

# FCC PART 15 B TEST REPORT

For

## **Interglobe Connection Corp**

8228 NW 30th Terrace, Doral, Florida, United States

FCC ID: 2AC7ISOLEC26N

Report Type: Product Type: Mobile phone Original Report **Report Number:** RDG170710014-00A **Report Date:** 2017-08-17 Jerry Zhang Jerry Zhang **Reviewed By: EMC Manager** Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China **Test Laboratory:** Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

**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).

## TABLE OF CONTENTS

GENERAL INFORMATION	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
Objective	
RELATED SUBMITTAL(S)/GRANT(S)	3
TEST METHODOLOGY	
MEASUREMENT UNCERTAINTY	
TEST FACILITY	4
SYSTEM TEST CONFIGURATION	5
DESCRIPTION OF TEST CONFIGURATION	5
EUT Exercise Software	5
EQUIPMENT MODIFICATIONS	
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS	
SUPPORT CABLE LIST AND DETAILS	
CONFIGURATION OF TEST SETUP	6
SUMMARY OF TEST RESULTS	7
FCC§15.107 - CONDUCTED EMISSIONS	8
EUT SETUP	8
EMI TEST RECEIVER SETUP	8
TEST EQUIPMENT LIST AND DETAILS	9
TEST PROCEDURE	
CORRECTED AMPLITUDE & MARGIN CALCULATION	
TEST RESULTS SUMMARY	
TEST DATA	10
FCC §15.109 - RADIATED SPURIOUS EMISSIONS	13
EUT SETUP	
EMI TEST RECEIVER SETUP	14
TEST PROCEDURE	14
TEST EQUIPMENT LIST AND DETAILS	1.4
TEST EQUIFMENT LIST AND DETAILS	14
CORRECTED AMPLITUDE & MARGIN CALCULATION	

#### **GENERAL INFORMATION**

#### **Product Description for Equipment Under Test (EUT)**

The *Interglobe Connection Corp*'s product, model number: *C26 (FCC ID: 2AC7ISOLEC26N)* (the "EUT") in this report was a *Mobile phone*, which was measured approximately: 11.36 cm (L) x 4.72 cm (W) x 1.92 cm (H), DC3.7V from Battery or DC 5V from adapter. The highest Operation frequency is 2480 MHz.

Report No.: RDG170710014-00A

Adapter Information: Input: 100-240V~50/60Hz Output: DC5.0V, 500mA

\*All measurement and test data in this report was gathered from production sample serial number: 170710014 (Assigned by BACL, Dongguan). The EUT was received on 2017-07-18.

## **Objective**

This test report is prepared on behalf of *Interglobe Connection Corp* 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 DSS submissions with FCC ID: 2AC7ISOLEC26N. FCC Part 22H, 24E PCE submissions with FCC ID: 2AC7ISOLEC26N.

#### **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~18GHz: 5.23 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

FCC Part15B Page 3 of 19

#### **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

Report No.: RDG170710014-00A

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

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

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

FCC Part15B Page 4 of 19

## **SYSTEM TEST CONFIGURATION**

## **Description of Test Configuration**

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

Report No.: RDG170710014-00A

## **EUT Exercise Software**

The software "Withrax" was used during test.

## **Equipment Modifications**

No modification was made to the EUT tested.

## **Local Support Equipment List and Details**

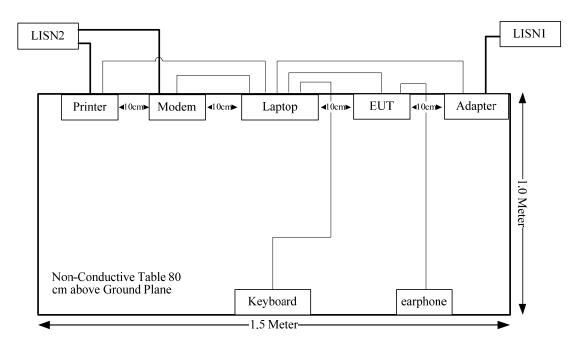
Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
НР	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	0293
SAMSUNG	TF Card	4G	N/A

## **Support Cable List and Details**

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	То
Serial Cable	yes	No	1.2	Serial Port of Laptop	Modem
Parallel Cable	yes	No	1.2	Parall Port of Laptop	Printer
Keyboard Cable	yes	No	1.8	USB Port of Laptop	Keyboard
USB Cable	yes	No	0.81	USB Port of Laptop	EUT
Earphone Cable	No	No	0.86	EUT	Earphone

