Radio Test Report

FCC ID: VGWHEI-18Y-1

Issued Date : Jan. 07, 2010
Project No. : R1006002
Equipment : One Way Transceiver Guide System
Model Name : HEI-18Y-1

Applicant : BANKEN CO., LTD
Address : 1842-10 Kimagase, Noda-shi,
Chiba-kan, 270-0222 Japan

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Jun. 08, 2010
Date of Test: Jun. 08, 2010 ~ Dec. 30, 2010

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ilac-MRA TAF Testing Laboratory 0659

Declaration

Neutron represents 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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1. CERTIFICATION

Equipment : One Way Transceiver Guide System
Brand Name : Tour Mic
Model Name : HEI-18Y-1
Applicant : BANKEN CO., LTD
Date of Test : Jun. 08, 2010 ~ Dec. 30, 2010
Standards : FCC Part15, Subpart C(15.249) / ANCI C63.4: 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-R1006002) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	N/A	
15.249	Radiated Spurious Emission	PASS	

NOTE:

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

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

CB08: (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054;
IC Assigned Code: 4428C-1)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95**%.
The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE
CB08	Radiated Emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB	
			200 - 1000MHz	3.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.
Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	One Way Transceiver Guide System
Brand Name	Tour Mic
Model Name	HEI-18Y-1
OEM Brand/Model Name	N/A
Model Difference	The EUT contains two parts: Transmitter Part (MIC) and Receiver Part (PHONE). Only the Transmitter Part (MIC) was used for final testing and collecting test data included in this report.
Product Description	The EUT is a One Way Transceiver Guide System. Operating Frequency: 920.2-922.0MHz Modulation Type: NFM Number of Channel: 10 Antenna Designation: Helical Antenna Gain (Peak): 0dBi Max Output Power: 47.41dBuV/m 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	Battery supplied.
Power Rating	I/P: DC 3V (AAA *2)
Connecting I/O Port(s)	Please refer to the User's Manual
Products Covered	1 * Transmitter Part (MIC) 1 * Receiver Part (PHONE) 1 * MIC 1 * Earphone
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.
2.

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	920.2	03	920.8	06	921.4	09	922.0
01	920.4	04	921	07	921.6		
02	920.6	05	921.2	08	921.8		

3.

Antenna List					
No.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	SHINE ALPHA	HL-800-63.8	Helical	N/A	0

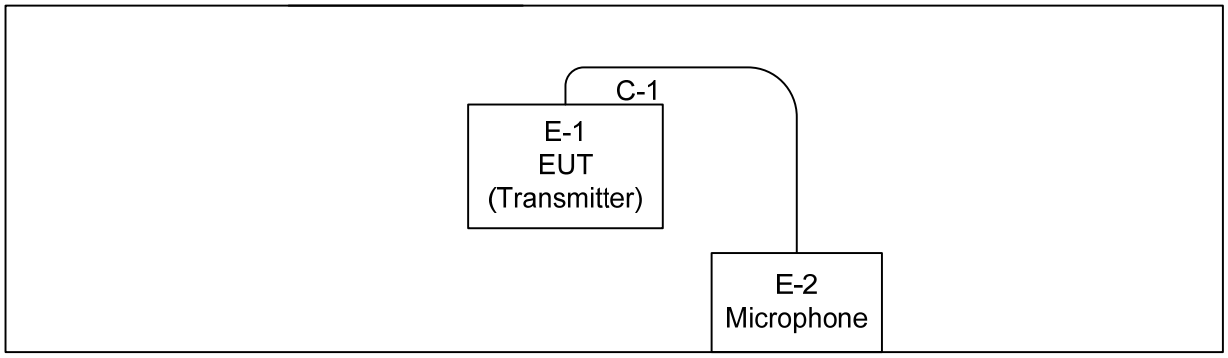
3.2 DESCRIPTION OF TEST MODES

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	CH00_TX 920.2 MHZ
Mode 2	CH05_TX 921.2 MHz
Mode 3	CH09_TX 922 MHz

For Radiated Test	
Final Test Mode	Description
Mode 1	CH00_TX 920.2 MHZ
Mode 2	CH05_TX 921.2 MHz
Mode 3	CH09_TX 922 MHz

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 Audio Cable

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	Series No.	Note
E-1	One Way Transceiver Guide System	Tour Mic	HEI-18Y-1	VGWHEI-18Y-1	N/A	EUT
E-2	Microphone	N/A	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2M	

Note:

(1) The support equipment was authorized by Declaration of Conformity.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

4. EMC EMISSION TEST

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

FREQUENCY (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

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other 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 comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Notes:
(1) The tighter limit applies at the band edges.
(2) Emission level (dBuV/m)=20log Emission level (uV/m).
(3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
Margin Level = Measurement Value – Limit Value

