

FCC TEST REPORT

For Guangdong Bekey Technology Co., Ltd. Wireless Charging Stand Test Model: V6

Additional Model No.: V5, V7, V8

Prepared for Address	:	Guangdong Bekey Technology Co., Ltd. R building, Dong Yuan Reservoir Region Immigration base, Butterfly Lodge Ind District, Dongyuan, Heyuan, Guangdong, China
Prepared by Address Tel Fax Web Mail	: : : : : : : : : : : : : : : : : : : :	Shenzhen LCS Compliance Testing Laboratory Ltd. 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China (+86)755-82591330 (+86)755-82591332 www.LCS-cert.com webmaster@LCS-cert.com
Date of receipt of test sample Number of tested samples Serial number Date of Test Date of Report		February 24, 2022 2 220221104A-1(Engineer sample), 220221104A-2(Normal sample) February 24, 2022 ~ March 03, 2022 March 04, 2022



Scan code to check authenticity



FCC TEST REPORT FCC CFR 47 PART 15C

Report Reference No	: LCS220221104AEA				
Date Of Issue	: March 04, 2022				
Testing Laboratory Name	: Shenzhen LCS Compliance Testi	ng Laboratory Ltd.			
Address	101, 201 Bldg A & 301 Bldg C, Juji Yabianxueziwei, Shajing Street, Bao 518000, China				
	Full application of Harmonised stan	dards ∎			
Testing Location/ Procedure	Partial application of Harmonised st	andards			
	Other standard testing method \square				
Applicant's Name	:Guangdong Bekey Technology Co., Ltd.				
Address	R building, Dong Yuan Reservoir Region Immigration base, : Butterfly Lodge Ind District, Dongyuan, Heyuan, Guangdong, China				
Test Specification					
Standard	EFCC CFR 47 PART 15C				
Test Report Form No	: LCSEMC-1.0				
TRF Originator	Shenzhen LCS Compliance Testing	Laboratory Ltd.			
Master TRF	: Dated 2011-03				
This publication may be reproduced Shenzhen LCS Compliance Testing the material. Shenzhen LCS Compli	g Laboratory Ltd. All rights reserve d in whole or in part for non-comme Laboratory Ltd. is acknowledged as ance Testing Laboratory Ltd. takes n ng from the reader's interpretation of t	ercial purposes as long as the copyright owner and source of o responsibility for and will not			
Test Item Description	: Wireless Charging Stand				
Trade Mark	: SooPii				
Test Model	: V6				
Power Supply	Input: 5V-2A, 9V-2A, 12V-1.5A Wireless Charger Output:15W/10W				
Result	: Positive				
Compiled by:	Supervised by:	Approved by:			
Diamond In	Jin Wang	Grino Linoz			
Diamond Lu/ Administrator	Jin Wang/ Technique principal	Gavin Liang/ Manager			



Г

٦

FCC TEST REPORT

Т

Test Report No. : LCS220	March 04, 2022 Date of issue	
Test Model	: V6	
EUT	: Wireless Charging Star	nd
Applicant	U	Reservoir Region Immigration base,
Address	: Butterfly Lodge Ind Disi China	trict, Dongyuan, Heyuan, Guangdong,
Telephone	: /	
Fax	: /	
Manufacturer	: Guangdong Bekey Te	UU
Address	U	Reservoir Region Immigration base, trict, Dongyuan, Heyuan, Guangdong,
Telephone	: /	
Fax	: /	
Factory	: Guangdong Bekey Te	chnology Co., Ltd.
Address		Reservoir Region Immigration base, trict, Dongyuan, Heyuan, Guangdong,
Telephone	: /	
Fax	: /	

Test Result	Positive
-------------	----------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



Revision History

Report Version	Issue Date	Revision Content	Revised By
000	March 04, 2022	Initial Issue	



