

# **FCC Test Report**

Report No.: AGC00688201218FE02

FCC ID	©. ;	2AU6EDNS-T002
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Bluetooth USB Adapter
BRAND NAME	;	Techkey
MODEL NAME	i	BT-06B, BT-06A
APPLICANT	:	Shenzhen Denos Trade Co., Ltd.
DATE OF ISSUE	÷	Dec. 24, 2020
STANDARD(S)	:	FCC Part 15.247
REPORT VERSION	:	V1.0



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# **REPORT REVISE RECORD**

<b>Report Version</b>	Revise Time	Issued Date	Valid Version	Notes
V1.0		Dec. 24, 2020	Valid	Initial Release

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# **1. VERIFICATION OF COMPLIANCE**

Applicant	Shenzhen Denos Trade Co., Ltd.	
Address	Room 610, Shibida Building, No. 55 ZhenHua Rd, Futian District, Shen Zhen, GuangDong, China	
Manufacturer	SHEN ZHEN SHI XIN HUA TIAN TECHNOLOGY CO., LTD	
Address	3Foor, B Buliding, DaHong Industrial Park, GuangMin District, Shenzhen City, China	
Factory	SHEN ZHEN SHI XIN HUA TIAN TECHNOLOGY CO., LTD	
Address	3Foor, B Buliding, DaHong Industrial Park, GuangMin District, Shenzhen City, China	
Product Designation	Bluetooth USB Adapter	
Brand Name	Techkey	
Test Model	BT-06B	
Series Model	BT-06A	
Difference Description	All the same except for the model name.	
Date of test	Dec. 18, 2020 to Dec. 24, 2020	
Deviation	No any deviation from the test method	
Condition of Test Sample	Normal	
Test Result	Pass	
Report Template	AGCRT-US-BLE/RF	

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.247.

Prepared By

Eddy · Liu

Max Zhan

Eddy Liu (Project Engineer)

Dec. 24, 2020

**Reviewed By** 

Max Zhang

(Reviewer)

D

Dec. 24, 2020

Approved By

Forrest Lei (Authorized Officer)

Dec. 24, 2020

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# 2. GENERAL INFORMATION

# 2.1. PRODUCT DESCRIPTION

The EUT is designed as a "Bluetooth USB Adapter". It is designed by way of utilizing the GFSK technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.402 GHz to 2.480GHz	
RF Output Power	7.174dBm (Max)	
Bluetooth Version	V4.0	
Modulation	BR □GFSK, EDR □π /4-DQPSK, □8DPSK BLE ⊠GFSK 1Mbps □GFSK 2Mbps	
Number of channels	40 Channel	
Antenna Designation	PCB Antenna (Comply with requirements of the FCC part 15.203)	
Antenna Gain	2dBi	
Hardware Version	V5.0	
Software Version	V5.0	
Power Supply	DC 5V by USB	

# 2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency	
	0	2402 MHz	
	1	2404 MHz	
2400~2483.5MHz			
	38	2478 MHz	
200 .00	39	2480 MHz	

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# 2.3. RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for FCC ID: 2AU6EDNS-T002 filing to comply with the FCC Part 15.247 requirements.

#### 2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

#### 2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

#### 2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

#### 2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device. For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

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# 3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y  $\pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

- Uncertainty of Conducted Emission, Uc = ±3.1 dB
- Uncertainty of Radiated Emission below 1GHz,  $Uc = \pm 4.0 \text{ dB}$
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB
- Uncertainty of total RF power, conducted,  $Uc = \pm 0.8 dB$
- Uncertainty of RF power density, conducted, Uc = ±2.6 dB
- Uncertainty of spurious emissions, conducted,  $Uc = \pm 2.7 dB$
- Uncertainty of Occupied Channel Bandwidth:  $Uc = \pm 2 \%$

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# 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX

Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.

# Software Setting

🗹 BlueTest3	_	□ ×		
Test Commands FCM EXT LB STEREO CODEC LB SETTLE PCM TONE PCM TONE STEREO PCM TIMING IN CTS RTS LB ENABLE DUT MODE BLE TEST TW	Test Arguments           Channel (0-39)         39           Length (0-37)         37           Bit pattern (0-7)         0	Close Help Execute Cold Reset Warm Reset		
C:\Users\DELL\AppData\Loca	l\QTI Ltd\BlueTest3\testapplog.txt			
Radio Test CFG PKT successful Radio Test TXDATAI successful Radio Test TXDATAZ successful Radio Test TXDATAZ successful Radio Test CFG PKT successful Radio Test CFG PKT successful Radio Test CFG PKT successful		^		
Radio lest CFO FRI Successful BLE TEST TX successful Chip cold reset : success BLE TEST TX successful BLE TEST TX successful BLE TEST TX successful	L			

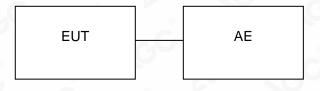
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# **5. SYSTEM TEST CONFIGURATION**

# 5.1. CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:



Conducted Emission Configure:

EUT	AE

# 5.2. EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Bluetooth USB	BT-06B	2AU6EDNS-T002	EUT
2	Control Box	N/A	USB-TTL	AE
3	PC	Huawei	Boh-WAQ9RP	AE
4	PC Adapter	Huawei	N/A	AE

# 5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(3)	Peak Output Power	Compliant
15.247 (a)(2)	6 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.247 (e)	Maximum Conducted Output Power Density	Compliant
15.209	Radiated Emission	Compliant
15.207	Conducted Emission	Compliant

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# 6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance (Shenzhen) Co., Ltd is accredited by A2LA

# TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	May 15, 2020	May 14, 2021
LISN	R&S	ESH2-Z5	100086	Jul. 03, 2020	Jul. 02, 2021
Test software	R&S	ES-K1(Ver.V1.71)	N/A	N/A	N/A

# TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	May 15, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 07, 2020	Dec. 06, 2021
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 21, 2019	Sep. 20, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 17, 2019	May 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021
Test software	Tonscend	JS32-RE (Ver.2.5)	C N/A	N/A	N/A