FCC Part15B Page 5 of 19

## **Configuration of Test Setup**



FCC Part15B Page 6 of 19

## SUMMARY OF TEST RESULTS

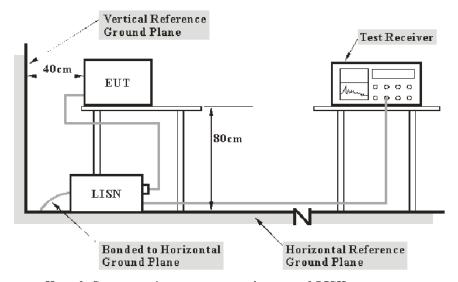
FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant

Report No.: RDG170710014-00A

FCC Part15B Page 7 of 19

## FCC§15.107 - CONDUCTED EMISSIONS

#### **EUT Setup**



Report No.: RDG170710014-00A

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.

The adapter was connected to the Main LISN with 120V/60Hz AC power source.

#### **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		

FCC Part15B Page 8 of 19

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	L.I.S.N	ESH2-Z5	892107/021	2016-09-01	2017-09-01
R&S	Two-line V-network	ENV 216	3560.6550.12	2016-12-08	2017-12-08
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
Unknown	Coaxial Cable	2m	Con-1	2016-09-01	2017-09-01
R&S	EMI Test Receiver	ESCS 30	830245/006	2016-12-08	2017-12-08

Report No.: RDG170710014-00A

#### **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:

$$V_C = V_R + A_C + VDF$$

FCC Part15B Page 9 of 19

<sup>\*</sup> 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).

Herein,

V<sub>C</sub>: corrected voltage amplitude

V<sub>R</sub>: reading voltage amplitude

A<sub>c</sub>: attenuation caused by cable loss

VDF: voltage division factor of AMN or ISN

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:

Report No.: RDG170710014-00A

Margin = Limit – Corrected Amplitude

#### **Test Results Summary**

According to the recorded data in following table, the EUT complied with the FCC Part 15 B Class B.

#### **Test Data**

#### **Environmental Conditions**

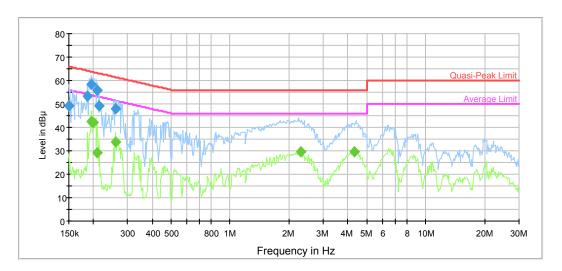
Temperature:	26.6 °C
Relative Humidity:	48%
ATM Pressure:	99.9 kPa

The testing was performed by Gaochao Gong on 2017-08-10.

FCC Part15B Page 10 of 19

Test Mode: Downloading

## AC120V, 60Hz, Line:



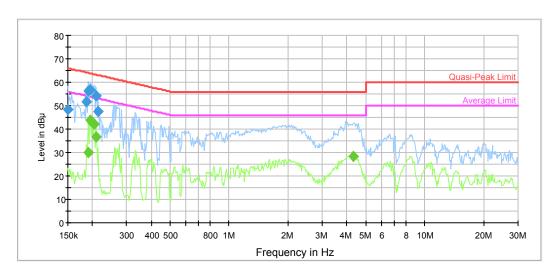
Report No.: RDG170710014-00A

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	49.1	9.000	L1	11.2	16.9	66.0	Compliance
0.187494	53.3	9.000	L1	10.7	10.8	64.1	Compliance
0.195114	58.3	9.000	L1	10.7	5.5	63.8	Compliance
0.209621	55.8	9.000	L1	10.6	7.4	63.2	Compliance
0.214692	49.2	9.000	L1	10.5	13.8	63.0	Compliance
0.259937	47.7	9.000	L1	10.3	13.7	61.4	Compliance

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.195114	42.4	9.000	L1	10.7	11.4	53.8	Compliance
0.199835	42.1	9.000	L1	10.6	11.5	53.6	Compliance
0.209621	29.2	9.000	L1	10.6	24.0	53.2	Compliance
0.259937	33.6	9.000	L1	10.3	17.8	51.4	Compliance
2.307034	29.7	9.000	L1	9.8	16.3	46.0	Compliance
4.295123	29.5	9.000	L1	9.8	16.5	46.0	Compliance

