

Jim He Bovey Yang

FCC RADIO TEST REPORT

Report Reference No...... NTEK-2011DG0723131E

Compiled by (+ signature) Jim He

Approved by (+ signature)

Bovey Yang

Applicant's name Aqua Ventus Ltd.

Address: Unit 514, 5/F, Kenning Industial Bldg., NO 19 Wang Hoi Road,

Kowloon Bay, HK

Manufacture's Name Aqua Ventus Ltd.

Address Unit 514, 5/F, Kenning Industial Bldg., NO 19 Wang Hoi Road,

Kowloon Bay, HK

Test specification:

Standard FCC Part15.249

Test procedure ANSI C63.4-2003

Test item description

Product name: Wireless Floating Speaker

FCC ID ZN2SHARK-LFISH-TX

Trademark: N/A

Model and/or type reference : Shark / Lionfish

Rating(s) DC 5V

Testing Laboratory information:

Testing Laboratory Name: NTEK Testing Technology Co., Ltd

Address 1/F, Building E, Fenda Science Park, Sanwei Community,

Xixiang Street, Bao ' an District, Shenzhen P.R. China.

This device described above has been tested by NTEK Testing Technology Co., Ltd, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Testing:

Date of receipt of test item 17 Jul. 2011

Date of Issue 25 Jul. 2011

Test Result..... Pass

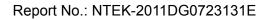




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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)					
Standard Section	Test Item	Judgment	Remark		
15.207	Conducted Emission	Pass			
15.203	Antenna Requirement	Pass			
15.249	Radiated Spurious Emission	Pass			
15.249	Occupied Bandwidth	Pass			

NOTE:

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



1.1 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 % $^{\circ}$

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	Radiated Emission Test	±3.17dB
3	RF power,conducted	±0.16dB
4	Spurious emissions,conducted	±0.21dB
5	All emissions,radiated(<1G)	±4.68dB
6	All emissions,radiated(>1G)	±4.89dB



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Floating Speaker			
Trade Name	N/A			
Model Name	Shark / Lionfish			
OEM Brand/Model Name	N/A			
Model Difference	All the model are identical exce	ept the model name		
	The EUT is a Wireless Floating	Speaker		
	Operation Frequency:	914~915 MHz		
Product Description	Modulation Type:	GFSK		
•	Antenna Designation:	Printed ANT		
	Antenna Gain(Peak)	1.0 dBi		
Channel List	Please refer to the Note 2.			
Power Source	DC Voltage supplied			
Power Rating	DC 5V from adapter AC 120V/6	60Hz		
Connecting I/O Port(s)	Please refer to the User's Manual			
Products Covered	N/A			
EUT Modification(s)	N/A			

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

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2.

	Channel List						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	914						
02	914.5						
03	915						

3.

Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Printed Antenna	NA	1.0	Antenna



2.2 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 Mode	Description		
Mode 1	CH1		
Mode 2	CH2		
Mode 3	CH3		

For Conducted Emission					
Final Test Mode	Description				
Mode 2	CH2				

For Radiated Emission					
Final Test Mode Description					
Mode 1 CH1					
Mode 2 CH2					
Mode 3	CH3				

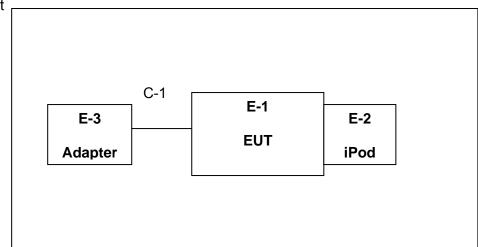
Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT use new battery.

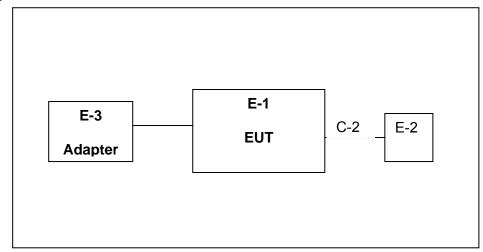


2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Ipod input



Aux input



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2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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	Series No.	Note
E-1	Wireless Floating Speaker	N/A	LIONFISH	ZN2SHARK-LFISH-TX	N/A	EUT
E-2	iPod	HP	IPod Touch	VOC	N/A	
E-3	Adapter	N/A	CTR04-050-0500U	VOC	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	YES	150	
C-2	NO	NO	120	

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>[Length]</code> column.



2.4.1 EQUIPMENTS LIST FOR ALL TEST ITEMS

2.4.2CONDUCTED EMISSION

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	2012-4-24
2	LISN	R&S	ENV216	101313	2012-4-24
3	LISN	Kyoritsu	KNW-407	8-1789-3	2012-4-24
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2012-4-24
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2012-4-24
6	Absorbing clamp	R&S	MDS-21	100423	2012-4-24

2.4.3RADIATED EMISSION

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	2012-4-24
2	Test Receiver	R&S	ESPI7	101318	2012-4-24
3	Bilog Antenna	TESEQ	CBL6111D	31216	2012-4-24
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2012-4-24
5	Spectrum Analyzer	ADVANTEST	R3182	150900201	2012-4-24
6	Low Noise Pre Amplifier	Tsj	MLA-0120-A 02-34	2648A04738	2012-4-24
7	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	451	2012-4-24
8	Loop Antenna	ARA	PLA-1030/B	1029	2012-3-19



3. TEST RESULT

3.1 ANTENNA REQUIREMENT

3.1.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

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3.1.2 EUT ANTENNA

The EUT antenna is integral Antenna. It comply with the standard requirement.



