

FCC PART 15B

TEST REPORT

For

SZ DJI TECHNOLOGY C/O., LTD

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FCC ID: SS3-NB06251803

Report Type: Original Report	Product Type: Multilink
Report Number:	RDG180409002-00A
Report Date:	2018-04-19
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:	Multilink
EUT Model:	NB0625
FCC ID:	SS3-NB06251803
Rated Input Voltage:	5Vdc
The Highest Operating Frequency:	5843 MHz
External Dimension:	77 mm (L) x 47 mm (W) x 14 mm (H)
Serial Number:	180409002
EUT Received Date:	2018-04-09

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 of the manufacturer is to determine the compliance of EUT with FCC Part 15 B Class B.

Related Submittal(s)/Grant(s)

FCC submissions with Part 15C DSS, FCC ID: SS3-NB06251803.

FCC submissions with Part 15E NII, FCC ID: SS3-NB06251803.

Part of system submissions with FCC ID: SS3-GL800A1703.

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: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1~6GHz: 4.98 dB, 6~18GHz: 5.89 dB, 18~40GHz: 5.47 dB
Temperature	±1 °C
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.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218,the FCC Designation No. : CN1220.

The test site has been 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) as below, that was provided manufacturer.

Test mode: Operating

The EUT was Connecting to the remote and Transceiving.

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

No software was used during test.

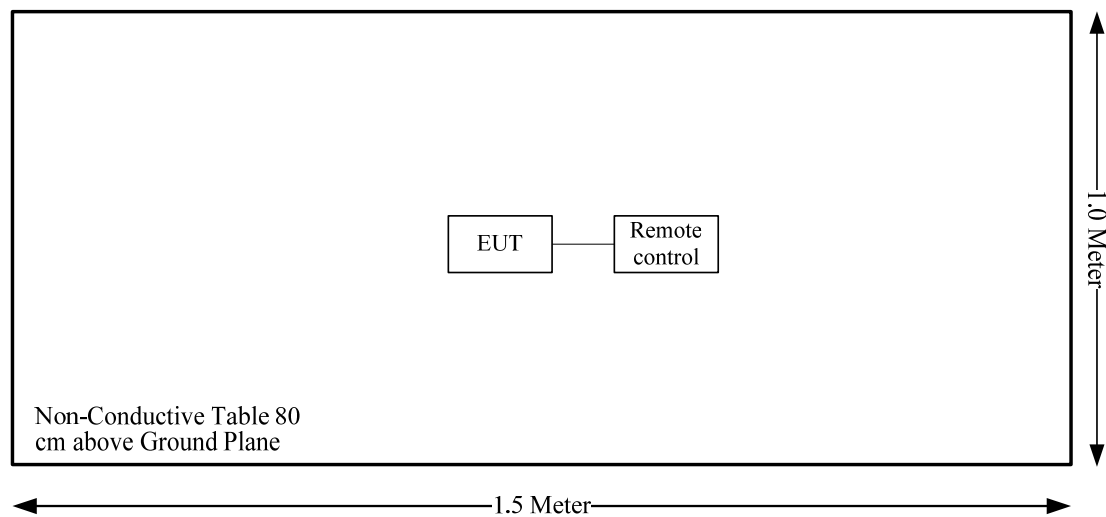
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DJI	Remote control	GL800A	N/A

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Data Cable	No	Yes	0.2	Remote	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

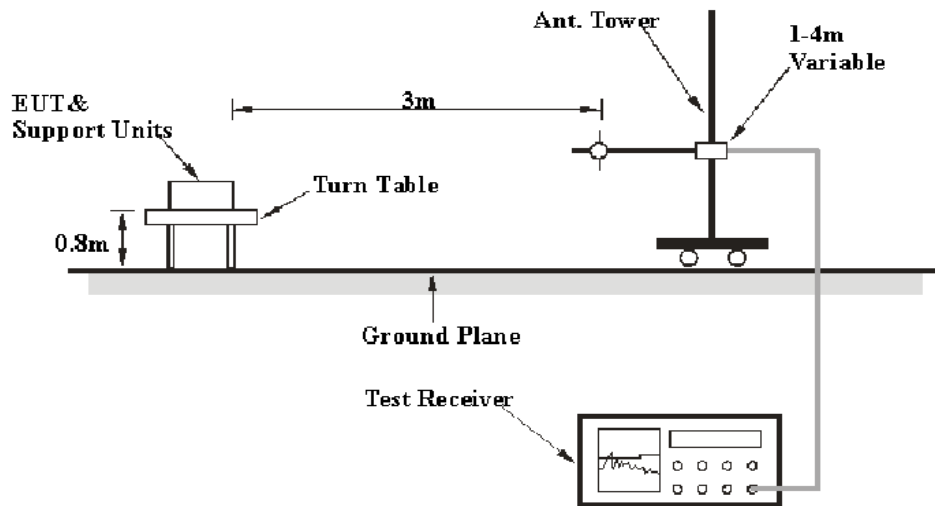
FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Not Applicable
§15.109	Radiated Emissions	Compliant

Not Applicable: the device was powered by remote system.

