



FCC PART 15 B
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-GL300N1801

Report Type: Original Report	Product Name: C1
Report Number:	RDG180101011-00
Report Date:	2018-02-06
Reviewed By:	Jerry Zhang EMC Manager <i>Jerry Zhang</i>
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan).

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

EUT Name:	C1
Equipment Type:	Remote Controller
EUT Model:	GL300N
FCC ID:	SS3-GL300N1801
Rated Input Voltage:	DC7.6V from battery
External Dimension:	16.7 cm(L)*20.0 cm(W)*20.0 cm(H)
Serial Number:	180101011
EUT Received Date:	2018.01.01
The Highest Operation Frequency:	5846.5MHz

Objective

This test report is prepared on behalf of *SZ DJI TECHNOLOGY CO., LTD* In accordance with Part 2, Subpart J, and Part 15-Subparts 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 Part 15C DTS and Part 15E NII submissions with FCC ID: SS3-GL300N1801.
Part of system submissions with FCC ID: SS3-MG1P1801.

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.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Dongguan).

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~26.5GHz: 5.23 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 typical use condition:

Test Mode: Downloading

In this mode, the Laptop was downloading data form EUT and TF card.

EUT Exercise Software

The software “DjiRfCertConsole_V1.3.0.51” and “Withrax” were used during test.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

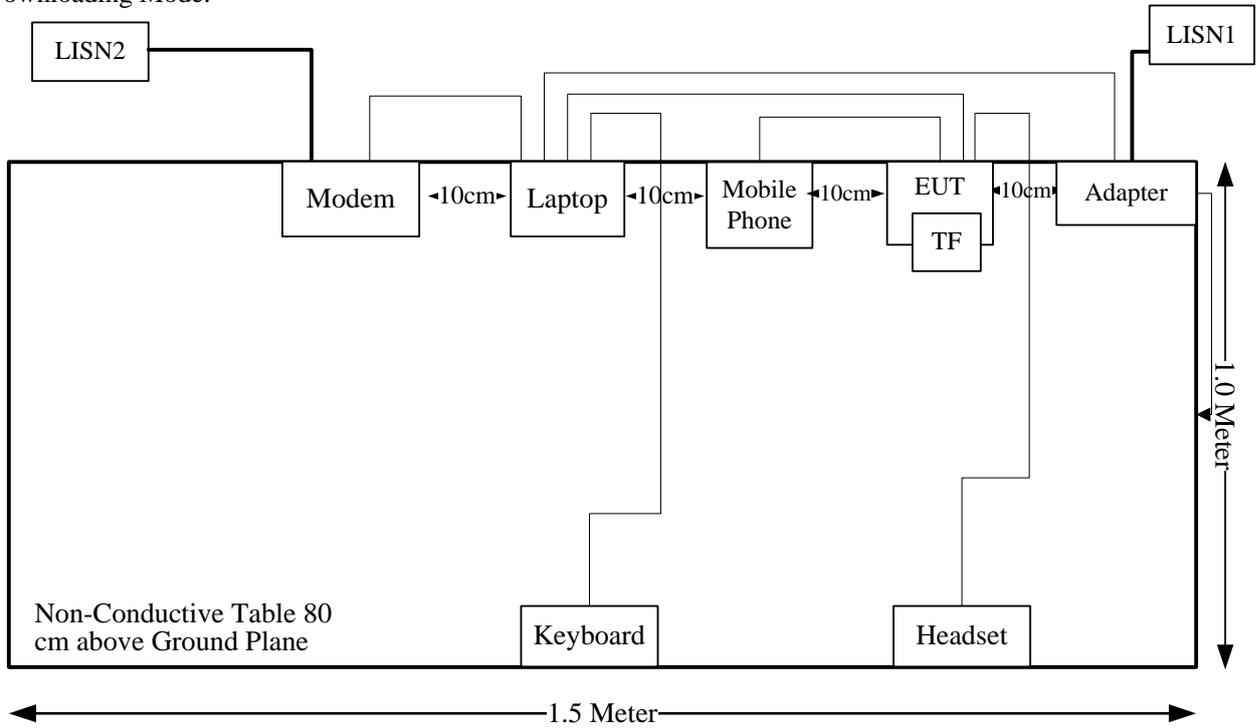
Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
N/A	Headset	N/A	N/A
xiaomi	Mobile phone	MI4	953520074820
DELL	Keyboard	SK-8115	CN-0DJ313-716716-05A-0DSO
SAST	Modem	AEM-2100	090200213

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Serial Cable	yes	No	1.2	Serial Port of Laptop	Modem
Keyboard Cable	yes	No	1.8	USB Port of Laptop	Keyboard
USB Cable	yes	No	0.5	USB Port of Laptop	EUT
Earphone Cable	No	No	1.1	EUT	Earphone
USB Cable	yes	No	1.2	USB Port of EUT	Mobile Phone

Configuration of Test Setup

Downloading Mode:



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2017-12-11	2018-12-11
N/A	Coaxial Cable	C-NJNJ-50	C-0200-01	2017-09-05	2018-09-05
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
R&S	Two-line V-network	ENV 216	101614	2017-12-08	2018-12-08
R&S	L.I.S.N	ESH2-Z5	892107/021	2017-09-25	2018-09-25
R&S	EMI Test Receiver	ESCI	100035	2017-08-04	2018-08-04
Sunol Sciences	Antenna	JB3	A060611-3	2017-07-21	2019-07-21
HP	Amplifier	8447F	2443A01912	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-NJNJ-50	C-0400-02	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-NJNJ-50	C-0075-02	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-NJNJ-50	C-2200-01	2017-09-05	2018-09-05
R&S	Spectrum Analyzer	FSEM	831259/019	2017-07-18	2018-07-18
TDK RF	Horn Antenna	HRN-0118	130 084	2016-01-05	2019-01-04
N/A	Coaxial Cable	C-2.4J2.4J-50	C-0700-01	2017-06-27	2018-06-27
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2017-09-05	2018-09-05
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2017-06-16	2020-06-15
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2016-11-18	2019-11-18
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2017-06-27	2018-06-27
unknown	Coaxial Cable	8m	C0800/01	2017-09-05	2018-09-05
R&S	Spectrum Analyzer	FSP 38	100478	2017-12-08	2018-12-08
Chengdu OuLi	Bandrejector Filter	5725-5850	005	2017-09-05	2018-09-05
arad	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:	24~ 27oC
Relative Humidity:	30~65 %
ATM Pressure:	100~101 kPa
Tester:	Vern Shen, Blake Yang, Alex You
Test Date:	2018.1.5-2018.1.13

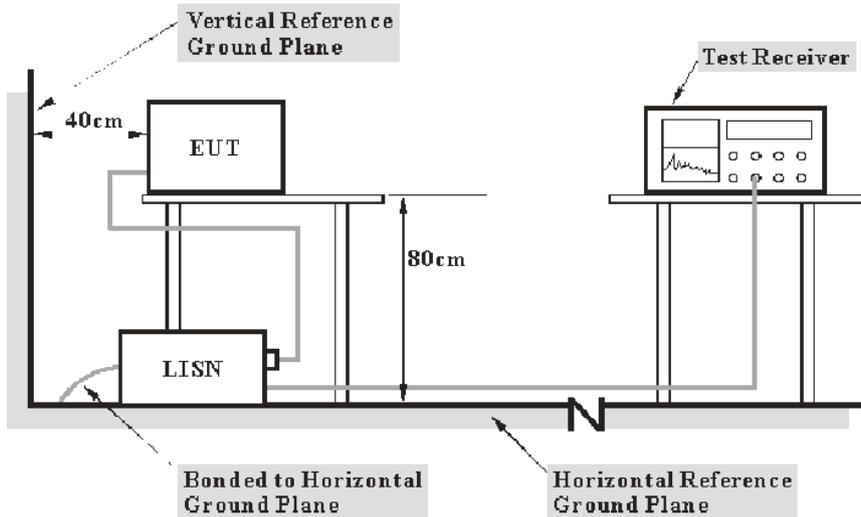
SUMMARY OF TEST RESULTS

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 of Laptop 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

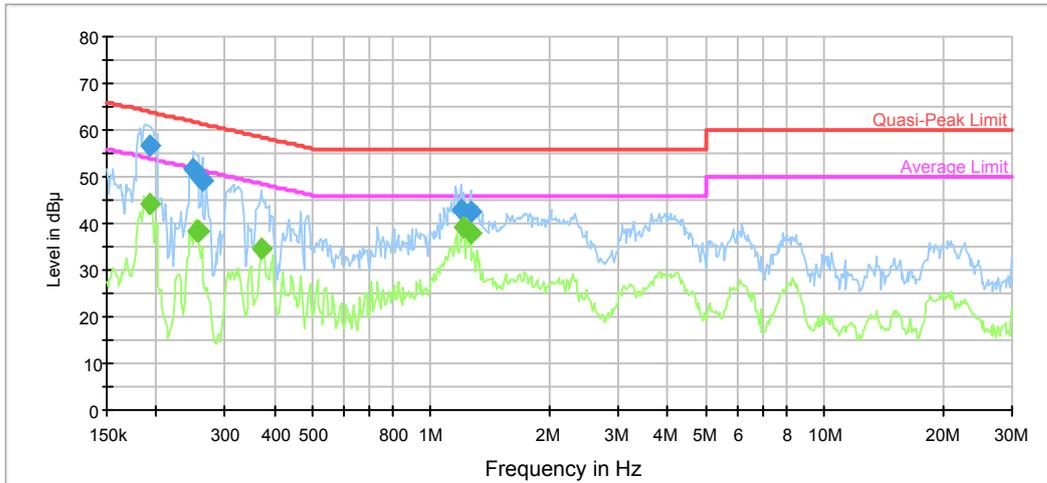
The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Result

Test Data

Please refer to following table and plots:

Model Number: GL300N
 Port: L
 Test Mode: Downloading
 Power Source: AC 120V/60Hz