3.2 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard	
FREQUENCT (MITZ)	Quasi-peak	Average	Quasi-peak	Average	Stariuaru	
0.15 -0.5			66 - 56 *	56 - 46 *	CISPR	
0.50 -5.0			56.00	46.00	CISPR	
5.0 -30.0			60.00	50.00	CISPR	

0.15 -0.5		66 - 56 *	56 - 46 *	LP002.
0.50 -5.0		56.00	46.00	LP002.
5.0 -30.0		60.00	50.00	LP002.

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	



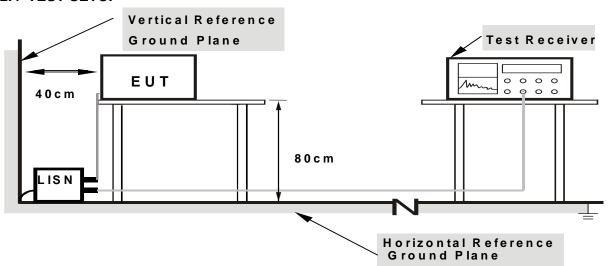
3.2.2 TEST PROCEDURE

- a. The EUT was placed 0.4 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.

3.2.3 DEVIATION FROM TEST STANDARD

No deviation

3.2.4 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

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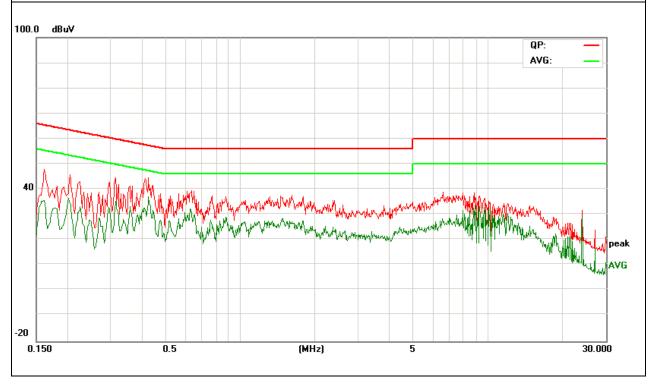


3.2.5 TEST RESULT

EUT:	Wireless Floating Speaker	Model Name :	LIONFISH		
Temperature :	26 ℃	Relative Humidity:	54%		
Pressure:	1010hPa	Test Date :	2011/7/22		
Test Mode:	Running	Phase :	Line		
Test Voltage :	DC 5V from Adapter AC 120V/60Hz				

Frequency	Factor	Meter Read	ding (dBµV)	Emission L	evel (dBµV)	Limits	(dBµV)	Margin	(dB)
(MHz)	(dB)	QP	Average	QP	Average	QP	Average	QP	Average
0.1620	11.68	36.19	23.95	47.87	35.63	65.36	55.36	-17.49	-19.73
0.2060	11.10	34.90	25.51	46.00	36.61	63.37	53.53	-17.37	-16.92
0.3140	10.71	33.97	24.55	44.68	35.26	59.86	49.86	-15.18	-14.60
*0.4260	10.49	34.10	26.61	44.59	37.10	57.33	47.33	-12.74	-10.23
0.6380	10.28	29.35	22.10	39.63	32.38	56.00	46.00	-16.37	-13.62
8.8220	10.26	28.43	23.53	38.69	33.79	60.00	50.00	-21.31	-16.21

- 1. All readings are Quasi-Peak and Average values.
- 2. Factor = Insertion Loss + Cable Loss.
 3. '*' means the worst case



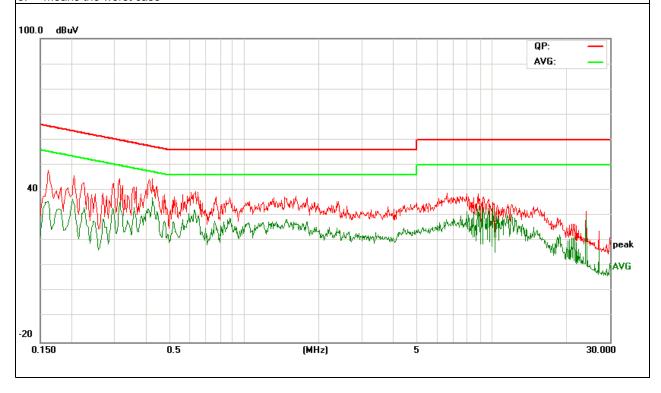


EUT: Wireless Floating Speaker Model Name : LIONFISH **26** ℃ Relative Humidity: Temperature: 54% Pressure: 1010hPa Test Date: 2011/7/22 Test Mode: Phase: Running Neutral DC 5V from Adapter AC 120V/60Hz Test Voltage

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Frequency	Factor	Meter Read	ding (dBµV)	Emission L	evel (dBµV)	Limits	(dBµV)	Margin	(dB)
(MHz)	(dB)	QP	Average	QP	Average	QP	Average	QP	Average
0.1620	11.68	36.19	23.95	47.87	35.63	65.36	55.36	-17.49	-19.73
0.2060	11.10	34.90	25.51	46.00	36.61	63.37	53.53	-17.37	-16.92
0.3140	10.71	33.97	24.55	44.68	35.26	59.86	49.86	-15.18	-14.60
*0.4260	10.49	34.10	26.61	44.59	37.10	57.33	47.33	-12.74	-10.23
0.6380	10.28	29.35	22.10	39.63	32.38	56.00	46.00	-16.37	-13.62
8.8220	10.26	28.43	23.53	38.69	33.79	60.00	50.00	-21.31	-16.21

- 1. All readings are Quasi-Peak and Average values.
- 2. Factor = Insertion Loss + Cable Loss.
 3. '*' means the worst case





3.3 RADIATED EMISSION MEASUREMENT

3.3.1 Radiated Emission Limits (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/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:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental	Field Strength of Harmonics
	((millivolts /meter)	(microvolts/meter)
2400 - 2483.5	50	500

Notes:

(1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP



3.3.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

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- 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. performed pretest to three orthogonal axis.
- 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.

