

# FCC PART 15 B TEST REPORT

For

# **Interglobe Connection Corp**

8228 NW 30th Terrace, Doral, Florida, United States, 33122

FCC ID: 2AC7IEKOT240

Report Type: **Product Type:** Mobile Phone Original Report **Report Number:** RDG171211002-00A **Report Date:** 2018-01-25 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).

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## **GENERAL INFORMATION**

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

The *Interglobe Connection Corp* 's product, model number: *Kolya T240 (FCC ID: 2AC7IEKOT240)* (the "EUT") in this report was a *Mobile Phone*, which was measured approximately: 12.7 cm (L) x 5.3 cm (W) x 1.2 cm (H), rated input voltage: DC3.7V from Battery or DC 5V from adapter. The highest operation frequency is 2480 MHz.

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Adapter Information: INPUT: AC 100-240V-50/60Hz OUTPUT: DC 5V, 500mA

\*All measurement and test data in this report was gathered from production sample serial number:171211002 (Assigned by BACL, Dongguan). The EUT was received on 2017-12-11.

#### **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: 2AC7IEKOT240. FCC Part 22H, 24E PCE submissions with FCC ID: 2AC7IEKOT240.

## **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).

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## **Measurement Uncertainty**

Parameter	Measurement Uncertainty
	30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical
Unwanted Emissions, radiated	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℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

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## **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.

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## **SYSTEM TEST CONFIGURATION**

## **Description of Test Configuration**

The system was configured for testing in operating and downloading mode.

## **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

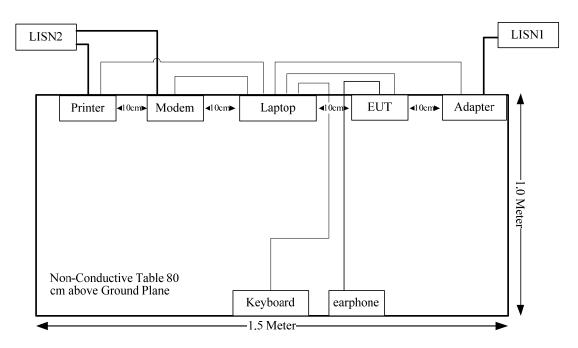
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## **Support Cable List and Details**

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	Parallel Port of Laptop	Printer
Keyboard Cable	yes	No	1	USB Port of Laptop	Keyboard
USB Cable	No	No	1.2	USB Port of Laptop	EUT
Earphone Cable	No	No	1.2	EUT	Earphone

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## **Configuration of Test Setup**



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## SUMMARY OF TEST RESULTS

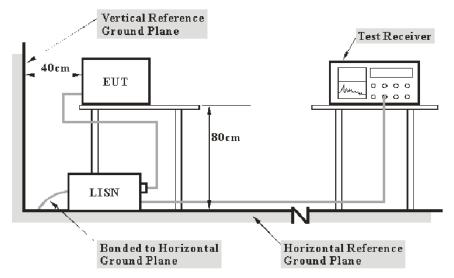
FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant

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## FCC§15.107 - CONDUCTED EMISSIONS

## **EUT Setup**



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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		

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## **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	2017-09-25	2018-09-25
R&S	Two-line V-network	ENV 216	3560.6550.12	2017-12-08	2018-12-08
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
N/A	Coaxial Cable	C-NJNJ-50	C-0200-01	2017-09-05	2018-09-05
R&S	EMI Test Receiver	ESCS 30	830245/006	2017-12-08	2018-12-08

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#### **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:

$$V_C = V_R + A_C + VDF$$

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:

Margin = Limit – Corrected Amplitude

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<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).

## **Test Results Summary**

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

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## **Test Data**

#### **Environmental Conditions**

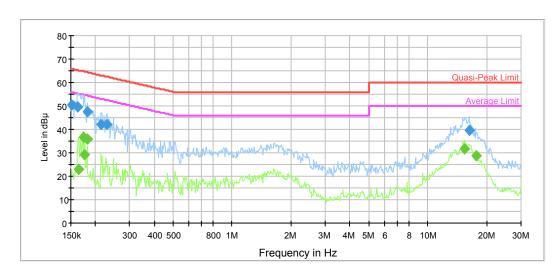
Temperature:	20.8°C
Relative Humidity:	29%
ATM Pressure:	102.2 kPa

The testing was performed by Alex You on 2018-12-18.