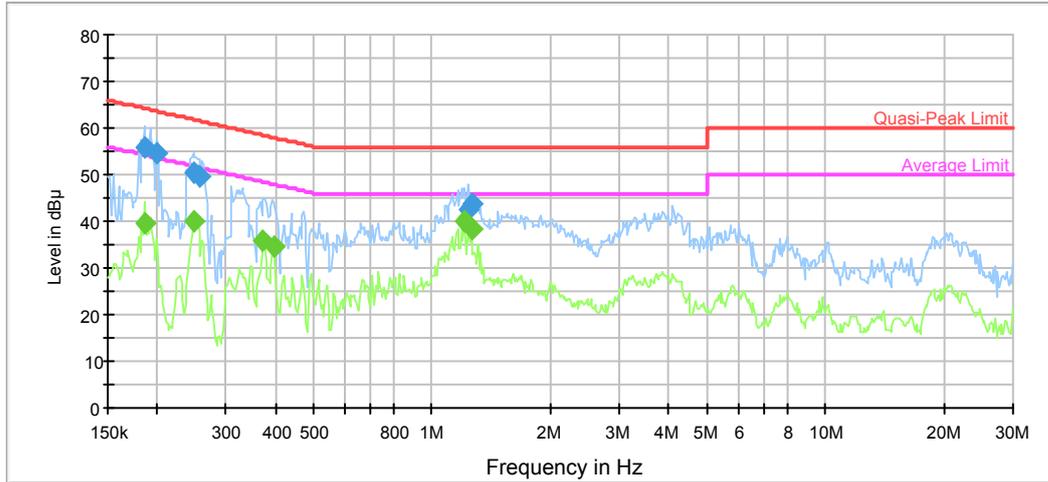
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.193566	56.6	9.000	L1	10.7	7.3	63.9
0.249785	51.5	9.000	L1	10.3	10.3	61.8
0.255827	50.1	9.000	L1	10.3	11.5	61.6
0.262017	49.2	9.000	L1	10.3	12.2	61.4
1.190776	43.0	9.000	L1	9.8	13.0	56.0
1.259081	42.5	9.000	L1	9.8	13.5	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.193566	44.1	9.000	L1	10.7	9.8	53.9
0.253797	38.5	9.000	L1	10.3	13.1	51.6
0.255827	38.4	9.000	L1	10.3	13.2	51.6
0.372042	34.7	9.000	L1	10.0	13.8	48.5
1.209904	39.2	9.000	L1	9.8	6.8	46.0
1.259081	37.9	9.000	L1	9.8	8.1	46.0

Model Number: GL300N
 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)
0.186006	56.0	9.000	N	10.7	8.2	64.2
0.199835	54.6	9.000	N	10.6	9.0	63.6
0.247802	50.5	9.000	N	10.3	11.3	61.8
0.255827	49.5	9.000	N	10.3	12.1	61.6
1.239175	42.4	9.000	N	9.8	13.6	56.0
1.259081	43.9	9.000	N	9.8	12.1	56.0

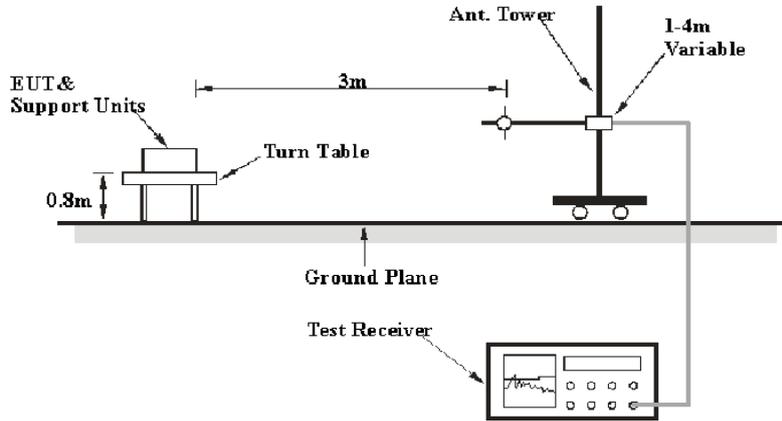
Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186006	39.4	9.000	N	10.7	14.8	54.2
0.249785	40.2	9.000	N	10.3	11.6	51.8
0.372042	35.9	9.000	N	10.0	12.6	48.5
0.396530	34.4	9.000	N	10.0	13.5	47.9
1.209904	40.2	9.000	N	9.8	5.8	46.0
1.259081	38.2	9.000	N	9.8	7.8	46.0

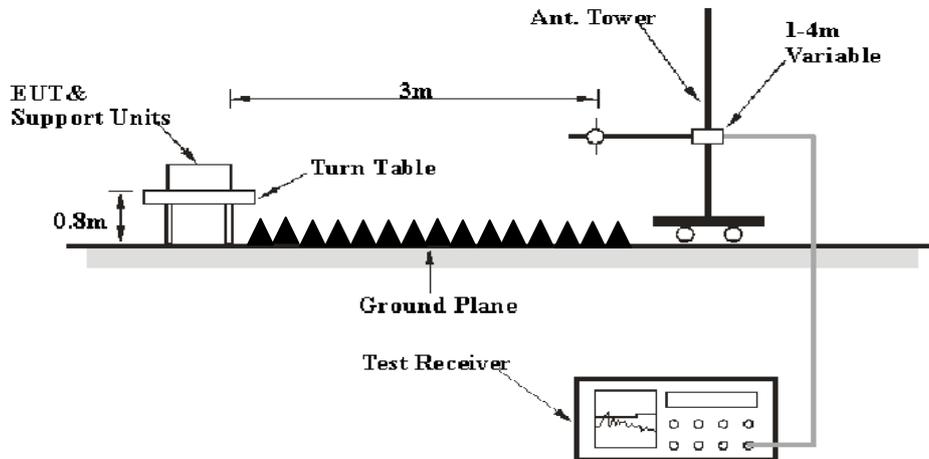
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission Below 1GHz tests were performed in the 3 meters chamber test site, above 1GHz tests were performed in the 3 meters chamber test site, 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	Reduced video bandwidth	/	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