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# 7. PEAK OUTPUT POWER

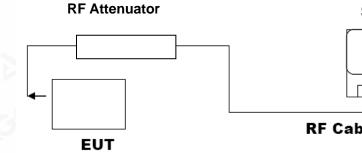
# 7.1. MEASUREMENT PROCEDURE

For peak power test:

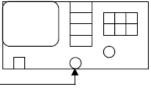
- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. RBW≥DTS bandwidth
- 3. VBW≥3\*RBW.
- 4. SPAN≥VBW.
- 5. Sweep: Auto.
- 6. Detector function: Peak.
- 7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

# 7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) PEAK POWER TEST SETUP



# **Spectrum Analyzer**



**RF** Cable

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#### 7.3. LIMITS AND MEASUREMENT RESULT

	PEAK OUTPUT POWER MEASURE		
Frequency (GHz)	FOR GFSK MOUDULAT Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.402	4.790	30	Pass
2.440	6.350	30	Pass
2.480	7.174	30	Pass

CH0

🚺 Keysight Spectrum Analyzer - Swept SA					
RL         RF         50 Ω         AC           Center Freq 2.402000000	CORREC GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	01:34:48 PM Dec 21, 2020 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast +++ In	ig: Free Run tten: 30 dB	Avg Hold: 100/100	2.402 230 GHz 4.790 dBm	Auto Tune
10.0		<sup>1</sup>			Center Freq 2.402000000 GHz
-10.0					Start Freq 2.399500000 GHz
-20.0					<b>Stop Freq</b> 2.404500000 GHz
-40.0					CF Step 500.000 kHz <u>Auto</u> Man
-60.0					Freq Offset 0 Hz
Center 2.402000 GHz #Res BW 1.5 MHz	#VBW 5.0	MHz	Sweep 1	Span 5.000 MHz .000 ms (1001 pts)	
MSG			STATUS		

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CH39

Keysight Spectrum Analyzer - Swept SA			1		
RL RF 50 Ω AC Center Freq 2.48000000		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	01:41:01 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE M WWWWW	Frequency
	PNO: Fast ++ IFGain:Low	Trig: Free Run Atten: 30 dB	Avg Hold: 100/100	DET PNNNN	
10 dB/div Ref 20.00 dBm			Mkr	2.479 705 GHz 7.174 dBm	Auto Tun
- <b>og</b> 10.0		<b>1</b>			<b>Center Fre</b> 2.480000000 GH
0.00					Start Fre
20.0					<b>Stop Fre</b> 2.482500000 GH
40.0					CF Sto 500.000 k <u>Auto</u> M
50.0					Freq Offs 0
70.0					
Center 2.480000 GHz #Res BW 1.5 MHz	#VBW	5.0 MHz	Sweep	Span 5.000 MHz 1.000 ms (1001 pts)	
ISG			STATU	s	

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# 8.6 DB BANDWIDTH

#### 8.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 kHz, VBW $\ge$ 3×RBW.
- 4. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

#### 8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

#### **8.3. LIMITS AND MEASUREMENT RESULTS**

	LIMITS AND MEASUR	REMENT RESULT	
Annlieghle Limite		Applicable Limits	
Applicable Limits	Test Data	(kHz)	Criteria
	Low Channel	697.9	PASS
>500KHZ	Middle Channel	694.6	PASS
	High Channel	697.7	PASS

#### 01:34:36 PM Dec 21, 2020 Radio Std: None Center Freq: 2.40200000 GHz Trig: Free Run Avg|Hol #Atten: 30 dB Frequency 2.402000000 GHz Avg|Hold:>100/100 Radio Device: BTS #IFGain:Low Ref 20.00 dBm **Center Freq** 2.402000000 GHz Span 3 MHz Center 2.402 GHz CF Step #Res BW 100 kHz #VBW 300 kHz Sweep 1 ms 300.000 k Auto Mar **Total Power** 11.2 dBm **Occupied Bandwidth** 1.0478 MHz **Freq Offset** 0 H **Transmit Freq Error** -12.737 kHz **OBW Power** 99.00 % x dB Bandwidth 697.9 kHz x dB -6.00 dB

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

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#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



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# 9. CONDUCTED SPURIOUS EMISSION

#### 9.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

#### 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

#### 9.3. MEASUREMENT EQUIPMENT USED

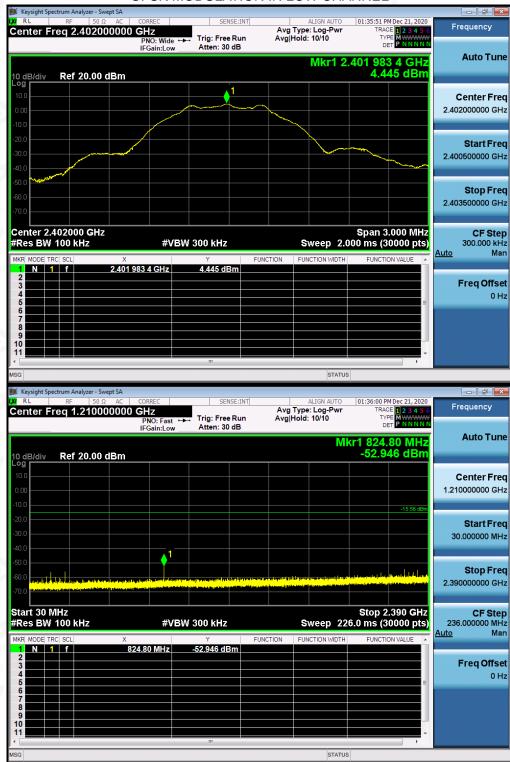
The same as described in section 6.

