



FCC Test Report

FCC ID: 2ADBD-18080V6

Product: HEXA BlueM

Trade Name : HEXA

Model Number: WIN 18080

Serial Model: WIN I8080X(X=A~Z)

Report No.: NTEK-2014NT0928515F3

Prepared for

Shen zhen Vinsdom Electronics CO.,Ltd.

 4^{TH} FLOOR, BUILDING 2 HUANGTIAN HENG CHANG RONG HIGH-TECH INDUSTRIAL PARK, BAOAN DISTRICT, SHEN ZHEN

Prepared by

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Applicant's name: Shen zhen Vinsdom Electronics CO.,Ltd.



TEST RESULT CERTIFICATION

Report No.: NTEK-2014NT0928515F3

Address:	HIGH-TE	,		NGTIAN HENG PARK,BAOAN	
Manufacturer's Name:	ZHEN	octron	nice		
Address:	Suit 1801	, 1 Yc	onge st. Toronto,	, Ontario, Canada	а
Product description					
Product name:	HEXA Blu	ıеМ			
Model and/or type reference :	WIN 1808	0			
Standards:	FCC Part	15B:0 3.4:20	01 Oct.2013 003		
This device described above ha equipment under test (EUT) is in the tested sample identified in the	complian		•		
This report shall not be reproduct document may be altered or revithe document.	-			• •	
Date of Test	:				
Date (s) of performance of tests	:	16 S	Sep. 2014 ~25 Se	ep. 2014	
Date of Issue	:	15 C	Oct. 2014		
Test Result	:	Pas	s		
Testing Engine	er :		Danny k	wany	
	_		Denny H	uang	_
Technical Man	ager :		Brow	n Ln	_
			(Brown	Lu)	
Authorized Sig	natory :		Bu	~	_
			(Bill Ya	ao)	



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1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission							
Standard Test Item Limit Judgment							
FCC Part15B:2013	Conducted Emission	Class B	PASS				
ANSI C63.4: 2003	Radiated Emission	Class B	PASS				

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.



1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd

Add.: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC Registration Number:238937; IC Registration Number:9270A-1

CNAS Registration Number:L5516

1.2 MEASUREMENT UNCERTAINTY

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 %.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
NTEKC01	ANSI	150 KHz ~ 30MHz	3.2	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
NTEKA01	ANSI	30MHz ~ 1000MHz	4.7	
		1GHz ~12.4GHz	5.0	



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	HEXA BlueM						
Model Name	WIN 18080						
Additional Model Number(s)	WIN 18080X(X=A~Z)						
Model Difference	All the model are the same circuexcept the model name and colo	•					
	The EUT is a HEXA BlueM.						
	Connecting I/O port:	USB, DC in ,HDMI					
	Operation Frequency:	BT:2402~2480 MHz					
		WIFI: 802.11b/g/n(20MHz):					
		2412~2462MHz					
		802.11n(40MHz):2422~2452MHz					
Product Description	Modulation Type:	BT(1Mbps): GFSK BT EDR(2Mbps): π /4-DQPSK BT EDR(3Mbps): 8-DPSK WIFI: CCK/OFDM/DBPSK/DAPSK					
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.						
Power Source	DC Voltage						
	Model:XKD-C2000IC5.0-12W						
Adapter	Input: 100-240V,50/60 Hz,0.5A Max Output: 5.0V===, 2.0A						
Battery	DC 3.7V ,5000mAh						



4.4 DECODIDITION OF TEST MODES

2.1.1 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.

