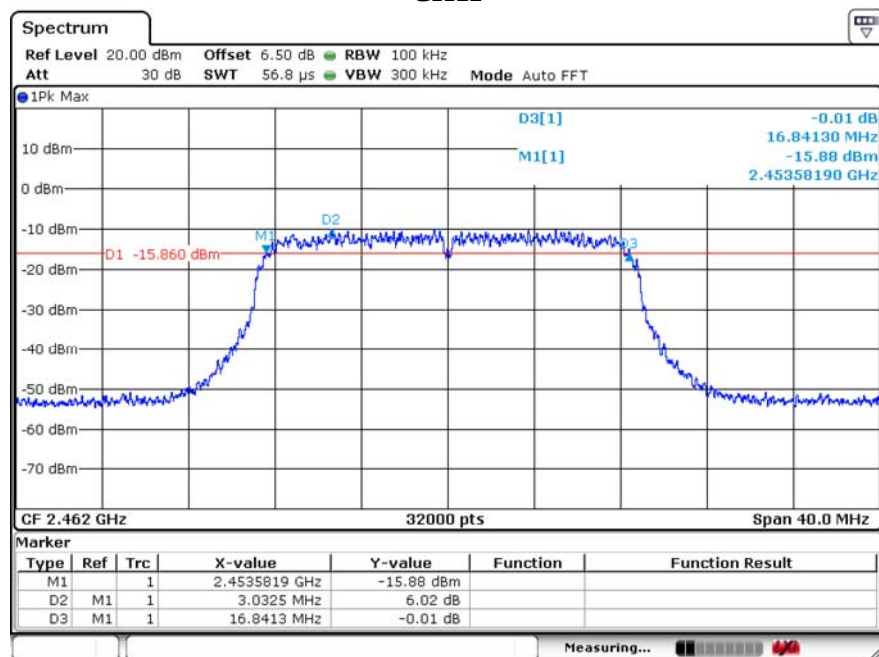
CH01



CH06



CH11



5. POWER DENSITY

5.1 APPLIED PROCEDURES / LIMIT

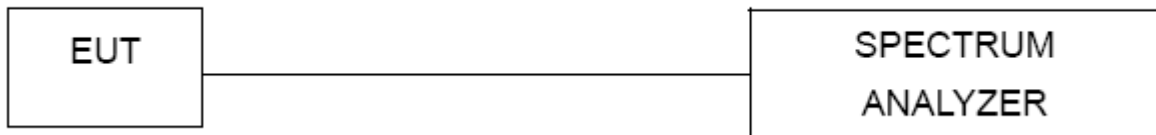
LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
3.10.1(6.2.2)	Power density	8dBm	2400-2483.5	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	3 kHz
VB	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 3kHz, VBW=10kHz, Sweep time = 100S, Span=300kHz.

5.1.2 TEST SETUP



5.1.3 EUT OPERATION CONDITIONS

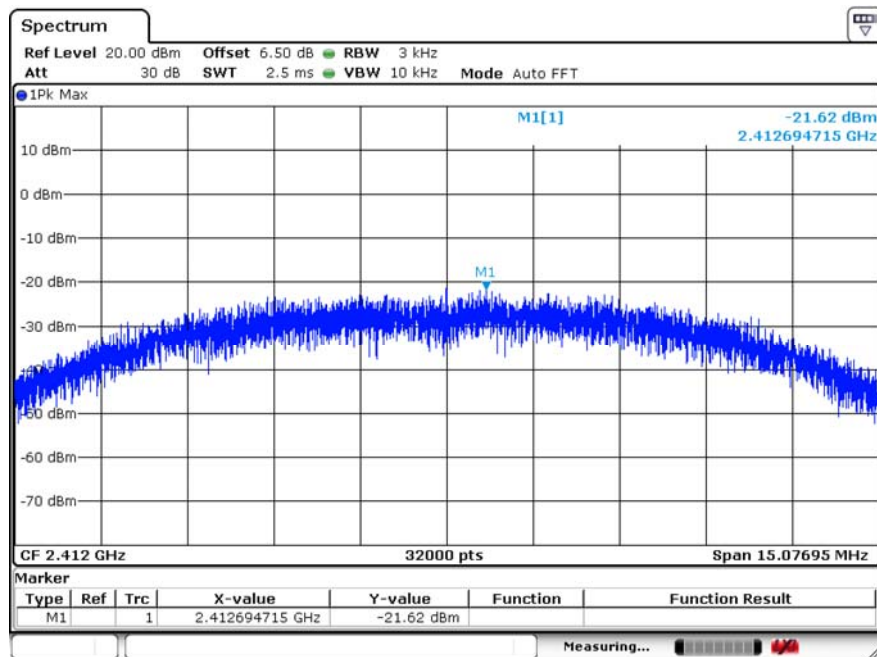
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.4 TEST RESULTS

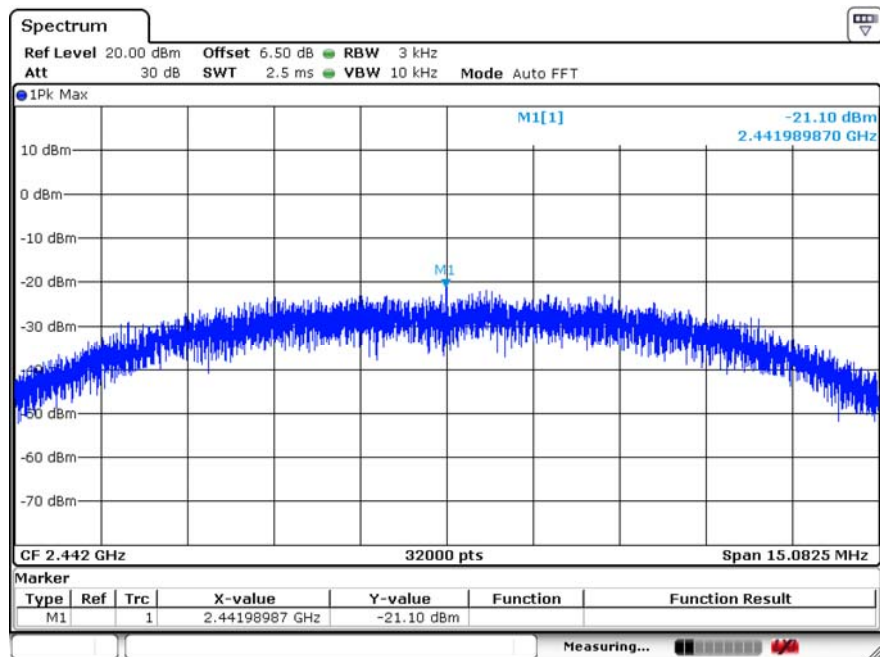
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 /CH06 /CH11 (802.11b Data rate 1Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-21.62	8
CH06	2437 MHz	-21.10	8
CH11	2462 MHz	-20.81	8

