



# **TEST REPORT**

**Applicant: INFINIX MOBILITY LIMITED** 

Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25

SHAN MEI STREET FOTAN NT HONGKONG

**FCC ID: 2AIZN-X6855** 

**Product Name: Mobile Phone** 

Standard(s): 47 CFR Part 15, Subpart C(15.247)

ANSI C63.10-2013

**KDB 558074 D01 15.247 Meas Guidance v05r02** 

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

**Report Number: 2403Y100558E-RF-00A** 

Date Of Issue: 2024/11/13

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## **Test Facility**

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

#### **Declarations**

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

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# DOCUMENT REVISION HISTORY

<b>Revision Number</b>	Report Number	Description of Revision	Date of Revision
1.0	2403Y100558E-RF-00A	Original Report	2024/11/13

# 1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1:1 1 Toduct Description for Equi	pinent under Test (ECT)
EUT Name:	Mobile Phone
EUT Model:	X6855
Operation Frequency:	2402-2480 MHz(BLE 1Mbps) 2404-2478 MHz(BLE 2Mbps)
Maximum Peak Output Power (Conducted):	
Modulation Type:	GFSK
Rated Input Voltage:	DC 3.91V from battery or DC 5V/5-11V/20V charging from adapter
sample number:	CE&RE:2TA4-1(Type 1) RF: 2TA4-2(Type 1)
<b>EUT Received Date:</b>	2024/10/21
<b>EUT Received Status:</b>	Good
N-4 The DITT has been a self-marking about	4 T 1 4 T 21

Note: The EUT has two configurations that Type 1 and Type 2 are electrically identical. Please refer to the declaration letter for more detail, which was provided by manufacturer. Per BT report test, conducted emissions test with Type 1 was the worst, and radiated emissions below 1 GHz test that Type 1 with charging by Adapter was the worst. Other test item only performs on Type 1 configurations.

**Operation Frequency Detail:** 

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2442
1	2404		
		•••	•••
		38	2478
19	2440	39	2480

Per section 15.31(m), the below frequencies were performed the test as below:

Test Channel	Frequency (MHz)
Lowest	2402
Middle	2440
Highest	2480

## For BLE 2Mbps:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2404	19	2442
1	2406		•••
	•••	•••	•••
			•••
	•••	36	2476
18	2440	37	2478

Per section 15.31(m), the below frequencies were performed the test as below:

Test Channel	Frequency (MHz)
Lowest	2404
Middle	2440
Highest	2478

# **Antenna Information Detail ▲:**

Antenna	Antenna Type	input impedance (Ohm)	Frequency Range (MHz)	Antenna Gain (dBi)
ANT14(Chain 0)	IFA	50	2400-2500	-3.9
ANT13(Chain 1)	IFA	50	2400-2500	-2.32
The Method of §15.203 Compliance:				
Antenna was permanently attached to the unit.				
Antenna use a unique type of connector to attach to the EUT.				

Unit was professionally installed, and installer shall be responsible for verifying that the

**Accessory Information:** 

Accessory Description	Manufacturer	Model
Adapter	Infinix	U900XSA

correct antenna is employed with the unit.

# 1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.
<b>Equipment Modifications:</b>	No
<b>EUT Exercise Software:</b>	Engineer mode

The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer  $\triangle$ :

Tost Modes	Power Level Setting		
Test Modes	<b>Lowest Channel</b>	Middle Channel	Highest Channel
1Mbps	6	6	6
2Mbps	6	6	6

1.2.2 Support Equipment List and Details

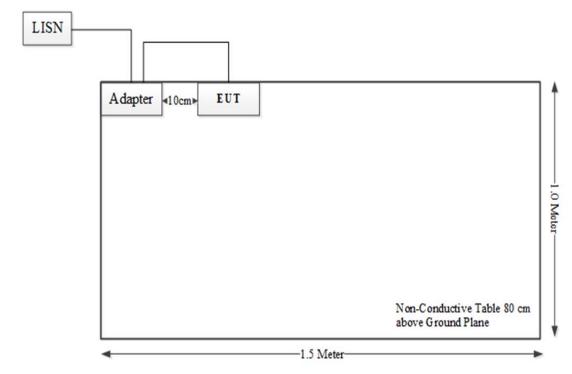
Manufacturer	Description	Model	Serial Number
Infinix	Adapter	U900XSA	KX07021024A16

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	То
USB Cable	No	No	1	Adapter	EUT

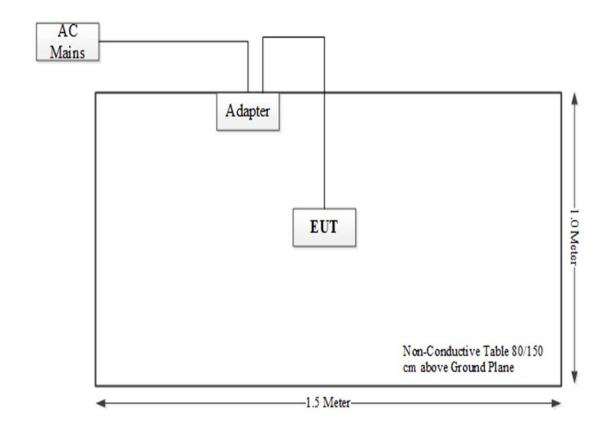
# 1.2.4 Block Diagram of Test Setup

AC line conducted emissions:



Spurious Emissions:

Adapter:



# 1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	9k~30MHz: 4.12dB, 30M~200MHz: 4.15 dB, 200M~1GHz: 5.61 dB, 1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB, 18G~26.5G:5.47 dB, 26.5G~40G:5.63 dB
Unwanted Emissions, conducted	±1.26 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

# 2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.203	Antenna Requirement	PASS
FCC §15.207(a)	AC Line Conducted Emissions	PASS
FCC §15.205,§15.209,§15.247(d)	Radiated Spurious Emission	PASS
FCC §15.207(a)(2)	6dB Emission Bandwidth	PASS
FCC §15.247(b)(1)	Maximum Conducted Output Power	PASS
FCC §15.247(d)	100 kHz Bandwidth of Frequency Band Edge	PASS
FCC §15.247(e)	Power Spectral Density	PASS
C63.10 §11.6	Duty Cycle	PASS
FCC §1.1307&§2.1093&§15.247 (i)	RF Exposure	PASS

# 3. REQUIREMENTS AND TEST PROCEDURES

#### 3.1 AC Line Conducted Emissions

#### 3.1.1 Applicable Standard

FCC §15.207(a).

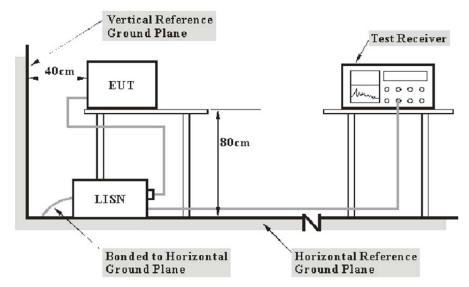
(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBµV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

<sup>\*</sup>Decreases with the logarithm of the frequency.