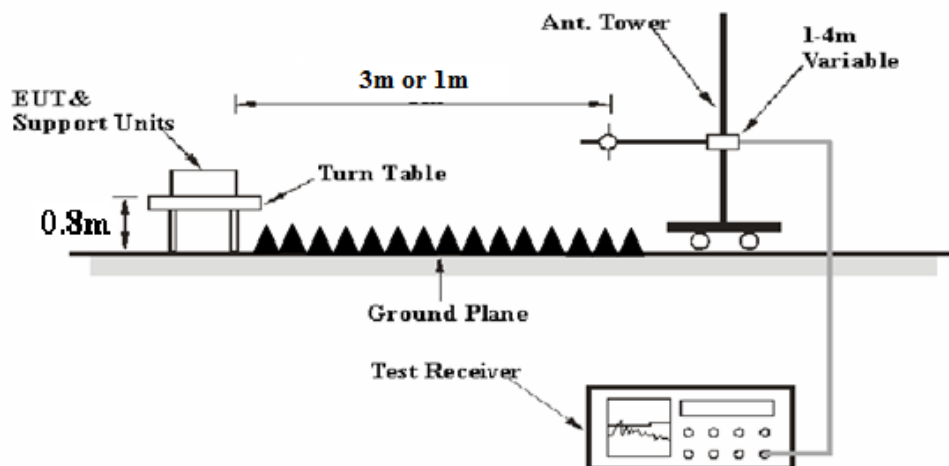
FCC PART 15B §15.109-RADIATED EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed at the 3 meters Test Site A and B, 1GHz-26.5GHz were performed at the 3 m distance and 26.5-40GHz was performed at 1 m 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 40 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	Measurement
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.

For frequency above 26.5GHz, according to C63.4, the test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1 m

Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1m]})$ dB= 9.54 dB

All emissions under the average limit and under the noise floor have not recorded in the report.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2017-12-11	2018-12-11
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
HP	Amplifier	8447D	2727A05902	2017-09-05	2018-09-05
Agilent	Spectrum Analyzer	E4440A	SG43360054	2017-12-08	2018-12-08
ETS-Lindgren	Horn Antenna	3115	000 527 35	2016-01-05	2019-01-04
MITEQ	Amplifier	AFS42-00101800-2 5-S-42	2001271	2017-09-05	2018-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2017-09-05	2018-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2017-09-05	2018-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2017-09-05	2018-09-05
Unknown	Coaxial Cable	C-2.4J2.4J-50	C-0700-02	2017-06-27	2018-06-27
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2016-11-18	2019-11-18
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2016-11-18	2019-11-18
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2017-06-27	2018-06-27
R&S	Spectrum Analyzer	FSP 38	100478	2017-12-08	2018-12-08

* **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).

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- Amplifier Gain+ Distance extrapolation factor

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:

$$\text{Margin} = \text{Limit} - \text{Result}$$

Test Data

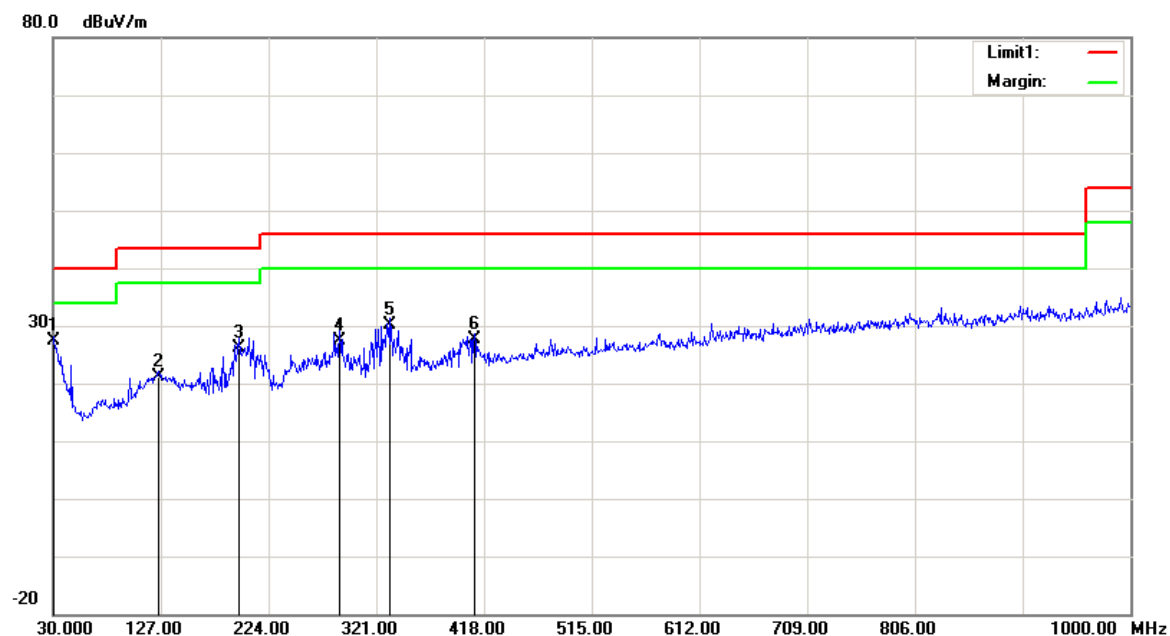
Environmental Conditions

Temperature:	24.4~24.6 °C
Relative Humidity:	39~42 %
ATM Pressure:	100.5~101.1 kPa

* The testing was performed by Blake Yang & Steve Zuo on 2018-04-15& 2018-04-16.

Please refer to following table and plots:

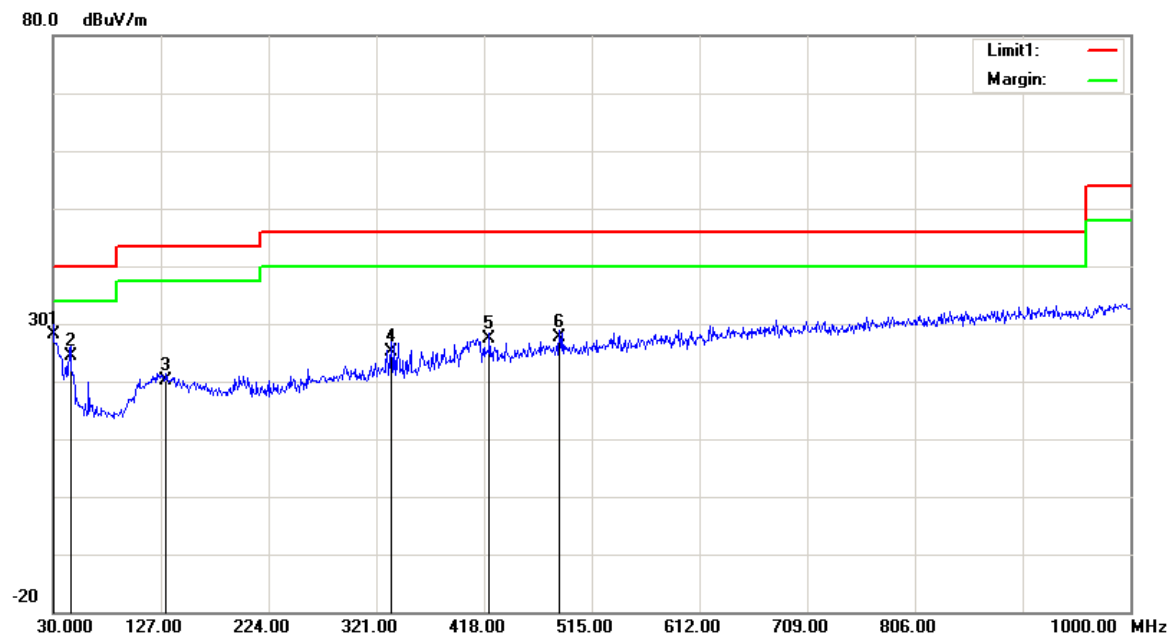
Condition:	FCC Class B 3M Radiation	Polarization:	Horizontal
EUT:	Multilink	Power:	DC 5V
Model:	NB0625	Distance:	3m
Test Mode:	Operating		



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected dB/m	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	30.0000	25.76	QP	1.54	27.30	40.00	12.70
2	125.0600	25.97	QP	-4.77	21.20	43.50	22.30
3	197.8100	32.63	QP	-6.43	26.20	43.50	17.30
4	288.0200	31.60	QP	-4.10	27.50	46.00	18.50
5	332.6400	33.49	QP	-3.39	30.10	46.00	15.90
6	409.2700	29.42	QP	-1.82	27.60	46.00	18.40

Condition: FCC Class B 3M Radiation
EUT: Multilink
Model: NB0625
Test Mode: Operating