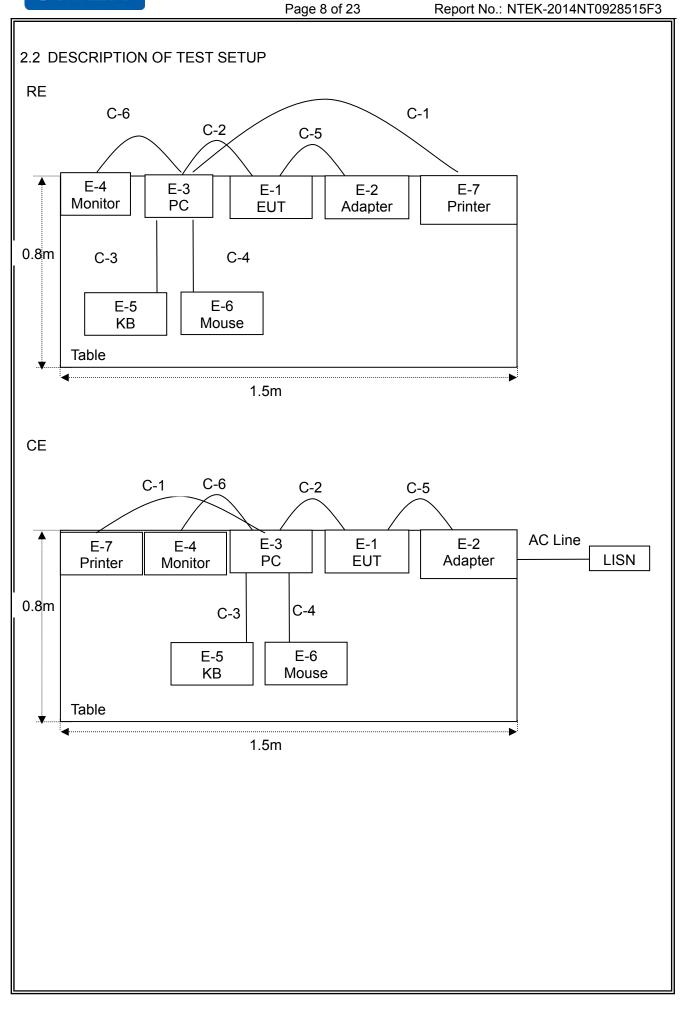
Pretest Mode	Description
Mode 1	TF Card Playing+chagring
Mode 2	HDMI
Mode 3	Data Exchange
Mode 4	REC

For Conducted Test					
Final Test Mode	Description				
Mode 1	TF Card Playing+chagring				
Mode 2	HDMI				
Mode 3	Data Exchange				
Mode 4	REC				

For Radiated Test				
Final Test Mode	Description			
Mode 1	TF Card Playing+chagring			
Mode 2	HDMI			
Mode 3	Data Exchange			
Mode 4	REC			

Note: Final Test Mode: Through Pre-scan, find the mode 3 is the worse case. Only the worst case mode is recorded in the report.







2.3 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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	Brand	Model/Type No.	Series No.	Note
E-1	HEXA BlueM	HEXA	WIN 18080	N/A	EUT
E-2	ADAPTER	N/A	XKD-C2000IC5.0 -12W	N/A	
E-3	Personal computer	DELL	FT4Y23X	34413561645	
E-4	Monitor	DELL	IN2020MB	cn-0y6mhx-74261-11f- 67es	
E-5	Keyboard	DELL	SK-8185	OY526KUS	
E-6	Mouse	DELL	MS111-P	cn-011d3v-71581-11e- 1th7	
E-7	Printer	Canon	L11121E	LBP2900	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2m	
C-2	NO	NO	1.0m	
C-3	NO	NO	1.0m	
C-4	NO	NO	1.0m	
C-5	NO	NO	1.0m	
C-6	NO	NO	1.0m	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>FLength</code> <code>_ column</code>.
- (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".



2.4 MEASUREMENT INSTRUMENTS LIST

2.4.1 CONDUCTED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibra tion period
1	LISN	R&S	ENV216	101313	Jul. 06, 2014	Jul. 05, 2015	1 year
2	LISN	SCHWARZBE CK	NNLK 8129	8129245	Dec. 25, 2013	Dec. 24, 2014	1 year
3	Pulse Limiter	SCHWARZBE CK	VTSD 9561F	9716	Dec. 25, 2013	Dec. 24, 2014	1 year
4	50Ω Switch	ANRITSU CORP	MP59B	6200983704	Jul. 06, 2014	Jul. 05, 2015	1 year
5	Test Cable	N/A	C01	N/A	Jul. 06, 2014	Jul. 05, 2015	1 year
6	Test Cable	N/A	C02	N/A	Jul. 06, 2014	Jul. 05, 2015	1 year
7	Test Cable	N/A	C03	N/A	Jul. 06, 2014	Jul. 05, 2015	1 year
8	EMI Test Receiver	R&S	ESCI	101160	Jul. 06, 2014	Jul. 05, 2015	1 year
9	Passive Voltage Probe	ESH2-Z3	R&S	100196	Jul. 06, 2014	Jul. 05, 2015	1 year
10	Absorbing Clamp	R&S	MDS-21	100423	Jul. 08, 2014	Jul. 07, 2015	1 year