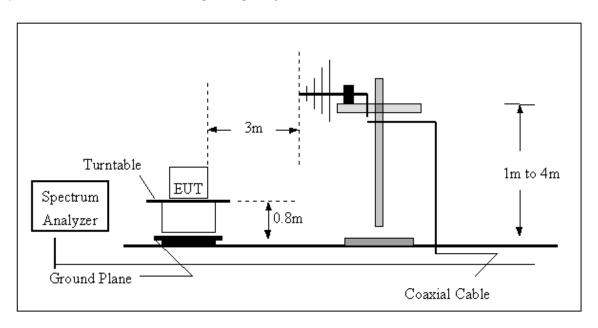
3.3.3 DEVIATION FROM TEST STANDARD

No deviation

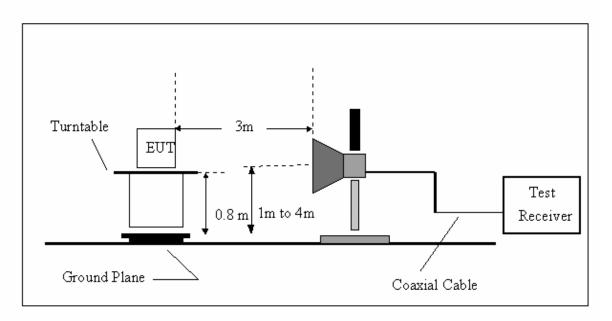


3.3.4 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



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





3.3.5 TEST RESULTS (BLOW 30MHz)

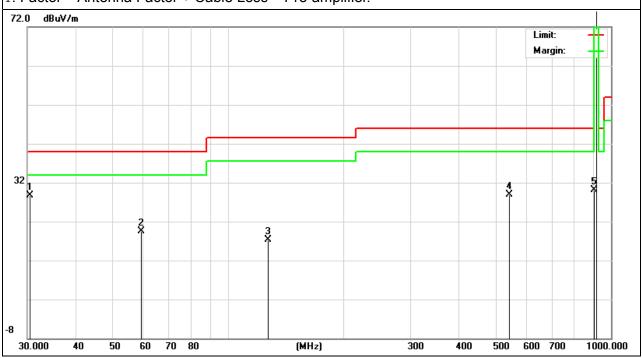
not detected blow 30MHz.

3.3.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH1 ipod in	Polarization :	Horizontal
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
30.3171	10.49	18.18	28.67	40	-11.33	QP
59.4405	14.17	5.25	19.42	40	-20.58	QP
127.6645	5.31	11.9	17.21	43.5	-26.29	QP
543.274	5.41	23.46	28.87	46	-17.13	QP
902	4.32	25.75	30.07	46	-15.93	QP
914.014	56.19	25.96	82.15	114	-31.85	peak
914.014	55.16	25.96	81.12	94	-12.88	AVG

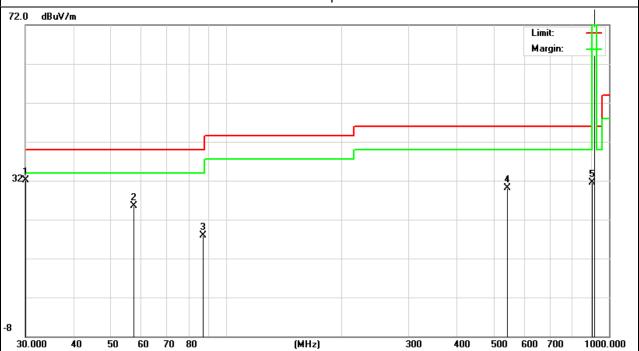
Remark:





EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature:	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH1 ipod in	Polarization :	Vertical
Test Power :	DC 5V		

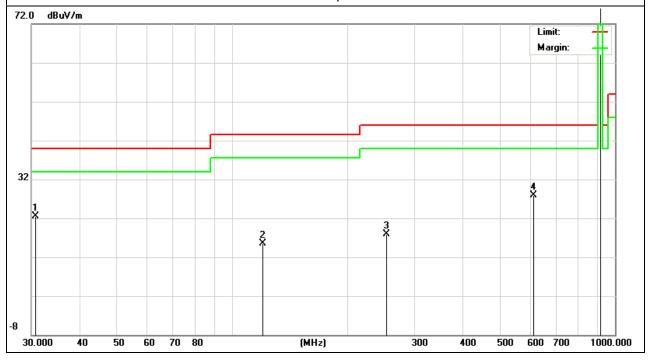
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotoctor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
30	13.69	18.33	32.02	40	-7.98	QP
57.5938	19.94	5.51	25.45	40	-14.55	QP
87.1115	8.87	9	17.87	40	-22.13	QP
543.274	6.7	23.46	30.16	46	-15.84	QP
902	5.79	25.75	31.54	46	-14.46	QP
914.024	62.79	25.96	88.75	114	-25.25	peak
914.024	60.29	25.96	86.25	94	-7.75	AVG





EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH2 ipod in	Polarization :	Horizontal
Test Power :	DC 5V		