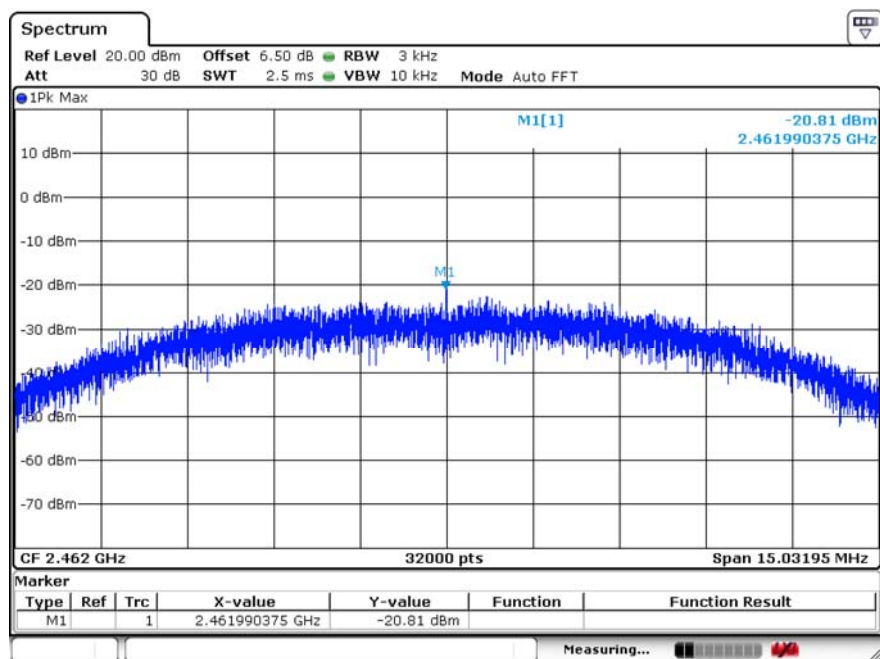
CH01



CH06



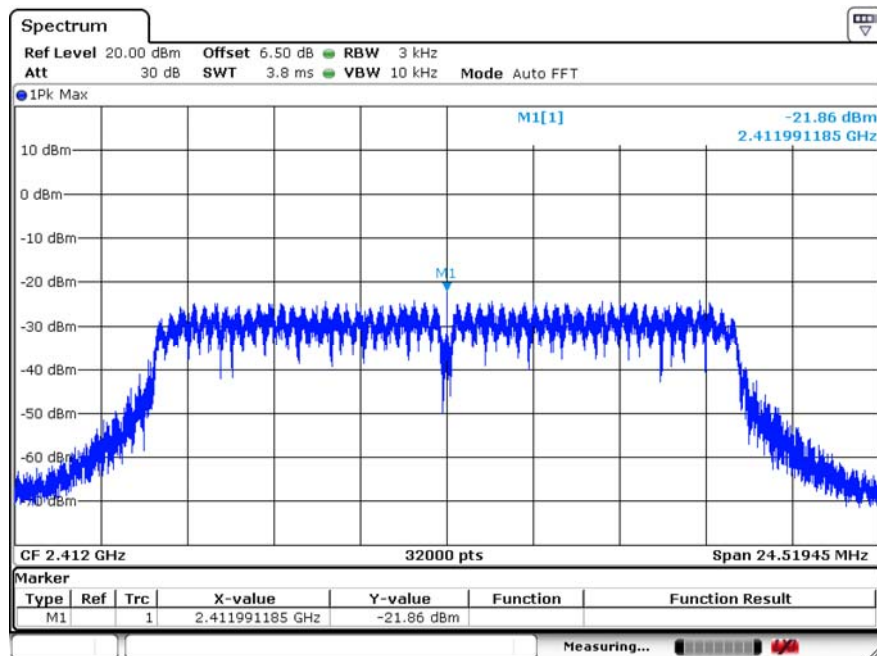
CH11



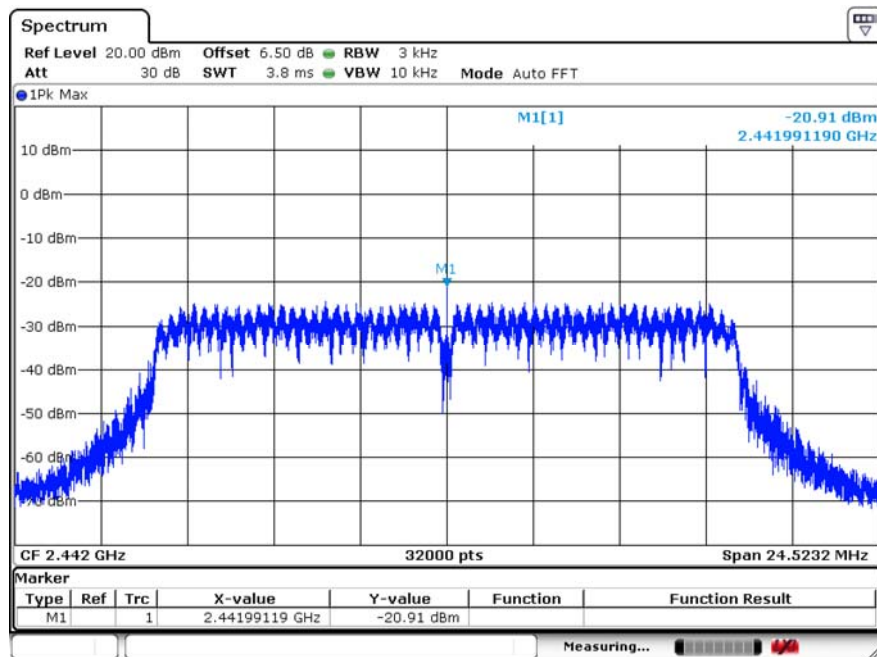
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 / CH06/CH11 (802.11g Data rate 6Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-21.86	8
CH06	2437 MHz	-20.91	8
CH11	2462 MHz	-20.71	8