2.4.2 RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibra tion period
1	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06, 2014	Jul. 05, 2015	1 year
2	Test Cable	N/A	R-01	N/A	Dec. 25, 2013	Dec. 24, 2014	1 year
3	Test Cable	N/A	R-02	N/A	Dec. 25, 2013	Dec. 24, 2014	1 year
4	EMI Test Receiver	R&S	ESCI-7	101318	Jul. 06, 2014	Jul. 05, 2015	1 year
5	Antenna Mast	EM	SC100_1	N/A	N/A	N/A	N/A
6	Turn Table	EM	SC100	060531	N/A	N/A	N/A
7	50Ω Switch	Anritsu Corp	MP59B	6200983705	Jul. 06, 2014	Jul. 05, 2015	1 year
8	Spectrum Analyzer	Aglient	E4407B	MY45108040	Jul. 06, 2014	Jul. 05, 2015	1 year
9	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06, 2014	Jul. 05, 2015	1 year
10	Amplifier	EM	EM-30180	060538	Jul. 06, 2014	Jul. 05, 2015	1 year
11	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06, 2014	Jul. 05, 2015	1 year



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

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

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

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

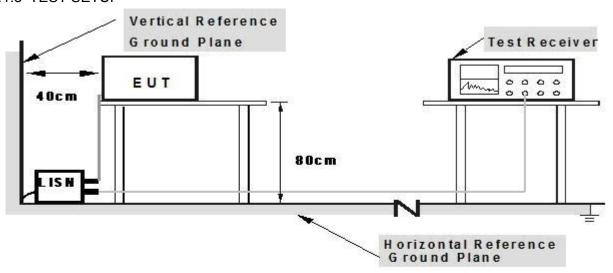
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.1.2 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.

3.1.3 TEST SETUP



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

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

3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



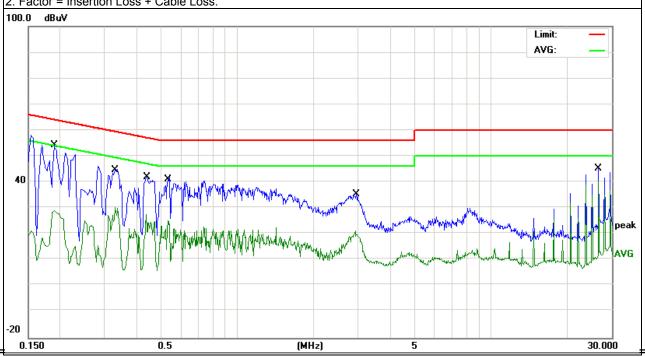
3.1.5 TEST RESULTS

EUT:	HEXA BlueM	Model Name. :	WIN 18080		
Temperature:	26 ℃	Relative Humidity:	54%		
Pressure:	1010hPa	Test Date :	2014-09-20		
Test Mode:	Mode 3	Phase :	L		
Test Voltage :	DC 5V From ADAPTER AC 120V/60Hz				

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1900	40.66	9.51	50.17	64.03	-13.86	QP
0.1900	19.65	9.51	29.16	54.03	-24.87	AVG
0.3300	33.99	9.50	43.49	59.45	-15.96	QP
0.3300	20.71	9.50	30.21	49.45	-19.24	AVG
0.4380	32.26	9.51	41.77	57.10	-15.33	QP
0.4380	18.04	9.51	27.55	47.10	-19.55	AVG
0.5340	30.12	9.51	39.63	56.00	-16.37	QP
0.5340	15.70	9.51	25.21	46.00	-20.79	AVG
2.9180	25.50	9.57	35.07	56.00	-20.93	QP
2.9180	11.66	9.57	21.23	46.00	-24.77	AVG
26.6020	35.20	10.15	45.35	60.00	-14.65	QP
26.6020	30.44	10.15	40.59	50.00	-9.41	AVG

Remark:

^{2.} Factor = Insertion Loss + Cable Loss.



^{1.} All readings are Quasi-Peak and Average values.

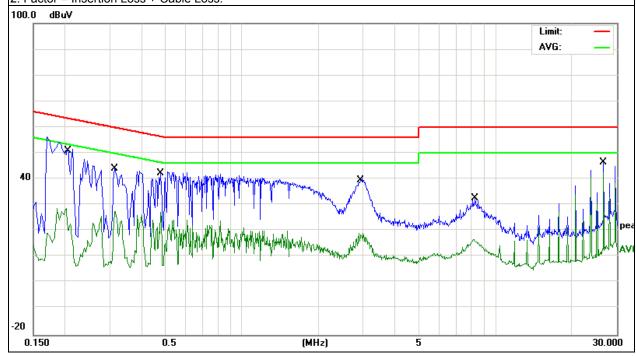


EUT: WIN 18080 Model Name. : **HEXA BlueM** Temperature: Relative Humidity: 54% 26 ℃ Pressure: 1010hPa Test Date: 2014-09-20 Test Mode: Mode 3 Phase: Ν Test Voltage : DC 5V From ADAPTER AC 120V/60Hz