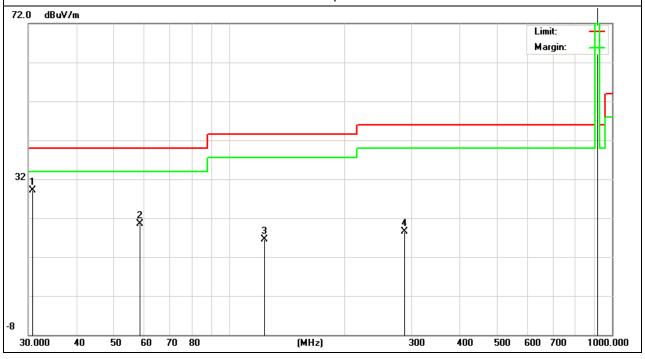
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
30.7454	4.57	17.96	22.53	40	-17.47	QP
120.6991	3.69	11.78	15.47	43.5	-28.03	QP
252.9482	4.48	13.45	17.93	46	-28.07	QP
614.2142	5.99	21.86	27.85	46	-18.15	QP
914.4985	58.86	25.98	84.84	114	-29.16	peak
914.4985	56.28	25.98	82.26	94	-11.74	AVG





EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH2 ipod in	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
30.6376	11.16	18.02	29.18	40	-10.82	QP
58.6126	15.2	5.36	20.56	40	-19.44	QP
123.6984	4.69	11.87	16.56	43.5	-26.94	QP
286.9823	4.84	13.75	18.59	46	-27.41	QP
914.4996	56.23	25.98	82.21	114	-31.79	peak
914.4996	54.44	25.98	80.42	94	-13.58	AVG



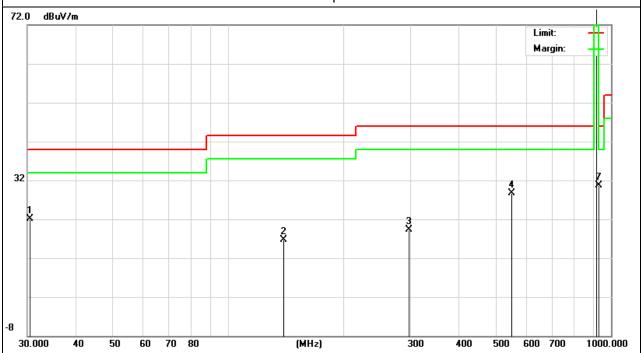


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH3 ipod in Polarization: Horizontal Test Power : DC 5V

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Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
30.3172	3.96	18.18	22.14	40	-17.86	QP
139.3611	4.78	11.93	16.71	43.5	-26.79	QP
297.2241	4.85	14.45	19.3	46	-26.7	QP
550.9479	5.42	23.27	28.69	46	-17.31	QP
915.0345	61.76	25.99	87.75	114	-26.25	peak
915.0345	59.34	25.99	85.33	94	-8.67	AVG
928	4.16	26.57	30.73	46	-15.27	QP

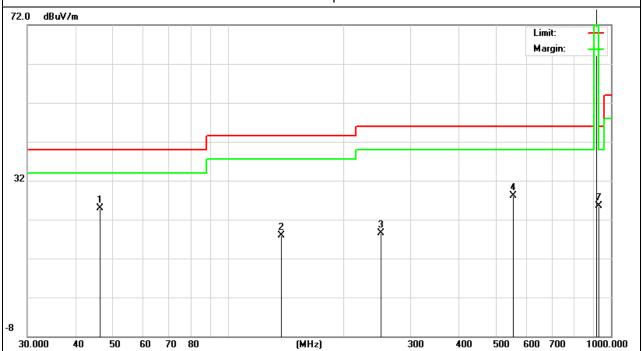
Remark:





EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH3 ipod in	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
46.3402	15.02	9.92	24.94	40	-15.06	QP
137.9028	5.91	11.95	17.86	43.5	-25.64	QP
250.3011	5.4	13.09	18.49	46	-27.51	QP
556.7744	6.04	22	28.04	46	-17.96	QP
915.0124	60.52	25.99	86.51	114	-27.49	peak
915.0124	58.24	25.99	84.23	94	-9.77	AVG
928	-1.02	26.57	25.55	46	-20.45	QP



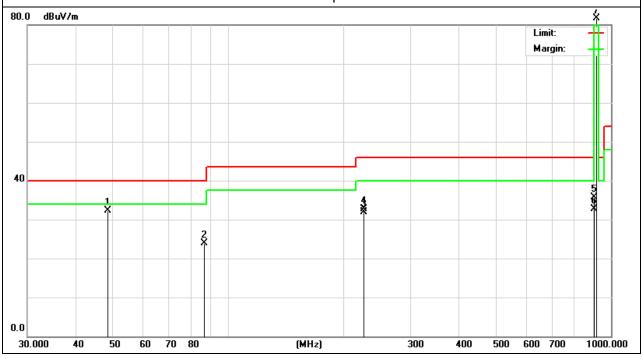


EUT: Wireless Floating Speaker Model Name : LIONFISH **2**4 ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH1 Aux input Polarization: Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
48.6358	23.41	8.82	32.23	40.00	-7.77	QP
86.7674	14.87	8.98	23.85	40.00	-16.15	QP
226.7578	21.52	10.33	31.85	46.00	-14.15	QP
902.0000	10.01	25.75	35.76	46.00	-10.24	QP
902.0000	6.90	25.75	32.65	46.00	-13.35	peak
914.0327	55.66	25.96	81.62	94.00	-12.38	AVG

Remark:



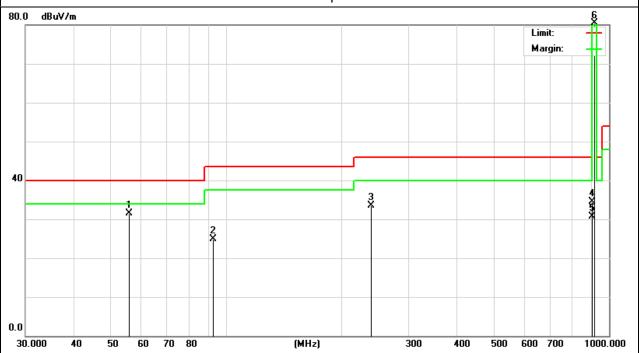


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH1 Aux input Polarization: Vertical Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
55.86	25.74	5.84	31.58	40.00	-8.42	QP
92.59	15.15	9.70	24.85	43.50	-18.65	QP
238.45	22.41	11.17	33.58	46.00	-12.42	QP
902.00	8.70	25.75	34.45	46.00	-11.55	QP
902.00	5.00	25.75	30.75	46.00	-15.25	QP
914.00	54.55	25.96	80.51	94.00	-13.49	peak
914.00	48.56	25.96	74.52	94.00	-19.48	AVG