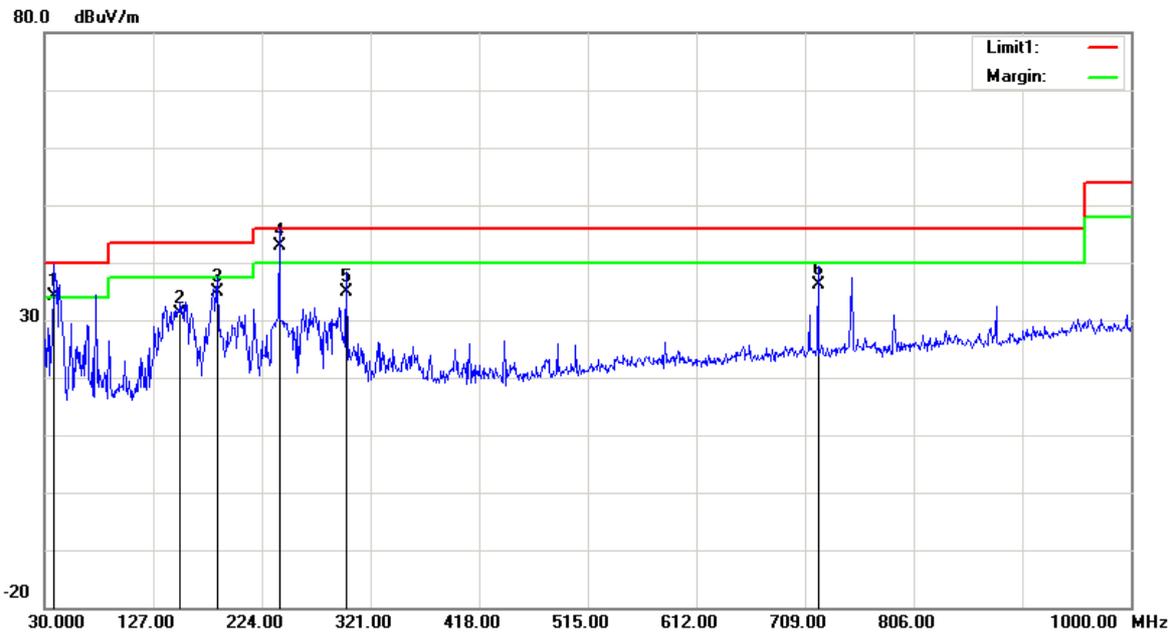
The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

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

Test Data

Please refer to following table and plots:

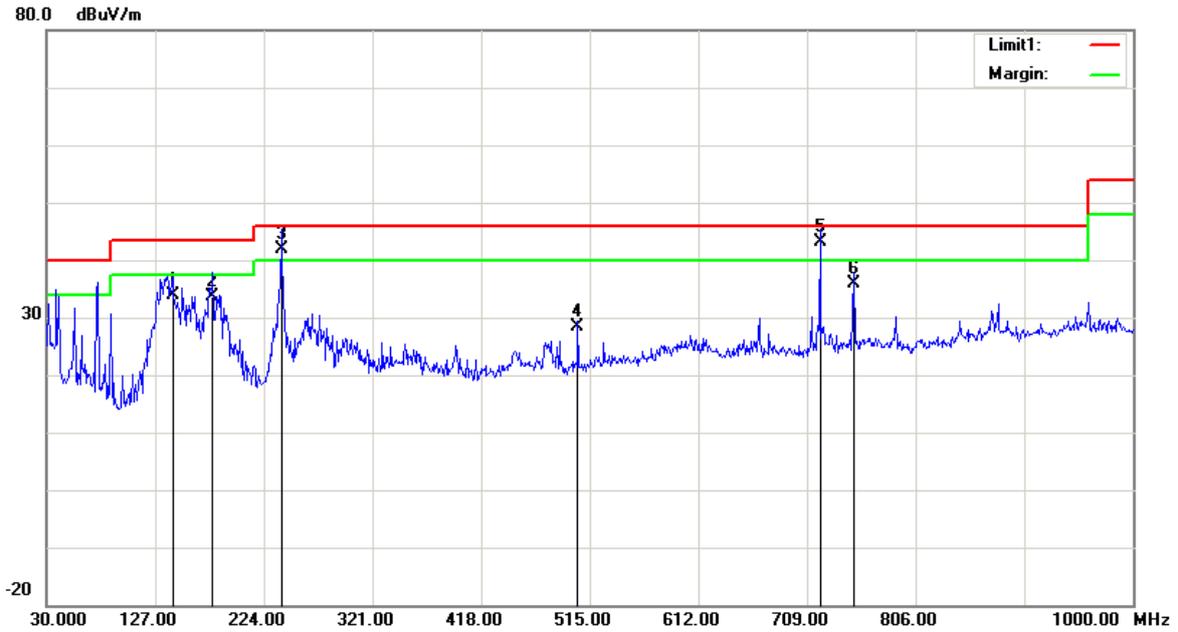
Condition:	FCC Class B 3m Radiation	Polarization:	Horizontal
EUT:	C1	Power:	DC 7.6V
Model:	GL300N	Distance:	3m
Test Mode:	Downloading		
Note:			



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	38.7300	46.08	QP	-11.98	34.10	40.00	5.90
2	151.2500	43.83	QP	-12.63	31.20	43.50	12.30
3	184.2300	48.52	QP	-13.52	35.00	43.50	8.50
4	239.5200	56.17	QP	-13.27	42.90	46.00	3.10
5	299.6600	45.51	QP	-10.61	34.90	46.00	11.10
6	720.6400	37.31	QP	-1.21	36.10	46.00	9.90

Condition: FCC Class B 3m Radiation
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