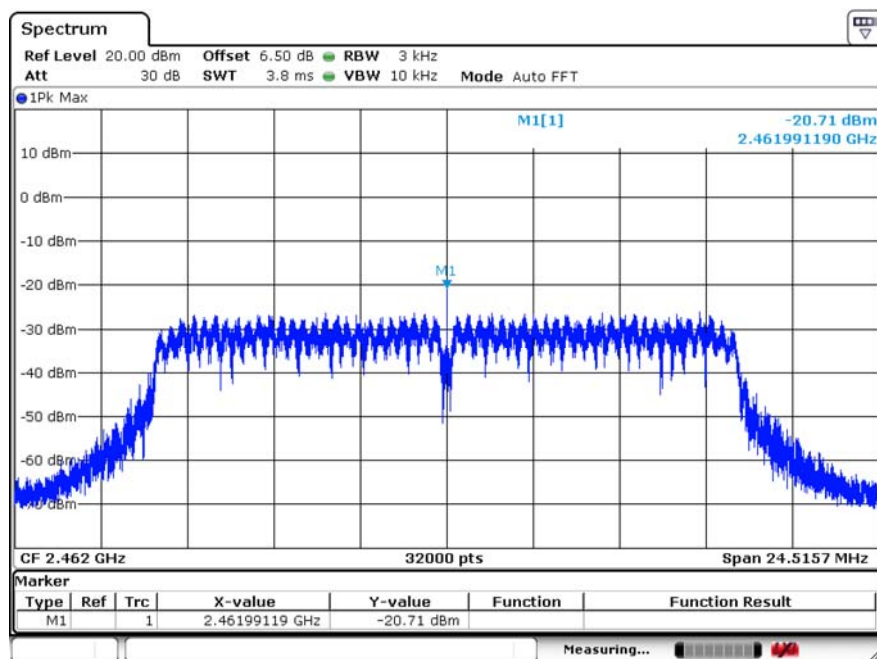
CH01



CH06



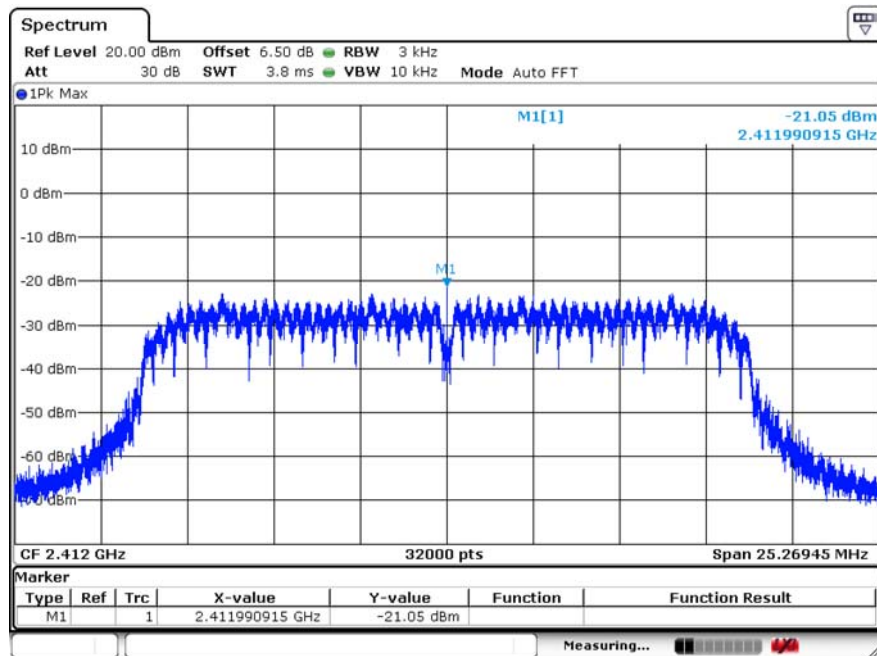
CH11



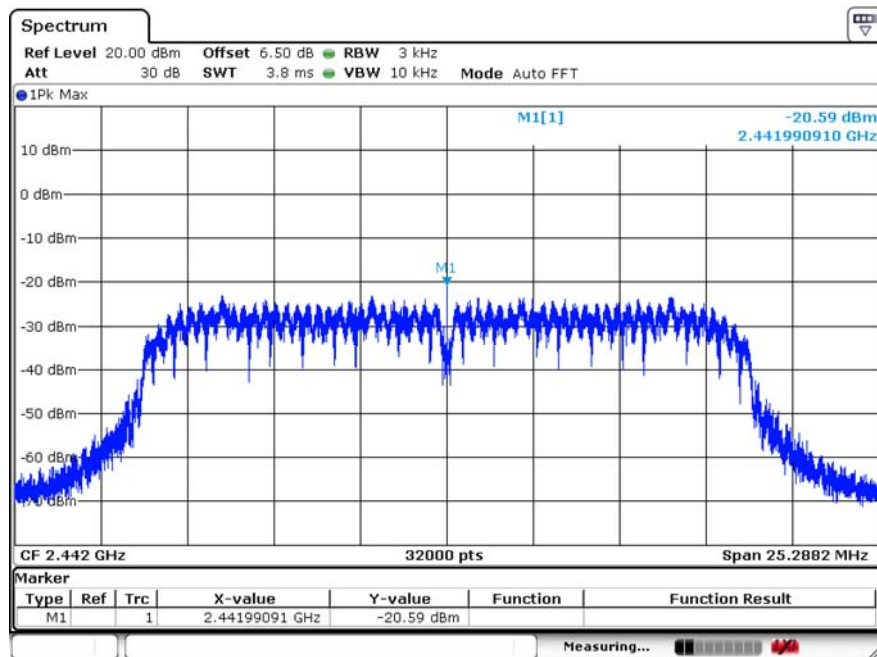
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01 / CH06/ CH11 (802.11n20 Data rate 6.5Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-21.05	8
CH06	2437 MHz	-20.59	8
CH11	2462 MHz	-20.42	8

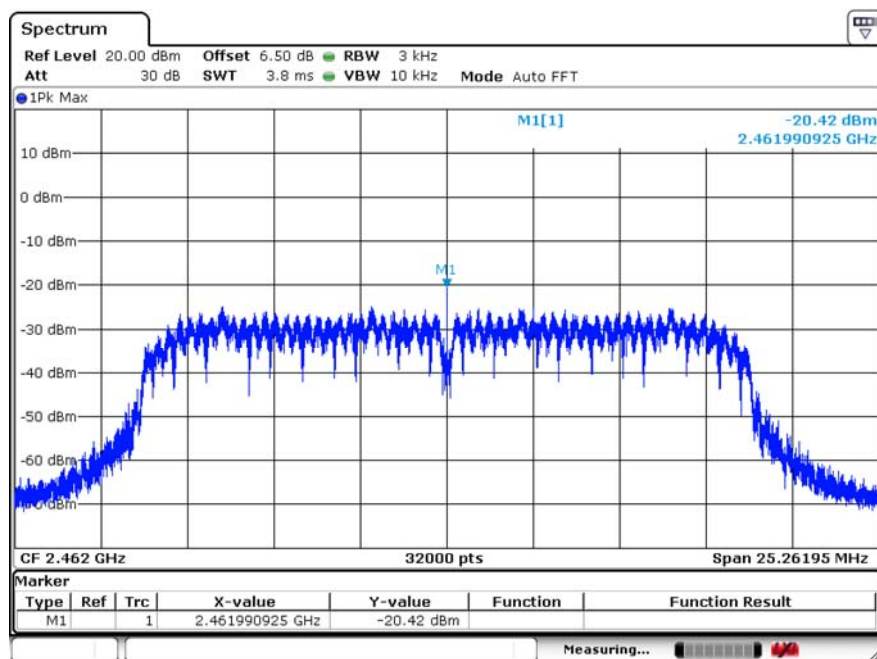
CH01



CH06



CH11



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
3.10.1(2)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