#### 9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEA	SUREMENT RESULT	
	Measurement Re	sult
Applicable Limits	Test Data	Criteria
In any 100 kHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the reference level	PASS

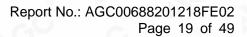
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# TEST RESULT FOR ENTIRE FREQUENCY RANGE GFSK MODULATION IN LOW CHANNEL

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	ectrum Analyzer - Sw									-	
Center F	RF 50 Ω req 13.741		CORREC GHZ	SEN	NSE:INT		ALIGN AUTO e: Log-Pwr		M Dec 21, 2020	Freq	uency
Genter			PNO: Fast ↔ IFGain:Low	Trig: Free Atten: 30		Avg Hold:		TYP			
10 dB/div	Ref 20.00	dBm					Mk	r1 7.200 -28.5	6 9 GHz 51 dBm	A	uto Tune
10.0 0.00 -10.0									-15.56 dBm		<b>nter Freq</b> 50000 GHz
-20.0		↓ <sup>1</sup>									Start Freq 00000 GHz
-50.0 -60.0 -70.0							ka ila ta ser della				Stop Freq 00000 GHz
Start 2.48 #Res BW	100 kHz	X		W 300 kHz Y	FUNC		Sweep 2	2.152 s (3	25.00 GHz 00000 pts)	2.25168 <u>Auto</u>	<b>CF Step</b> 50000 GHz Man
1 N 1 2 3 3 4 5 6 7 8 9 9		7.20	06 9 GHz	-28.551 dB						Fre	e <b>q Offset</b> 0 Hz
11 MSG				III			STATUS	3			

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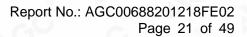
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 E-mail: agc@agc-cert.com



8		DULATION		TAININEL	
Keysight Spectrum Analyzer -	Swept SA Ω AC CORREC	SENSE:INT	ALIGN AUTO	01:39:16 PM Dec 21, 2020	
Center Freq 2.440	000000 GHz PNO: Wide ↔ IFGain:Low	Trin Free Prov	Avg Type: Log-Pwr Avg Hold: 10/10	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNN	Frequency
	I Guilleow		Mkr1 2	439 981 3 GHz	Auto Tune
10 dB/div Ref 20.0	0 dBm			6.098 dBm	
10.0		<b>1</b>			Our ter Free
0.00					Center Freq 2.440000000 GHz
-10.0					2.440000000 GH2
-20.0					
-30.0				~	Start Freq
-40.0					2.438500000 GHz
-50.0				an and a second second	
-60.0					Stop Freq
-70.0					2.441500000 GHz
-70.0					
Center 2.440000 GH #Res BW 100 kHz		V 300 kHz	Sweep 2.0	Span 3.000 MHz 100 ms (30000 pts)	CF Step 300.000 kHz
MKR MODE TRC SCL	Х		FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f	2.439 981 3 GHz	6.098 dBm			_
3 4					Freq Offset 0 Hz
5				E	0 Hz
6 7					
8					
10				Ţ	
•		m		ħ	
MSG			STATUS		
📁 Keysight Spectrum Analyzer -					
Center Freq 1.215	Ω AC CORREC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	01:39:25 PM Dec 21, 2020 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast ↔ IFGain:Low	Trig: Free Run Atten: 30 dB	Avg Hold: 10/10	DET PNNNN	
			Mkr	1 2.362 24 GHz	Auto Tune
10 dB/div Ref 20.0	0 dBm			-53.840 dBm	
Log					
10.0					Center Freq
0.00					1.215000000 GHz
-10.0				-13.9U dBm	
-20.0					Start Freq
-30.0					30.000000 MHz
-40.0				1	
					Stop Freq
-70.0				al es de la plate las sets est de la constation de	2.40000000 GHz
Start 30 MHz #Res BW 100 kHz		V 300 kHz	0	Stop 2.400 GHz 8.0 ms (30000 pts)	CF Step 237.000000 MHz
			· · · · ·		Auto Man
MKR MODE TRC SCL	× 2.362 24 GHz	√ -53.840 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	
2 3					Freq Offset
4					0 Hz
5				E	
7 8					
9					
11					
MSG		m	STATUS	•	

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	ectrum Analyzer - Sv										
Center F	RF 50 S req 13.741			SEN	NSE:INT		ALIGN AUTO e: Log-Pwr		M Dec 21, 2020	Frequ	uency
Center		F	PNO: Fast ++ FGain:Low	Trig: Free Atten: 30		Avg Hold:		TYF			
10 dB/div	Ref 20.00	dBm					Mk		9 5 GHz 53 dBm	Au	uto Tune
Log 10.0 0.00 -10.0									-13.9U abm		nter Freq 60000 GHz
-20.0 -30.0 -40.0											<b>tart Freq</b> 10000 GHz
-50.0 -60.0 -70.0							Leville Hiller of a second				<b>top Freq</b> 10000 GHz
Start 2.48 #Res BW	100 kHz	X	#VBW	V 300 kHz Y	FUNC		Sweep 2	2.152 s (3	5.00 GHz 0000 pts)		CF Step 60000 GHz Man
1         N         1           2         3         4           3         4         5           6         6         6           7         8         9           9         10         10			9 5 GHz	-21.753 dB						Fre	e <b>q Offset</b> 0 Hz
11 MSG				m			STATUS	3			