- (b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:
- (1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.
- (2) For all other carrier current systems: 1000  $\mu V$  within the frequency band 535-1705 kHz, as measured using a 50  $\mu H/50$  ohms LISN.
- (3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.
- (c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

#### 3.1.2 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 C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

# 3.1.3 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

#### 3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

#### 3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor Factor = attenuation caused by cable loss + voltage division factor of AMN

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit - Result

### 3.2 Radiation Spurious Emissions

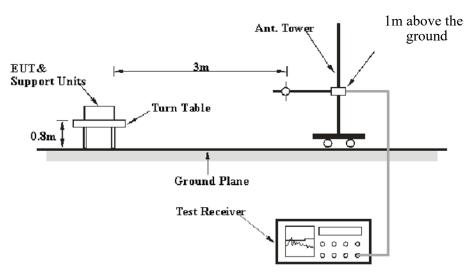
#### 3.2.1 Applicable Standard

FCC §15.247 (d);

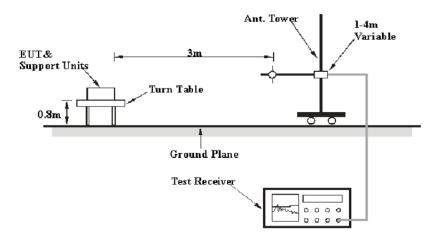
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### 3.2.2 EUT Setup

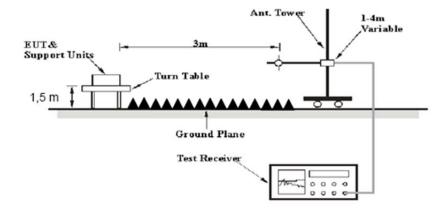
#### 9kHz - 30MHz:



#### 30MHz - 1GHz:



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



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 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 spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

#### 3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz-1000MHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	/	PK
9 KHZ — 130 KHZ	/	/	200 Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	/	PK
	/	/	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
	/	/	120 kHz	QP

1GHz- 25GHz:

Pre-scan:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Avia	>98%	1MHz	5 kHz
Ave.	<98%	1MHz	$\geq 1/T$ , not less than 5 kHz

Note: T is minimum transmission duration

Final measurement for emission identified during the pre-scan:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Avia	>98%	1MHz	10 Hz
Ave.	<98%	1MHz	≥1/T

Note: T is minimum transmission duration

If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.

The spurious emissions which below the limit more than 20dB was not be recorded.

#### 3.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9–90 kHz, 110–490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

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

#### 3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit - Result

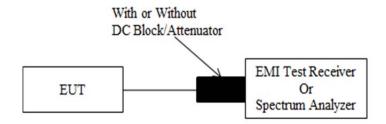
#### 3.3 Minimum 6 dB Bandwidth

#### 3.3.1 Applicable Standard

FCC §15.247 (a)(2)

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 3.3.2 EUT Setup



#### 3.3.3 Test Procedure

According to ANSI C63.10-2013 Section 11.8

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times RBW$ .
- c) Detector = Peak.
- d) Trace mode =  $\max$  hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

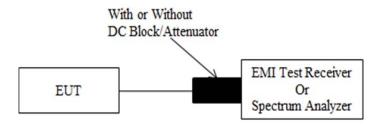
#### 3.4 Maximum Conducted Output Power

#### 3.4.1 Applicable Standard

FCC §15.247 (b)(3)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

#### 3.4.2 EUT Setup



#### 3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.1

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

- a) Set the RBW  $\geq$  DTS bandwidth.
- b) Set VBW  $\geq$  [3 × RBW].
- c) Set span  $\geq$  [3 × RBW].
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

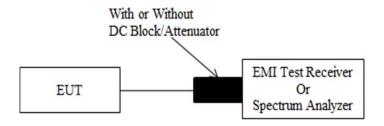
#### 3.5 Maximum power spectral density

#### 3.5.1 Applicable Standard

FCC §15.247 (e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

#### **3.5.2 EUT Setup**



#### 3.5.3 Test Procedure

According to ANSI C63.10-2013 Section 11.10.2

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set the RBW to  $3 \text{ kHz} \le \text{RBW} \le 100 \text{ kHz}$ .
- d) Set the VBW  $\geq$  [3 × RBW].
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

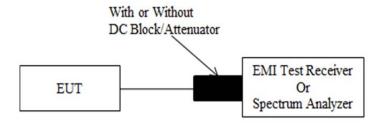
### 3.6 100 kHz Bandwidth of Frequency Band Edge

#### 3.6.1 Applicable Standard

FCC §15.247 (d);

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### **3.6.2 EUT Setup**



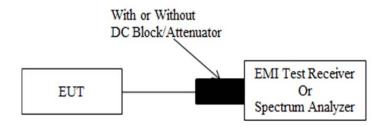
#### 3.6.3 Test Procedure

According to ANSI C63.10-2013 Section 11.11

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW  $\geq$  [3 × RBW].
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

#### 3.7 Duty Cycle

#### 3.7.1 EUT Setup



#### 3.7.2 Test Procedure

According to ANSI C63.10-2013 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

- 1) Set the center frequency of the instrument to the center frequency of the transmission.
- 2) Set RBW  $\geq$  OBW if possible; otherwise, set RBW to the largest available value.
- 3) Set VBW  $\geq$  RBW. Set detector = peak or average.
- 4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if  $T \le 16.7$  µs.)

#### 3.8 Antenna Requirement

#### 3.8.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

#### 3.8.2 Judgment

**Compliant.** Please refer to the Antenna Information detail in Section 1.

# 4. TEST DATA AND RESULTS

## **4.1 AC Line Conducted Emissions**

Sample Number:	2TA4-1	Test Date:	2024/10/30
Test Site:	CE		Transmitting (maximum conducted output power mode, Chain 0 BLE 2Mbps middle channel)
Tester:	David Huang	Test Result:	Pass

#### **Environmental Conditions:**

Humidity: 52 (%) 100.3	( ( )			52	ATM Pressure: (kPa)	100.3
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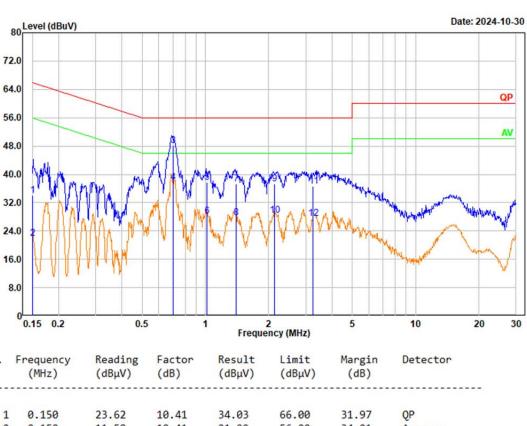
# **Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101132	2024/4/1	2025/3/31
R&S	EMI Test Receiver	ESR3	103104	2024/5/10	2025/5/9
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2024/1/15	2025/1/14
Audix	Test Software	Е3	191218 (V9)	N/A	N/A

<sup>\*</sup> Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Project No.: 2403Y100558E-RF Tester: David Huang Port: Line

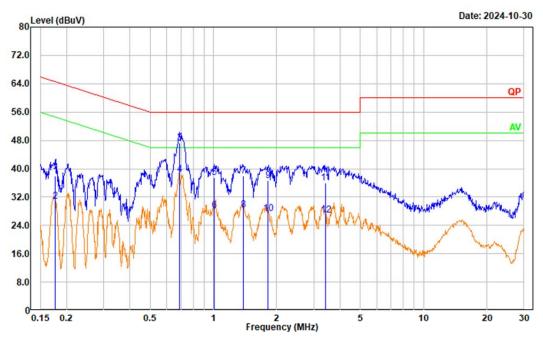
Note: Transmitting(BLE)



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.150	23.62	10.41	34.03	66.00	31.97	QP
2		11.58	10.41	21.99	56.00	34.01	Average
3	0.703	37.32	10.71	48.03	56.00	7.97	QP
4	0.703	26.92	10.71	37.63	46.00	8.37	Average
5	1.016	27.08	10.61	37.69	56.00	18.31	QP
6	1.016	17.56	10.61	28.17	46.00	17.83	Average
7	1.399	26.89	10.42	37.31	56.00	18.69	QP
8	1.399	17.44	10.42	27.86	46.00	18.14	Average
9	2.138	27.14	10.14	37.28	56.00	18.72	QP
10	2.138	18.17	10.14	28.31	46.00	17.69	Average
11	3.251	26.28	10.27	36.55	56.00	19.45	QP
12	3.251	17.35	10.27	27.62	46.00	18.38	Average