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:
(1) The limit for radiated test was performed according to FCC PART 15B.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).
(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
Margin Level = Measurement Value – Limit Value

FREQUENCY RANGE OF RADIATED MEASUREMENT

FCC Part15 (15.249) , Subpart C RSS 210 (A2.9)	
Limit	Frequency Range (MHz)
Field strength of fundamental 50000 μV/m (94 dBμV/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 μV/m (54 dBμV/m) @ 3 m	Above 2483.5

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Dec. 08, 2011
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 20, 2011
4	Microflex Cable	N/A	N/A	1m	May. 19, 2011
5	Test Cable	N/A	LMR-400	966_12m	Jun. 17, 2011
6	Test Cable	N/A	LMR-400	966_3m	Jun. 17, 2011
7	Pre-Amplifier	EMC	EMC-330	980001	Jun. 03, 2011
8	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 17, 2011

Remark: ” N/A” denotes No Model Name / Serial No. and No Calibration specified.

4.1.3 TEST PROCEDURE

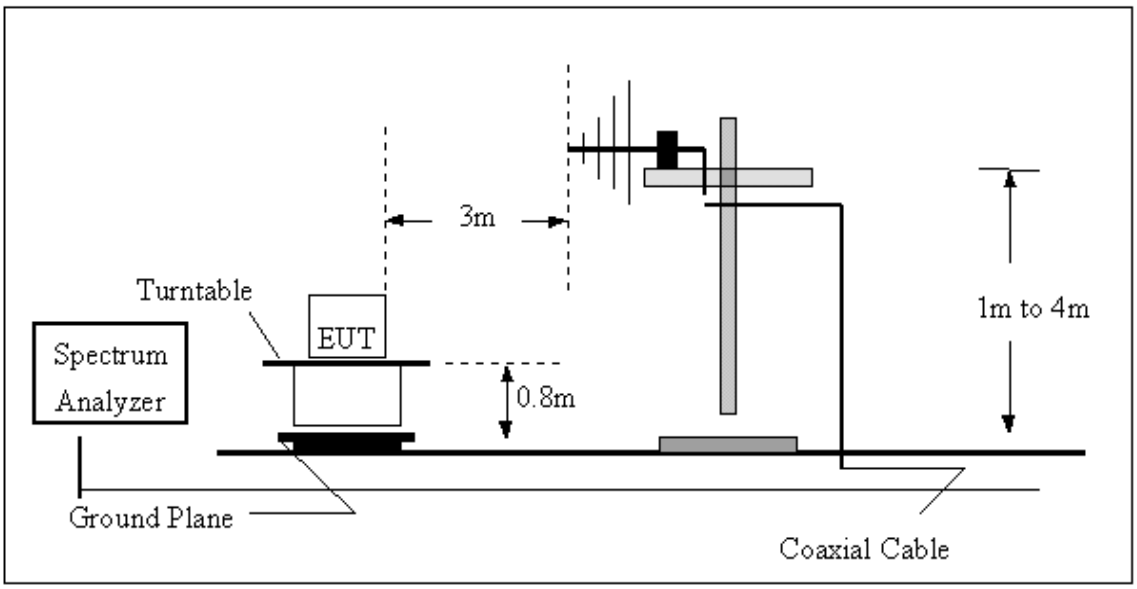
a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
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 radiated 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.