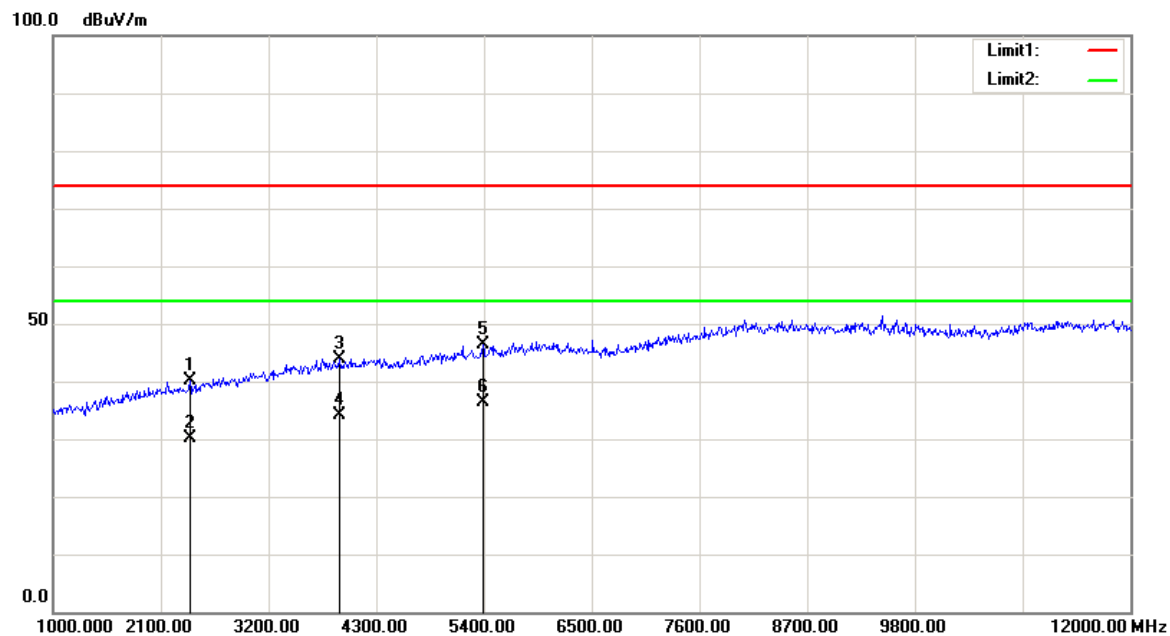
Polarization: Vertical
Power: DC 5V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected dB/m	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	30.0000	26.66	QP	1.54	28.20	40.00	11.80
2	45.5200	33.91	QP	-9.41	24.50	40.00	15.50
3	131.8500	25.10	QP	-5.00	20.10	43.50	23.40
4	334.5800	28.58	QP	-3.38	25.20	46.00	20.80
5	422.8500	28.88	QP	-1.58	27.30	46.00	18.70
6	485.9000	27.94	QP	-0.34	27.60	46.00	18.40

Condition: FCC Part 15 Class B
EUT: Multilink
Model: NB0625
Test Mode: Operating

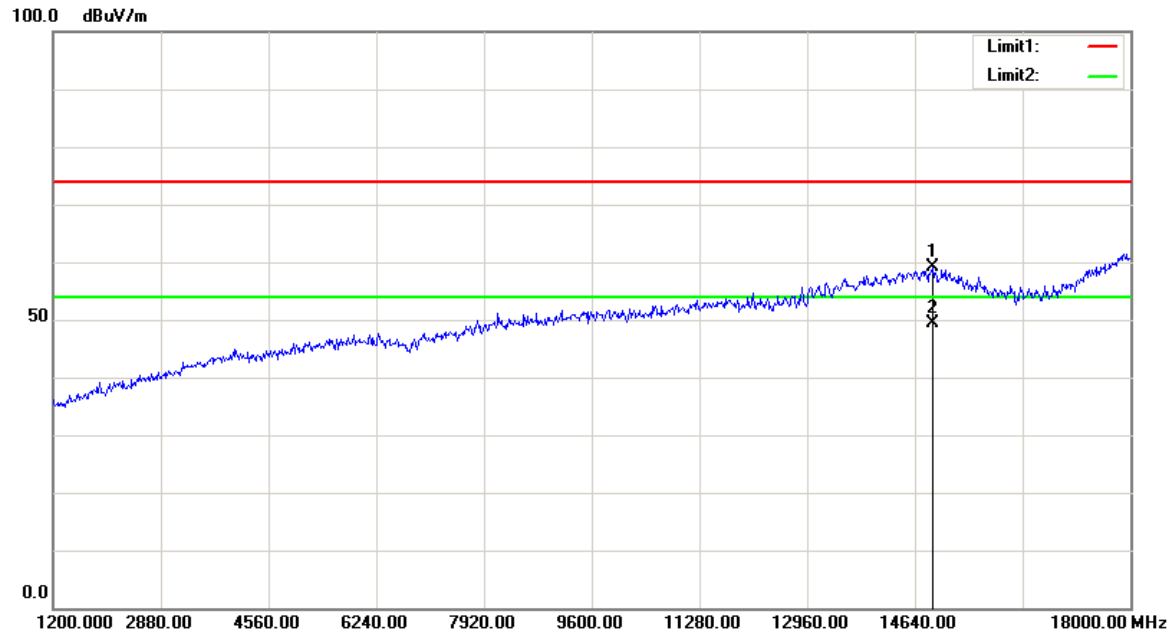
Polarization: Horizontal
Power: DC 5V
Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	2402.500	46.61	peak	-6.51	40.10	74.00	33.90
2	2402.500	36.54	AVG	-6.51	30.03	54.00	23.97
3	3926.000	46.08	peak	-2.12	43.96	74.00	30.04
4	3926.000	36.15	AVG	-2.12	34.03	54.00	19.97
5	5389.000	46.23	peak	0.16	46.39	74.00	27.61
6	5389.000	36.34	AVG	0.16	36.50	54.00	17.50