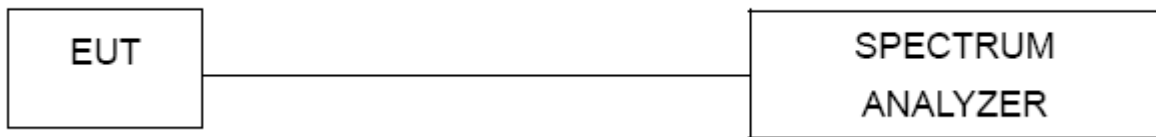
6.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 1MHz, VBW= 3MHz, Sweep time = Auto.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH06 /CH11 (802.11b Data rate 1Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	10.94	30	1
CH06	2437MHz	12.46	30	1
CH11	2462 MHz	12.75	30	1

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH06 /CH11 (802.11g Data rate 6Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	10.90	30	1
CH06	2437MHz	12.91	30	1
CH11	2462 MHz	12.13	30	1

EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH06 /CH11 (802.11n20 Data rate 6.5Mbps)		
Test Date :	2020-07-15		

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	11.33	30	1
CH06	2437MHz	13.31	30	1
CH11	2462 MHz	12.74	30	1

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency 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 or shall not exceed the general levels specified in Section 2.8.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

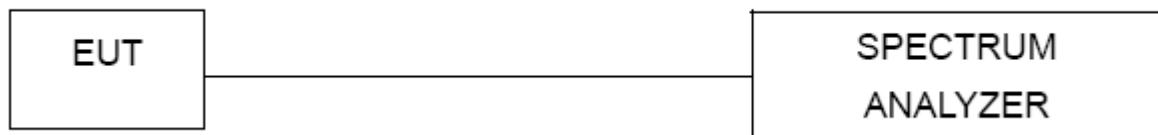
The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 kHz /100 kHz for Peak

7.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 100kHz, VBW=100kHz, Sweep time = Auto.

7.1.2 TEST SETUP



7.1.3 EUT OPERATION CONDITIONS

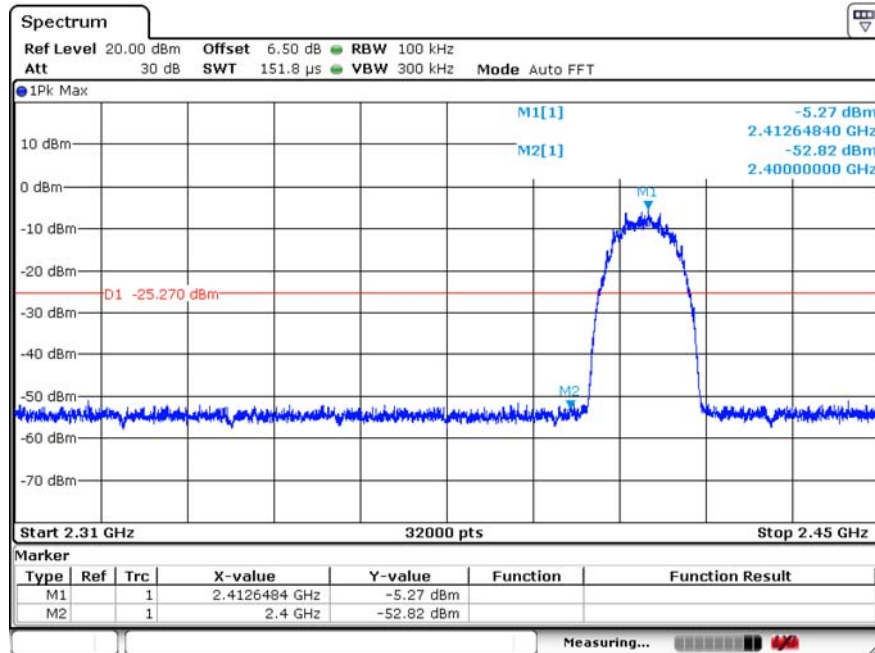
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.4 TEST RESULTS

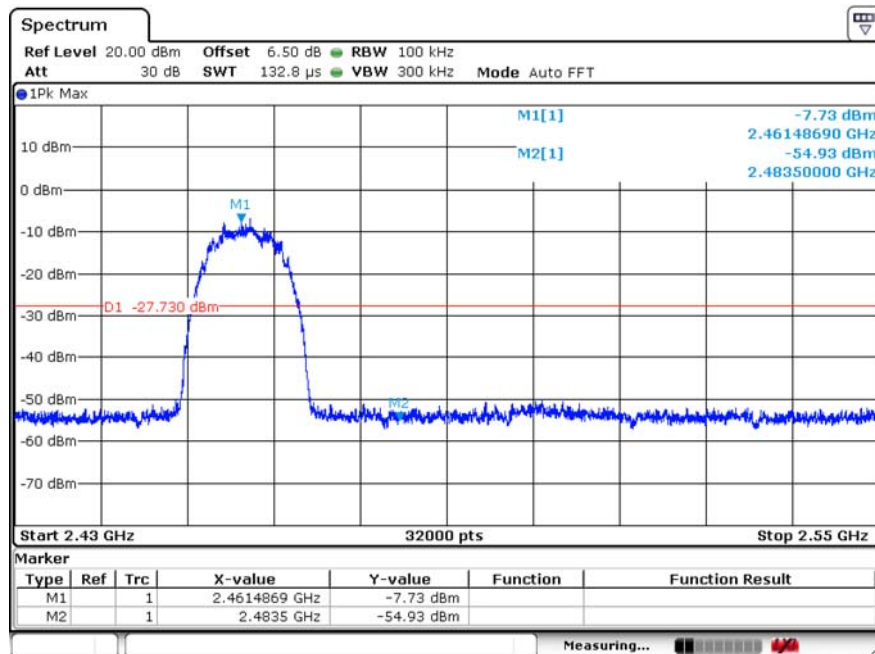
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH11 (802.11b Data rate 1Mbps)		
Test Date :	2020-07-15		

in any 100kHz bandwidth outside the low frequency band	in any 100 kHz bandwidth outside the high frequency band
Pass	Pass
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.	