Project No.: 2403Y100558E-RF Tester: David Huang Port: neutral

Note: Transmitting(BLE)



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.177	27.55	10.40	37.95	64.62	26.67	QP
2	0.177	20.43	10.40	30.83	54.62	23.79	Äverage
3	0.690	36.98	10.23	47.21	56.00	8.79	QP
4	0.690	28.14	10.23	38.37	46.00	7.63	Average
5	1.011	26.95	10.52	37.47	56.00	18.53	QP
6	1.011	17.62	10.52	28.14	46.00	17.86	Average
7	1.386	27.57	10.44	38.01	56.00	17.99	QP
8	1.386	17.95	10.44	28.39	46.00	17.61	Average
9	1.817	26.37	10.37	36.74	56.00	19.26	QP
10	1.817	16.93	10.37	27.30	46.00	18.70	Average
11	3.405	25.87	10.20	36.07	56.00	19.93	QP
12	3.405	16.73	10.20	26.93	46.00	19.07	Average

# **4.2 Radiation Spurious Emissions**

#### 4.2.1 9 kHz - 1 GHz

	<u> </u>		
Sample Number:	2TA4-1	Test Date:	2024/11/2
Test Site:	966-2	Test Mode:	Transmitting (maximum conducted output power mode, Chain 0 BLE 2Mbps middle channel)
Tester:	Roinin Fu	Test Result:	Pass

Environmental Conditions:									
Temperature: (°C)		Relative Humidity: (%)	57	ATM Pressure: (kPa)	101.1				

**Test Equipment List and Details:** 

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2023/12/1	2026/11/30
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
TIMES MICROWAVE	Coaxial Cable	LMR-600- UltraFlex	C-0100-03	2023/12/4	2024/12/3
TIMES MICROWAVE	Coaxial Cable	LMR-600- UltraFlex	C-0370-01	2023/12/4	2024/12/3
XQY	Coaxial Cable	XQY-CMR400UF- NJ-NJ-7M	24056379	2024/6/11	2025/6/10
Sonoma	Amplifier	310N	186165	2023/12/4	2024/12/3
Audix	Test Software	E3	191218 (V9)	N/A	N/A

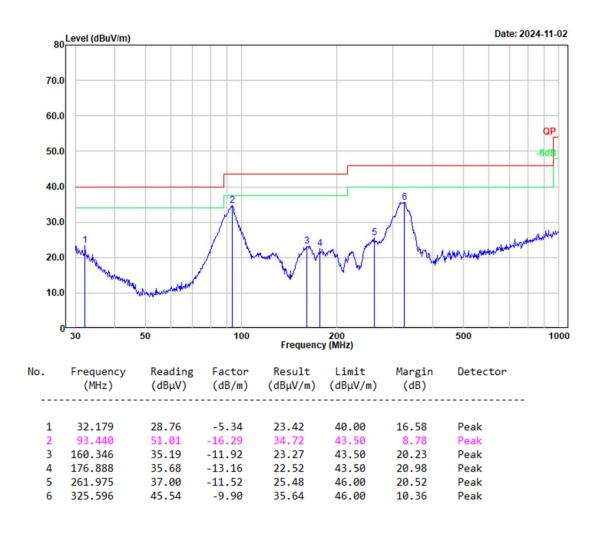
<sup>\*</sup> Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

# **Test Data:**

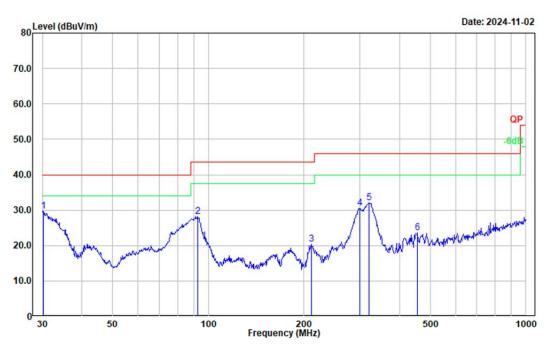
After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to plots. For 9kHz-30MHz, The amplitude of spurious emissions attenuated more than 20 dB below the limit was not be reported.

## Adapter:

Project No.: 2403Y100558E-RF Tester: Roinin Fu Polarization: horizontal Note: Transmitting



Project No.: 2403Y100558E-RF
Tester: Roinin Fu
Polarization: vertical
Note: Transmitting



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.317	33.79	-3.99	29.80	40.00	10.20	Peak
2	92.462	44.66	-16.49	28.17	43.50	15.33	Peak
3	210.786	34.32	-13.94	20.38	43.50	23.12	Peak
4	300.367	41.05	-10.38	30.67	46.00	15.33	Peak
5	319.937	42.23	-10.05	32.18	46.00	13.82	Peak
6	455.906	30.47	-6.75	23.72	46.00	22.28	Peak

## 4.2.2 1GHz - 25 GHz:

Sample Number	2TA4-1	Test Date:	2024/10/25
Test Site:	966-1	Test Mode:	Transmitting
Tester:	Mack Huang	Test Result:	Pass

Environmental Conditions:									
Temperature: (°C)	26.8	Relative Humidity: (%)	61	ATM Pressure: (kPa)	100.3				

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

Manufacturer Description		Model	Serial Number	Calibration Date	Calibration Due Date
ETS-Lindgren	Horn Antenna	3115	9912-5985	2023/12/6	2026/12/5
R&S	Spectrum Analyzer	FSV40	101591	2024/4/1	2025/3/31
MICRO-COAX	Coaxial Cable	UFA210A-1-1200- 70U300	217423-008	2024/1/15	2025/1/14
MICRO-COAX	Coaxial Cable	UFA210A-1-2362- 300300	235780-001	2024/1/15	2025/1/14
BACL	Preamplifier	1313-A20M18G	4032311	2024/4/1	2025/3/31
Audix	Test Software	E3	191218 (V9)	N/A	N/A
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2024/2/4	2027/2/3
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2024/1/15	2025/1/14
MICRO-COAX	Coaxial Cable	UFB142A-1-2362- 200200	235772-001	2024/1/15	2025/1/14
JD	Multiplex Switch Test Control Set	DT7220SCU	DQ77925	2024/8/5	2025/8/4
JD	Filter Switch Unit	DT7220FSU	DQ77928	2024/8/5	2025/8/4

<sup>\*</sup> Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

# **Test Data:**

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

# Chain 0

# **BLE 1Mbps:**

F	Rece	eiver	Polar	E4	Result	Limit	Maria
Frequency (MHz)	Reading (dBµV)	Detector	(H/V)	Factor (dB/m)	(dBµV/m)	(dBµV/m)	Margin (dB)
		Low (	Channel: 2402 MHz				
4804.000	33.45	PK	Н	8.50	41.95	74.00	32.05
4804.000	21.85	AV	Н	8.50	30.35	54.00	23.65
4804.000	33.66	PK	V	8.50	42.16	74.00	31.84
4804.000	21.78	AV	V	8.50	30.28	54.00	23.72
7206.000	34.68	PK	Н	11.39	46.07	74.00	27.93
7206.000	22.20	AV	Н	11.39	33.59	54.00	20.41
7206.000	34.10	PK	V	11.39	45.49	74.00	28.51
7206.000	22.38	AV	V	11.39	33.77	54.00	20.23
		Middle (	Channel:	2440	MHz		
4880.000	34.29	PK	Н	8.96	43.25	74.00	30.75
4880.000	22.20	AV	Н	8.96	31.16	54.00	22.84
4880.000	34.33	PK	V	8.96	43.29	74.00	30.71
4880.000	22.45	AV	V	8.96	31.41	54.00	22.59
7320.000	34.16	PK	Н	11.56	45.72	74.00	28.28
7320.000	22.05	AV	Н	11.56	33.61	54.00	20.39
7320.000	33.98	PK	V	11.56	45.54	74.00	28.46
7320.000	21.84	AV	V	11.56	33.40	54.00	20.60
		High (	Channel:	2480	MHz		
4960.000	33.82	PK	Н	8.80	42.62	74.00	31.38
4960.000	21.57	AV	Н	8.80	30.37	54.00	23.63
4960.000	34.33	PK	V	8.80	43.13	74.00	30.87
4960.000	22.41	AV	V	8.80	31.21	54.00	22.79
7440.000	34.32	PK	Н	11.47	45.79	74.00	28.21
7440.000	22.03	AV	Н	11.47	33.50	54.00	20.50
7440.000	34.16	PK	V	11.47	45.63	74.00	28.37
7440.000	22.33	AV	V	11.47	33.80	54.00	20.20