Condition: FCC Part 15 Class B
 EUT: Multilink
 Model: NB0625
 Test Mode: Operating

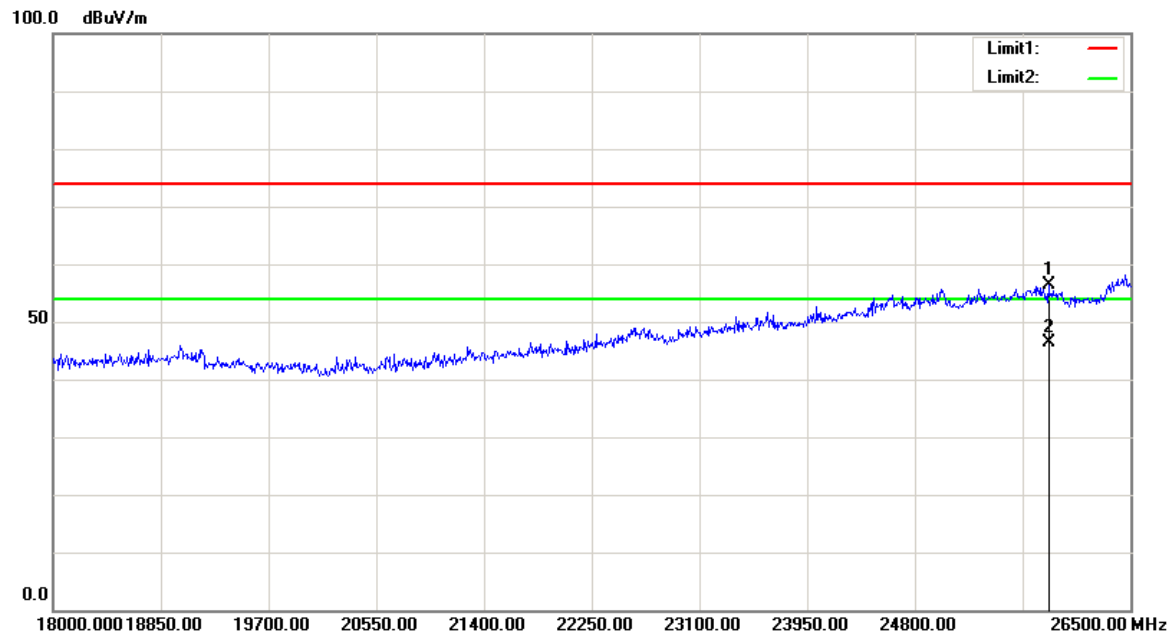
Polarization: Horizontal
 Power: DC 5V
 Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	14934.000	49.11	peak	9.96	59.07	74.00	14.93
2	14934.000	39.54	AVG	9.96	49.50	54.00	4.50