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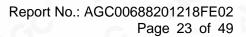
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Kausiaht Casstern Archar					
I Keysight Spectrum Analyzer - Sw Center Freq 2.48000	AC CORREC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:03 PM Dec 21, 2020	Frequency
	PNO: Wide IFGain:Low	Atten: 30 dB	Avginola. 10/10	TYPE MWWWWW DET PNNNN	
			Mkr1 2.	479 977 7 GHz	Auto Tune
10 dB/div Ref 20.00	dBm			6.966 dBm	
10.0		<sup>1</sup>			Center Fred
0.00			$\sim$		2.480000000 GHz
-10.0					
-20.0					Start Fred
-30.0				$\sim$	2.478500000 GHz
-40.0					
-50.0					Stop Fred
-60.0					2.481500000 GH
-70.0					
Center 2.480000 GHz #Res BW 100 kHz		SW 300 kHz	Sweep 2.0	Span 3.000 MHz 00 ms (30000 pts)	CF Step 300.000 kHz
MKR MODE TRC SCL	X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 F 2 3 4 4 4	2.479 977 7 GHz	6.966 dBm			Freq Offset
5				E	
7 8					
9					
11				•	
MSG			STATUS	, P	
	/ent S∆		STATUS	P	
J Keysight Spectrum Analyzer - Sw M RL RF 50 Ω	AC CORREC	SENSE:INT	ALIGN AUTO	01:42:13 PM Dec 21, 2020	Frequency
🚺 Keysight Spectrum Analyzer - Sw	AC CORREC 00000 GHz PNO: Fast	Trig: Free Run		01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE MWAAAAAAA	Frequency
Mexisght Spectrum Analyzer - Sw MRL RF 50 Ω Center Freq 1.21500	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trin Frank	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency
J Keysight Spectrum Analyzer - Sw M RL RF 50 Ω	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET PNNNN	
Keysight Spectrum Analyzer-Sw	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec
Keysight Spectrum Analyzer - Sw     RL RF 50 Ω     Center Freq 1.21500	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Fred
Keysight Spectrum Analyzer - Sw     RL RF 50 Ω     Center Freq 1.21500	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Fred
Keysight Spectrum Analyzer - Sw           R RL         RF         50 Ω           Center Freq 1.21500           O dB/div         Ref 20.00 (000)           000         000         000           -100         -200	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           10 dB/div         Ref 20.00 d           000	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec
Keysight Spectrum Analyzer - Sw           R RL         RF         50 Ω           Center Freq 1.21500           10 dB/div         Ref 20.00 d           000	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500         Ref 20.00 €         Context           10 dB/div         Ref 20.00 €         Ref 20.00 €         Context           10.0         0.0         0.0         Context	AC CORREC 00000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 MHz
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500         Ref 20.00 €         Context           10 dB/div         Ref 20.00 €         Ref 20.00 €         Context           10.0         0.0         0.0         Context	AC CORREC 000000 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 2 3 4 5 6 TYPE M DET P NN NN N 1 2.375 83 GHz	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 MHz
Keysight Spectrum Analyzer - Sw     (	AC CORREC 00000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 1 23 4 5 6 TYPE MANNAW OCT PMANNAW 1 2.375 83 GHz -52.947 dBm -4303 dbm -4303 dbm	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 MHz Stop Frec 2.400000000 GHz
Keysight Spectrum Analyzer - Sw     (RL RF 50 Ω     Center Freq 1.21500	AC CORREC OOOOO GHZ PNO: Fast IFGain:Low dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PMDec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 4 5 6 OPT 1 2 .375 83 GHz -52.947 dBm -4303 dBm -4303 dBm -4303 dBm -52.940 GHz 8.0 ms (30000 pts)	Frequency           Auto Tune           Center Freq           1.215000000 GHz           Start Freq           30.000000 MHz           Stop Freq           2.400000000 GHz           CF Step           237.000000 MHz
Keysight Spectrum Analyzer - Sw     RL	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 MKr	01:42:13 PMDec 21, 2020 TRACE 1 23 45 6 TYPE OCT PHILING 1 2.375 83 GHz -52.947 dBm -4303 dbr -4303 dbr -4303 dbr	Frequency           Auto Tune           Center Freq           1.215000000 GHz           Start Freq           30.000000 MHz           Stop Freq           2.400000000 GHz           CF Step           237.000000 MHz
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           Io dB/div         Ref 20.00 f           0 0         0         0           10 0         0         0           10 0         0         0           10 0         0         0         0           20 0         0         0         0           20 0         0         0         0           20 0         0         0         0           40 0         0         0         0           40 0         0         0         0           50 0         0         0         0           40 0         0         0         0         0           50 0         0         0         0         0           50 0         0         0         0         0           50 0         0         0         0         0         0           50 0         0         0         0         0         0           50 0         0         0         0         0         0           50 0         0         0	AC CORREC DOUDOO GHZ PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PMDec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 4 5 6 OPT 1 2 .375 83 GHz -52.947 dBm -4303 dBm -4303 dBm -4303 dBm -52.940 GHz 8.0 ms (30000 pts)	Frequency           Auto Tune           Center Freq           1.215000000 GHz           Start Freq           30.000000 MHz           Stop Freq           2.400000000 GHz           CF Step           237.000000 MHz           Auto
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           O dB/div         Ref 20.00 (           O g         Image: Constraint of the second sec	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 3 4 5 6 TYPE 1 2 2 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 GHz 2.400000000 GHz 237.000000 MHz Auto Mar
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           O dB/div         Ref 20.00 d           10 0	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PMDec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 4 5 6 OPT 1 2 .375 83 GHz -52.947 dBm -4303 dBm -4303 dBm -4303 dBm -52.940 GHz 8.0 ms (30000 pts)	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 GHz 2.400000000 GHz 237.000000 MHz Auto Mar
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           I o dB/div         Ref 20.00 d           0 o	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 3 4 5 6 TYPE 1 2 2 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 GHz 2.400000000 GHz 237.000000 MHz Auto Mar
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           Io dB/div         Ref 20.00 f           00	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 3 4 5 6 TYPE 1 2 2 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	Frequency Auto Tune Center Frec 1.215000000 GHz Start Frec 30.000000 MHz 2.400000000 GHz 2.37.000000 MHz Auto Mar
Keysight Spectrum Analyzer - Sw           RL         RF         50 Ω           Center Freq 1.21500           O         Ref 20.00 (           000	AC CORREC DODOOO GHZ PNO: Fast IFGain:Low dBm dBm dBm dBm dBm dBm dBm dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	01:42:13 PM Dec 21, 2020 TRACE 1 2 3 4 5 6 TYPE 1 2 3 4 5 6 TYPE 1 2 2 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	Frequency           Auto Tune           Center Freq           1.215000000 GHz           Start Freq           30.000000 MHz           Stop Freq           2.400000000 GHz           CF Step           237.000000 MHz