FCC Part15B Page 11 of 19

## AC120V, 60Hz, Neutral:



Report No.: RDG170710014-00A

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	48.2	9.000	N	11.2	17.8	66.0	Compliance
0.187494	51.9	9.000	N	10.7	12.2	64.1	Compliance
0.190505	56.1	9.000	N	10.7	7.9	64.0	Compliance
0.195114	56.7	9.000	N	10.6	7.1	63.8	Compliance
0.209621	54.3	9.000	N	10.5	8.9	63.2	Compliance
0.214692	47.3	9.000	N	10.5	15.7	63.0	Compliance

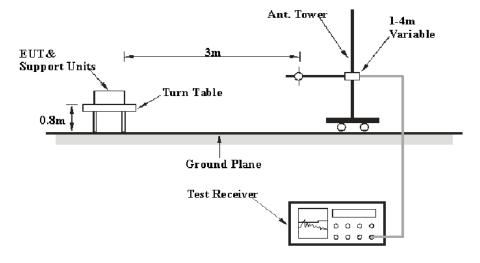
Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.190505	30.0	9.000	N	10.7	24.0	54.0	Compliance
0.195114	43.8	9.000	N	10.6	10.0	53.8	Compliance
0.198249	43.4	9.000	N	10.6	10.3	53.7	Compliance
0.204669	42.0	9.000	N	10.6	11.4	53.4	Compliance
0.209621	36.7	9.000	N	10.5	16.5	53.2	Compliance
4.295123	28.4	9.000	N	9.8	17.6	46.0	Compliance

FCC Part15B Page 12 of 19

## FCC §15.109 - RADIATED SPURIOUS EMISSIONS

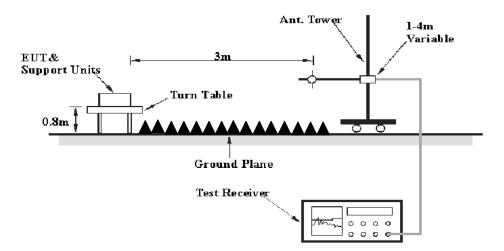
#### **EUT Setup**

#### **Below 1GHz:**



Report No.: RDG170710014-00A

#### **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.

FCC Part15B Page 13 of 19

#### **EMI Test Receiver Setup**

The system was investigated from 30 MHz to 13 GHz.

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

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

Report No.: RDG170710014-00A

#### **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.

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2016-09-01	2017-08-31
Sunol Sciences	Antenna	JB3	A060611-1	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2016-09-01	2017-09-01
R&S	Spectrum Analyzer	FSU 26	200256	2016-12-08	2017-12-08
ETS-Lindgren	Horn Antenna	3115	000 527 35	2016-01-05	2019-01-04
MITEQ	Amplifier	AFS42-00101800-2 5-S-42	2001271	2016-09-05	2017-09-05
Unknown	Coaxial Cable	Chamber A-1	4m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber B-1	0.75m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber A-2	10m	2016-09-01	2017-09-01
Unknown	Coaxial Cable	Chamber B-2	8m	2016-09-01	2017-09-01
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

<sup>\*</sup> 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).

FCC Part15B Page 14 of 19

#### **Corrected Amplitude & Margin Calculation**

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Report No.: RDG170710014-00A

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

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

calculation is as follows:

Margin = Limit – Corrected Amplitude

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25.1 °C
Relative Humidity:	45 %
ATM Pressure:	100.3 kPa

<sup>\*</sup> The testing was performed by Gavin Xu on 2017-07-19.