Condition: FCC Part 15 Class B
EUT: Multilink
Model: NB0625
Test Mode: Operating

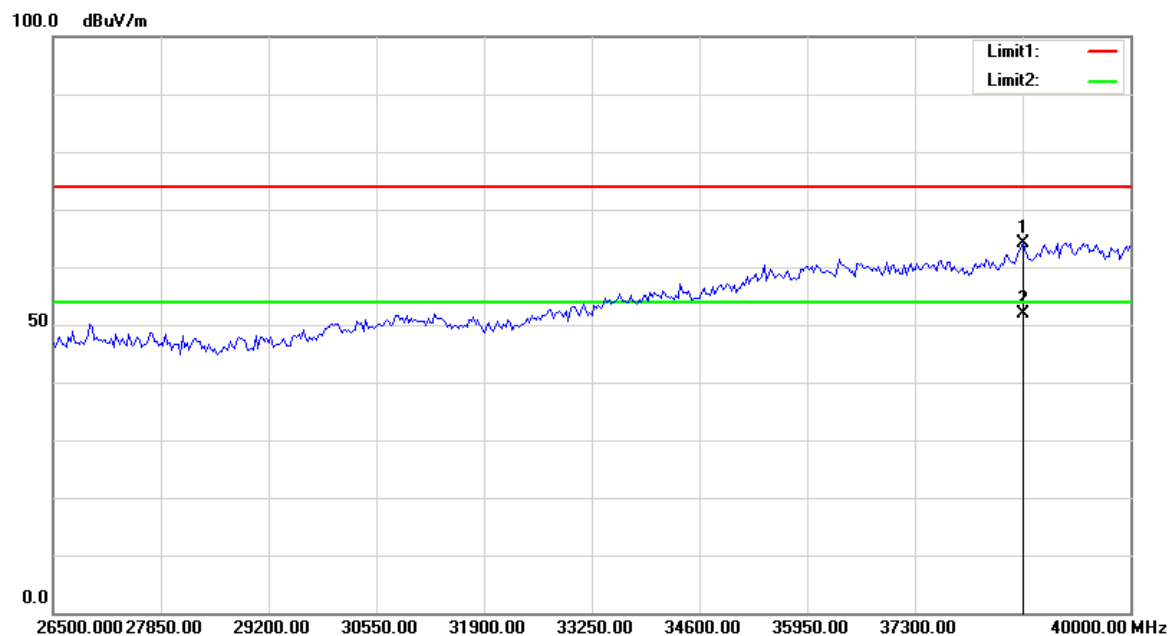
Polarization: Horizontal
Power: DC 5V
Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	25854.000	36.81	peak	19.57	56.38	74.00	17.62
2	25854.000	26.75	AVG	19.57	46.32	54.00	7.68

Condition: FCC Part 15 Class B
EUT: Multilink
Model: NB0625
Test Mode: Operating

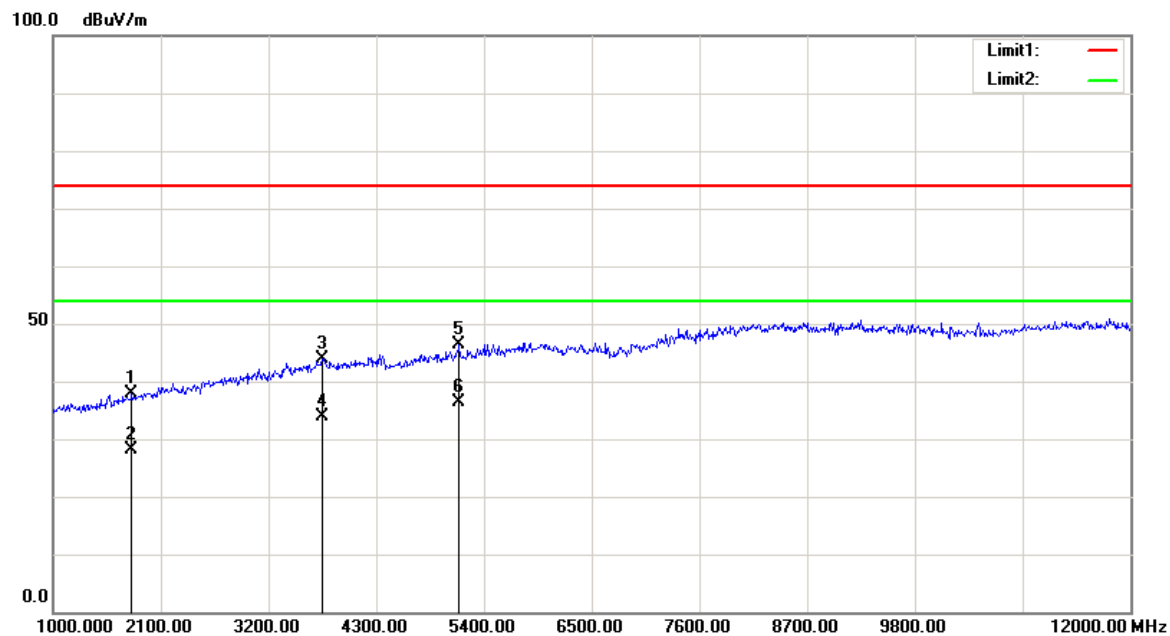
Polarization: Horizontal
Power: DC 5V
Distance: 1m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	38650.000	48.03	peak	16.22	64.25	74.00	9.75
2	38650.000	35.76	AVG	16.22	51.98	54.00	2.02