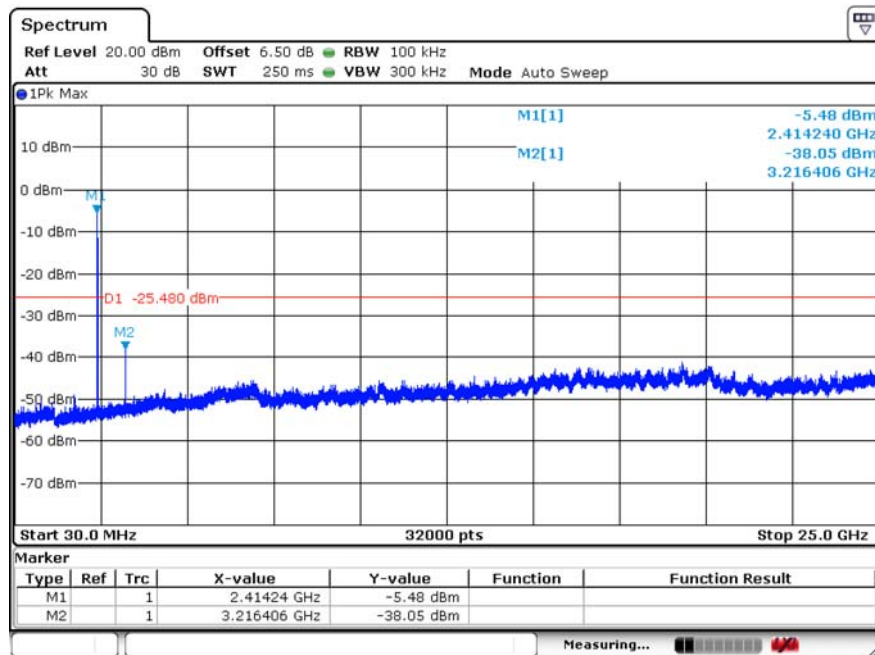
CH01 (Lower)



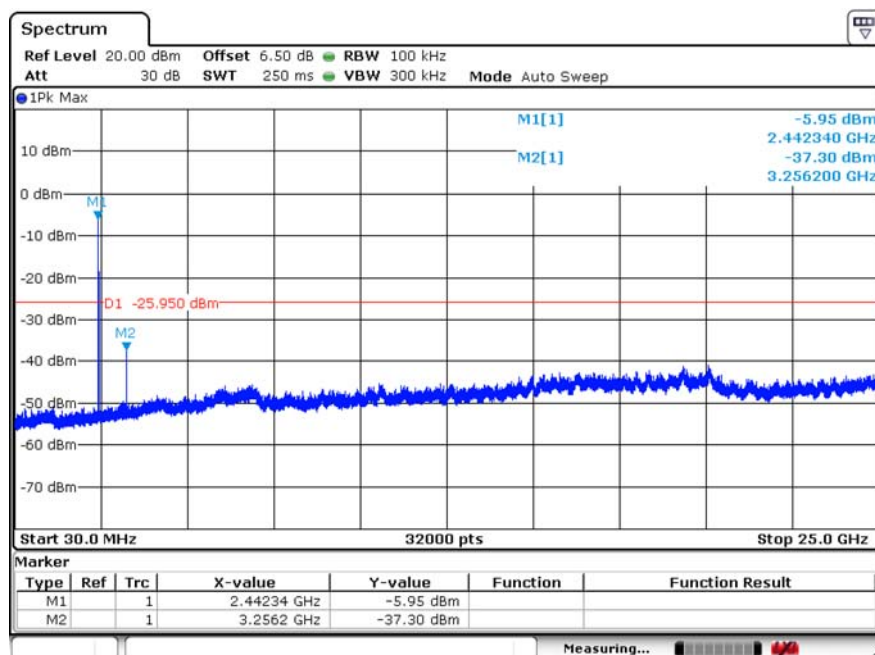
CH 11(Upper)



