

13.56 MHz Radio Test Report FCC ID: SIB-BGTAB-NV24A

IC: 6719D-BGTABNV24A

This report concerns (check one) : ☐ Original Grant ☐ Class II Change

Project No. : 1406C178 Equipment : dreamtab : BGTAB-NV24A Model Name

: Foxconn International Inc Applicant

Address : NO 2 ZIYOU ST TUCHENG DISTRICT NEW

TAIPEI, 236 Taiwan

Date of Receipt : Jun. 24, 2014

Date of Test : Jun. 24, 2014~ Aug. 08, 2014 | Sued Date : Aug. 11, 2014

Issued Date : Aug. 11, 2014 Tested by : BTL Inc.

Testing Engineer

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Declaration

BTLrepresents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (NML) of R.O.C., or National Institute of Standards and Technology (NIST) of U.S.A.

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FICP-7-1406C178	Original Issue.	Aug. 11, 2014

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1. CERTIFICATION

Equipment : dreamtab Brand Name : FUHU

Model Name: BGTAB-NV24A

Applicant : Foxconn International Inc.

Manufacturer: FUHU INC

Address : 909 N SEPULVEDA BLVD STE 540 EL SEGUNDO, CA 90245 Factory : HONGFUJIN Precision Electronics (Chong Qing) Co., Ltd.

Address : No.1, 1st E District RD., Shapingba District, Chongqing 401332, P.R. China

Date of Test : Jun. 24, 2014~ Aug. 08, 2014 Test Sample : ENGINEERING SAMPLE

Standard(s): FCC Part 15, Subpart C: 15.225 / ANSI C63.4: 2009

Canada RSS-210:2010; Canada RSS-GEN:2010

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FICP-7-1406C178) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 15, Subpart C: 15.225 / Canada RSS-210 :2010 ; RSS-GEN :2010				
Standard(Standard(s) Section Test Item		Judgment	Remark
15.207	RSS-GEN 7.2.2	Conducted emission	PASS	
15.35 / 15.205 / 15.209 / 15.225	RSS-210 Annex 2(A2.6)	Radiated emission	PASS	
15.225(e)	RSS-210 Annex 2(A2.6)	Frequency Stability	PASS	
15.203		Antenna Requirement	PASS	
	RSS-210 Annex 8(A8.5)	20dB Occupied Bandwidth Measurement	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this test report.

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2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02** and **DG-CB03** at the location of No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792

BTL's test firm number for FCC: 319330 BTL's test firm number for IC: 4428B-1

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC rules and for reference only.

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

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	3.4	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	Note
		9KHz~30MHz	V	3.79	
		9KHz~30MHz	Η	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Н	3.60	
DG-CB03	DG-CB03 CISPR	200MHz ~ 1,000MHz	V	3.86	
DG-CBUS CISEK	200MHz ~ 1,000MHz	Н	3.94		
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	Н	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	Н	4.14	

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3.GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	dreamtab		
Brand Name	FUHU		
Model Name	BGTAB-NV24A		
Model Difference	N/A		
	Operation Frequency:	13.56 MHz	
Product Description	Antenna Designation:	Loop Antenna	
1 Toddot Besonption	More details of EUT technical specification, please refer to the User's Manual.		
Power Source	#1 DC supplied from AC Adapter. Model: ADS-65LSI-19-3 19065G #2 Supplied from rechargeable Li-ion polymer battery. Brand / Model: McNair / MLP2462113-4S		
Power Rating	#1 I/P AC 100-240V~ 50/60Hz 1.5A O/P: DC 19V 3.42A #2 DC14.8V 1650mAh 24.42Wh		
Connecting I/O Port(s)	Please refer to the User's Manual		

Note:

1. Table for Filed Antenna

Ant.	Manufacturer	Model Name	Antenna Type
1	JIENG TAI	AH-JT-0219Y211	Loop Antenna

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3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX MODE

Conducted emission test		
Final Test Mode Description		
Mode 1	TX MODE	

Radiated emission test		
Final Test Mode Description		
Mode 1	TX MODE	

Frequency Stability test/ Antenna Requirement test/ 20dB Occupied Bandwidth Measurement			
Final Test Mode Description			
Mode 1	TX MODE		

Note:

(1) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on z-plane. Therefore only the test data of this z-plane was used for radiated emission measurement test.

