

# RADIO TEST REPORT

## FCC 47 CFR PART 15 SUBPART C

### INDUSTRY CANADA RSS-247

<b>Test Standard</b>	<b>FCC Part 15.247 IC RSS-247 issue 2 and IC RSS-GEN issue 5</b>
<b>Product name</b>	<b>Tablet</b>
<b>Brand Name</b>	<b>ICON/iFit</b>
<b>Model No.</b>	<b>MP10-ARGON2X-C</b>
<b>Test Result</b>	<b>Pass</b>
<b>Statements of Conformity</b>	<b>Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.</b>

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.( Wugu Laboratory)

Approved by:



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Kevin Tsai  
Deputy Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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### Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 8, 2021	Initial Issue	ALL	Allison Chen

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## 1. GENERAL INFORMATION

### 1.1 EUT INFORMATION

<b>FCC Applicant</b>	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
<b>IC Applicant</b>	COMPAL ELECTRONICS INC. No. 581 & 581-1, Ruiguang Rd., Neihu District Taipei R.O.C. 114 Taiwan
<b>Manufacturer</b>	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
<b>Equipment</b>	Tablet
<b>Model No.</b>	MP10-ARGON2X-C
<b>Model Discrepancy</b>	N/A
<b>Trade Name</b>	ICON/iFit
<b>Received Date</b>	July 30, 2021
<b>Date of Test</b>	September 1, 2021
<b>Power Operation</b>	EUT Power from Power Supply. (DC12V)
<b>HW Version</b>	LA-L521P
<b>SW Version</b>	Android 9
<b>EUT Serial #</b>	425339-PP21D305212

**Remark:**

1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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## 1.2 EUT CHANNEL INFORMATION

Frequency Range	2402MHz-2480MHz
Modulation Type	GFSK for BLE-1Mbps
Number of channel	40 Channels

**Remark:**

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 and RSS-GEN Table 1 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

## 1.3 ANTENNA INFORMATION

Antenna Type	<input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils
Antenna Gain	2.47 dBi
Antenna Connector	IPEX

**Remark:**

1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

## 1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~1G (Horizontally)	+/- 3.91
3M Semi Anechoic Chamber / 30M~1G (Vertically)	+/- 4.57
3M Semi Anechoic Chamber / 1G~6G	+/- 5.20
3M Semi Anechoic Chamber / 6G~18G	+/- 5.18
3M Semi Anechoic Chamber / 18G~40G	+/- 3.68

**Remark:**

- 1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

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## 1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	N/A	Not applicable, because EUT doesn't connect to AC Main Source direct.
Radiation	Ray Li	-
RF Conducted	N/A	Not applicable.

**Remark:** The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

## 1.6 INSTRUMENT CALIBRATION

3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/08/2021	02/07/2022
Bilog Antenna	Sunol Sciences	JB3	A030105	07/19/2021	07/18/2022
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/24/2021	02/23/2022
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/06/2021	01/05/2022
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/09/2020	12/08/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	12/09/2020	12/08/2021
Pre-Amplifier	EMEC	EM330	060609	02/24/2021	02/23/2022
Pre-Amplifier	HP	8449B	3008A00965	12/25/2020	12/24/2021
Pre-Amplifier	MITEQ	AMF-6F-18004000-37-8P	985646	09/02/2020	09/01/2021
Signal Analyzer	R&S	FSV 40	101073	09/17/2020	09/16/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180419c				

**Remark:** Each piece of equipment is scheduled for calibration once a year.

## 1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
	N/A				

Support Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	Adapter	WEIHAI POWER	HAS060123-EA	N/A	N/A

## 1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, RSS-247 Issue 2 and RSS-GEN Issue 5





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## 2. TEST SUMMARY

<b>FCC Standard Section</b>	<b>IC Standard Section</b>	<b>Report Section</b>	<b>Test Item</b>	<b>Result</b>
15.203	RSS-GEN 6.8	1.3	Antenna Requirement	Pass
15.247(d)	RSS-GEN 8.9, 8.10	4.1	Radiation Spurious Emission (Below 1GHz)	Pass