Remark:



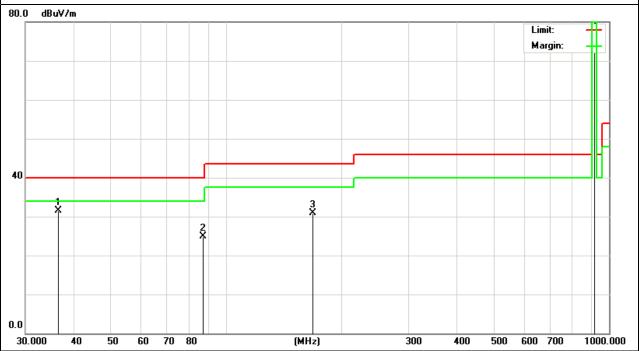


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : Polarization: CH2 Aux input Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
36.59	16.65	14.93	31.58	40.00	-8.42	QP
87.30	15.84	9.02	24.86	40.00	-15.14	QP
168.29	20.78	10.17	30.95	43.50	-12.55	QP
914.49	50.60	25.98	76.58	94.00	-17.42	peak
914.49	46.88	25.98	72.86	94.00	-21.14	AVG

Remark:





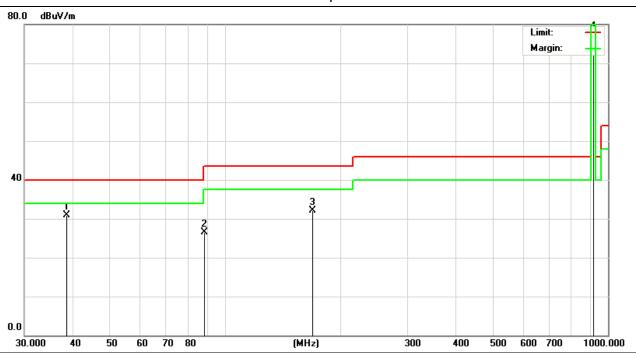
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EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH2 Aux input	Polarization :	Vertical
Test Power :	DC 5V		

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
38.52	16.79	14.03	30.82	40.00	-9.18	QP
88.26	17.43	9.11	26.54	43.50	-16.96	QP
169.55	22.09	10.06	32.15	43.50	-11.35	QP
914.49	51.60	25.98	77.58	94.00	-16.42	peak
914.49	47.48	25.98	73.46	94.00	-20.54	AVG

Remark:



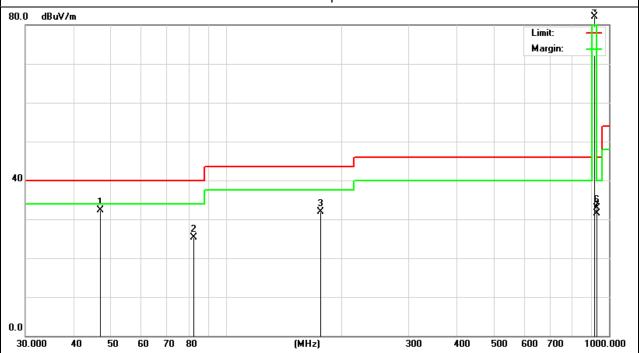


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH3 Aux input Polarization: Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
46.87	22.62	9.66	32.28	40.00	-7.72	QP
82.56	17.04	8.20	25.24	40.00	-14.76	QP
176.29	22.20	9.69	31.89	43.50	-11.61	QP
915.05	56.15	25.99	82.14	94.00	-11.86	QP
915.05	49.70	25.99	75.69	94.00	-18.31	peak
928.00	6.39	26.57	32.96	46.00	-13.04	AVG
928.00	5.01	26.57	31.58	46.00	-14.42	QP

Remark:

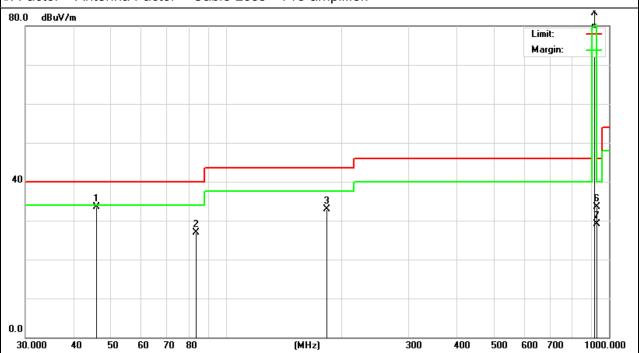




EUT: Wireless Floating Speaker Model Name : LIONFISH Relative Humidity: 54% Temperature: **24** ℃ Pressure: 1010 hPa Test Date : 2011-7-20 Test Mode : CH3 Aux input Polarization: Vertical Test Power : DC 5V

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotoctor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
45.89	23.44	10.14	33.58	40.00	-6.42	QP
83.58	18.45	8.42	26.87	40.00	-13.13	QP
183.56	23.43	9.45	32.88	43.50	-10.62	QP
915.05	57.52	25.99	83.51	94.00	-10.49	QP
915.05	51.26	25.99	77.25	94.00	-16.75	peak
928.00	7.02	26.57	33.59	46.00	-12.41	AVG
928.00	2.55	26.57	29.12	46.00	-16.88	QP