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3.3 BLOCK [DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED)
	EUT	

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3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
-	-	-	-	-	-	

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

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4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Fraguency (MHz)	Class A (dBuV)		Class B	Standard	
Frequency (MHz)	Quasi-peak	Average	Quasi-peak	Average	Stariuaru
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

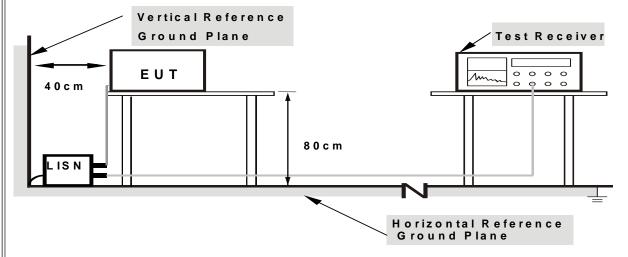
4.1.3 DEVIATION FROM TEST STANDARD

No deviation

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4.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting mode.

4.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC120V/60Hz

4.1.6 TEST RESULTS

Please refer to the Attachment A.

Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

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4.2 RADIATED EMISSION TEST

4.2.1 LIMIT

	FCC Part 15.209					
Frequency Field Strength Limitation			Field Strength Limitation at 3m Measurement			
(MHz)	(uV/m) Dist		(uV/m)	(dBuV/m)		
0.009 - 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80		
0.490 - 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40		
1.705 – 30.00	30	30 30m 100* 30 20log 30		20log 30 + 40		
30.0 – 88.0	100	3m	100	20log 100		
88.0 – 216.0	6.0 150 3m 150 2		20log 150			
216.0 – 960.0	200 3m		200	20log 200		
Above 960.0	500	3m	500	20log 500		
		FCC P	art 15.225(a)/(b)/(c)			
Frequency	Field Streng Limitation		Field Strength Limitation	n at 3m Measurement Dist		
(MHz)	(uV/m)	Dist	(uV/m)	(dBuV/m)		
13.553 – 13.567	15,848	30 m	15,848*100	124		
13.567 – 13.710	334	30 m	334*100	90.5		
13.110 – 13.410 13.710 – 14.010	106	30 m	106*100	80.5		

Note

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$. Example:

F.S Limit at 30m distance is 30uV/m, then F.S Limitation at 3m distance is adjusted as L_{d1} = $L_1 = 30 \text{uV/m} * (10)^2 = 100 * 30 \text{ uV/m}$

(4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

Margin Level = Measurement Value - Limit Value



4.2.2 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE: (FCC PART 15.209)

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

NOTE: (FCC PART 15.225)

- a. Spectrum Setting:
 - 9 KHz 150 KHz, RBW= 200Hz, VBW=200Hz, Sweep time = 200 ms. 150 K Hz – 30 MHz, RBW= 10 KHz, VBW=10 KHz, Sweep time = 200 ms.
 - 30 MHz 1000 MHz, RBW= 100 KHz, VBW=100 KHz, Sweep time = 200 ms.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- c. The Log-Bicon Antenna will use to test frequency range from 30MHz to 1000MHz and the Loop Antenna will use to test frequency below 30MHz.

4.2.3 DEVIATION FROM TEST STANDARD

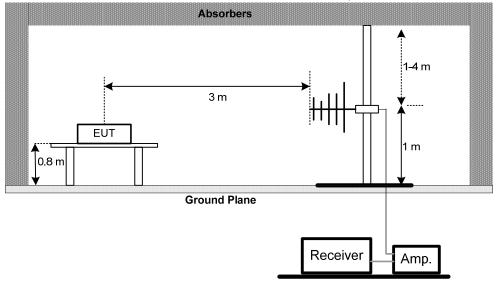
No deviation

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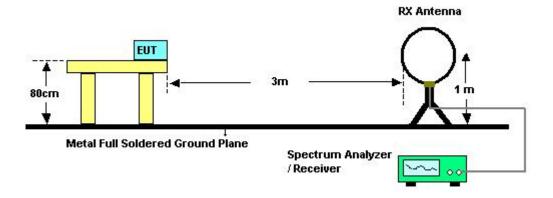