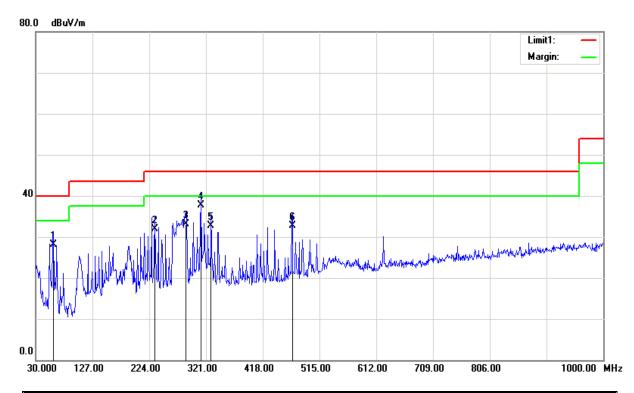
Test Result: Compliance

FCC Part15B Page 15 of 19

Test Mode: Downloading

## 1) Below 1GHz:

#### Horizontal



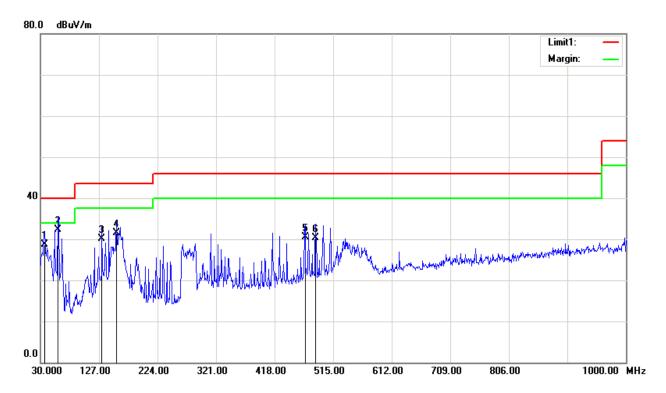
Report No.: RDG170710014-00A

Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBμV/m)	Margin (dB)
60.0700	40.60	QP	-12.40	28.20	40.00	11.80
233.7000	39.48	QP	-7.58	31.90	46.00	14.10
286.0800	38.47	QP	-5.27	33.20	46.00	12.80
312.2700	42.36	QP	-4.66	37.70	46.00	8.30
329.7300	37.43	QP	-4.73	32.70	46.00	13.30
468.4400	33.73	QP	-0.93	32.80	46.00	13.20

FCC Part15B Page 16 of 19

Report No.: RDG170710014-00A

#### Vertical



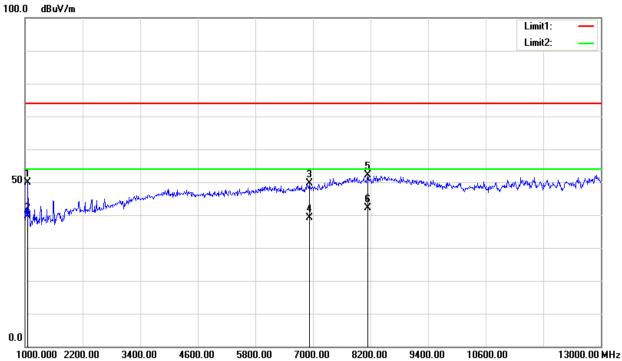
Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
36.7900	32.11	QP	-3.41	28.70	40.00	11.30
59.1000	44.72	QP	-12.42	32.30	40.00	7.70
131.8500	35.42	QP	-5.32	30.10	43.50	13.40
156.1000	38.17	QP	-6.67	31.50	43.50	12.00
468.4400	31.43	QP	-0.93	30.50	46.00	15.50
485.9000	31.13	QP	-0.73	30.40	46.00	15.60

FCC Part15B Page 17 of 19

#### 2) Above 1GHz:

#### Horizontal



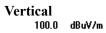


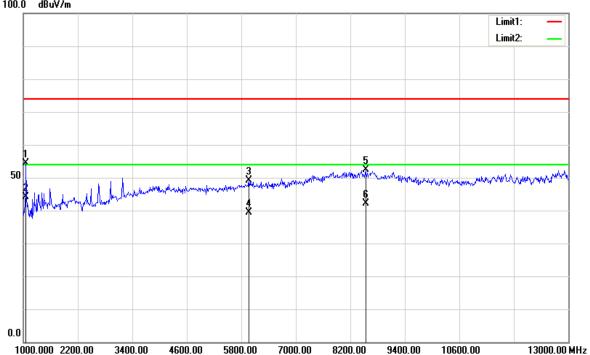
Report No.: RDG170710014-00A

Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBμV/m)	Margin (dB)
1066.000	59.40	peak	-9.62	49.78	74.00	24.22
1066.000	49.23	AVG	-9.62	39.61	54.00	14.39
6934.000	45.22	peak	4.41	49.63	74.00	24.37
6934.000	34.75	AVG	4.41	39.16	54.00	14.84
8140.000	45.53	peak	6.61	52.14	74.00	21.86
8140.000	35.54	AVG	6.61	42.15	54.00	11.85

FCC Part15B Page 18 of 19







Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Атр. (dBµV/m)	Limit (dBμV/m)	Margin (dB)
1060.000	64.08	peak	-9.64	54.44	74.00	19.56
1060.000	53.79	AVG	-9.64	44.15	54.00	9.85
5968.000	46.15	peak	3.10	49.25	74.00	24.75
5968.000	36.31	AVG	3.10	39.41	54.00	14.59
8542.000	45.14	peak	7.35	52.49	74.00	21.51
8542.000	34.81	AVG	7.35	42.16	54.00	11.84

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

FCC Part15B Page 19 of 19