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Test Mode: Downloading

## AC120V, 60Hz, Line:



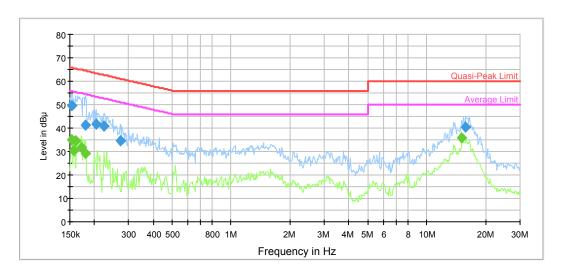
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Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.152410	50.2	9.000	L1	11.2	15.7	65.9	Compliance
0.162441	49.6	9.000	L1	11.0	15.7	65.3	Compliance
0.181612	47.7	9.000	L1	10.8	16.9	64.4	Compliance
0.212988	42.3	9.000	L1	10.5	20.8	63.1	Compliance
0.228823	42.2	9.000	L1	10.4	20.3	62.5	Compliance
16.251162	39.3	9.000	L1	10.0	20.7	60.0	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.165051	22.6	9.000	L1	11.0	32.6	55.2	Compliance
0.173134	36.6	9.000	L1	10.9	18.2	54.8	Compliance
0.175915	29.1	9.000	L1	10.9	25.6	54.7	Compliance
0.181612	35.7	9.000	L1	10.8	18.7	54.4	Compliance
15.369534	31.5	9.000	L1	10.0	18.5	50.0	Compliance
17.739864	28.6	9.000	L1	10.0	21.4	50.0	Compliance

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## AC120V, 60Hz, Neutral:



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Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.153629	49.5	9.000	N	11.1	16.3	65.8	Compliance
0.180171	41.3	9.000	N	10.8	23.2	64.5	Compliance
0.204669	41.6	9.000	N	10.6	21.8	63.4	Compliance
0.225205	41.1	9.000	N	10.5	21.5	62.6	Compliance
0.272666	34.5	9.000	N	10.2	26.5	61.0	Compliance
15.867293	40.3	9.000	N	10.0	19.7	60.0	Compliance

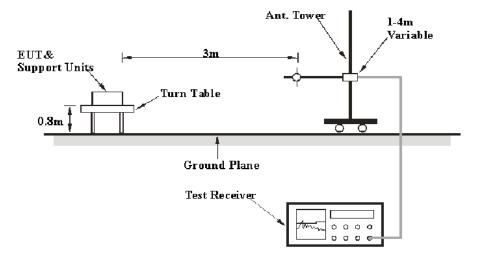
Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.153629	35.0	9.000	N	11.1	20.8	55.8	Compliance
0.157346	30.6	9.000	N	11.1	25.0	55.6	Compliance
0.159873	34.9	9.000	N	11.0	20.6	55.5	Compliance
0.171759	31.4	9.000	N	10.9	23.5	54.9	Compliance
0.180171	29.2	9.000	N	10.8	25.3	54.5	Compliance
15.126541	35.6	9.000	N	9.9	14.4	50.0	Compliance

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## FCC §15.109 - RADIATED SPURIOUS EMISSIONS

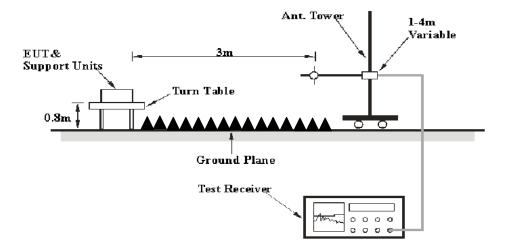
## **EUT Setup**

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



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#### **Above 1GHz:**



The radiated emission tests were performed in the 10 meters chamber test site for the range 30MHz to 1GHz and the 3 meters chamber test site for above 1GHz, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

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## **EMI Test Receiver Setup**

The system was investigated from 30 MHz to 13.0 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
ADOVE I GHZ	1 MHz	10 Hz	/	AVG

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#### **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	100035	2017-08-04	2018-08-04
Sunol Sciences	Antenna	ЈВ3	A060611-3	2017-07-21	2019-07-21
НР	Amplifier	8447F	2443A01912	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
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
N/A	Coaxial Cable	C-SJSJ-50	C-0800-01	2017-09-05	2018-09-05
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).

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#### **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:

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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:	16.9~20.1°C
Relative Humidity:	33~42 %
ATM Pressure:	100.8~102 kPa

<sup>\*</sup> The testing was performed by Steven Zuo on 2017-12-22~2018-01-10.