Remark:



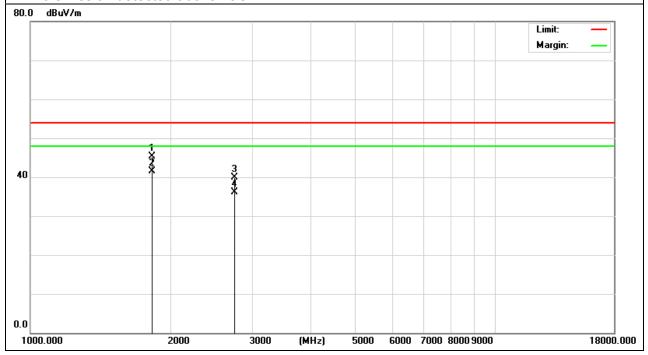


3.3.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH1 ipod in	Polarization :	Horizontal
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1828.158	16.9	28.35	45.25	54	-8.75	peak
1828.158	13.21	28.35	41.56	54	-12.44	AVG
2742.159	4.81	35.19	40	54	-14	peak
2742.159	0.96	35.19	36.15	54	-17.85	AVG

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.

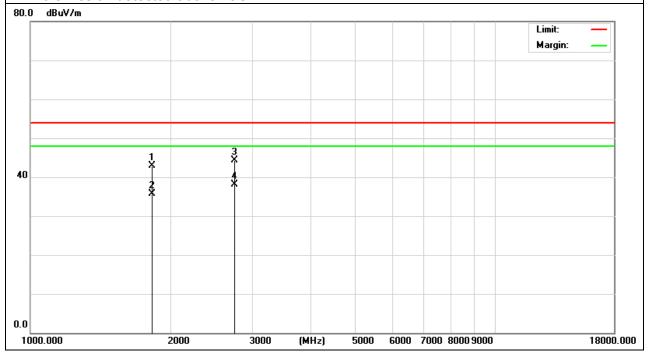




EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH1 ipod in	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1828.356	14.51	28.35	42.86	54	-11.14	peak
1828.356	7.3	28.35	35.65	54	-18.35	AVG
2742.872	9.05	35.2	44.25	54	-9.75	peak
2742.872	2.96	35.2	38.16	54	-15.84	AVG

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.



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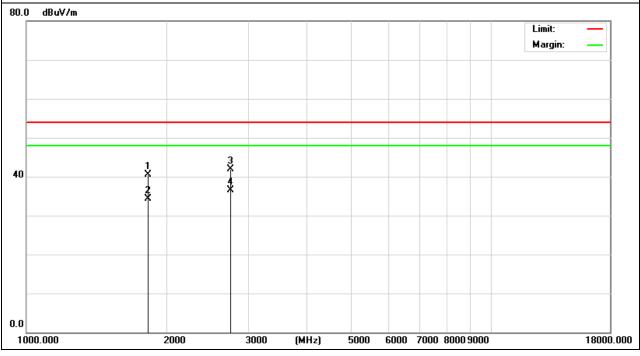


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH2 ipod in Polarization: Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1829.547	12.22	28.35	40.57	54	-13.43	peak
1829.547	5.91	28.35	34.26	54	-19.74	AVG
2743.876	6.65	35.21	41.86	54	-12.14	peak
2743.876	1.3	35.21	36.51	54	-17.49	AVG

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.

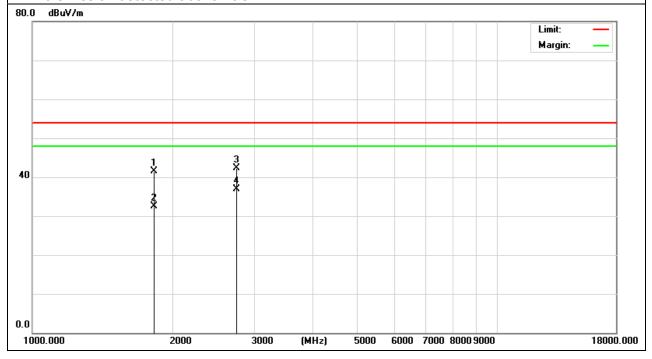




EUT: Wireless Floating Speaker Model Name : LIONFISH Relative Humidity: 54% Temperature: **24** ℃ 2011-7-20 Pressure: 1010 hPa Test Date: Test Mode : CH2 ipod in Polarization: Vertical Test Power : DC 5V

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1829.576	13.1	28.35	41.45	54	-12.55	peak
1829.576	4.07	28.35	32.42	54	-21.58	AVG
2743.458	7.07	35.2	42.27	54	-11.73	peak
2743.458	1.62	35.2	36.82	54	-17.18	AVG

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.





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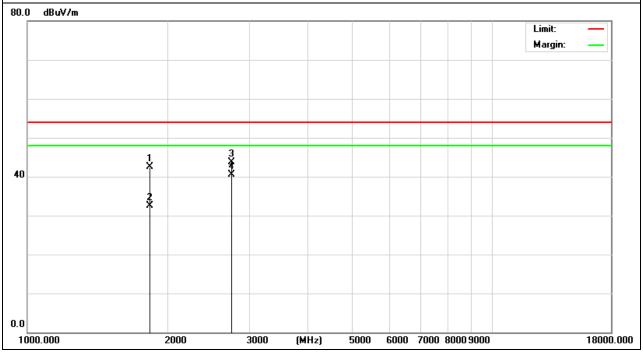
EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH3 ipod in	Polarization :	Horizontal
Test Power :	DC 5V		

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1830.523	14.21	28.36	42.57	54	-11.43	peak
1830.523	4.22	28.36	32.58	54	-21.42	AVG
2745.577	8.43	35.22	43.65	54	-10.35	peak
2745.577	5.31	35.22	40.53	54	-13.47	AVG

Remark:

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.