Condition: FCC Part 15 Class B
EUT: Multilink
Model: NB0625
Test Mode: Operating

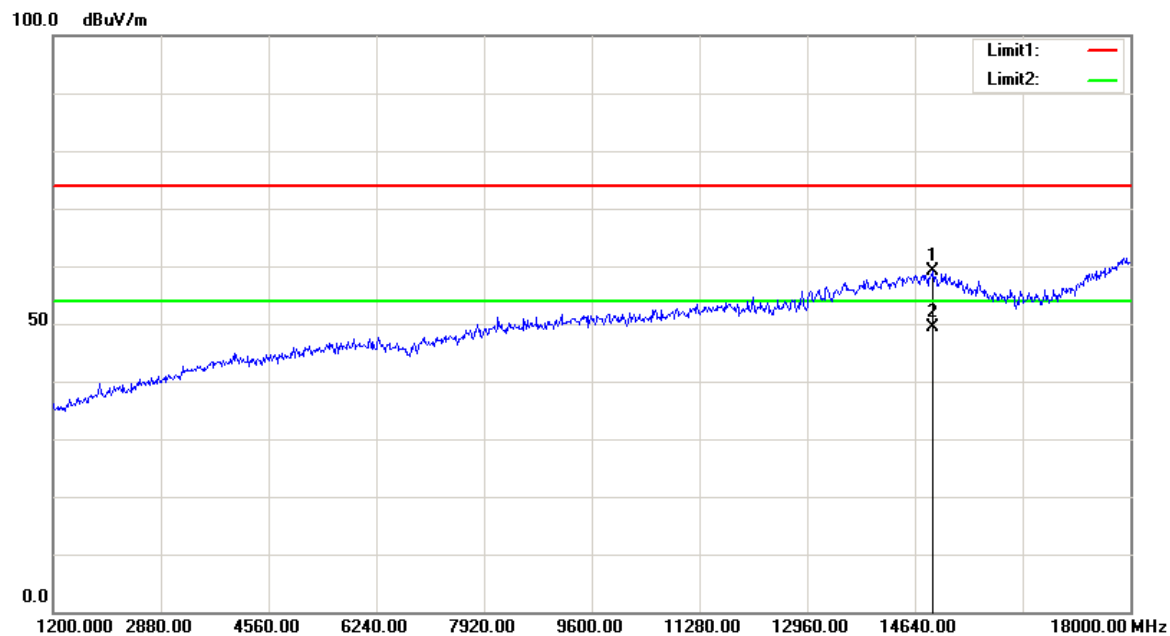
Polarization: Vertical
Power: DC 5V
Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	1803.000	45.66	peak	-7.77	37.89	74.00	36.11
2	1803.000	35.79	AVG	-7.77	28.02	54.00	25.98
3	3750.000	46.48	peak	-2.63	43.85	74.00	30.15
4	3750.000	36.39	AVG	-2.63	33.76	54.00	20.24
5	5152.500	46.58	peak	-0.28	46.30	74.00	27.70
6	5152.500	36.64	AVG	-0.28	36.36	54.00	17.64