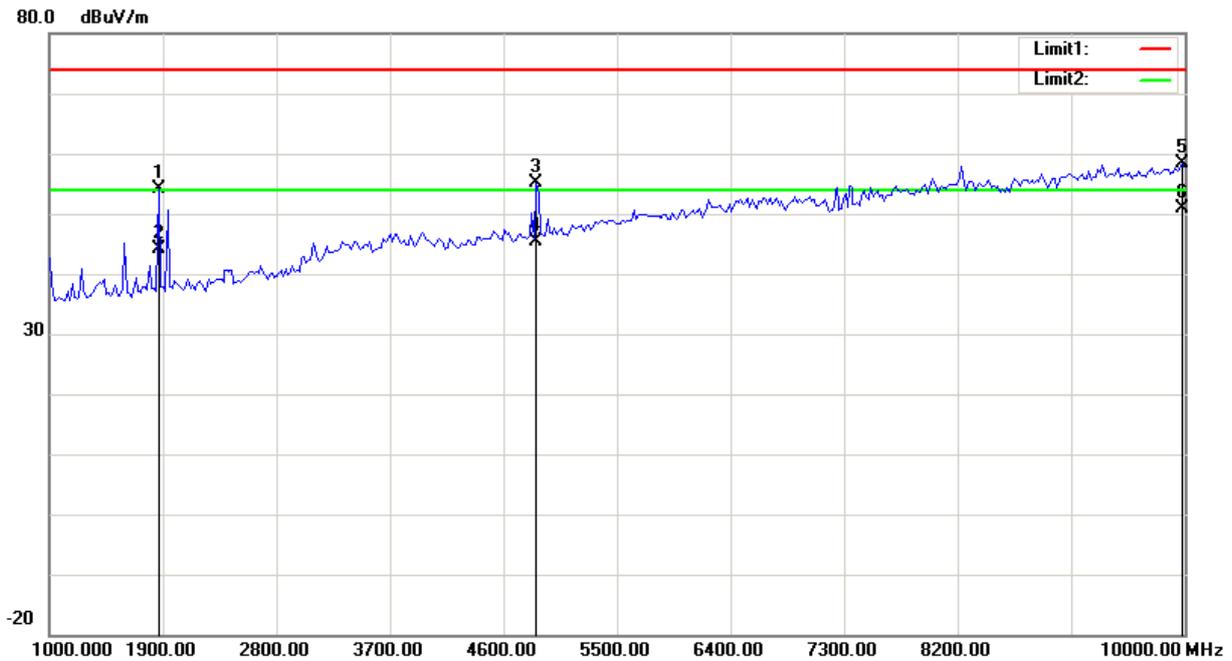
Polarization: Vertical
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	142.5200	46.44	QP	-12.54	33.90	43.50	9.60
2	178.4100	46.85	QP	-13.25	33.60	43.50	9.90
3	239.5200	55.17	QP	-13.27	41.90	46.00	4.10
4	504.3300	33.87	QP	-5.57	28.30	46.00	17.70
5	720.6400	44.31	QP	-1.21	43.10	46.00	2.90
6	750.7100	36.47	QP	-0.57	35.90	46.00	10.10

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

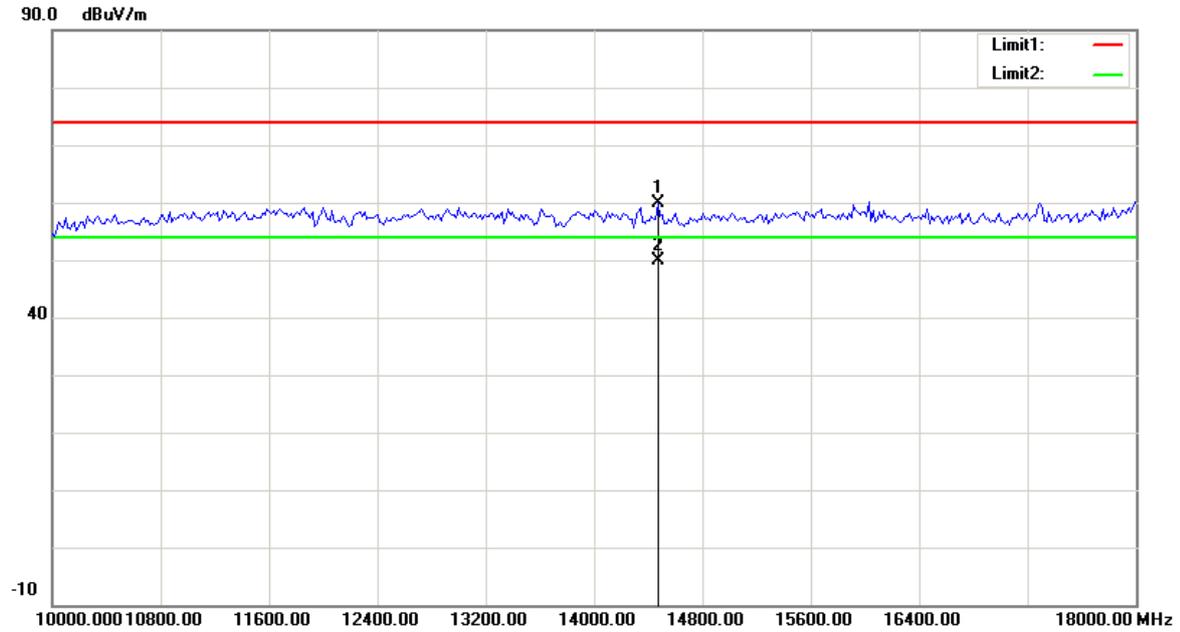
Polarization: Horizontal
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	1865.732	52.52	peak	1.56	54.08	74.00	19.92
2	1865.732	42.54	AVG	1.56	44.10	54.00	9.90
3	4859.719	44.92	peak	10.33	55.25	74.00	18.75
4	4859.719	34.97	AVG	10.33	45.30	54.00	8.70
5	9981.964	36.81	peak	21.55	58.36	74.00	15.64
6	9981.964	29.23	AVG	21.55	50.78	54.00	3.22