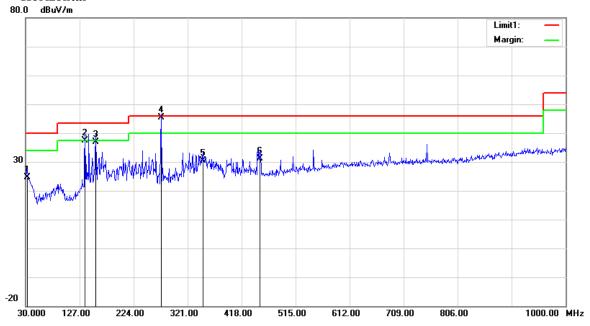
Test Result: Compliance

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Test Mode: Downloading

## 1) Below 1GHz:

## Horizontal



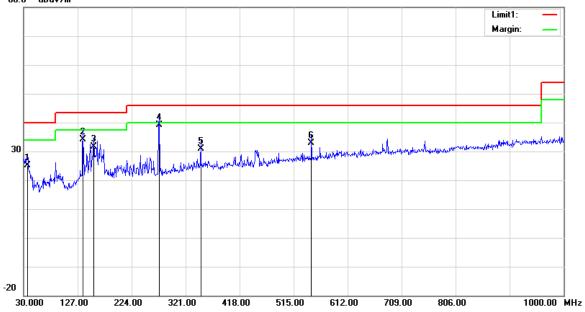
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Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBμV/m)	Margin (dB)
32.9100	27.95	QP	-3.25	24.70	40.00	15.30
136.7000	44.13	QP	-6.73	37.40	43.50	6.10
156.1000	43.50	QP	-6.70	36.80	43.50	6.70
273.4700	51.08	QP	-5.78	45.30	46.00	0.70
348.1600	33.99	QP	-3.49	30.50	46.00	15.50
450.9800	32.16	QP	-1.06	31.10	46.00	14.90

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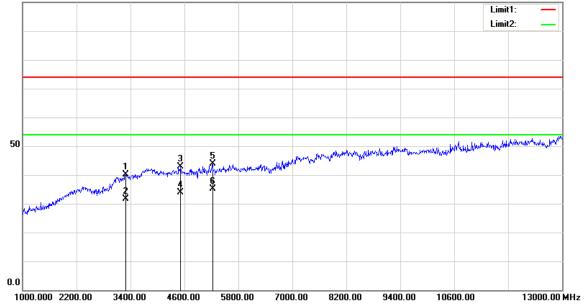


Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
36.7900	30.32	QP	-5.12	25.20	40.00	14.80
136.7000	40.93	QP	-6.73	34.20	43.50	9.30
156.1000	38.40	QP	-6.70	31.70	43.50	11.80
273.4700	44.88	QP	-5.78	39.10	46.00	6.90
348.1600	34.39	QP	-3.49	30.90	46.00	15.10
547.0100	31.30	QP	1.60	32.90	46.00	13.10

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## 2) Above 1GHz:

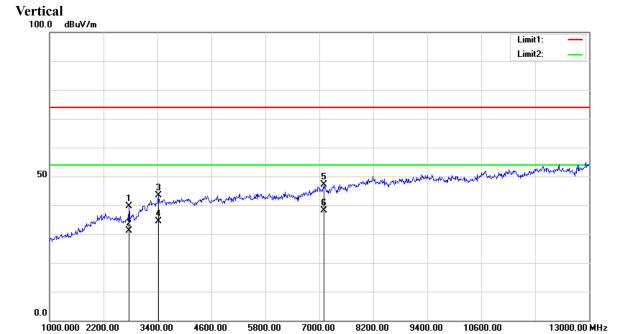




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Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
3298.000	44.12	peak	-3.93	40.19	74.00	33.81
3298.000	35.62	AVG	-3.93	31.69	54.00	22.31
4516.000	44.62	peak	-1.79	42.83	74.00	31.17
4516.000	35.76	AVG	-1.79	33.97	54.00	20.03
5224.000	44.01	peak	-0.18	43.83	74.00	30.17
5224.000	35.24	AVG	-0.18	35.06	54.00	18.94

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Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2770.000	45.03	peak	-5.34	39.69	74.00	34.31
2770.000	36.52	AVG	-5.34	31.18	54.00	22.82
3430.000	46.68	peak	-3.40	43.28	74.00	30.72
3430.000	37.75	AVG	-3.40	34.35	54.00	19.65
7108.000	43.80	peak	3.36	47.16	74.00	26.84
7108.000	34.67	AVG	3.36	38.03	54.00	15.97

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

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