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	ight Spec		Analyzer - S																	
LXI RL Cent	er Fr	RF	50 13.750			ORREC			SE	NSE:IN	IT	Ava		ALIGN AUTO			PM Dec 21, CE 1 2 3			Frequency
Com		σq	15.750			PNO: I	Fast ∺		ig: Fre tten: 30		۱			10/10		т		₩₩₩		
						FGain	LOW		tten. o					M	kar	174	04G			Auto Tune
10 dB	Idiu	Doi	20.00	dB	m									IV			10 di			
Log [		Ke	20.00																	
10.0																		_		Center Freq
0.00																			1:	3.750000000 GHz
-10.0				+	1=												-13.0	3 dBm		
-20.0																		_		Start Freq
-30.0		_																_	:	2.500000000 GHz
-40.0																		_		
-50.0				+									در اس دانده	data		No. of control in the	the state of the s			Oton From
-60.0	a kate					ter dirit			a leader				addina and	Califfranka ( 1		Sec. Heater	- Print and a second		2	<b>Stop Freq</b> 5.00000000 GHz
-70.0	Contraction of the local division of the loc																		23	5.000000000 GH2
	2.50															04.000	DE 00.0	SI I		
	2.50 BW						#VB۱	N 30	0 kHz					Sweep	2.	stop. 152 s f	25.00 G 30000 i	ofs)		CF Step 2.25000000 GHz
					Х				Y	_	ELIN	TION		CTION WIDT		`	ION VALUE	_	Au	
	N 1	f				0 4 G	Iz		010 dl	Зm	FUN	LIUN	FUN			FUNCI	ION VALUE	Ê		
2		-								$\rightarrow$								- 1		Freq Offset
4																				0 Hz
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Note: The peak emissions without marker on the above plots are fundamental wave and need not to compare with the limit.

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Web: http://cn.agc-cert.com/





# TEST RESULT FOR BAND EDGE GFSK MODULATION IN LOW CHANNEL

#### GFSK MODULATION IN HIGH CHANNEL



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# **10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY**

#### **10.1. MEASUREMENT PROCEDURE**

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set the SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 10.2 was used in this testing.

#### **10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)**

Refer to Section 7.2.

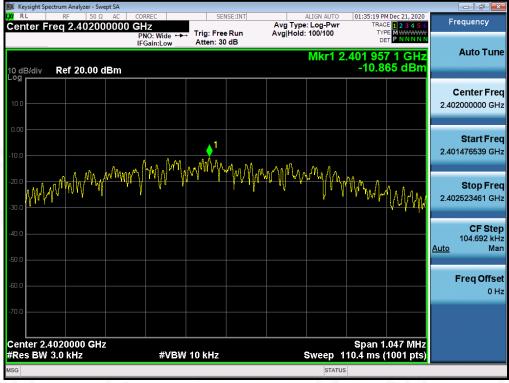
#### **10.3. MEASUREMENT EQUIPMENT USED**

Refer to Section 6.

#### **10.4. LIMITS AND MEASUREMENT RESULT**

Channel No.	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-10.865	8	Pass
Middle Channel	-9.195	8	Pass
High Channel	-8.428	8	Pass

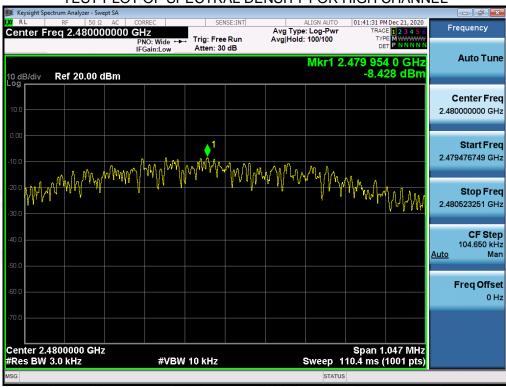
# TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



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# TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



#### TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

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# **11. RADIATED EMISSION**

#### **11.1. MEASUREMENT PROCEDURE**

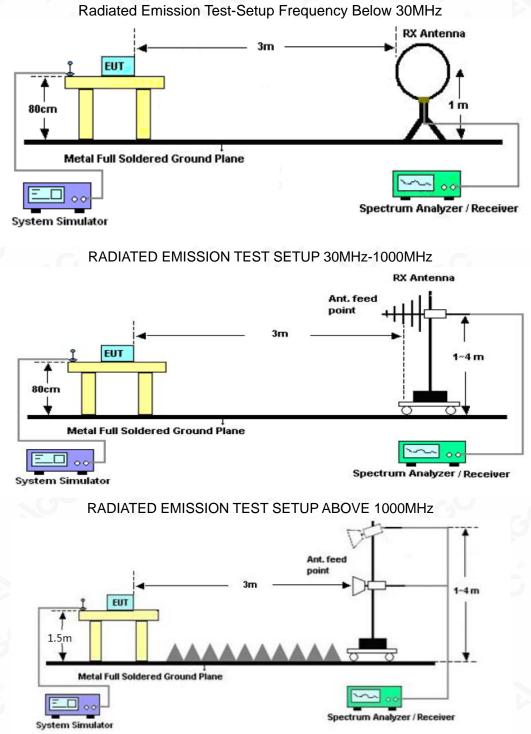
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

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#### 11.2. TEST SETUP



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 Attestation of Global Compliance(Shenzhen)Co., Ltd

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# **11.3. LIMITS AND MEASUREMENT RESULT**