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

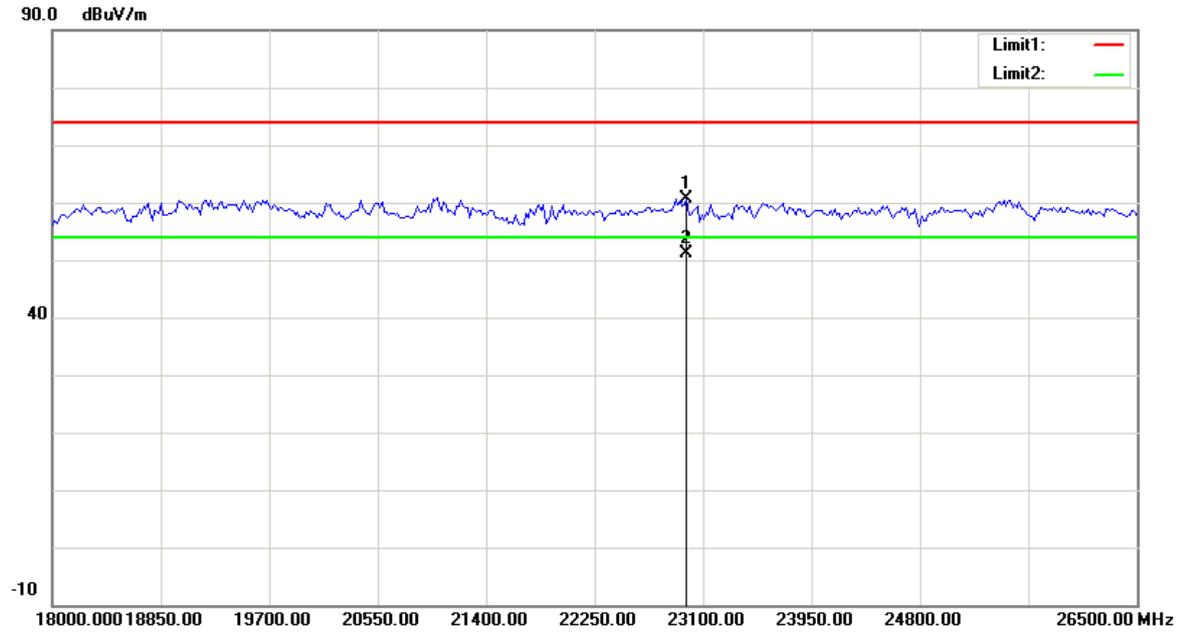
Polarization: Horizontal
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	14472.946	31.83	peak	28.11	59.94	74.00	14.06
2	14472.946	21.83	AVG	28.11	49.94	54.00	4.06

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

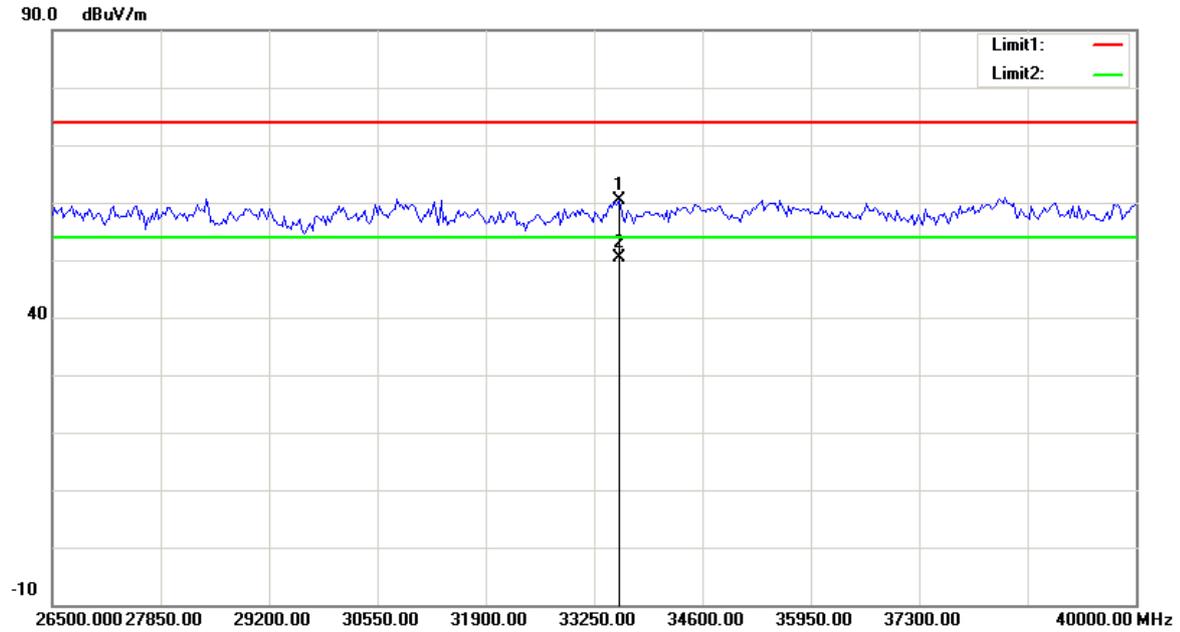
Polarization: Horizontal
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	22973.948	41.77	peak	18.87	60.64	74.00	13.36
2	22973.948	32.20	AVG	18.87	51.07	54.00	2.93