TABLE OF CONTENTS

1. GENERAL INFORMATION	6
1.1 Description of Device (EUT)	6
1.2 Support equipment List	6
1.3 External I/O Cable	6
1.4 Description of Test Facility	6
1.5 Statement of the Measurement Uncertainty	7
1.6 Measurement Uncertainty	
1.7 Description of Test Modes	
2. TEST METHODOLOGY	
2.1 EUT Configuration	
2.2 EUT Exercise	
2.3 General Test Procedures	
2.3.1 Conducted Emissions 2.3.2 Radiated Emissions	
3. SYSTEM TEST CONFIGURATION	
3.1 Justification	
3.2 EUT Exercise Software 3.3 Special Accessories	
3.4 Block Diagram/Schematics	
3.5 Equipment Modifications.	
3.6 Test Setup	
4. SUMMARY OF TEST EQUIPMENT.	
5. SUMMARY OF TEST RESULT	11
6. POWER LINE CONDUCTED MEASUREMENT	.12
7. RADIATED EMISSION MEASUREMENT	
7.1. Block Diagram of Test Setup	
7.1. Block Diagram of Test Setup 7.2 Radiated Emission Limit	. 15
7.2. Radiated Emission Limit	. 15
7.2. Radiated Emission Limit 7.3. EUT Configuration on Measurement	. 15 . 16 16
7.2. Radiated Emission Limit	. 15 . 16 16 16
 7.2. Radiated Emission Limit	. 15 . 16 16 16 17 17
 7.2. Radiated Emission Limit	. 15 . 16 16 16 17 17 18
 7.2. Radiated Emission Limit	. 15 . 16 16 16 17 17 18
 7.2. Radiated Emission Limit	. 15 . 16 16 17 17 17 18
 7.2. Radiated Emission Limit	15 16 16 17 17 17 18 22 22
 7.2. Radiated Emission Limit	. 15 . 16 16 17 17 17 18 22 22 23
 7.2. Radiated Emission Limit	. 15 . 16 16 17 17 17 18 22 22 23
 7.2. Radiated Emission Limit	. 15 . 16 . 16 . 17 . 17 . 17 . 18 . 22 . 22 . 23 . 24

1. GENERAL INFORMATION

1.1 [1.1 Description of Device (EUT)						
E	EUT	: Wireless Charging Stand					
Т	Fest Model	: V6					
A	Additional Model No.	: V5, V7, V8					
Ν	Model Declaration	: PCB board, structure and internal of these model(s) are the same, So no additional models were tested					
F	Power Supply	: Input: 5V=2A, 9V=2A, 12V=1.5A Wireless Charger Output:15W/10W/7.5W/5W					
F	Hardware Version	: M2110P-01 REV1.0 20210825					
S	Software Version	: CWT2043 QFN					
V	Wireless Charging	:					
	Dperating Frequency	: 110.3~205KHz					
Ν	Modulation Type	: CW (Continuous Wave)					
A	Antenna Type	: Coil Antenna					

1.2 Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate	
OPPO	Adapter	OP52KAUH		FCC	
HONOR	phone			FCC	

Note: Auxiliary equipment is provided by the laboratory.

1.3 External I/O Cable

I/O Port Description	Quantity	Cable	
Type-C USB Port	1	N/A	

1.4 Description of Test Facility

NVLAP Accreditation Code is 600167-0. FCC Designation Number is CN5024 CAB identifier is CN0071. CNAS Registration Number is L4595. Test Firm Registration Number: 254912

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.



1.5 Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6 Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
		9KHz~30MHz	3.10dB	(1)
		30MHz~200MHz	2.96dB	(1)
Radiation Uncertainty		200MHz~1000MHz	3.10dB	(1)
		1GHz~26.5GHz	3.80dB	(1)
		26.5GHz~40GHz	3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	1.63dB	(1)
Power disturbance :		30MHz~300MHz	1.60dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.7 Description of Test Modes

Equipment under test was operated during the measurement under the following conditions:

Charging and communication mode

Modulation Type: CW (Continuous Wave)

Test Mod	Test Modes					
Mode 1	AC/DC Adapter (9V/2A) + EUT + Mobile Phone (Battery Status: <1%)	Record				
Mode 2	AC/DC Adapter (9V/2A) + EUT + Mobile Phone (Battery Status: <50%)	Pre-tested				
Mode 3	AC/DC Adapter (9V/2A) + EUT + Mobile Phone (Battery Status: <99%)	Pre-tested				
Mode 4	AC/DC Adapter (12V/1.5A) + EUT + Mobile Phone (Battery Status: <1%)	Pre-tested				
Mode 5	AC/DC Adapter (12V/1.5A) + EUT + Mobile Phone (Battery Status: <50%)	Pre-tested				
Mode 6	AC/DC Adapter (12V/1.5A) + EUT + Mobile Phone (Battery Status: <99%)	Pre-tested				
Mode 7	AC/DC Adapter (5V/2A) + EUT + Mobile Phone (Battery Status: <1%)	Pre-tested				
Mode 8	AC/DC Adapter (5V/2A) + EUT + Mobile Phone (Battery Status: <50%)	Pre-tested				
Mode 9	AC/DC Adapter (5V/2A) + EUT + Mobile Phone (Battery Status: <99%)	Pre-tested				
Note: All	test modes were pre-tested, but we only recorded the worst case in this report.					