### 3. DESCRIPTION OF TEST MODES

#### 3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	BLE Mode (1Mbps)
Test Channel Frequencies	1.Lowest Channel : 2402MHz 2.Middle Channel : 2442MHz 3.Highest Channel : 2480MHz

**Remark:**

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

#### 3.2 THE WORST MODE OF MEASUREMENT

Radiated Emission Measurement Below 1G	
<b>Test Condition</b>	<b>Radiated Emission Below 1G</b>
<b>Power supply Mode</b>	<b>Mode 1: EUT power by Power Supply</b>
<b>Worst Mode</b>	<input checked="" type="checkbox"/> <b>Mode 1</b> <input type="checkbox"/> <b>Mode 2</b> <input type="checkbox"/> <b>Mode 3</b> <input type="checkbox"/> <b>Mode 4</b>

**Remark:**

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report

## 4. TEST RESULT

### 4.1 RADIATION SPURIOUS EMISSION

#### 4.1.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

#### Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

#### Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

**Remark:**

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

**RSS-Gen Table 3 and Table 5 – General Field Strength Limits for Transmitters and Receivers at Frequencies Above 30 MHz** (Note)

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

**Note:** Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with Section 6.6.

**RSS-Gen Table 6: General Field Strength Limits for Transmitters at Frequencies Below 30 MHz (Transmit)**

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement Distance (m)
9-490 kHz <sup>Note</sup>	6.37/F (F in kHz)	300
490-1,705 kHz	63.7/F (F in kHz)	30
1.705-30 MHz	0.08	30

**Note:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

### 4.1.2 Test Procedure

Test method Refer as ANSI C63.10:2013

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9KHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.
4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

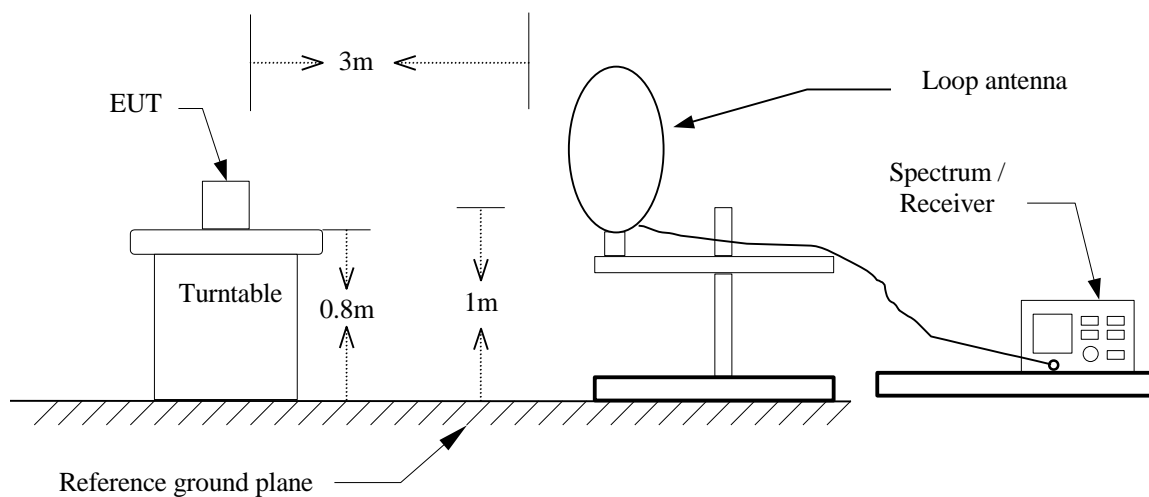
5. The SA setting following :

- (1) Below 1G : RBW = 100kHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
- (2) Above 1G :
  - (2.1) For Peak measurement : RBW = 1MHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
  - (2.2) For Average measurement : RBW = 1MHz, VBW
    - 'If Duty Cycle  $\geq$  98%, VBW=10Hz.
    - 'If Duty Cycle < 98%, VBW=1/T.