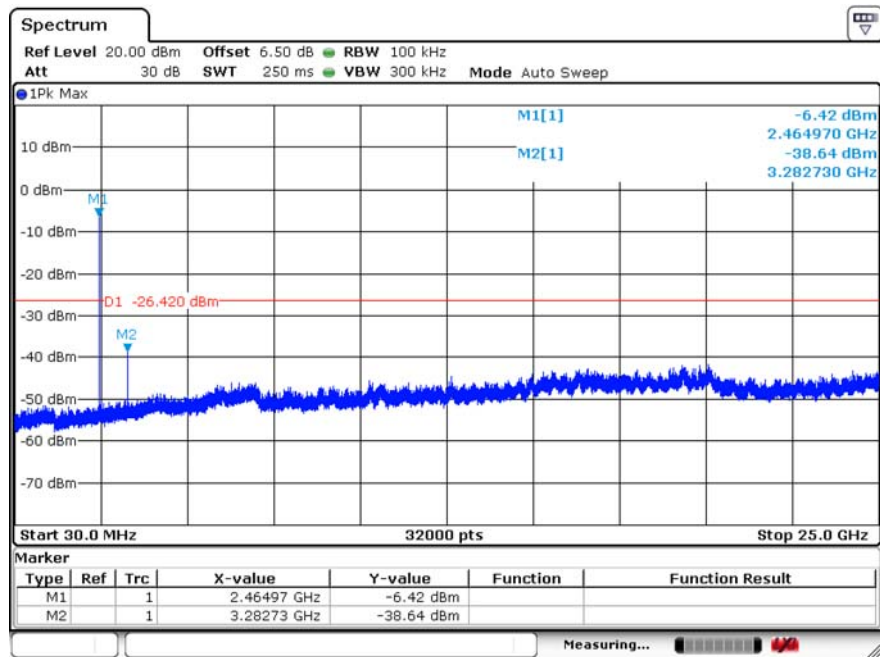
CH01



CH06



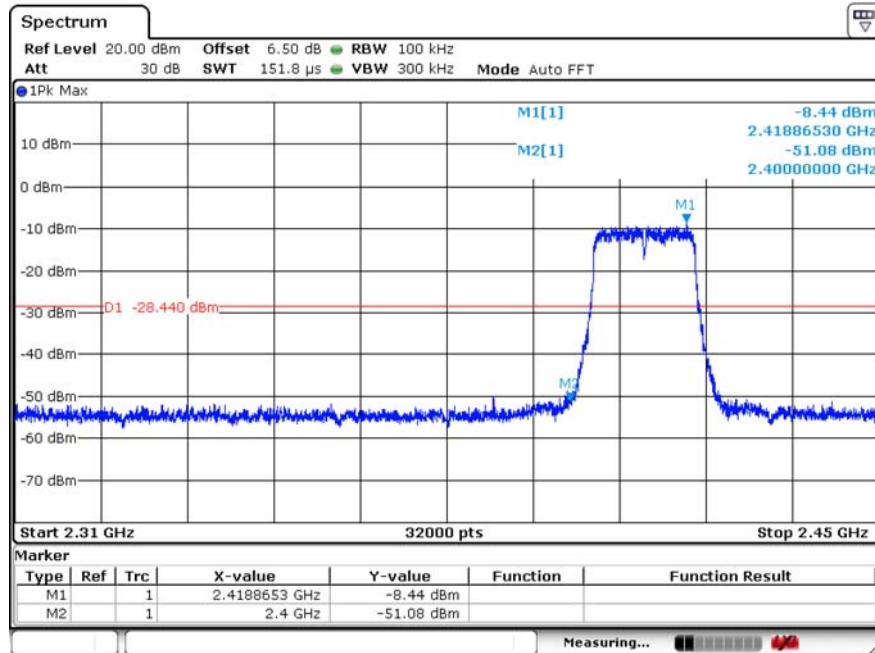
CH11



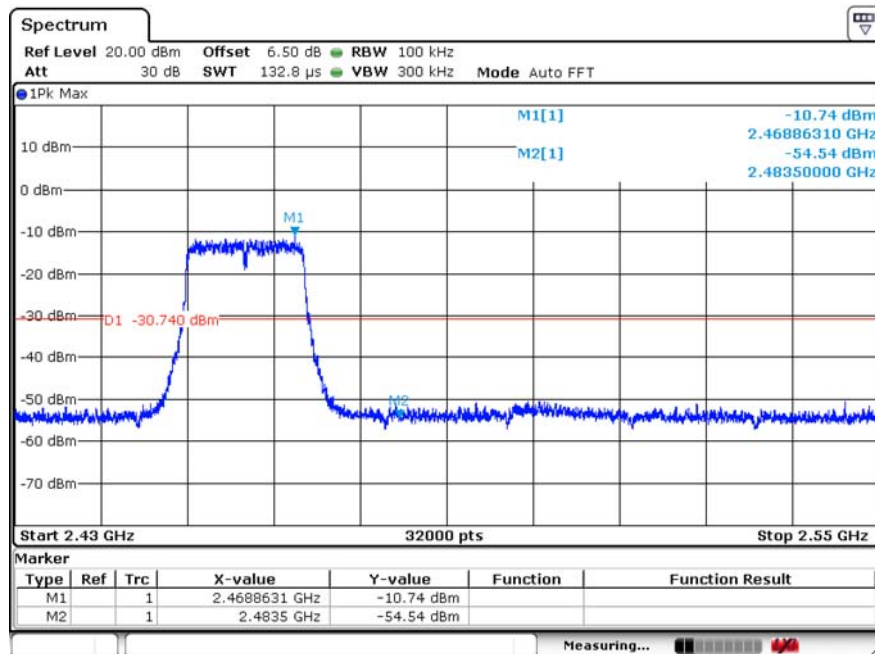
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH11 (802.11g Data rate 6Mbps)		
Test Date :	2020-07-15		

in any 100kHz bandwidth outside the low frequency band	in any 100 kHz bandwidth outside the high frequency band
Pass	Pass
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.	

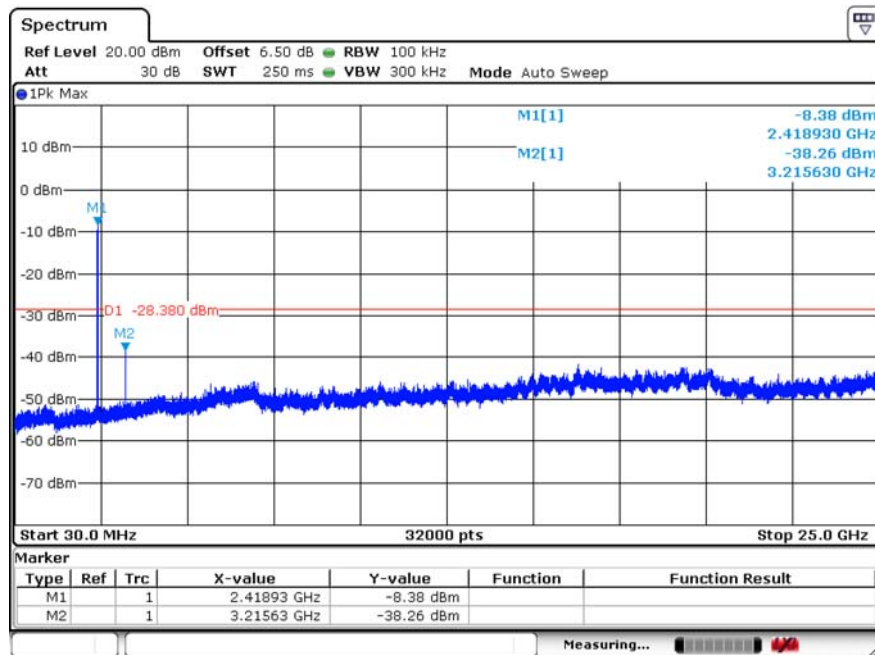
CH01 (Lower)



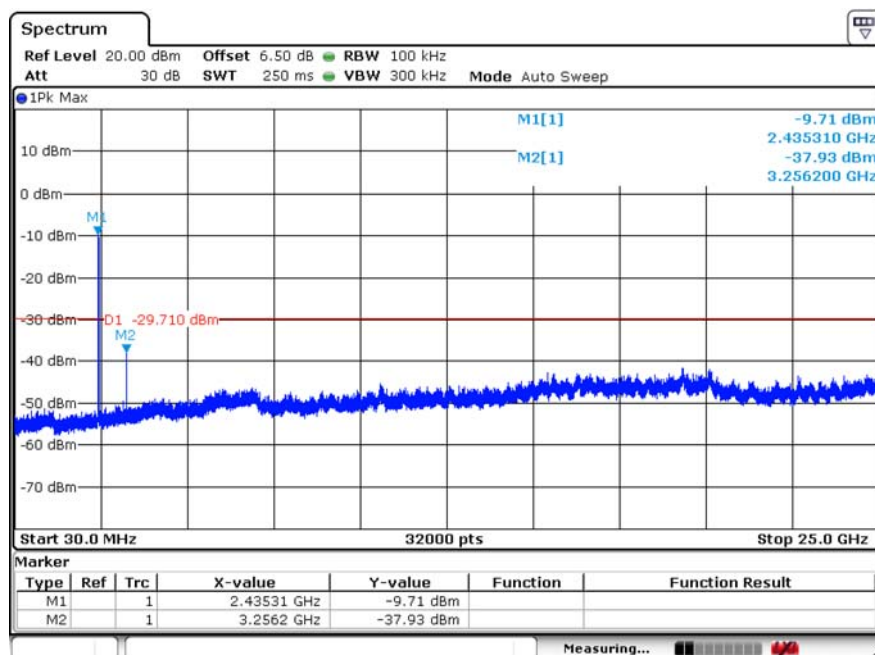
CH 11(Upper)