15.209 Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

# 11.4. TEST RESULT

# **RADIATED EMISSION BELOW 30MHz**

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

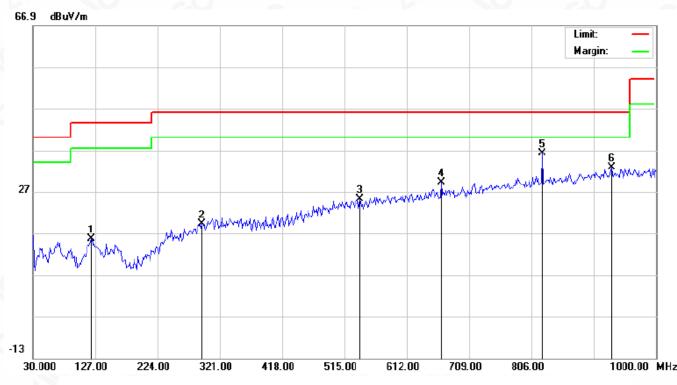
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RADIATED EMISSION BELOW 1GHZ	
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EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		120.5332	-2.17	17.87	15.70	43.50	-27.80	peak
2		293.5167	-1.73	20.97	19.24	46.00	-26.76	peak
3		539.2500	-0.58	25.76	25.18	46.00	-20.82	peak
4		665.3500	1.38	27.73	29.11	46.00	-16.89	peak
5	*	822.1666	5.59	30.70	36.29	46.00	-9.71	peak
6		930.4832	0.82	31.96	32.78	46.00	-13.22	peak

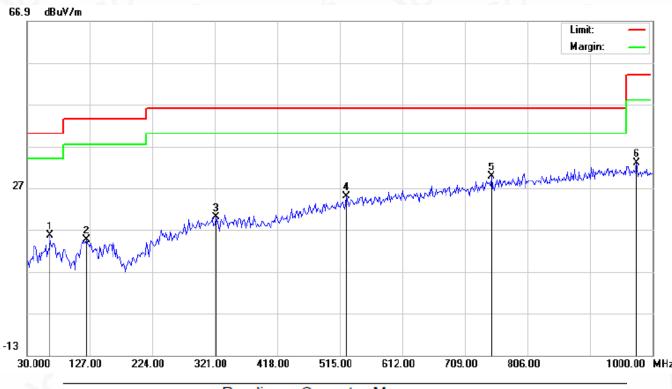
# **RESULT: PASS**

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EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	
1		65.5667	-0.97	16.56	15.59	40.00	-24.41	peak	
2		122.1500	-2.90	17.57	14.67	43.50	-28.83	peak	
3		322.6167	-1.29	21.36	20.07	46.00	-25.93	peak	
4		524.7000	-0.42	25.47	25.05	46.00	-20.95	peak	
5	*	749.4167	0.52	29.27	29.79	46.00	-16.21	peak	
6		974.1333	0.65	32.34	32.99	54.00	-21.01	peak	

#### RESULT: PASS Note:

- 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.
- 2. All test modes had been tested. The mode 3 is the worst case and recorded in the report.

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# **RADIATED EMISSION ABOVE 1GHZ**

EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	- Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4804.000	44.19	0.08	44.27	74	-29.73	peak
4804.000	36.54	0.08	36.62	54	-17.38	AVG
7206.000	39.22	2.21	41.43	74	-32.57	peak
7206.000	32.08	2.21	34.29	54 💿	-19.71	AVG
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emark:		G .				- C
actor = Anter	nna Factor + Cable	Loss – Pre-	-amplifier.			0

EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	44.86	0.08	44.94	74	-29.06	peak
4804.000	35.27	0.08	35.35	54	-18.65	AVG
7206.000	39.18	2.21	41.39	74	-32.61	peak
7206.000	31.54	2.21 💿	33.75	54	-20.25	AVG
8		- 66-				

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
) (MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4880.000	44.55	0.14	44.69	74	-29.31	peak
4880.000	36.04	0.14	36.18	54	-17.82	AVG
7320.000	40.15	2.36	42.51	74	-31.49	peak
7320.000	32.43	2.36	34.79	54	-19.21	AVG
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ctor = Anter	na Factor + Cable	Loss – Pre-	amplifier.			- 6

EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	- Value Type
4880.000	46.31	0.14	46.45	74	-27.55	peak
4880.000	38.43	0.14	38.57	54	-15.43	AVG
7320.000	41.26	2.36	43.62	74	-30.38	peak
7320.000	33.18	2.36 💿	35.54	54	-18.46	AVG
			0			
				0		

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4960.000	45.62	0.22	45.84	74	-28.16	peak
4960.000	36.45	0.22	36.67	54	-17.33	AVG
7440.000	38.79	2.64	41.43	74	-32.57	peak
7440.000	30.21	2.64	32.85	54	-21.15	AVG
8	© 1				6	
emark:	- 6	8			- 6	8
ctor = Anter	na Factor + Cable	Loss – Pre-	amplifier.			- 6

EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4960.000	44.97	0.22	45.19	74	-28.81	peak
4960.000	35.36	0.22	35.58	54	-18.42	AVG
7440.000	39.48	2.64	42.12	74	-31.88	peak
7440.000	29.74	2.64	32.38	54	-21.62	AVG
mark:		- C				0

Factor = Antenna Factor + Cable Loss – Pre-amplifier

# **RESULT: PASS**

#### Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

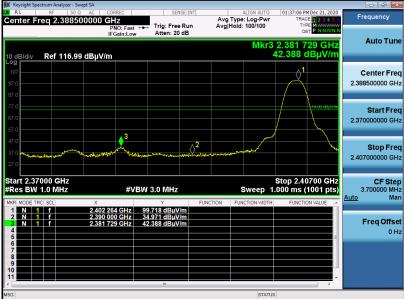
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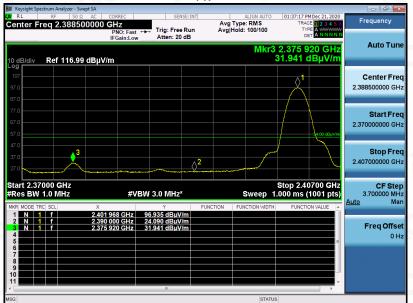
TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS						
EUT	Bluetooth USB Adapter	Model Name	BT-06B			
Temperature	25° C	Relative Humidity	55.4%			
Pressure	960hPa	Test Voltage	Normal Voltage			
Test Mode	Mode 1	Antenna	Horizontal			

### TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS

PK



AV



**RESULT: PASS** 

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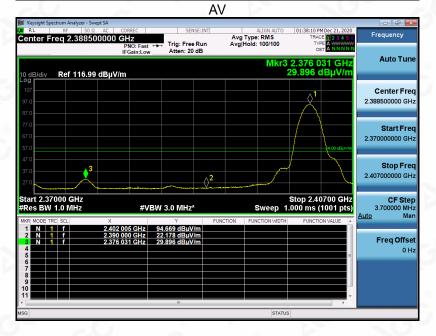
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EUT	Bluetooth USB Adapter	Model Name	BT-06B
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical





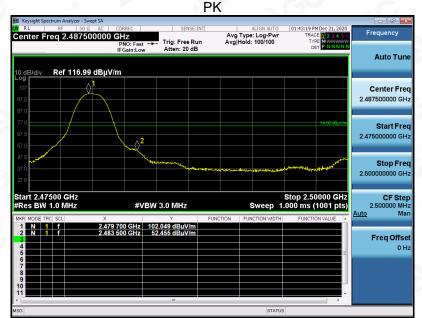
**RESULT: PASS** 

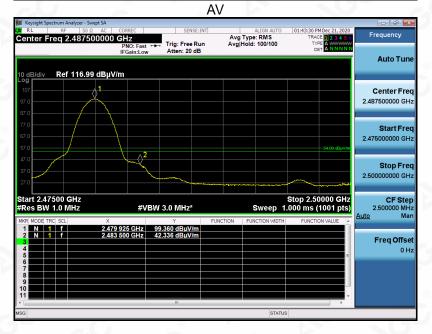
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EUT	Bluetooth USB Adapter	Model Name	BT-06B	
Temperature	25° C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	Mode 3	Antenna	Horizontal	
DI/				





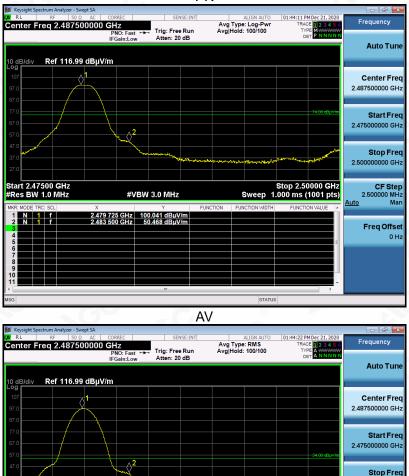
**RESULT: PASS** 

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EUT	Bluetooth USB Adapter	Model Name	BT-06B	
Temperature	25° C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	Mode 3	Antenna	Vertical	
РК				



# Image: div Ref 116.99 dBµV/m Center Freq 10 1</td

# **RESULT: PASS Note**: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.

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# **12. FCC LINE CONDUCTED EMISSION TEST**

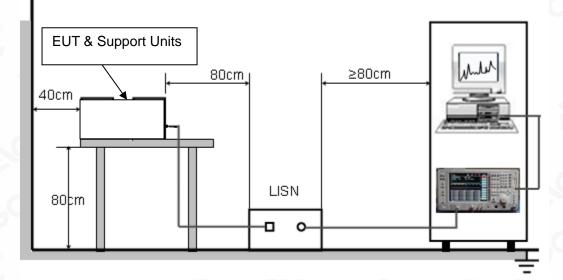
# **12.1. LIMITS OF LINE CONDUCTED EMISSION TEST**

Franciscov	Maximum RF Line Voltage		
Frequency	Q.P.( dBuV)	Average( dBuV)	
150kHz~500kHz	66-56	56-46	
500kHz~5MHz	56	46	
5MHz~30MHz	60	50	

Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

# 12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



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# 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

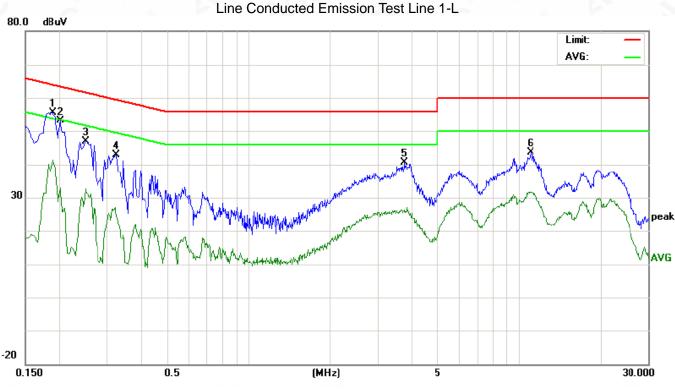
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

# 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

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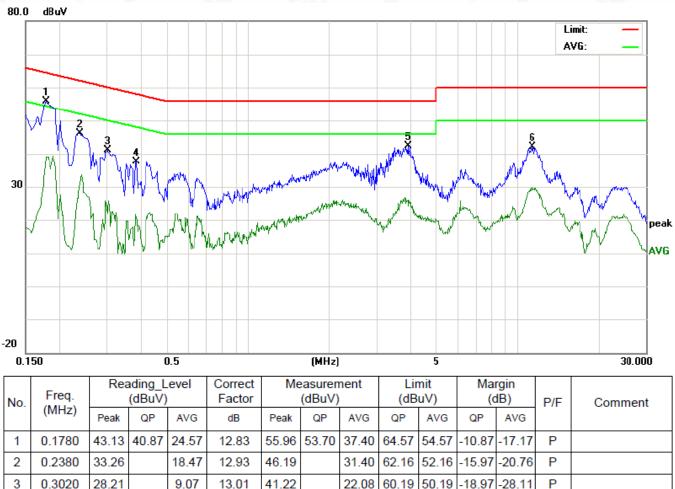
# 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Reading Level Correct Measurement Limit Margin Freq. (dBuV) Factor (dBuV) (dBuV) (dB) No. P/F Comment (MHz) Peak QP AVG dB Peak QP AVG QP AVG QP AVG 54.03 0.1900 42.86 40.09 24.94 12.85 55.71 52.94 37.79 64.03 -11.09 -16.24 Ρ 1 0.2020 40.23 20.03 53.10 53.52 Ρ 2 12.87 32.90 63.52 -10.42 -20.62 0.2500 12.95 46.91 61.75 51.75 -14.84 3 33.96 19.57 32.52 -19.23 Ρ 0.3260 29.83 11.29 42.96 59.55 49.55 -16.59 -25.13 Ρ 4 13.13 24.42 5 3.7860 28.25 13.99 12.33 40.58 26.32 56.00 46.00 -15.42 -19.68 Ρ 6 11.0780 30.66 18.60 12.94 43.60 31.54 60.00 50.00 -16.40 -18.46 Ρ