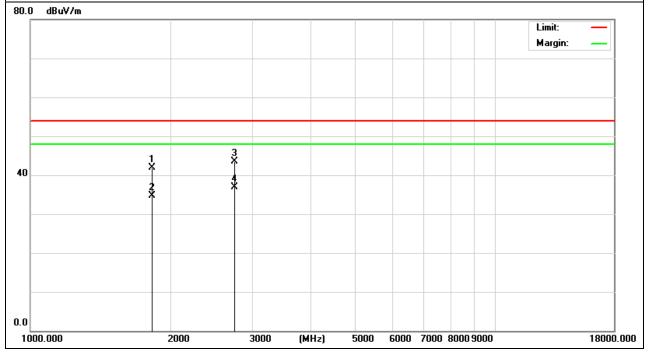




EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH3 ipod in	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1830.451	15.2	28.36	43.56	54	-10.44	peak
1830.451	2.84	28.36	31.2	54	-22.8	AVG
2745.126	9	35.22	44.22	54	-9.78	peak
2745.126	6.28	35.22	41.5	54	-12.5	AVG

- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. No emission detected above 18GHz.



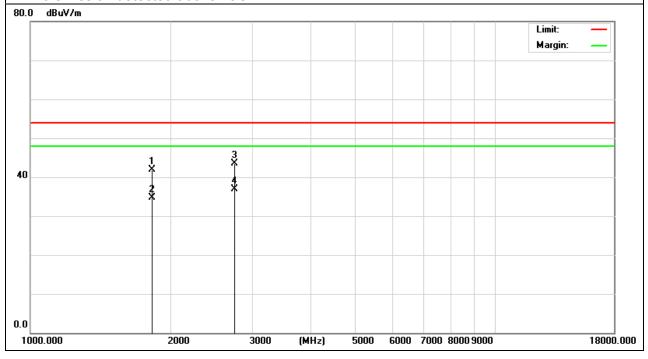


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH1 Aux input Polarization: Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1828.35	13.50	28.35	41.85	54.00	-12.15	peak
1828.35	6.27	28.35	34.62	54.00	-19.38	AVG
2742.19	8.39	35.19	43.58	54.00	-10.42	peak
2742.19	1.68	35.19	36.87	54.00	-17.13	AVG

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.

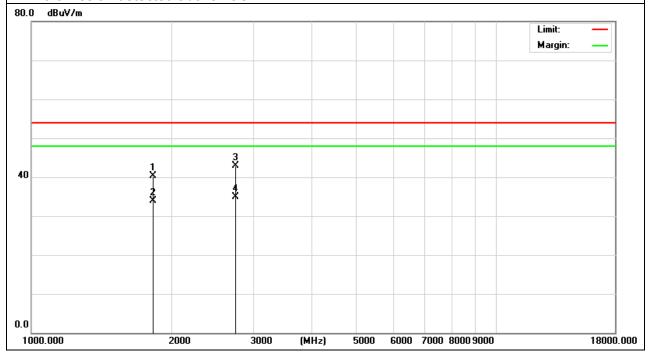




EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH1 Aux input	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1828.28	11.91	28.35	40.26	54.00	-13.74	peak
1828.35	5.50	28.35	33.85	54.00	-20.15	AVG
2742.35	7.76	35.20	42.96	54.00	-11.04	peak
2742.35	-0.35	35.20	34.85	54.00	-19.15	AVG

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.



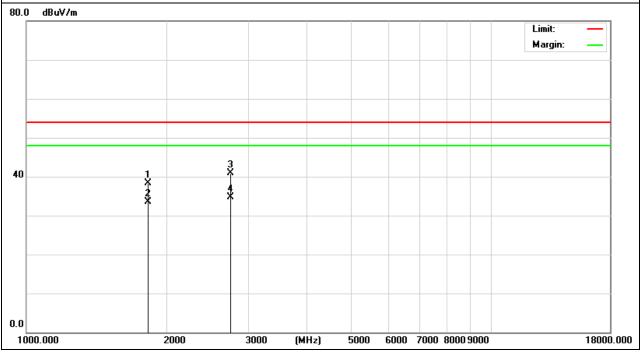


EUT: Wireless Floating Speaker Model Name : LIONFISH **24** ℃ Relative Humidity: 54% Temperature: Pressure: 1010 hPa Test Date: 2011-7-20 Test Mode : CH2 Aux input Polarization: Horizontal Test Power : DC 5V

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1829.43	9.93	28.35	38.28	54.00	-15.72	peak
1829.43	5.23	28.35	33.58	54.00	-20.42	AVG
2743.68	5.65	35.21	40.86	54.00	-13.14	peak
2743.68	-0.52	35.21	34.69	54.00	-19.31	AVG

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.

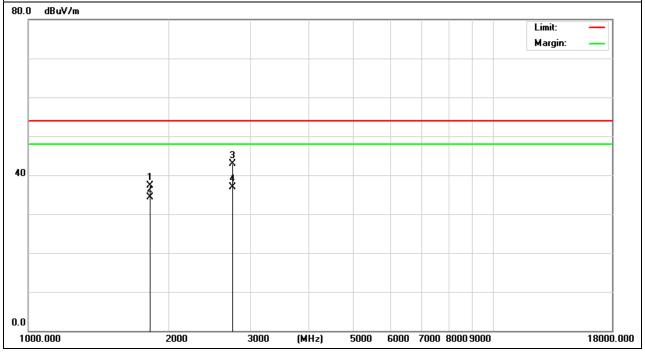




EUT: Wireless Floating Speaker Model Name : LIONFISH Relative Humidity: 54% Temperature: **24** ℃ 2011-7-20 Pressure: 1010 hPa Test Date: Test Mode : CH2 Aux input Polarization: Vertical Test Power : DC 5V

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1829.36	8.91	28.35	37.26	54.00	-16.74	peak
1829.37	5.93	28.35	34.28	54.00	-19.72	AVG
2743.55	7.66	35.20	42.86	54.00	-11.14	peak
2743.55	1.64	35.20	36.84	54.00	-17.16	AVG

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.