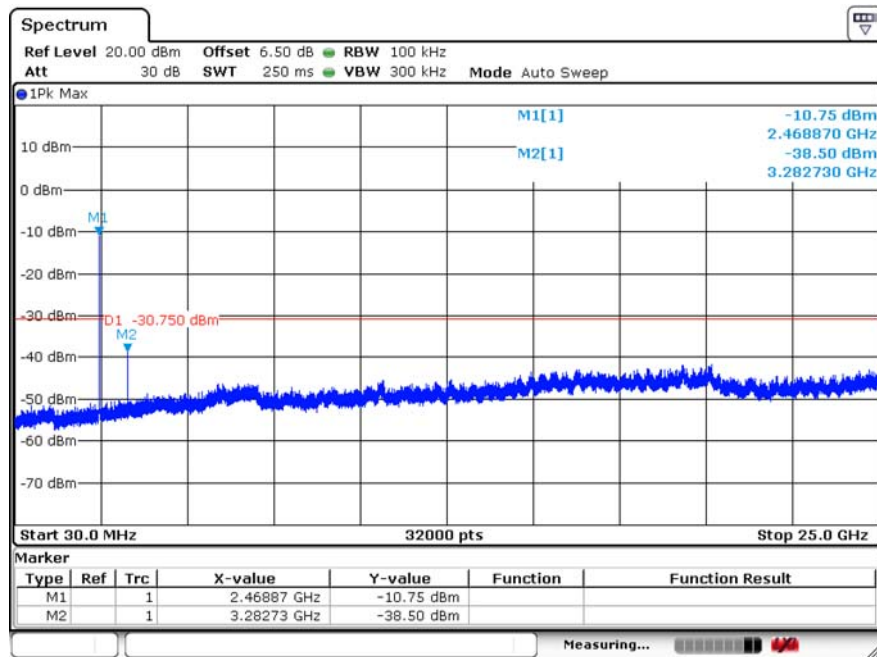
CH01



CH06



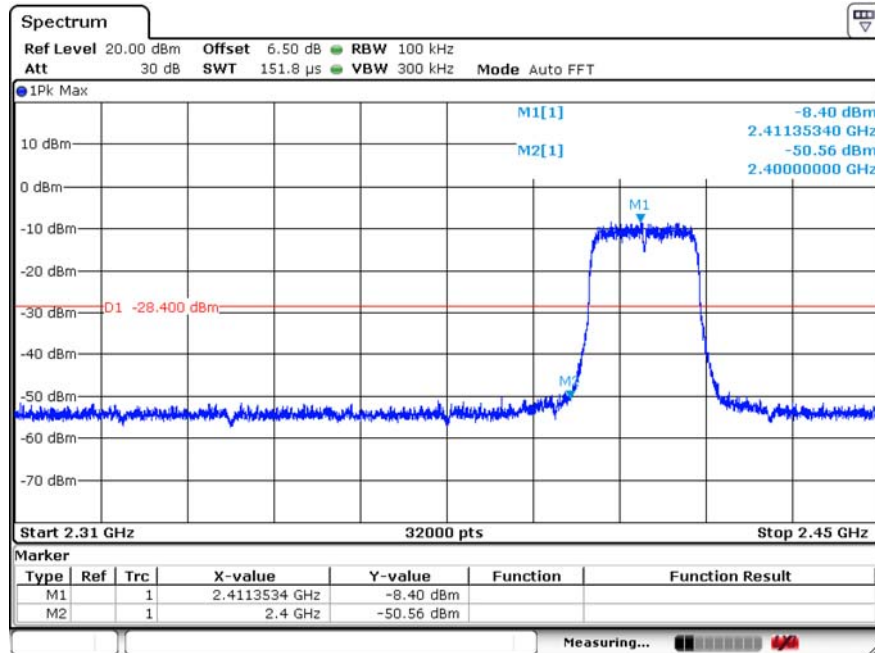
CH11



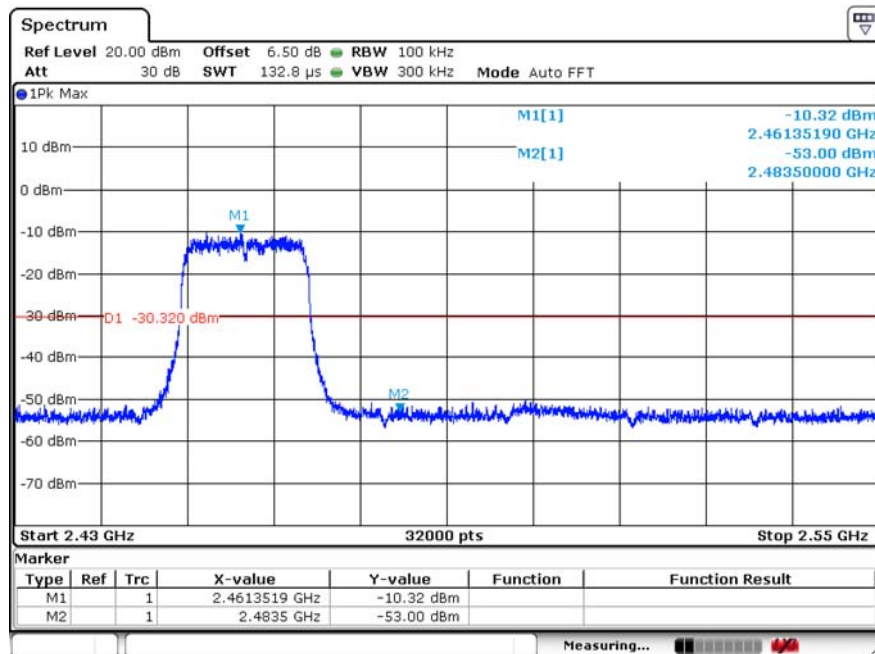
EUT :	3-Axis Stabilized Handheld Gimbal for Camera	Model Name :	MVG220FF
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Voltage :	DC7.4V from battery
Test Mode :	CH01/ CH11 (802.11n20 Data rate 6.5Mbps)		
Test Date :	2020-07-15		

in any 100kHz bandwidth outside the low frequency band	in any 100 kHz bandwidth outside the high frequency band
Pass	Pass
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.	