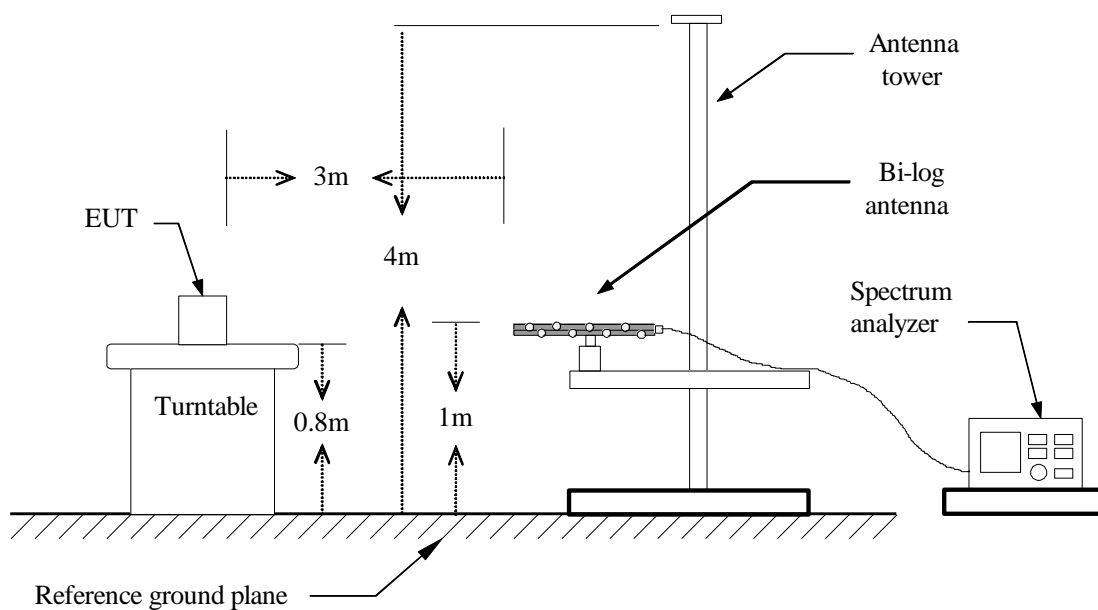
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### 4.1.3 Test Setup