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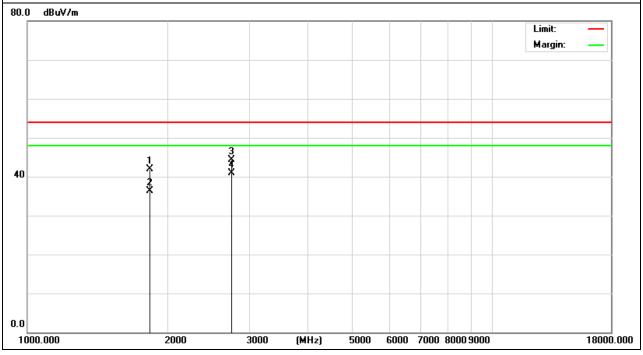
EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature :	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH3 Aux input	Polarization :	Horizontal
Test Power :	DC 5V		

Report No.: NTEK-2011DG0723131E

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1830.28	13.50	28.36	41.86	54.00	-12.14	peak
1830.28	7.92	28.36	36.28	54.00	-17.72	AVG
2745.44	9.04	35.22	44.26	54.00	-9.74	peak
2745.44	5.66	35.22	40.88	54.00	-13.12	AVG

Remark:

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.

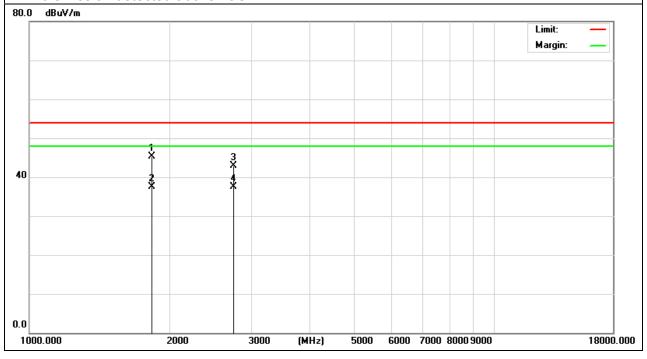




EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature:	24 ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Test Date :	2011-7-20
Test Mode :	CH3 Aux input	Polarization :	Vertical
Test Power :	DC 5V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
1830.13	16.93	28.35	45.28	54.00	-8.72	peak
1830.13	9.16	28.35	37.51	54.00	-16.49	AVG
2745.38	7.63	35.22	42.85	54.00	-11.15	peak
2745.38	2.36	35.22	37.58	54.00	-16.42	AVG

- 3. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 4. No emission detected above 18GHz.





4. BANDWIDTH TEST

4.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

Report No.: NTEK-2011DG0723131E

b. Spectrum Setting : RBW= 300KHz, VBW≥RBW, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP



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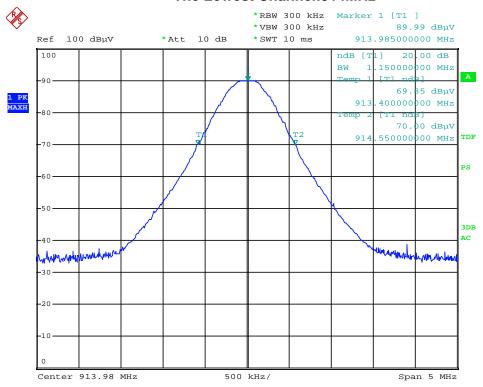


4.4 TEST RESULTS

EUT:	Wireless Floating Speaker	Model Name :	LIONFISH
Temperature:	26 ℃	Relative Humidity:	53%
Pressure :	1020 hPa	Test Power :	DC 5V
Test Mode :	TX CH 1/2/3		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)
CH1	914	1.150
CH2	914.5	1.055
CH3	915	1.155

The Lowest Channel:914MHz

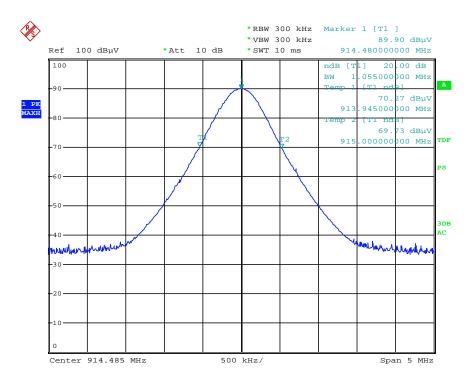


Date: 19.JUL.2011 14:14:12



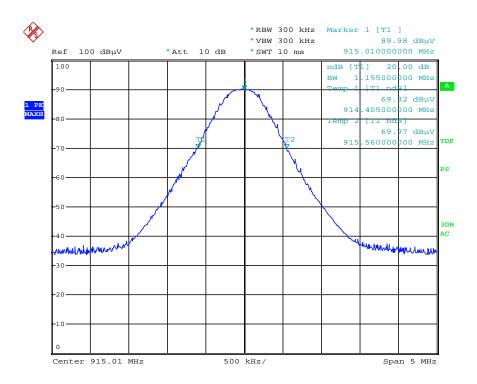


The Middle Channel:914.5MHz



Date: 19.JUL.2011 14:15:17

The Middle Channel:915MHz



Date: 19.JUL.2011 14:16:09