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Kemark
0.2020	40.72	9.50	50.22	63.52	-13.30	QP
0.2020	19.38	9.50	28.88	53.52	-24.64	AVG
0.3140	32.19	9.51	41.70	59.86	-18.16	QP
0.3140	18.15	9.51	27.66	49.86	-22.20	AVG
0.4780	31.15	9.53	40.68	56.37	-15.69	QP
0.4780	17.77	9.53	27.30	46.37	-19.07	AVG
2.8980	29.17	9.58	38.75	56.00	-17.25	QP
2.8980	9.72	9.58	19.30	46.00	-26.70	AVG
8.2979	22.88	9.70	32.58	60.00	-27.42	QP
8.2979	7.07	9.70	16.77	50.00	-33.23	AVG
26.6020	36.04	10.27	46.31	60.00	-13.69	QP
26.6020	32.25	10.27	42.52	50.00	-7.48	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values.
- 2. Factor = Insertion Loss + Cable Loss.





3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
PREQUENCY (WITZ)	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

Notes:

- (1) The limit for radiated test was performed according to as following: FCC PART 15B /ICES-003.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

Test Arrangement for Radiated Emissions up to 1 GHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

Test Arrangement for Radiated Emissions above 1 GHz.

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength.Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.



Note: For the hand-held device, the EUT should be measured for all 3 axes and only the wors case is recorded in the report

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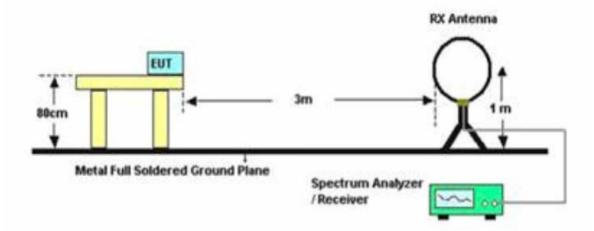
During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

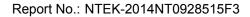
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
	Peak	1 MHz	1 MHz
Above 1000	Peak	1 MHz	10 Hz

3.2.3 TEST SETUP

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

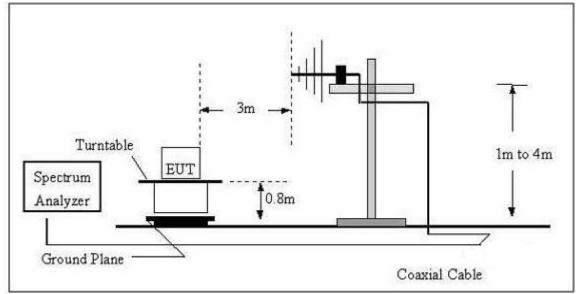
For radiated emissions below 30MHz



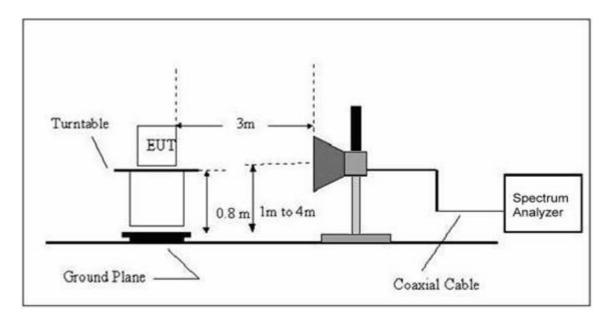




For Radiated Emission 30~1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



3.2.5 TEST RESULTS TEST RESULTS (Below 30 MHz)

EUT:	HEXA BlueM	Model Name :	WIN 18080
Temperature :	20 ℃	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	
Test Mode :	TX	Polarization :	

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				Р
				Р

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =20 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



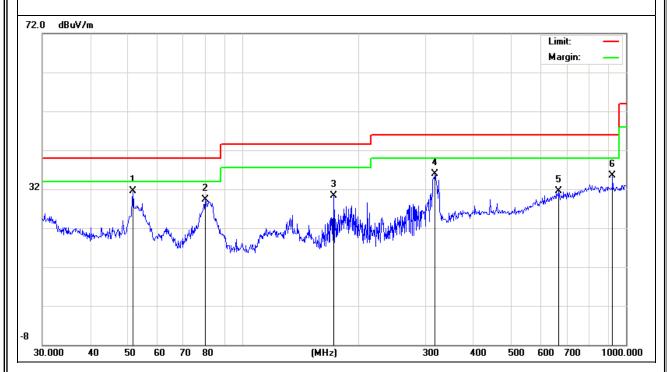
TEST RESULTS (30~1000 MHz)