## BLE 2Mbps:

Engage	Rece	eiver	Polar	E4	Result	Limit	Margin
Frequency (MHz)	Reading (dBµV)	Detector	(H/V)	Factor (dB/m)	(dBµV/m)	(dBµV/m)	(dB)
		Low (	Channel:	2404	MHz		
4808.000	34.11	PK	Н	8.54	42.65	74.00	31.35
4808.000	22.03	AV	Н	8.54	30.57	54.00	23.43
4808.000	33.88	PK	V	8.54	42.42	74.00	31.58
4808.000	21.67	AV	V	8.54	30.21	54.00	23.79
7212.000	34.62	PK	Н	11.38	46.00	74.00	28.00
7212.000	22.44	AV	Н	11.38	33.82	54.00	20.18
7212.000	34.36	PK	V	11.38	45.74	74.00	28.26
7212.000	22.50	AV	V	11.38	33.88	54.00	20.12
		Middle (	Channel:	2440	MHz		
4880.000	34.32	PK	Н	8.96	43.28	74.00	30.72
4880.000	22.33	AV	Н	8.96	31.29	54.00	22.71
4880.000	34.06	PK	V	8.96	43.02	74.00	30.98
4880.000	22.29	AV	V	8.96	31.25	54.00	22.75
7320.000	33.78	PK	Н	11.56	45.34	74.00	28.66
7320.000	21.46	AV	Н	11.56	33.02	54.00	20.98
7320.000	34.55	PK	V	11.56	46.11	74.00	27.89
7320.000	22.30	AV	V	11.56	33.86	54.00	20.14
		High (	Channel:	2478	MHz		
4956.000	34.05	PK	Н	8.81	42.86	74.00	31.14
4956.000	22.21	AV	Н	8.81	31.02	54.00	22.98
4956.000	34.37	PK	V	8.81	43.18	74.00	30.82
4956.000	22.35	AV	V	8.81	31.16	54.00	22.84
7434.000	34.48	PK	Н	11.47	45.95	74.00	28.05
7434.000	22.58	AV	Н	11.47	34.05	54.00	19.95
7434.000	34.60	PK	V	11.47	46.07	74.00	27.93
7434.000	22.12	AV	V	11.47	33.59	54.00	20.41

Chain 1: BLE 1Mbps:

Emagnamay	Rece	eceiver	Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit	Margin (dB)	
Frequency (MHz)	Reading (dBµV)	Detector				(dBµV/m)		
		Low C	Channel:	nel: 2402 MHz				
4804.000	33.48	PK	Н	8.50	41.98	74.00	32.02	
4804.000	21.52	AV	Н	8.50	30.02	54.00	23.98	
4804.000	33.96	PK	V	8.50	42.46	74.00	31.54	
4804.000	21.37	AV	V	8.50	29.87	54.00	24.13	
7206.000	34.01	PK	Н	11.39	45.40	74.00	28.60	
7206.000	22.20	AV	Н	11.39	33.59	54.00	20.41	
7206.000	34.33	PK	V	11.39	45.72	74.00	28.28	
7206.000	22.24	AV	V	11.39	33.63	54.00	20.37	
		Middle (	Channel:	2440	MHz			
4880.000	34.30	PK	Н	8.96	43.26	74.00	30.74	
4880.000	22.20	AV	Н	8.96	31.16	54.00	22.84	
4880.000	33.66	PK	V	8.96	42.62	74.00	31.38	
4880.000	21.57	AV	V	8.96	30.53	54.00	23.47	
7320.000	34.16	PK	Н	11.56	45.72	74.00	28.28	
7320.000	22.60	AV	Н	11.56	34.16	54.00	19.84	
7320.000	34.17	PK	V	11.56	45.73	74.00	28.27	
7320.000	22.23	AV	V	11.56	33.79	54.00	20.21	
		High C	Channel:	2480	MHz			
4960.000	33.96	PK	Н	8.80	42.76	74.00	31.24	
4960.000	21.54	AV	Н	8.80	30.34	54.00	23.66	
4960.000	34.22	PK	V	8.80	43.02	74.00	30.98	
4960.000	22.28	AV	V	8.80	31.08	54.00	22.92	
7440.000	34.23	PK	Н	11.47	45.70	74.00	28.30	
7440.000	22.48	AV	Н	11.47	33.95	54.00	20.05	
7440.000	34.30	PK	V	11.47	45.77	74.00	28.23	
7440.000	22.27	AV	V	11.47	33.74	54.00	20.26	

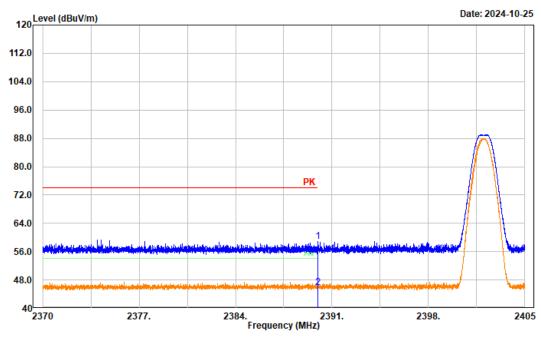
# **BLE 2Mbps:**

Frequency (MHz)	Receiver		D 1	Б. /	D 1	T. 1. 1.		
	Reading (dBµV)	Detector	Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Margin (dB)	
		Low (	Channel:	2404	MHz			
4808.000	33.44	PK	Н	8.54	41.98	74.00	32.02	
4808.000	21.20	AV	Н	8.54	29.74	54.00	24.26	
4808.000	33.68	PK	V	8.54	42.22	74.00	31.78	
4808.000	21.90	AV	V	8.54	30.44	54.00	23.56	
7212.000	34.53	PK	Н	11.38	45.91	74.00	28.09	
7212.000	22.87	AV	Н	11.38	34.25	54.00	19.75	
7212.000	34.19	PK	V	11.38	45.57	74.00	28.43	
7212.000	22.11	AV	V	11.38	33.49	54.00	20.51	
		Middle (	Channel:	2440	MHz			
4880.000	34.08	PK	Н	8.96	43.04	74.00	30.96	
4880.000	22.10	AV	Н	8.96	31.06	54.00	22.94	
4880.000	33.68	PK	V	8.96	42.64	74.00	31.36	
4880.000	21.67	AV	V	8.96	30.63	54.00	23.37	
7320.000	34.70	PK	Н	11.56	46.26	74.00	27.74	
7320.000	22.14	AV	Н	11.56	33.70	54.00	20.30	
7320.000	34.39	PK	V	11.56	45.95	74.00	28.05	
7320.000	22.30	AV	V	11.56	33.86	54.00	20.14	
High Channel: 2478					MHz			
4956.000	33.55	PK	Н	8.81	42.36	74.00	31.64	
4956.000	21.63	AV	Н	8.81	30.44	54.00	23.56	
4956.000	34.02	PK	V	8.81	42.83	74.00	31.17	
4956.000	22.14	AV	V	8.81	30.95	54.00	23.05	
7434.000	34.18	PK	Н	11.47	45.65	74.00	28.35	
7434.000	22.37	AV	Н	11.47	33.84	54.00	20.16	
7434.000	34.56	PK	V	11.47	46.03	74.00	27.97	
7434.000	22.20	AV	V	11.47	33.67	54.00	20.33	