Condition: FCC Part 15 Class B
EUT: Multilink
Model: NB0625
Test Mode: Operating

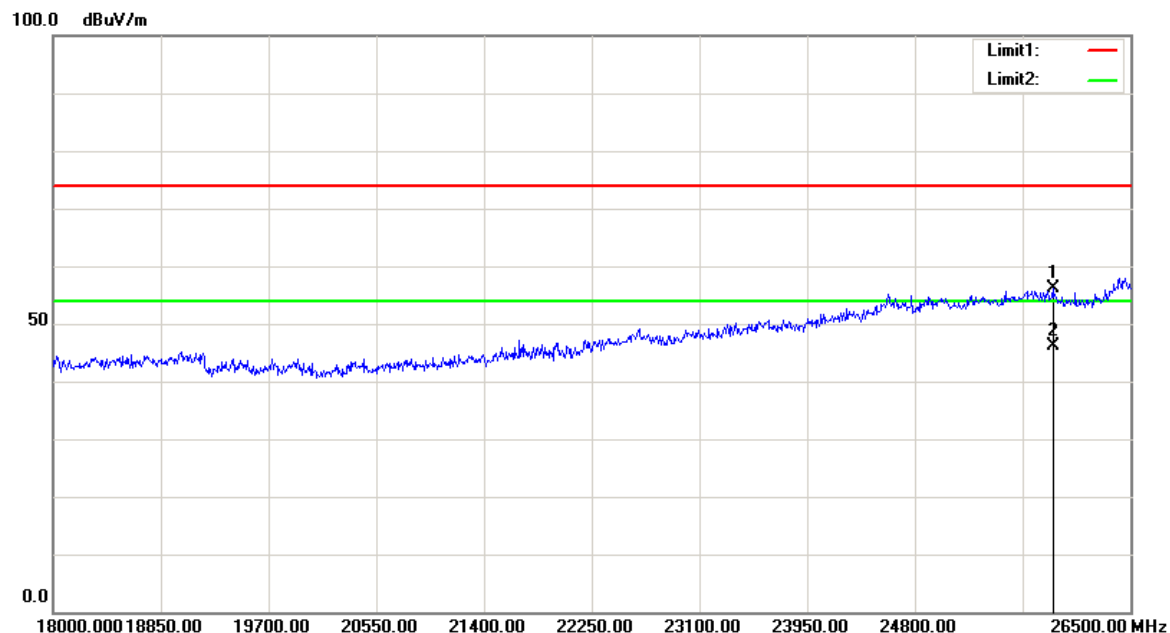
Polarization: Vertical
Power: DC 5V
Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	14934.000	49.13	peak	9.96	59.09	74.00	14.91
2	14934.000	39.48	AVG	9.96	49.44	54.00	4.56

Condition: FCC Part 15 Class B
 EUT: Multilink
 Model: NB0625
 Test Mode: Operating

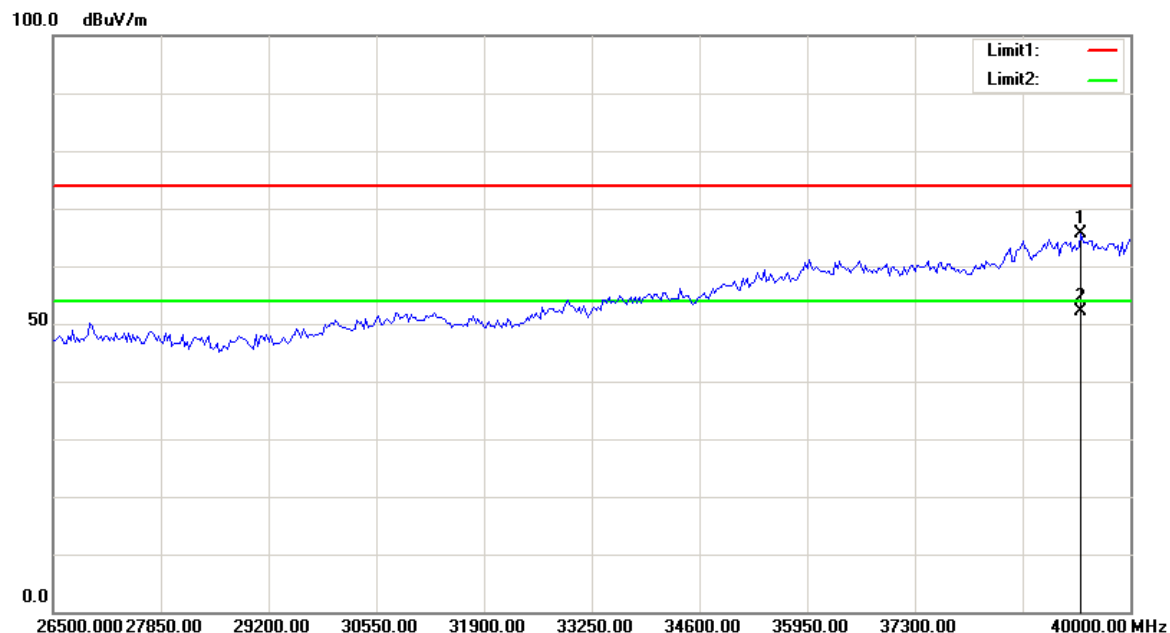
Polarization: Vertical
 Power: DC 5V
 Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected dB/m	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	25892.250	36.44	peak	19.59	56.03	74.00	17.97
2	25892.250	26.57	AVG	19.59	46.16	54.00	7.84

Condition: FCC Part 15 Class B(Peak)
EUT: Multilink
Model: NB0625
Test Mode: Operating

Polarization: Vertical
Power: DC 5V
Distance: 1m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected dB/m	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	39379.000	49.58	peak	16.02	65.60	74.00	8.40
2	39379.000	36.05	AVG	16.02	52.07	54.00	1.93

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