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR PART 15C 15.207 and DA 00-705.

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT was operated in the normal operating mode for Hopping Numbers and Dwell Time test and a continuous transmits mode for other tests.

According to its specifications, the EUT must comply with the requirements of the Section 15.207 under the FCC Rules Part 15 Subpart C.

2.3 General Test Procedures

2.3.1 Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1GHz and 1.5 m above ground plane above 1GHz. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10-2013

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in a normal condition.

3.2 EUT Exercise Software

N/A.

3.3 Special Accessories

N/A.

3.4 Block Diagram/Schematics

Please refer to the related document.

3.5 Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6 Test Setup

Please refer to the test setup photo.



4. SUMMARY OF TEST EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	MXA Signal Analyzer	Agilent	N9020A	MY49100040	2021-06-17	2022-06-16
2	SPECTRUM ANALYZER	R&S	FSP40	100503	2021-11-16	2022-11-15
3	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2021-09-25	2022-09-24
4	Positioning Controller	MF	MF-7082	/	2021-06-21	2022-06-20
5	EMI Test Software	EZ	EZ-EMC	/	N/A	N/A
6	EMI Test Receiver	R&S	ESR 7	101181	2021-06-21	2022-06-20
7	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2021-06-30	2024-07-01
8	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-06-30	2024-07-01
9	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-06-30	2024-07-01
10	RF Cable-R03m	Jye Bao	RG142	CB021	2021-06-21	2022-06-20
11	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2021-06-21	2022-06-20
12	EMI Test Receiver	R&S	ESPI	101840	2021-06-21	2022-06-20
13	Artificial Mains	R&S	ENV216	101288	2021-06-21	2022-06-20
14	10dB Attenuator	SCHWARZBECK	MTS-IMP-136	261115-001-0032	2021-06-21	2022-06-20
15	Broadband Preamplifier	SCHWARZBECK	BBV9745	9719-025	2021-06-21	2022-06-20
16	EMI Test Software	Farad	EZ	/	N/A	N/A



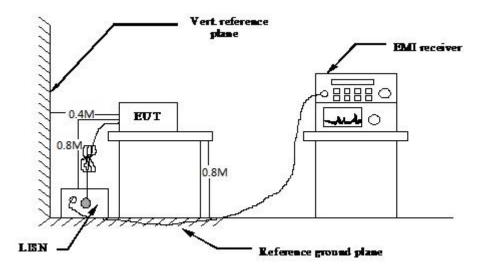
5. SUMMARY OF TEST RESULT

FCC Rules	Description of Test	Test Sample	Result
§15.207(a)	AC Conducted Emissions	Sample 1	Compliant
§15.209	Radiated Spurious Emissions	Sample 1	Compliant
§15.215	20 dB Bandwidth	Sample 1	Compliant

Remark: The measurement uncertainty is not included in the test result. N/A – Not Applicable!!!



6.1. Block Diagram of Test Setup



6.2. Standard Applicable

According to §15.207: For all the consumer devices which 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 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

Frequency Range	Limits (dBµV)	
(MHz)	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

* Decreasing linearly with the logarithm of the frequency

6.3 Test Results

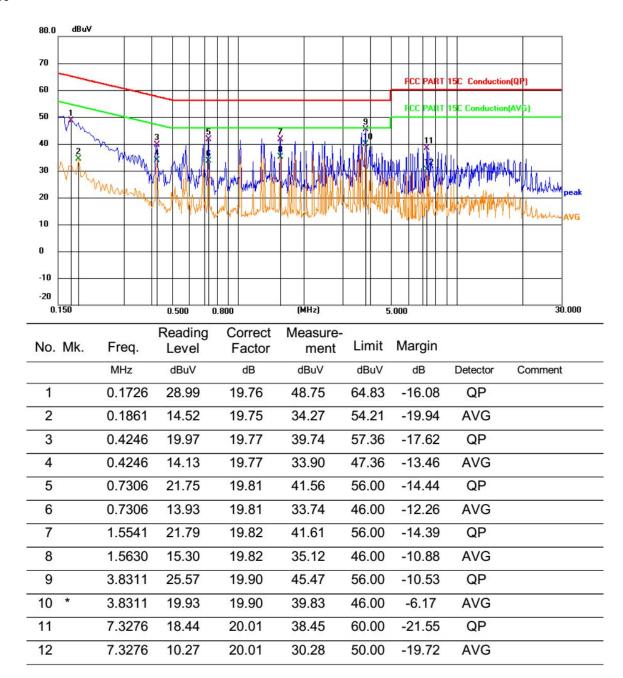
PASS

The test data please refer to following page.