# Worst band edge test plots

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal

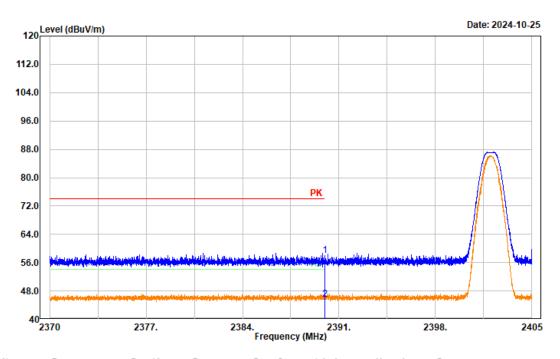
Note: BLE 1M Low Channel 2402MHz Chain 0



No.	Frequency (MHz)			Result (dBµV/m)			Detector
1	2390.000	27.45	31.46	58.91	74.00	15.09	Peak
2	2390.000	14.36	31.46	45.82	54.00	8.18	Average

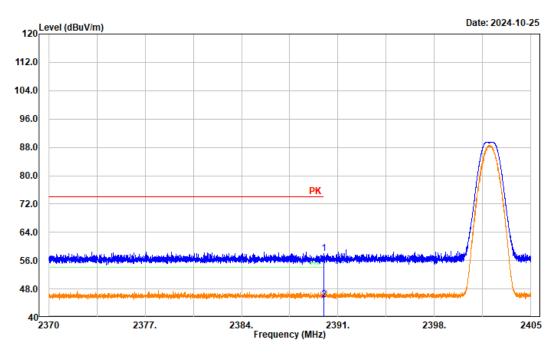
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical

Note: BLE 1M Low Channel 2402MHz Chain 0



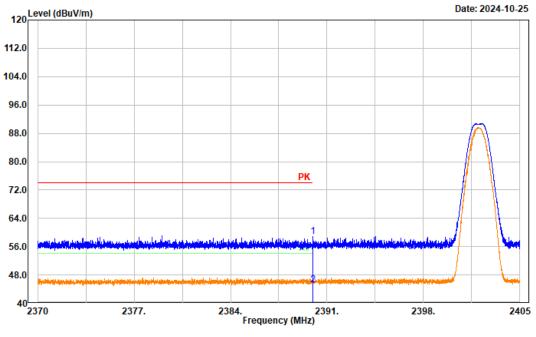
No.	Frequency (MHz)			Result (dBµV/m)			Detector
1	2390.000	26.56	31.46	58.02	74.00	15.98	Peak
2	2390,000	14.12	31.46	45.58	54.00	8.42	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



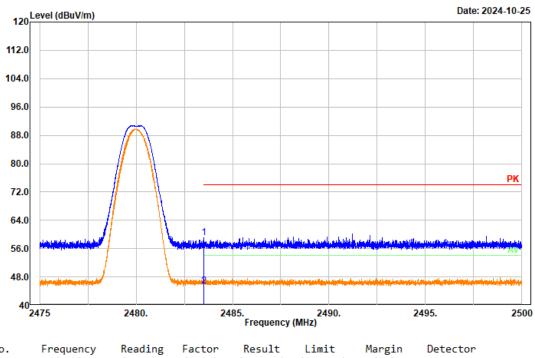
No.	Frequency (MHz)	Reading (dBμV)					Detector
1	2390.000	26.53	31.46	57.99	74.00	16.01	Peak
2	2390.000	13.55	31.46	45.01	54.00	8.99	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



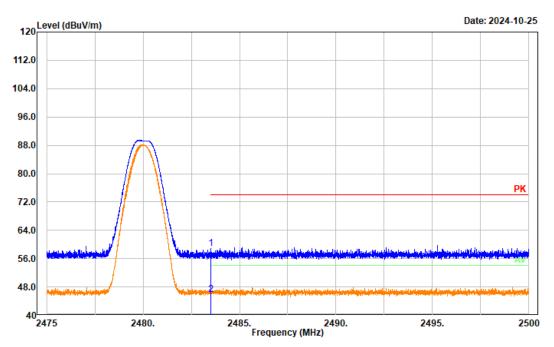
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2390.000	27.44	31.46	58.90	74.00	15.10	Peak
2	2390 000	13 78	31 46	45 24	54 00	8 76	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



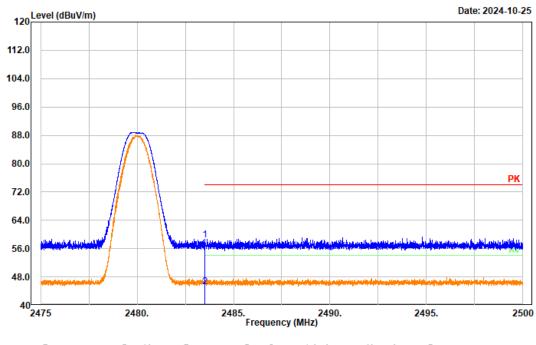
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	27.56	31.50	59.06	74.00	14.94	Peak
2	2483 500	14 02	31 50	45 52	54 00	8 48	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



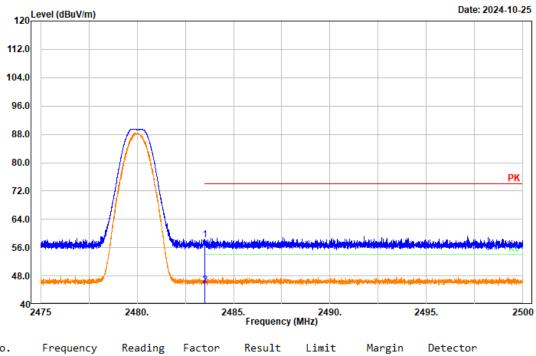
No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	2483.500	27.31	31.50	58.81	74.00	15.19	Peak
2	2483.500	14.30	31.50	45.80	54.00	8.20	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



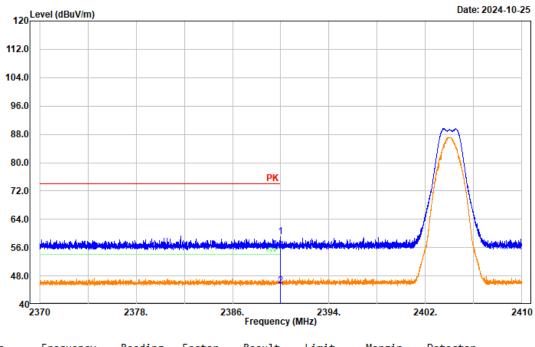
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	26.99	31.50	58.49	74.00	15.51	Peak
2	2483 500	13 65	31 50	45 15	54 00	8 85	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



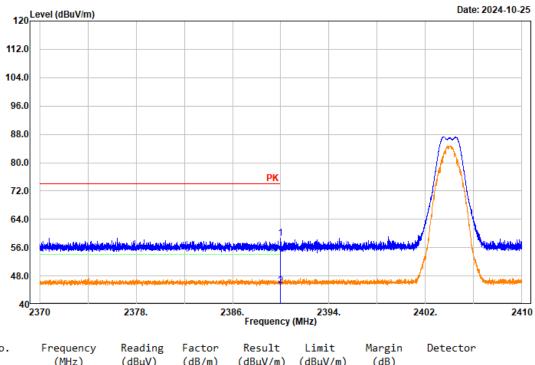
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	26.71	31.50	58.21	74.00	15.79	Peak
2	2483 500	13 99	31 50	45 49	54 00	8 51	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