EUT:	HEXA BlueM	Model Name :	WIN 18080			
Temperature :	24 ℃	Relative Humidity:	54%			
Pressure :	1010 hPa	Test Date :	2014-09-20			
Test Mode :	Mode 3	Polarization :	Horizontal			
Test Power :	DC 5V From ADAPTER AC 120V/60Hz					

Freq.	Reading	Factor	Measurement	Limit	Over	Remark
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	Remark
51.6613	21.26	10.22	31.48	40.00	-8.52	QP
79.8002	23.55	5.85	29.40	40.00	-10.60	QP
172.5988	19.78	10.57	30.35	43.50	-13.15	QP
317.701	21.06	14.89	35.95	46.00	-10.05	QP
668.1422	7.60	23.91	31.51	46.00	-14.49	QP
922.5157	8.29	27.15	35.44	46.00	-10.56	QP

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.





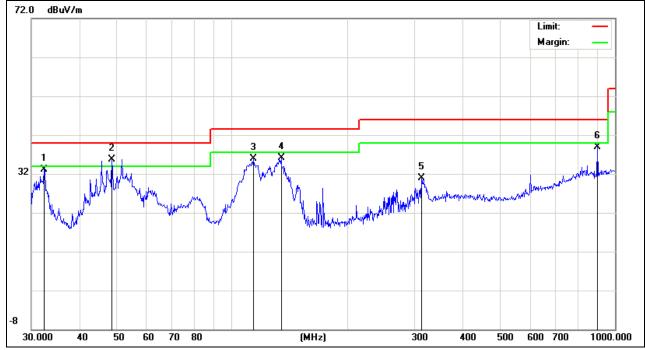
EUT: HEXA BlueM Model Name : WIN 18080 Temperature: 24 ℃ Relative Humidity: 54% Pressure: 1010 hPa Test Date: 2014-09-20 Test Mode : Mode 3 Polarization: Vertical Test Power : DC 5V From ADAPTER AC 120V/60Hz

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Freq.	Reading	Factor	Measurement	Limit	Over	ver Remark	
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	Kemark	
32.4059	14.94	18.11	33.05	40.00	-6.95	QP	
48.6719	24.62	11.02	35.64	40.00	-4.36	QP	
113.7142	25.09	10.75	35.84	43.50	-7.66	QP	
134.5592	24.48	11.67	36.15	43.50	-7.35	QP	
312.1792	16.19	14.66	30.85	46.00	-15.15	QP	
900.1471	11.97	27.01	38.98	46.00	-7.02	QP	

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.





3.2.6 TEST RESULTS(1000~12400MHz)

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(H/V)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	(dB)		
V	1112.888	63.82	-17.44	46.38	74	-27.62	peak	
V	1112.888	41.42	-17.44	23.98	54	-30.02	AVG	
V	1924.979	62.09	-12.47	49.62	74	-24.38	peak	
V	1924.979	40.64	-12.47	28.17	54	-25.83	AVG	
V	2250.365	61.63	-12.22	49.41	74	-24.59	peak	
V	2250.365	39.04	-12.22	26.82	54	-27.18	AVG	
V	2650.172	61.75	-10.95	50.80	74	-23.2	peak	
V	2650.172	39.36	-10.95	28.41	54	-25.59	AVG	
V	2850.26	61.01	-11.13	49.88	74	-24.12	peak	
V	2850.26	41.00	-11.13	29.87	54	-24.13	AVG	
V	3975.074	57.83	-5.15	52.68	74	-21.32	peak	
V	3975.074	36.41	-5.15	31.26	54	-22.74	AVG	
Н	1313.378	58.65	-16.6	42.05	74	-31.95	peak	
Н	1313.378	38.46	-16.6	21.86	54	-32.14	AVG	
Н	1513.004	59.04	-15.67	43.37	74	-30.63	peak	
Н	1513.004	39.23	-15.67	23.56	54	-30.44	AVG	
Н	1924.893	57.41	-12.47	44.94	74	-29.06	peak	
Н	1924.893	36.84	-12.47	24.37	54	-29.63	AVG	
Н	2700.272	57.25	-10.78	46.47	74	-27.53	peak	
Н	2700.272	35.97	-10.78	25.19	54	-28.81	AVG	
Н	3788.057	53.89	-6.42	47.47	74	-26.53	peak	
Н	3788.057	32.29	-6.42	25.87	54	-28.13	AVG	
Н	4762.901	51.75	-2.72	49.03	74	-24.97	peak	
Н	4762.901	30.69	-2.72	27.97	54	-26.03	AVG	
Domor						-		

Remark:

Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit



4. EUT TEST PHOTO