4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC14.8V

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4.2.7 TEST RESULTS (BELOW 30MHZ) - FCC PART 15.209 Please refer to the Attachment B.
4.2.8 TEST RESULTS - (30-1000MHZ) - FCC PART 15.209 Please refer to the Attachment C.
4.2.9 TEST RESULTS- FCC PART 15.225 Please refer to the Attachment D.

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4.3 FREQUENCY STABILITY MEASUREMENT

4.3.1 LIMIT

FCC Part 15.225(e)

The frequency tolerance of the carrier signal shall be maintained within +/-0.01% of the operating frequency over a temperature variation of - 20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

For battery operated equipment, the equipment tests shall be performed using a new battery.

4.3.2 TEST PROCEDURE

- a. The equipment under test was connected to an external AC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.
 - After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.
- b. At room temperature (25±5°C), an external variable AC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.

4.3.3 DEVIATION FROM TEST STANDARD

No deviation

4.3.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.3.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC14.8V

4.3.6 TEST RESULTS

Please refer to the Attachment E.

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5. 20dB SPECTRUM BANDWIDTH MEASUREMENT

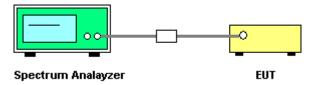
5.1. LIMIT OF 20dB BANDWIDTH MEASUREMENT

The 20dB bandwidth shall be specified in operating frequency band.

5.2.TEST PROCEDURES

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 10kHz RBW and 10kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

5.3. TEST SETUP LAYOUT



5.4. TEST DEVIATION

There is no deviation with the original standard.

5.5. EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.6. TEST RESULT

Please refer to the Attachment F.

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6. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Apr. 24, 2015
2	LISN	R&S	ENV216	100087	Nov. 09, 2014
3	Test Cable	N/A	C_17	N/A	Mar.14, 2015
4	EMI TEST RECEIVER	R&S	ESCS30	826547/022	Apr. 24, 2015
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Apr. 24, 2015

	Radiated Emission Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Apr. 24, 2015
2	Amplifier	HP	8447D	2944A09673	Apr. 24, 2015
3	Test Receiver	R&S	ESCI	100382	Apr. 24, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Antenna	ETS	3115	00075789	Apr. 24, 2015
6	Amplifier	Agilent	8449B	3008A02274	Apr. 24, 2015
7	Spectrum	Agilent	E4408B	US39240143	Nov. 09, 2014
8	Test Cable	HUBER+SUHNER	C-45	N/A	Apr. 29, 2015
9	Controller	СТ	SC100	N/A	N/A
10	Horn Antenna	EMCO	3115	9605-4803	Apr. 24, 2015
11	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Apr. 24, 2015
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct. 22, 2014

		6dB Bandwidt	th Measureme	ent	
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

Remark: "N/A" denotes no model name, serial no. or calibration specified. All calibration period of equipment list is one year.

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7. EUT TEST PHOTO

Conducted Measurement Photos





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Radiated Measurement Photos

9KHz to 30MHz





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Radiated Measurement Photos

30MHz to 1000MHz





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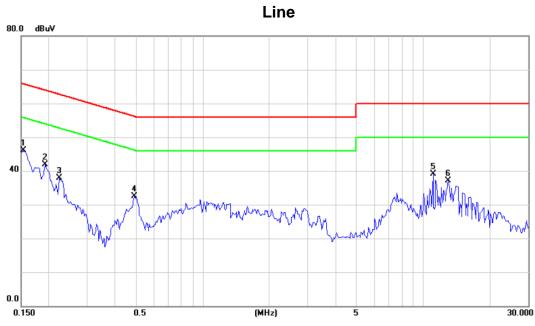


ATTACHMENT A - CONDUCTED EMISSION

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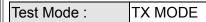