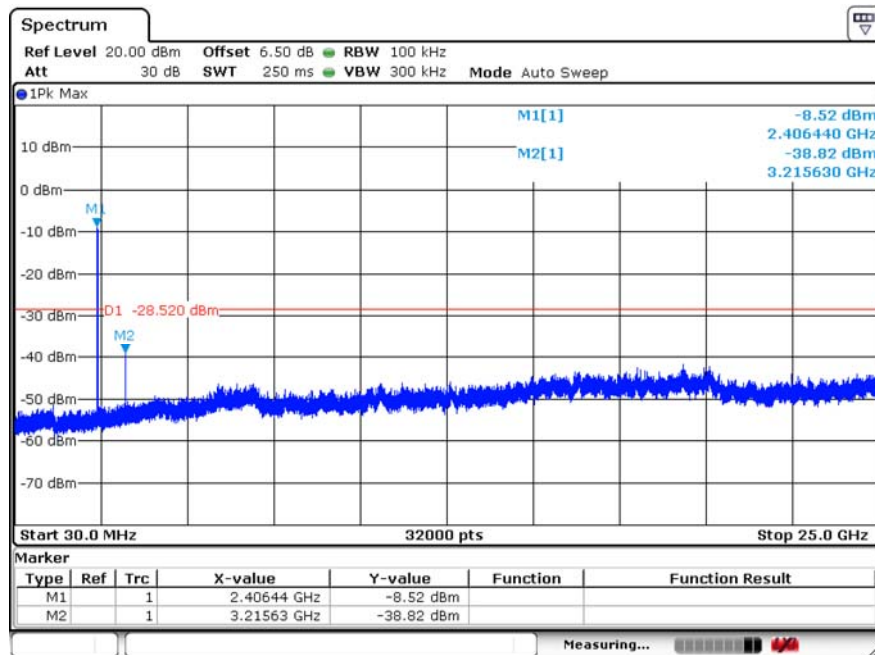
CH01 (Lower)



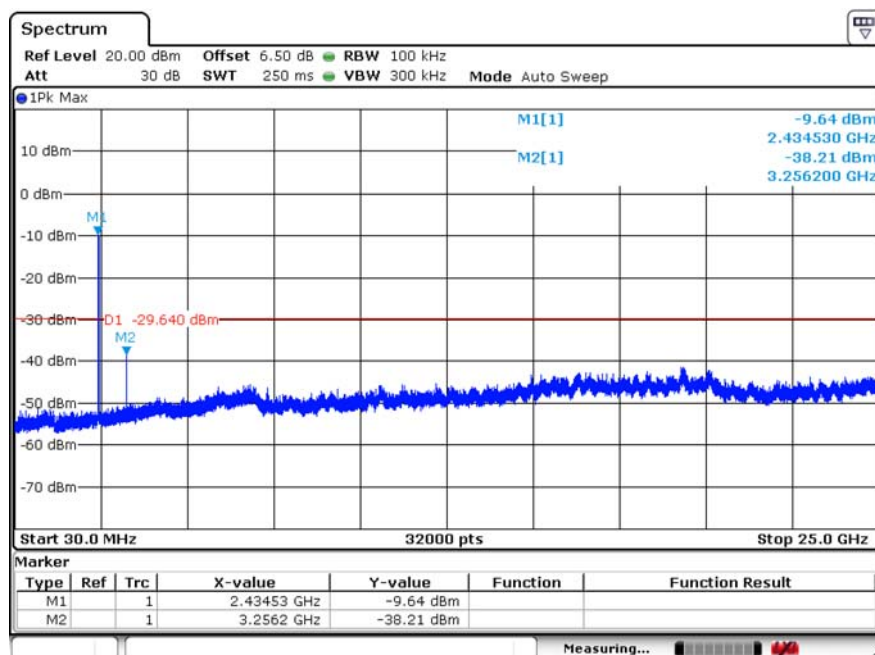
CH 11(Upper)



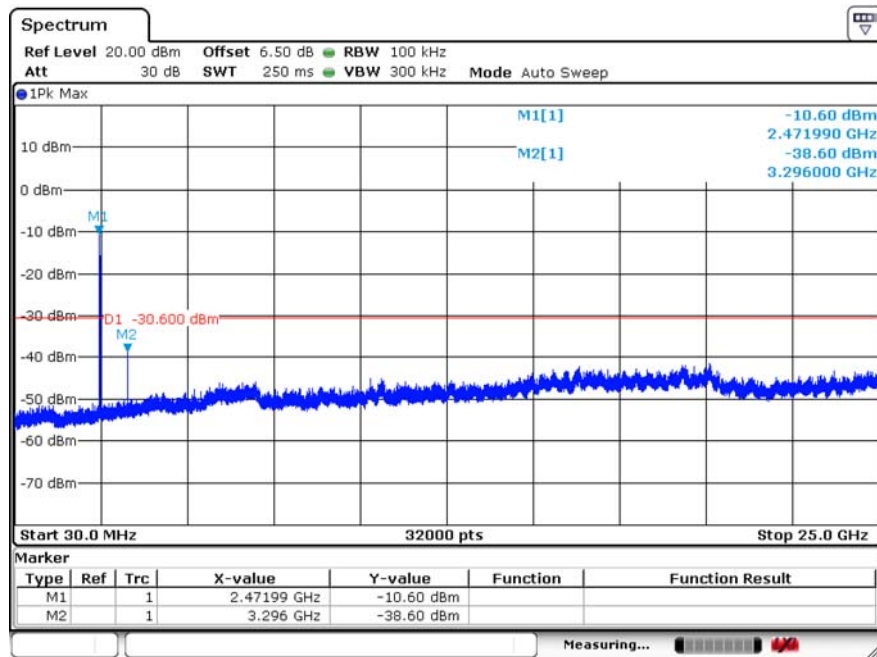
CH01



CH06



CH11



9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

3.10.1 requirement: Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

9.2 EUT ANTENNA

The antenna is Integer antenna and no consideration of replacement. Antenna max gain is 1.0 dBi from 2.4GHz to 2.5GHz.

10. EUT TEST PHOTO

Radiated Measurement Photos 30MHz-1GHz



Radiated Measurement Photos Above 1GHz



Conducted Measurement Photos**11. APPENDIX-Photographs of EUT Constructional Details**

Refer to Appendix-photographs.

**** End of Report ****