4.1.4 DEVIATION FROM TEST STANDARD

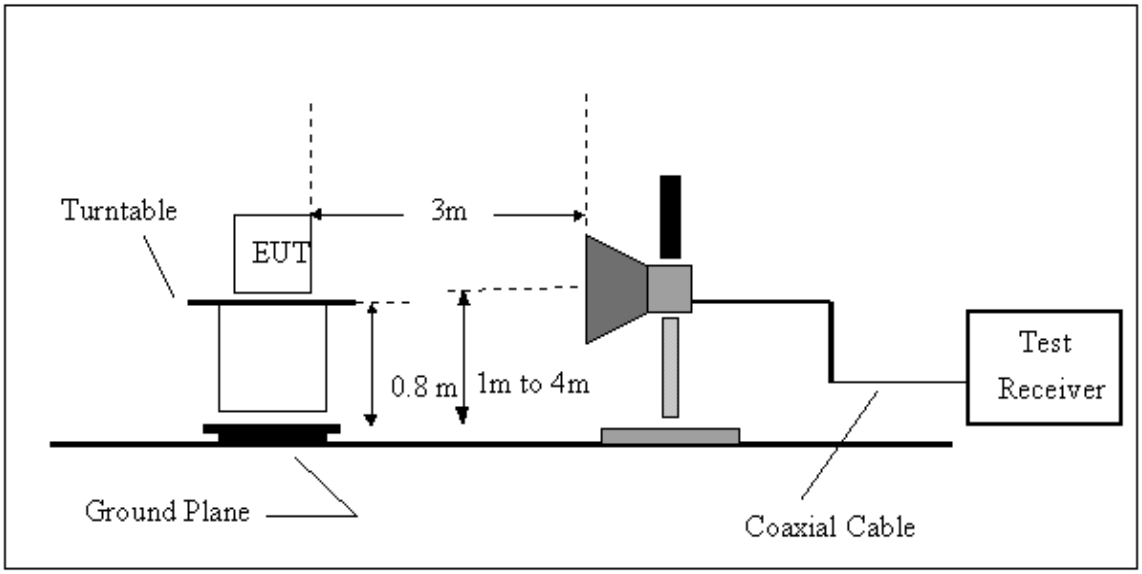
No deviation

4.1.5 TEST SETUP

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



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



4.1.6 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.

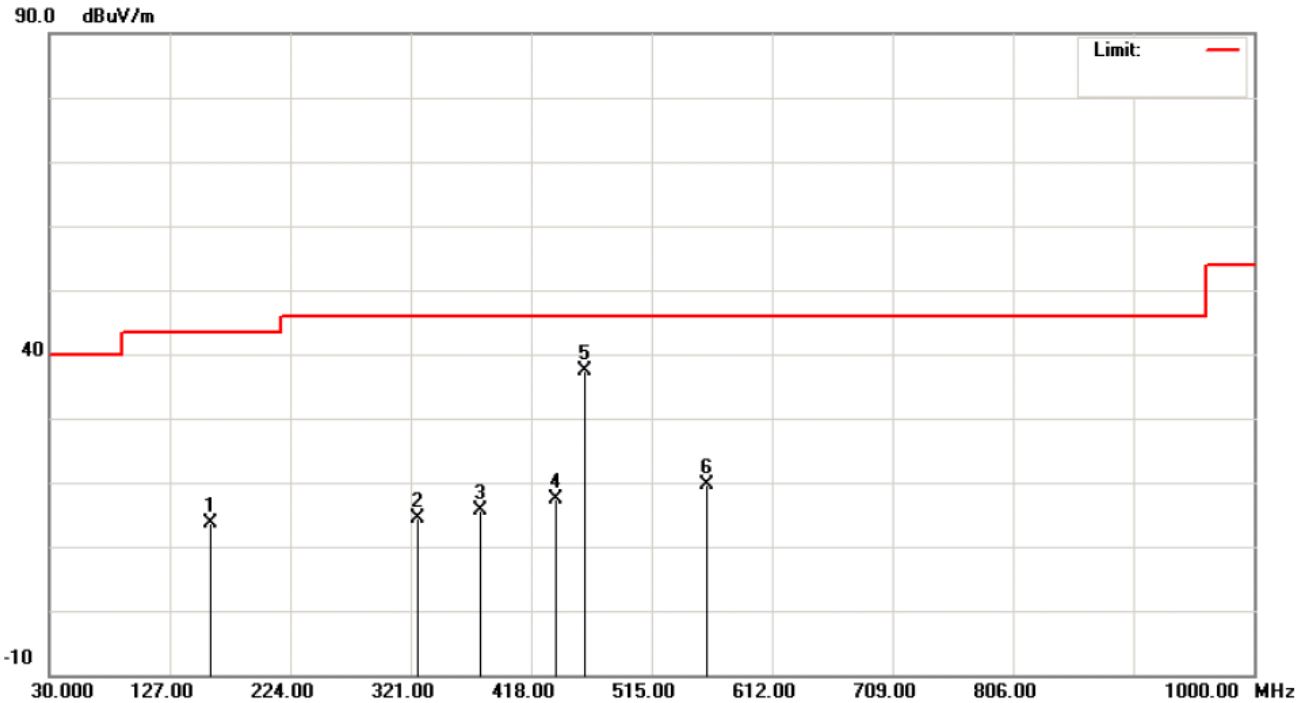
4.1.7 TEST RESULTS-BETWEEN 30MHZ AND 1000MHZ

E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V		
Test Mode :	CH05_TX 921.2 MHZ		

Freq. (MHz)	Polarization H/V	Reading Level (dBuV)	Correct Factor(dB)	Measurement (dBuV/m)	Limit(Quasi-Peak) (dBuV/m)	Margin (dB)	Note
159.9800	V	30.30	-16.62	13.68	43.50	- 29.82	
326.8200	V	29.60	-15.13	14.47	46.00	- 31.53	
377.2600	V	29.56	-13.85	15.71	46.00	- 30.29	
437.4000	V	29.64	-12.23	17.41	46.00	- 28.59	
460.6800	V	49.04	-11.70	37.34	46.00	- 8.66	
559.6200	V	29.40	-9.76	19.64	46.00	- 26.36	

Remark：

(1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120 kHz; SPA setting in RBW=120 kHz, VBW =120 kHz, Swp. Time = 0.3 sec./ MHz.
(2) 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.
(3) Measuring frequency range from 30 MHz to 1000 MHz.
(4) If the peak scan value is under the limit for more than 20dB, the signal will not show in table.