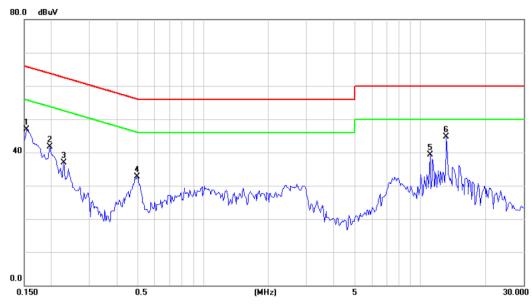
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1540	36.49	9.52	46.01	65.78	-19.77	peak	
2		0.1930	32.31	9.54	41.85	63.91	-22.06	peak	
3		0.2242	28.33	9.54	37.87	62.66	-24.79	peak	
4		0.4898	22.97	9.59	32.56	56.17	-23.61	peak	
5		11.0897	28.87	10.15	39.02	60.00	-20.98	peak	
6		12.9961	26.90	10.25	37.15	60.00	-22.85	peak	

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Neutral



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1540	37.38	9.52	46.90	65.78	-18.88	peak	
2	0.1970	32.13	9.53	41.66	63.74	-22.08	peak	
3	0.2281	27.45	9.53	36.98	62.52	-25.54	peak	
4	0.4977	23.11	9.58	32.69	56.04	-23.35	peak	
5	11.0897	29.01	10.22	39.23	60.00	-20.77	peak	
6 *	13.2110	34.39	10.36	44.75	60.00	-15.25	peak	

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ATTACHMENT B - RADIATED EMISSION	ON (9KHZ-30MHZ)

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Test Mode	:	TX Mode
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Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOLE
0.0156	0°	13.38	24.58	37.99	103.74	-65.75	AVG
0.0156	0°	14.24	24.58	38.84	123.74	-84.90	PEAK
0.0311	0°	6.76	23.60	30.40	97.75	-67.35	AVG
0.0311	0°	7.59	23.60	31.60	117.75	-86.15	PEAK
0.0385	0°	4.34	23.13	27.43	95.90	-68.47	AVG
0.0385	0°	5.76	23.13	28.83	115.90	-87.07	PEAK
0.0470	0°	3.15	22.59	25.71	94.16	-68.45	AVG
0.0470	0°	4.82	22.59	27.37	114.16	-86.79	PEAK
2.0604	0°	28.72	19.46	48.17	69.54	-21.37	QP
3.3738	0°	20.35	18.94	39.31	69.54	-30.23	QP

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOIE
0.0155	90°	13.16	24.30	37.48	123.80	-86.32	AVG
0.0155	90°	14.21	24.30	38.47	143.80	-105.33	PEAK
0.0311	90°	6.86	23.60	30.47	117.75	-87.28	AVG
0.0311	90°	7.73	23.60	31.39	137.75	-106.36	PEAK
0.0373	90°	5.91	23.20	29.13	116.17	-87.04	AVG
0.0373	90°	6.87	23.20	30.04	136.17	-106.13	PEAK
0.0470	90°	5.19	22.59	27.73	114.16	-86.43	AVG
0.0470	90°	6.11	22.59	28.68	134.16	-105.48	PEAK
2.0604	90°	29.65	19.46	49.09	69.54	-20.45	QP
3.2842	90°	17.14	18.93	36.05	69.54	-33.49	QP

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported \circ
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB); •
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor. •