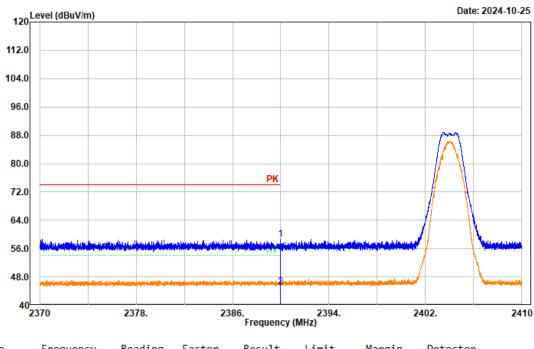
No.	Frequency (MHz)	Reading (dBμV)		Result (dBμV/m)		Margin (dB)	Detector
1 2	2390.000	27.51	31.46	58.97	74.00	15.03	Peak
	2390.000	13.69	31.46	45.15	54.00	8.85	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical

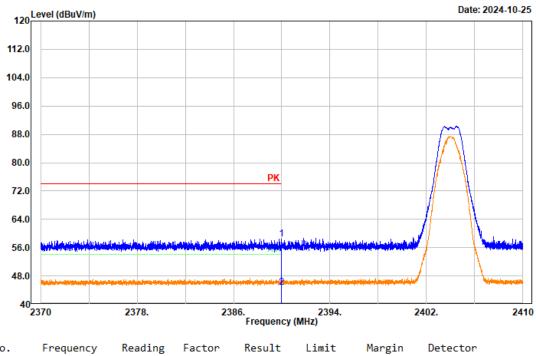


No.	Frequency (MHz)	Reading (dBμV)		Result (dBμV/m)			Detector
1	2390.000	27.13	31.46	58.59	74.00	15.41	Peak
2	2390 000	13 85	31 /6	45 31	5/1 00	8 69	Λνοηρσο

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal

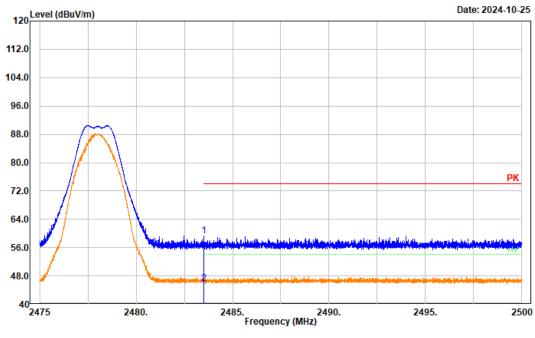


Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



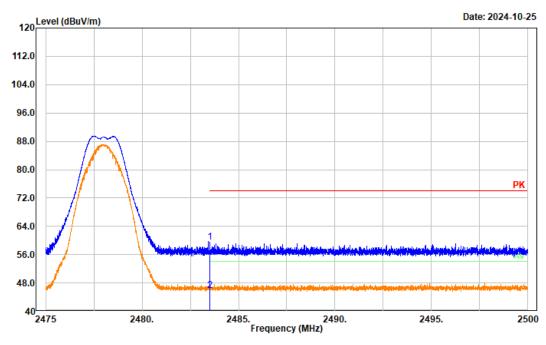
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2390.000	26.91	31.46	58.37	74.00	15.63	Peak
2	2390 000	13 28	31 46	44 74	54 00	9.26	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



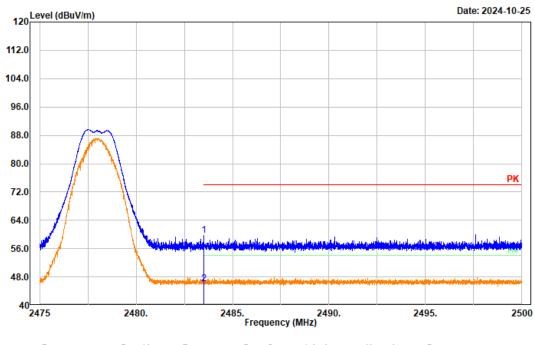
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	27.75	31.50	59.25	74.00	14.75	Peak
2	2483 500	14 27	31 50	45 77	54 00	8 23	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



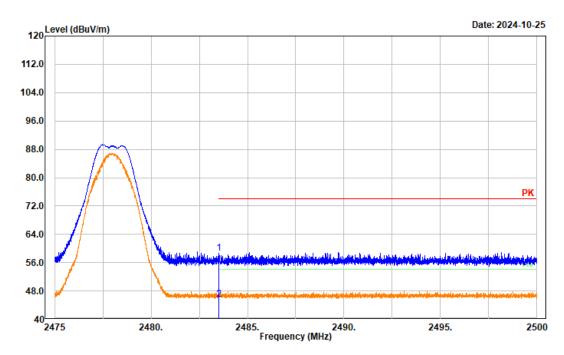
No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	27.95	31.50	59.45	74.00	14.55	Peak
2	2483 500	14 39	31 50	45 89	54 00	8 11	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal



No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	2483.500	28.15	31.50	59.65	74.00	14.35	Peak
2	2483.500	14.55	31.50	46.05	54.00	7.95	Average

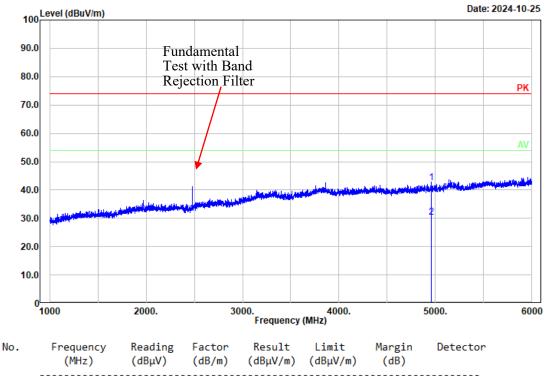
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Vertical



No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	2483.500	27.19	31.50	58.69	74.00	15.31	Peak
2	2483.500	14.17	31.50	45.67	54.00	8.33	Average

### Worst radiation spurious emissions margin test plots for each mode

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal

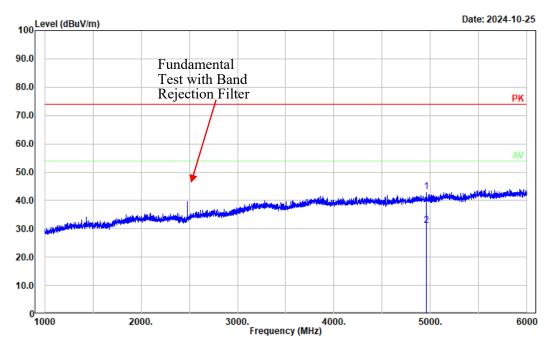


Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

Polarization: vertical

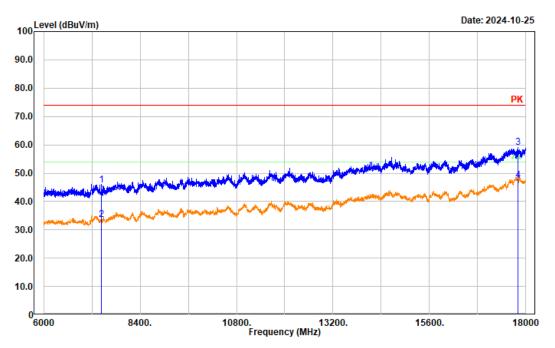
Note: BLE 1M High Channel 2480MHz Chain 0





No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	4960.000	34.33	8.80	43.13	74.00	30.87	Peak
2	4960.000	22.41	8.80	31.21	54.00	22.79	Average

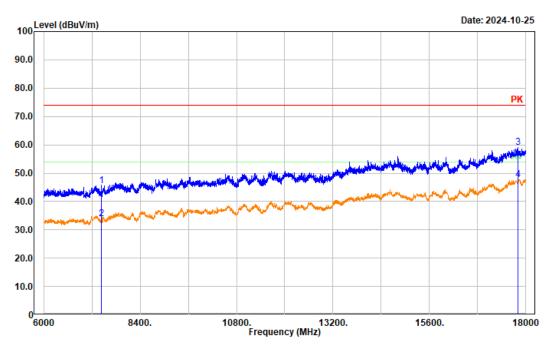
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal Note: BLE 1M High Channel 2480MHz Chain 0