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

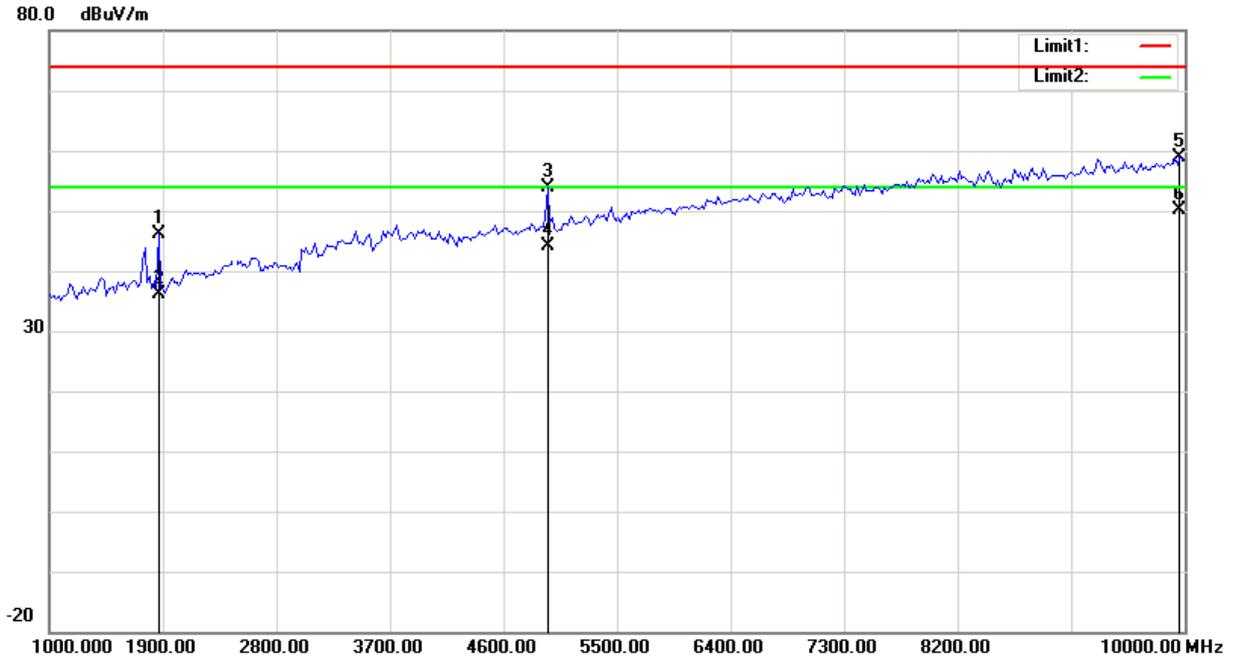
Polarization: Horizontal
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	33561.122	31.54	peak	28.72	60.26	74.00	13.74
2	33561.122	21.64	AVG	28.72	50.36	54.00	3.64

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

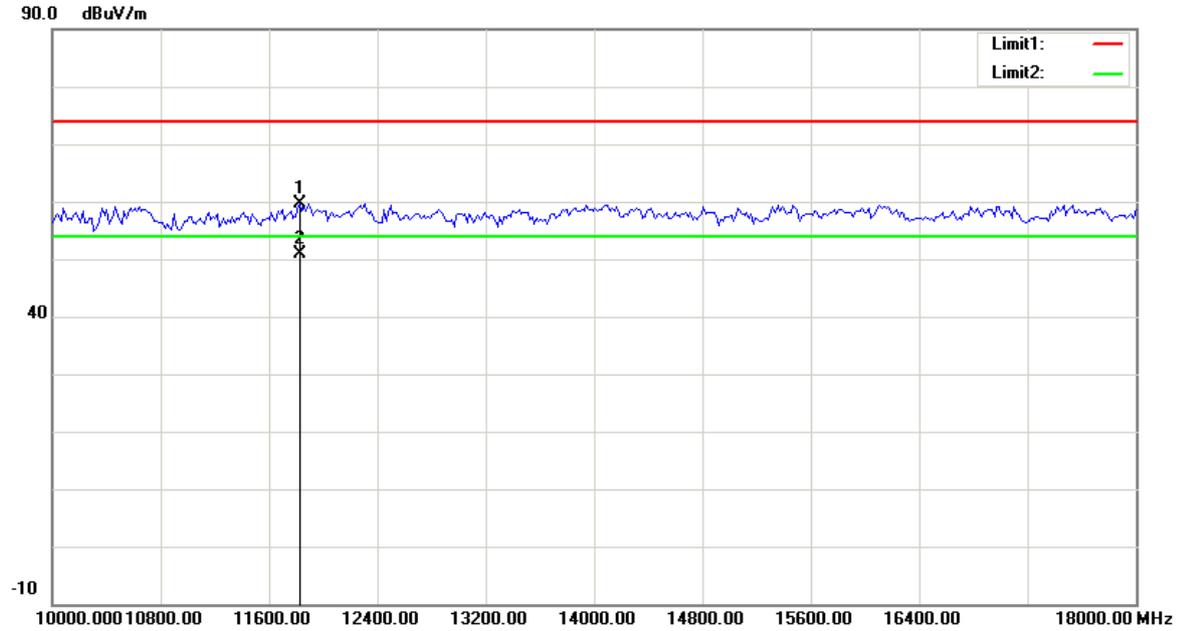
Polarization: Vertical
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	1865.732	44.46	peak	1.56	46.02	74.00	27.98
2	1865.732	34.54	AVG	1.56	36.10	54.00	17.90
3	4949.900	43.29	peak	10.68	53.97	74.00	20.03
4	4949.900	33.52	AVG	10.68	44.20	54.00	9.80
5	9963.928	37.55	peak	21.42	58.97	74.00	15.03
6	9963.928	28.62	AVG	21.42	50.04	54.00	3.96