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Line Conducted Emission Test Line 2-N

#### **RESULT: PASS**

0.3860

3.9420

11.4100

38.08

30.25

28.96

4.29

14.01

16.85

13.44

12.05

13.07

51.52

42.30

42.03

4

5

6

Note: All the test modes had been tested, the mode 3 was the worst case. Only the data of the worst case would be record in this test report.

17.73

26.06

29.92

58.15

56.00

60.00

48.15

46.00

50.00

-6.63

-13.70

-17.97

30.42

-19.94

20.08

Ρ

Ρ

Ρ

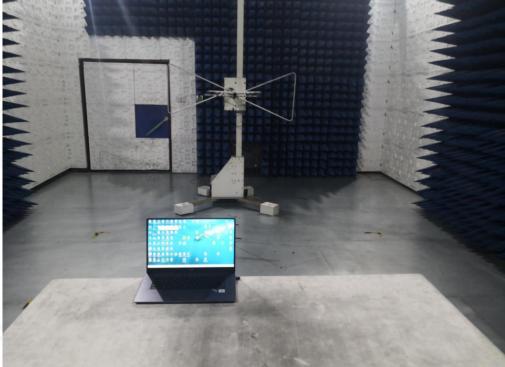
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated frame/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC in the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15da/Castra the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



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# APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP BELOW 1GHz



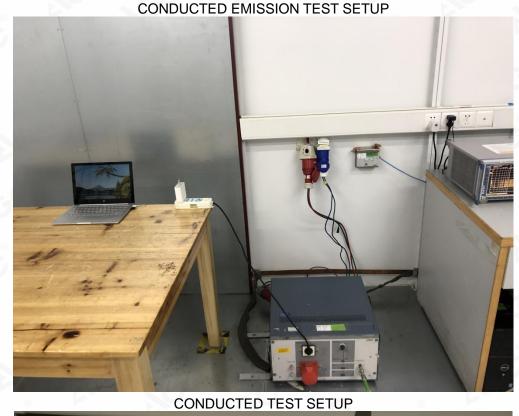
RADIATED EMISSION TEST SETUP ABOVE 1GHz



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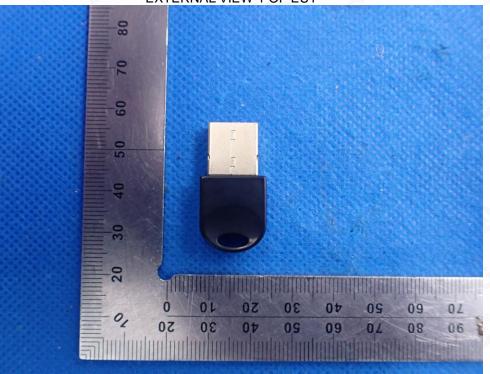
 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



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#### APPENDIX B: PHOTOGRAPHS OF EUT EXTERNAL VIEW-1 OF EUT

## **EXTERNAL VIEW-2 OF EUT**



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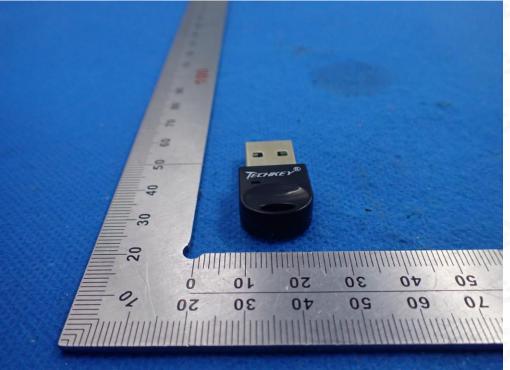
 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



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## **EXTERNAL VIEW-3 OF EUT**



**EXTERNAL VIEW-4 OF EUT** 



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#### **EXTERNAL VIEW-5 OF EUT**



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50

30

0,2

09

07

09

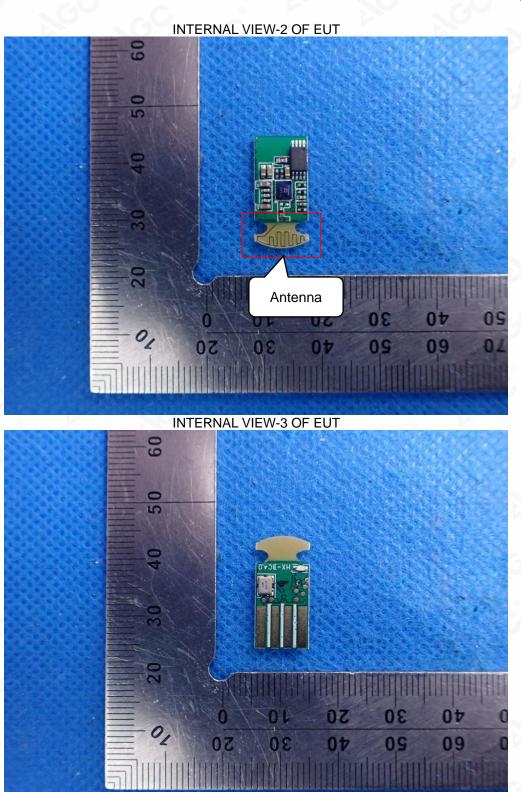
08

06

100

01





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#### **INTERNAL VIEW-4 OF EUT**

----END OF REPORT----

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#### Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.

5. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

6. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

7. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

9. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

10. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Perturn/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.