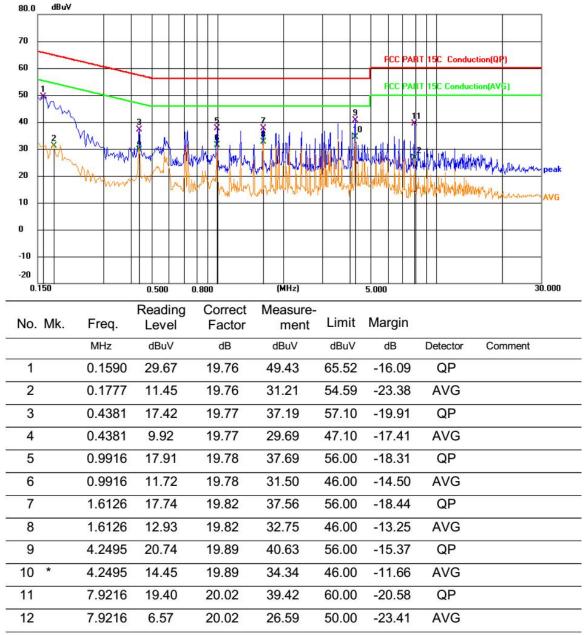
Temperature	22.7 ℃	Humidity	53.7%
Test Engineer	Kay Hu	Configurations	Transmit

AC Power Line Conducted Emission (Power input to adapter @ AC 120V/60Hz (Worst Case))

Line



Neutral



***Note: Pre-scan all modes and recorded the worst case results in this report. Margin=Reading level + Correct - Limit



I

Pre-amp

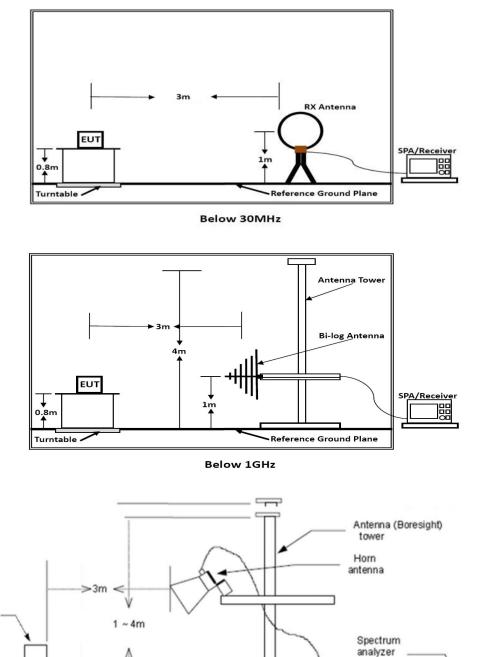
7. RADIATED EMISSION MEASUREMENT

7.1. Block Diagram of Test Setup

EUT

Turntable

1.5m



30cm

7.2. Radiated Emission Limit

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below 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

7.3. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.4. Operating Condition of EUT

(1) Setup the EUT as shown in Section 7.1.

7.5. Measuring Setting

The following table is the setting of spectrum analyzer and receiver.

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP/Average
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP/Average
Start ~ Stop Frequency	30MHz~1000MHz / RB 100kHz for QP

7.6. Test Procedure

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 1 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.



2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

- --- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- --- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- --- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- --- The measurement distance is 3 meter.
- --- The EUT was set into operation.

Premeasurement:

- --- The turntable rotates from 0° to 315° using 45° steps.
- --- The antenna is polarized vertical and horizontal.
- --- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

7.7. Test Results

PASS.

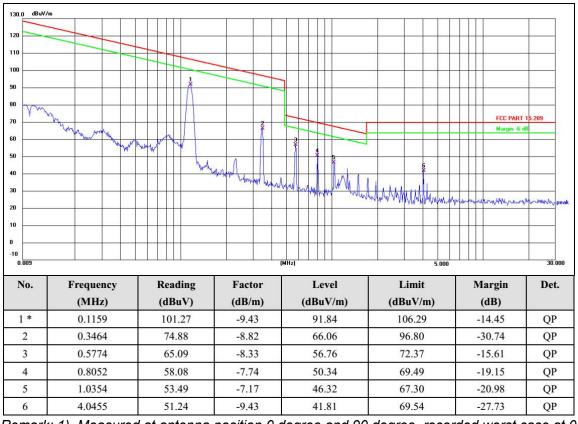
Only report the worst test data mode 1 in test report;

The test data please refer to following page:

Temperature	23.8°C	Humidity	52.5%
Test Engineer	Kay Hu	Configurations	Transmit



0.009 MHz - 30 MHz Horizontal



Remark: 1). Measured at antenna position 0 degree and 90 degree, recorded worst case at 0 degree.