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

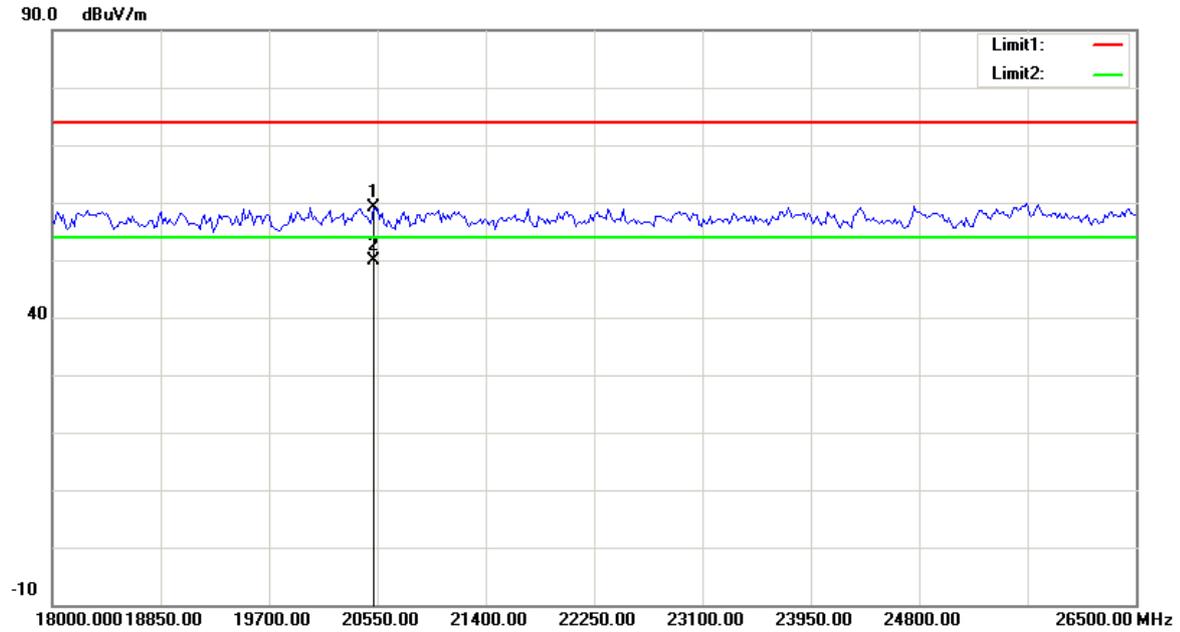
Polarization: Vertical
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dB μ V)	Detector	Corrected (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1	11827.655	35.33	peak	24.40	59.73	74.00	14.27
2	11827.655	26.38	AVG	24.40	50.78	54.00	3.22

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

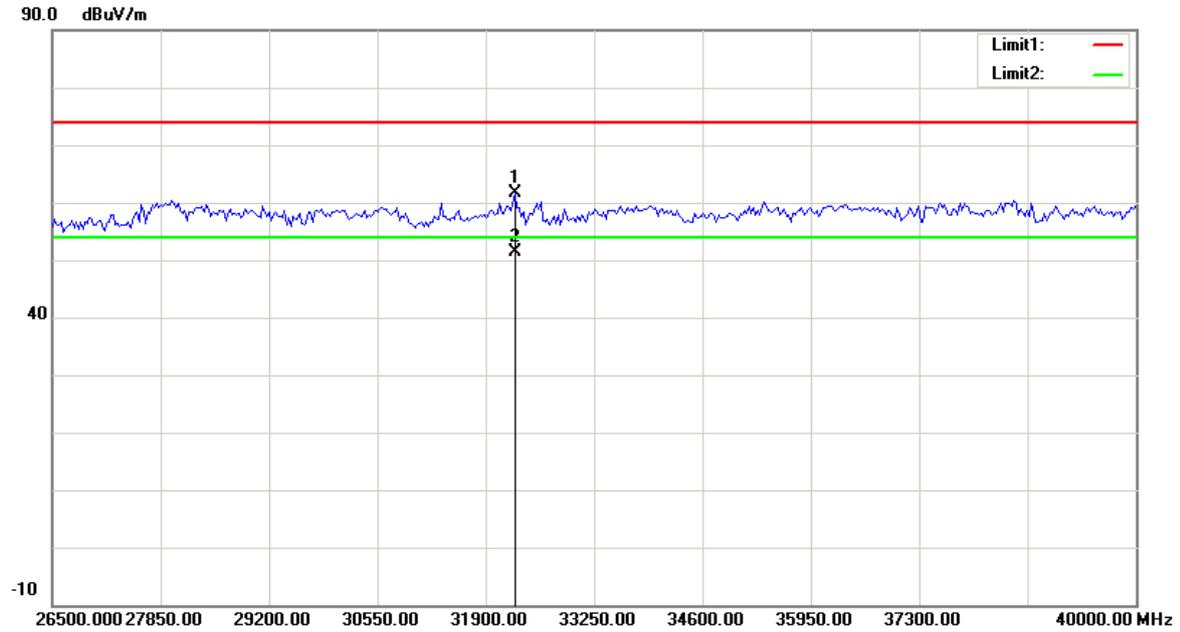
Polarization: Vertical
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	20521.042	41.99	peak	17.18	59.17	74.00	14.83
2	20521.042	32.69	AVG	17.18	49.87	54.00	4.13

Condition: FCC Part15B Radiation(Peak)
EUT: C1
Model: GL300N
Test Mode: Downloading
Note:

Polarization: Vertical
Power: DC 7.6V
Distance: 3m



No.	Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	32262.525	34.90	peak	26.82	61.72	74.00	12.28
2	32262.525	24.45	AVG	26.82	51.27	54.00	2.73

****END OF REPORT****