#### 9kHz ~ 30MHz

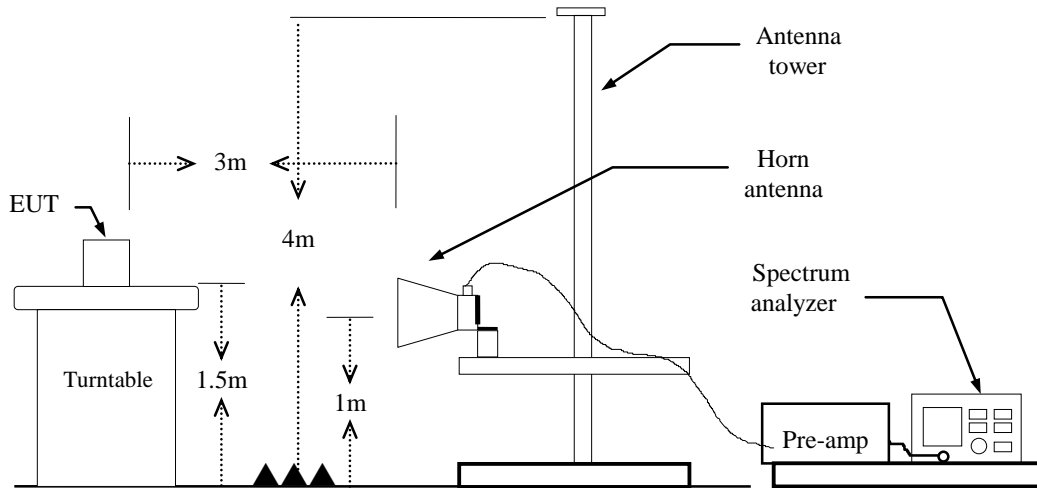


#### 30MHz ~ 1GHz



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## Above 1 GHz

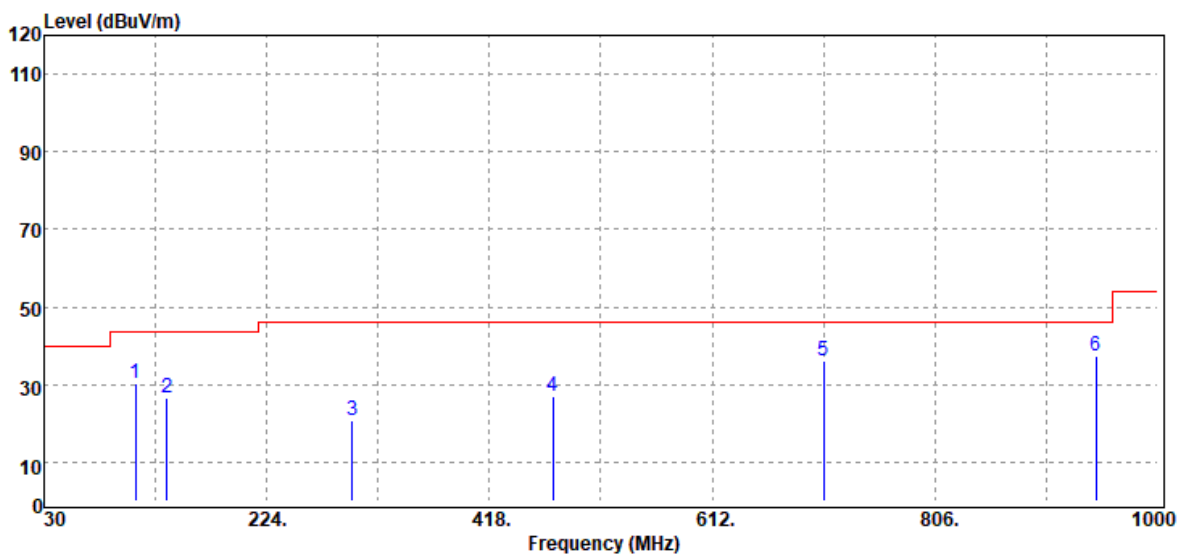


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### 4.1.4 Test Result

#### Below 1G Test Data

Test Mode:	BT Mode	Temp/Hum	23.4(°C)/ 60%RH
Test Item	30MHz-1GHz	Test Date	September 1, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		