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7440.000	34.32	11.47	45.79	74.00	28.21	Peak
2	7440.000	22.03	11.47	33.50	54.00	20.50	Average
3	17800.800	33.30	25.77	59.07	74.00	14.93	Peak
4	17800.800	21.75	25.77	47.52	54.00	6.48	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

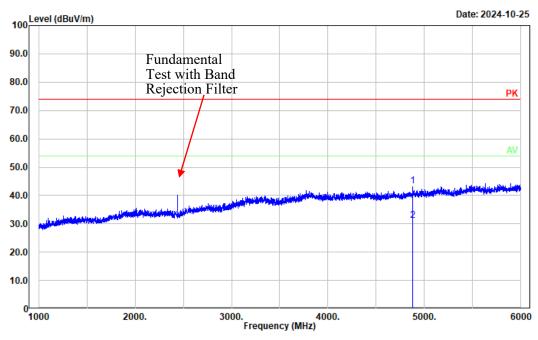
Note: BLE 1M High Channel 2480MHz Chain 0



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7440.000	34.16	11.47	45.63	74.00	28.37	Peak
2	7440.000	22.33	11.47	33.80	54.00	20.20	Average
3	17793.600	33.23	25.78	59.01	74.00	14.99	Peak
4	17793.600	21.88	25.78	47.66	54.00	6.34	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal Note: BLE 1M Middle Channel 2440MHz Chain 1

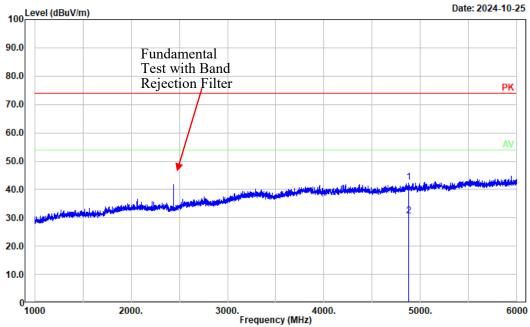




No.	Frequency (MHz)			Result (dBμV/m)			Detector
1	4880.000	34.30	8.96	43.26	74.00	30.74	Peak
2	4880.000	22.20	8.96	31.16	54.00	22.84	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical
Note: BLE 1M Middle Channel 2440MHz Chain 1

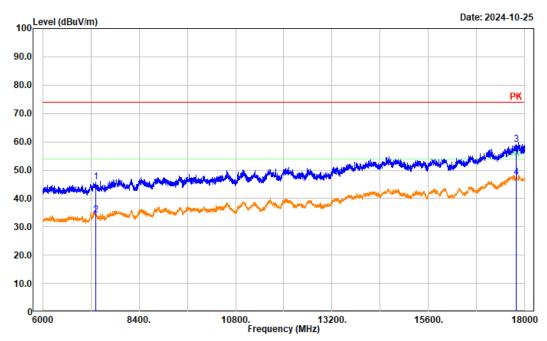




No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	4880.000	33.66	8.96	42.62	74.00	31.38	Peak
2	4880.000	21.57	8.96	30.53	54.00	23.47	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal Note: BLE 1M Middle Channel 2440MHz Chain 1



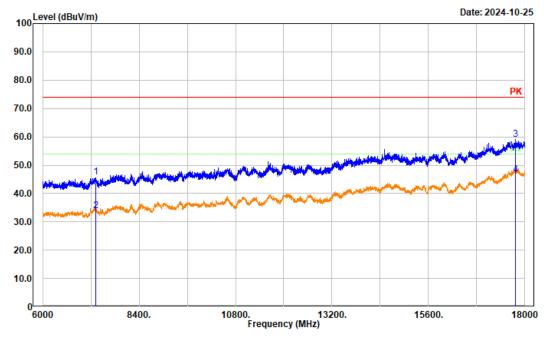


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7320.000	34.16	11.56	45.72	74.00	28.28	Peak
2	7320.000	22.60	11.56	34.16	54.00	19.84	Average
3	17779.200	33.36	25.80	59.16	74.00	14.84	Peak
4	17779.200	21.75	25.80	47.55	54.00	6.45	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

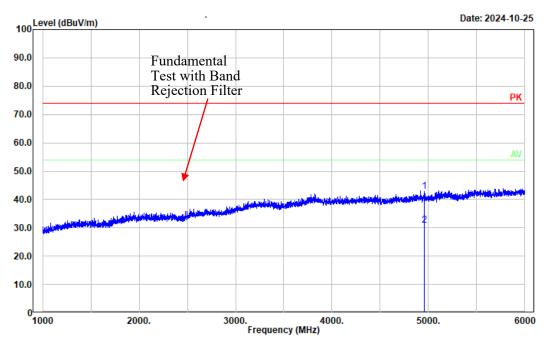
Polarization: vertical
Note: BLE 1M Middle Channel 2440MHz Chain 1





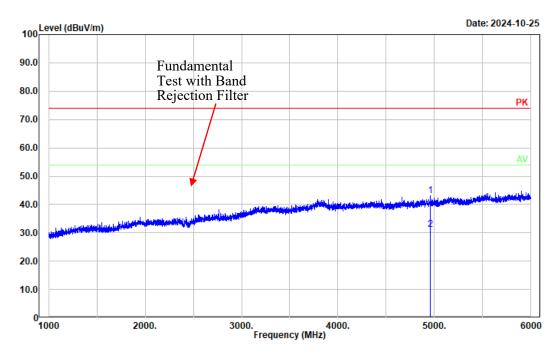
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7320.000	34.17	11.56	45.73	74.00	28.27	Peak
2	7320.000	22.23	11.56	33.79	54.00	20.21	Average
3	17767.200	33.15	25.81	58.96	74.00	15.04	Peak
4	17767.200	20.88	25.81	46.69	54.00	7.31	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal Note: BLE 2M High Channel 2478MHz Chain 0



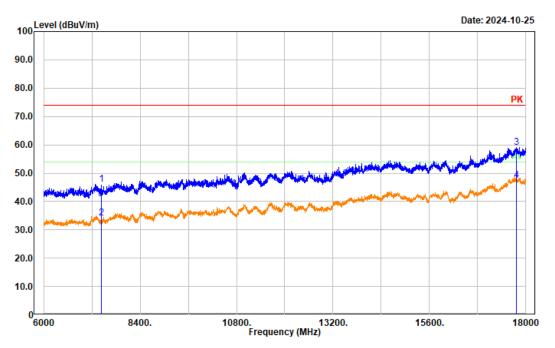
No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	4956.000	34.05	8.81	42.86		31.14	Peak
2	4956.000	22.21	8.81	31.02	54.00	22.98	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical
Note: BLE 2M High Channel 2478MHz Chain 0



No.	Frequency (MHz)	Reading (dBµV)		Result (dBμV/m)		Margin (dB)	Detector
1	4956.000	34.37	8.81	43.18	74.00	30.82	Peak
2	4956.000	22.35	8.81	31.16	54.00	22.84	Average

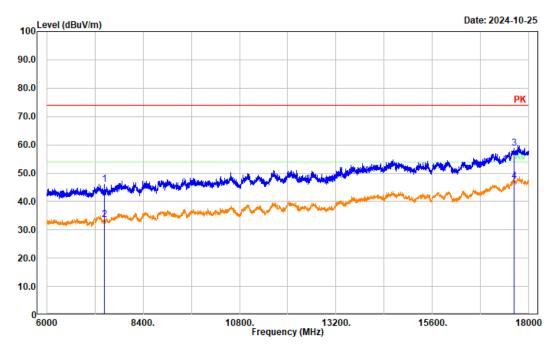
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal Note: BLE 2M High Channel 2478MHz Chain 0