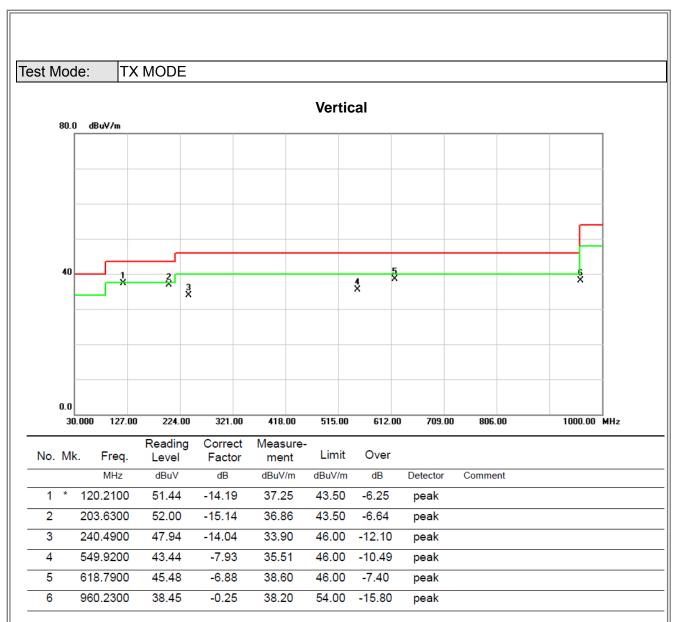
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АТ	TACHMENT C - RADIATED EMISSION (30MHZ TO 1000M	/IHZ)

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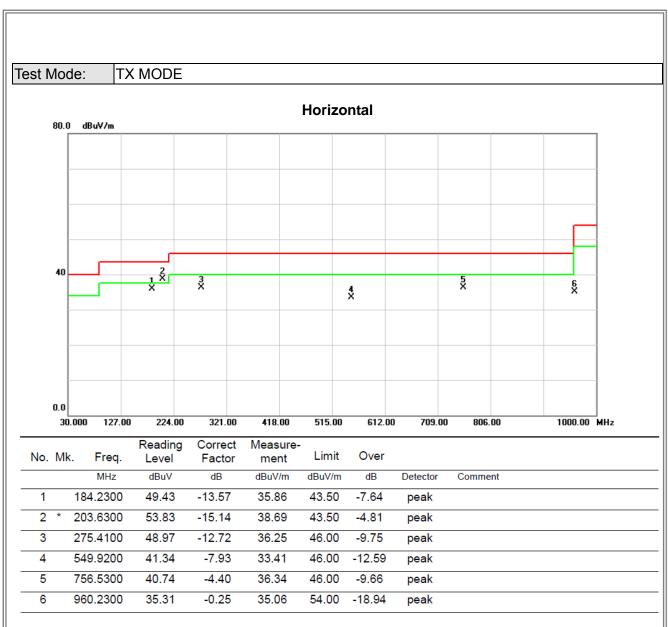




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ATTACHMENT D - RADIATED EMISSION (FCC PART 15.225)
ATTACHMENT D - RADIATED EMISSION (FCC PART 15.225)

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Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
13.560	0°	30.24	21.27	51.51	124.00	-72.49	
27.120	0°	15.36	21.77	37.13	69.54	-32.41	

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
13.560	90°	29.67	21.27	50.94	124.00	-73.06	
27.120	90°	13.41	21.77	35.18	69.54	-34.36	

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ATTACHMENT E - FREQUENCY S	TABILITY MEASUREMENT

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Test Mode: TX MODE

Frequency Stability Versus Environmental Temperature										
	Temperature (°C)	Voltage (DC)	Frequency (MHz)	Frequency Error (kHz)	Limit (kHz)	Result				
	20	120V	13.5599							
0 min	50	120V	13.5597	0.0003	+/- 1.356	PASS				
	-20	120V	13.5601	0.0001	+/- 1.356	PASS				
2 min	50	120V	13.5602	0.0002	+/- 1.356	PASS				
	-20	120V	13.5598	0.0002	+/- 1.356	PASS				
5 min	50	120V	13.5599	0.0001	+/- 1.356	PASS				
	-20	120V	13.5601	0.0001	+/- 1.356	PASS				
10 min	50	120V	13.5598	0.0002	+/- 1.356	PASS				
	-20	120V	13.5599	0.0001	+/- 1.356	PASS				

Fuequency Stability Versus Input Voltage										
Temperature (°C)		tage .C)	Frequency (MHz)	Frequency Error (kHz)	Limit (kHz)	Result				
20	V-nom	120V	13.5598	0.0002						
20	V-min	102V	13.5601	0.0001	+/- 1.356	PASS				
20	V-max	138V	13.5599	0.0001	+/- 1.356	PASS				

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ATTACHMENT F - 20dB SPECTRUM BANDWIDTH MEASUREMENT	

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