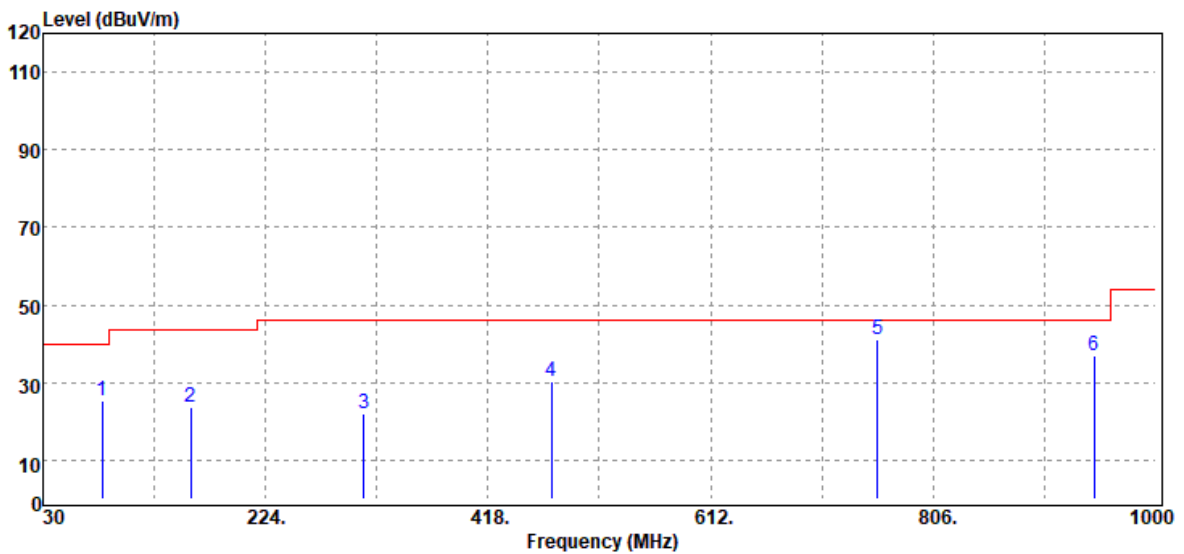


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
109.54	Peak	40.85	-10.53	30.32	43.50	-13.18
136.70	Peak	36.22	-9.70	26.52	43.50	-16.98
298.69	Peak	29.76	-8.80	20.96	46.00	-25.04
473.29	Peak	30.40	-3.55	26.85	46.00	-19.15
709.00	Peak	35.74	0.18	35.92	46.00	-10.08
946.65	Peak	33.82	3.66	37.48	46.00	-8.52

**Note:** No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)



Test Mode:	BT Mode	Temp/Hum	23.4(°C)/ 60%RH
Test Item	30MHz-1GHz	Test Date	September 1, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
81.41	Peak	41.20	-15.78	25.42	40.00	-14.58
159.01	Peak	34.09	-10.51	23.58	43.50	-19.92
309.36	Peak	30.34	-8.48	21.86	46.00	-24.14
473.29	Peak	33.76	-3.55	30.21	46.00	-15.79
757.50	Peak	40.37	0.90	41.27	46.00	-4.73
946.65	Peak	33.43	3.66	37.09	46.00	-8.91

**Note:** No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

## 4.2 TEST DATA RE-USE SUMMARY

### Introduction Section:

The application re-uses data collected on a similar device. The subject device of this application (Model: MP10-ARGON2X-C, FCC ID: GKR436386, IC: 2533B-436386) is electrically identical to the reference device (Model: MP10-ARGON2-C, FCC ID: GKR425339, IC: 2533B-425339) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

### Differences Brief Description:

The WLAN and Bluetooth hardware of this device are identical to the implementation in  
FCC ID: GKR436386

IC: 2533B-436386

The Product Equality Declaration document includes detailed information about the changes between the devices. The data from that application has been verified through appropriate spot checks to demonstrate compliance for this device as shown in the summary table below.

### Spot Check Verification Result Summary

Equipment Class	Reference FCC ID / IC No.	Folder Test	Report Title/ Section
DTS-BLE	GKR425339 / 2533B-425339	T210413W02-RP2	All Section (Except for Radiation Spurious Emission below 1GHz)

### Summery of the spot check for Unlicensed bands and Licensed bands

In order to confirm hardware similarity of the subject device with the reference device, we used same setting power to radiated emission measurement were performed on the subject device for the Band edge and Harmonic, the test result were similar with FCC ID: GKR425339 / IC: 2533B-425339.

#### WLAN and BLE

Report	Test Item	Mode / CH.	Measured Frequency (MHz)	GKR425339 / 2533B-425339			GKR436386 / 2533B-436386			Gap (dB)	
				Peak	Average	Ant. Pol.	Peak	Average	Ant. Pol.	Peak	Average
DTS (BLE)	Band edge	Low	2390	44.84	33.97	V	44.63	33.83	V	0.21	0.14
	Emission 1G~26.5G	Mid	4880	38.93	-	V	38.71	-	V	0.22	-
			7320	45.11	-	V	45.09	-	V	0.02	-

Report	Test Item	Mode / CH.	Ant. Pol.	Measured Frequency (MHz)	GKR425339 / 2533B-425339		Measured Frequency (MHz)	GKR436386 / 2533B-436386		Gap (dB)	
					Peak	Average		Peak	Average	Peak	Average
DTS (BLE)	LF	Mid	V	51.34	37.81	-	946.65	37.48	-	0.26	-

- End of Test Report -