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7434.000	34.48	11.47	45.95	74.00	28.05	Peak
2	7434.000	22.58	11.47	34.05	54.00	19.95	Average
3	17767.200	33.34	25.81	59.15	74.00	14.85	Peak
4	17767.200	21.74	25.81	47.55	54.00	6.45	Average

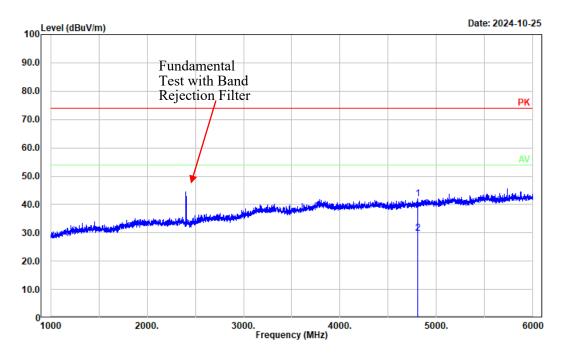
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

Note: BLE 2M High Channel 2478MHz Chain 0



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7434.000	34.60	11.47	46.07	74.00	27.93	Peak
2	7434.000	22.12	11.47	33.59	54.00	20.41	Average
3	17623.200	34.09	24.79	58.88	74.00	15.12	Peak
4	17623.200	22.44	24.79	47.23	54.00	6.77	Average

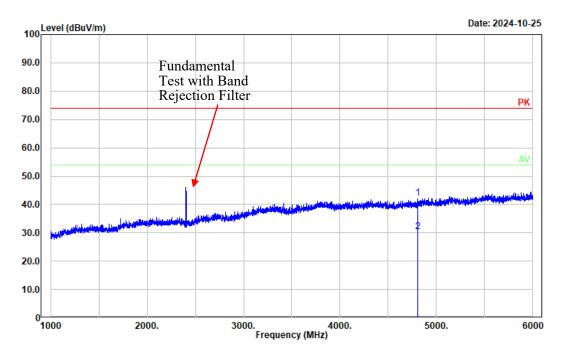
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal
Note: BLE 2M Low Channel 2404MHz Chain 1



No.	Frequency (MHz)	Reading (dBµV)		Result (dBμV/m)		Margin (dB)	Detector
1	4808.000	33.44	8.54	41.98	74.00	32.02	Peak
2	4808.000	21.20	8.54	29.74	54.00	24.26	Average

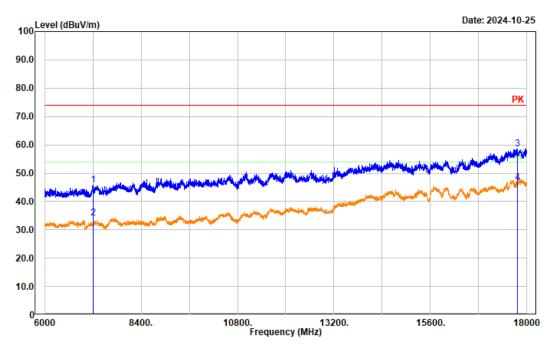
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

Polarization: vertical
Note: BLE 2M Low Channel 2404MHz Chain 1



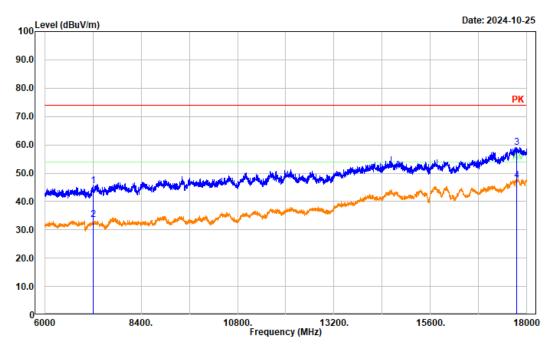
No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	4808.000	33.68	8.54	42.22	74.00	31.78	Peak
2	4808.000	21.90	8.54	30.44	54.00	23.56	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: horizontal
Note: BLE 2M Low Channel 2404MHz Chain 1



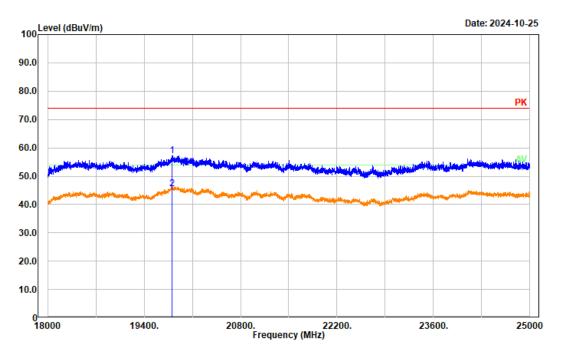
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7212.000	34.53	11.38	45.91	74.00	28.09	Peak
2	7212.000	22.87	11.38	34.25	54.00	19.75	Average
3	17764.800	32.69	25.81	58.50	74.00	15.50	Peak
4	17764.800	20.88	25.81	46.69	54.00	7.31	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical
Note: BLE 2M Low Channel 2404MHz Chain 1



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7212.000	34.19	11.38	45.57	74.00	28.43	Peak
2	7212.000	22.11	11.38	33.49	54.00	20.51	Average
3	17745.600	33.18	25.85	59.03	74.00	14.97	Peak
4	17745.600	21.69	25.85	47.54	54.00	6.46	Average

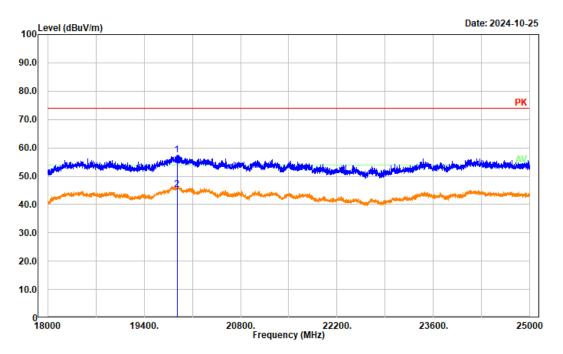
Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: Horizontal
Note: BLE 2M Low Channel 2404MHz Chain 1



No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	19803.200	49.27	7.95	57.22	74.00	16.78	Peak
2	19803.200	37.71	7.95	45.66	54.00	8.34	Average

Project No.: 2403Y100558E-RF Tester: Mack Huang Polarization: vertical

Polarization: vertical
Note: BLE 2M Low Channel 2404MHz Chain 1



No.	Frequency (MHz)			Result (dBμV/m)		Margin (dB)	Detector
1	19877.400	49.57	7.97	57.54	74.00	16.46	Peak
2	19877.400	37.42	7.97	45.39	54.00	8.61	Average

## 4.3 RF Conducted data

For chain 0 test data, please refer to Annex "2403Y100558E-RF-00A Appendix A-Chain 0" for detail test data.

For chain 1 test data, please refer to Annex "2403Y100558E-RF-00A Appendix B-Chain 1" for detail test data.

### 5. RF EXPOSURE EVALUATION

#### 5.1 Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq$  50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] •  $[\sqrt{f(GHz)}] \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq$  50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $\leq$  5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

#### 5.2 Measurement Result

Frequency (MHz)	Conducted Output Power Including Tolerance		Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
(14112)	(dBm)	(mW)	(11111)	varue	(1 6)	Exclusion
2402-2480	3.5	2.24	5	0.7	3	Yes

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Result: Compliant. The stand-alone SAR test is not necessary.

# 6. EUT PHOTOGRAPHS

Please refer to the attachment 2403Y100558E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2403Y100558E-RF-INP EUT INTERNAL PHOTOGRAPHS

# 7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2403Y100558E-RF-00A-TSP TEST SETUP PHOTOGRAPHS.

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