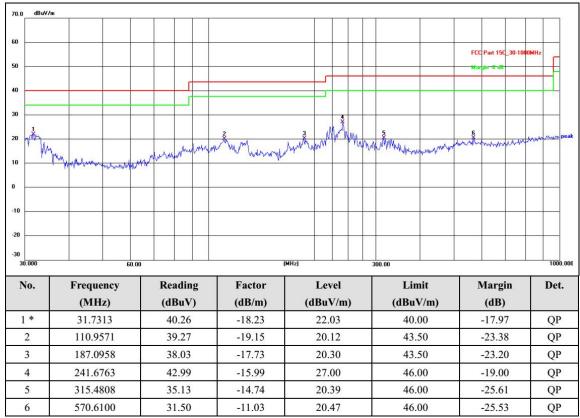
2). Margin=Reading level + Factor- Limit

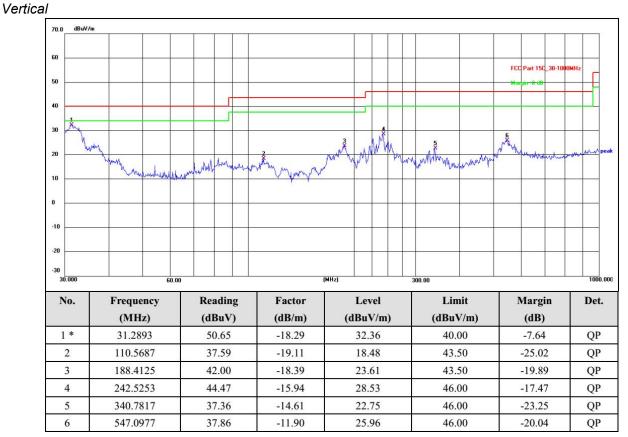
Shenzhen LCS Compliance Testing Laboratory Ltd. FCC ID: 2AVCH-V6 Report No.: LCS220221104AEA

Temperature	23.5°C	Humidity	52.2%
Test Engineer	Kay Hu	Configurations	Transmit

Below 1GHz

Horizontal



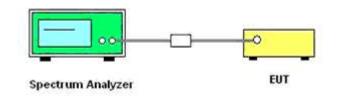


1). Emission level $(dBuV/m) = 20 \log Emission level (uV/m)$.

2). Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

8. 20 DB BANDWIDTH MEASUREMENT

8.1. Block Diagram of Test Setup



8.2. Test Procedure

Use the following spectrum analyzer settings:

Span = 500Hz

RBW = 100Hz

VBW = 300Hz

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).



8.3. Test Results

Test F	Test Result Of 99% and 20dB Bandwidth Measurement		
Test Frequency 20dB Bandwidth Limit			
(MHz)	(kHz)	(KHz)	
0.116 0.500 Non-Specified			

Result: Pass

Please refer to the following page for test plot.

Test plot of 99% and		idth Measu	rement
Agilent Spectrum Analyzer - Occupied BW	zo ub banaw		rement
Center Freq 116.000 kHz Cent	ense:PULSE ALIGN AUTO er Freq: 116.000 kHz Free Run Avg Hold>10/10	01:26:49 PMFeb 28, 2022 Radio Std: None	Span
#IFGain:Low #Atte	n: 10 dB	Radio Device: BTS	Span
10 dB/div Ref 0.00 dBm			500.00 Hz
Log -10.0			
-20.0			
-30.0			
-40.0			Full Span
-60.0	+		
-70.0			
-80.0			
Center 116.0 kHz		Span 500 Hz	
	#VBW 300 Hz	Sweep FFT	LastSpan
Occupied Bandwidth	Total Power -48	.9 dBm	
285 Hz			
Transmit Freq Error 1 Hz	OBW Power 9	99.00 %	
x dB Bandwidth 500 Hz	x dB -20	0.00 dB	
 MSG	STAT	us 🛃 AC coupled: Accy unspe	ec'd < 10MHz
().116 MHz		

9. PHOTOGRAPHS OF TEST SETUP

Please refer to separated files for Test Setup Photos of the EUT.

10. EXTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

11. INTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF REPORT------