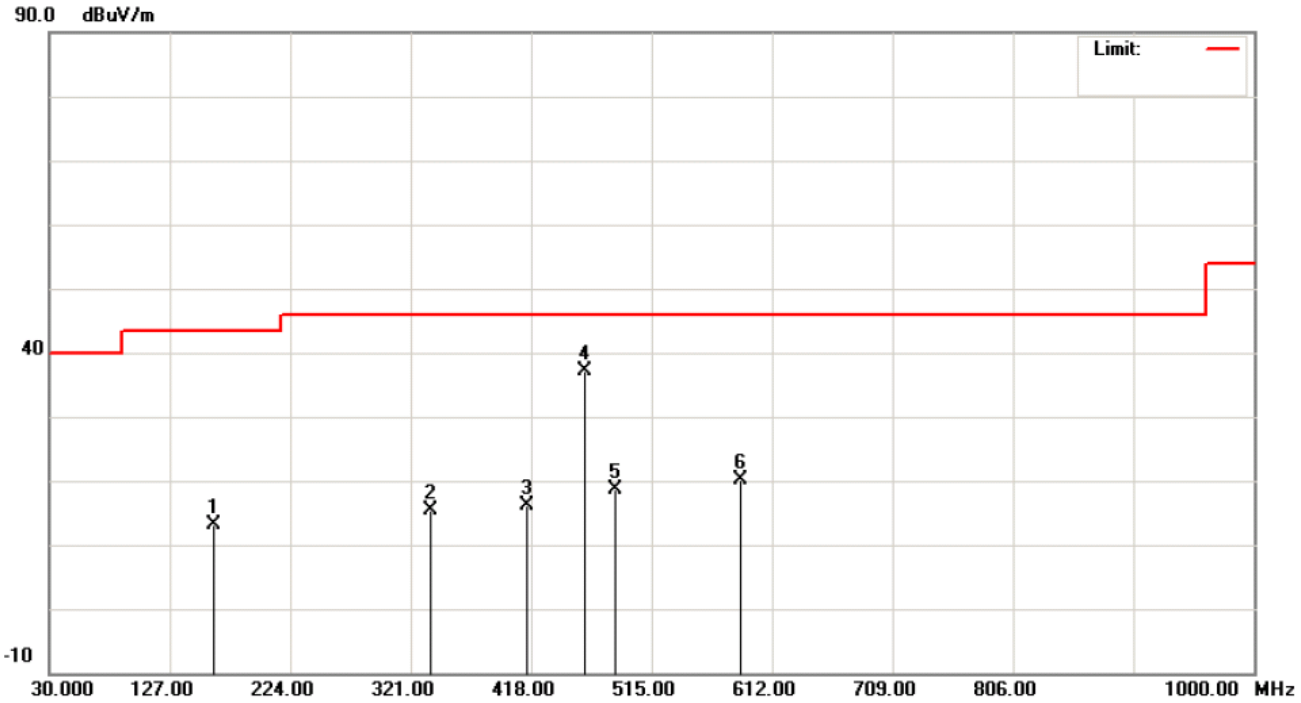


E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V		
Test Mode :	CH05_TX 921.2 MHZ		

Freq. (MHz)	Polarization H/V	Reading Level (dBuV)	Correct Factor(dB)	Measurement (dBuV/m)	Limit(Quasi-Peak) (dBuV/m)	Margin (dB)	Note
161.9200	H	29.78	-16.69	13.09	43.50	- 30.41	
336.5200	H	30.14	-14.88	15.26	46.00	- 30.74	
414.1200	H	29.06	-12.88	16.18	46.00	- 29.82	
460.6800	H	48.83	-11.70	37.13	46.00	- 8.87	
485.9000	H	29.81	-11.26	18.55	46.00	- 27.45	
586.7800	H	29.15	-9.03	20.12	46.00	- 25.88	

Remark：

(1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120 kHz; SPA setting in RBW=120 kHz, VBW =120 kHz, Swp. Time = 0.3 sec./ MHz.
(2) 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.
(3) Measuring frequency range from 30 MHz to 1000 MHz.
(4) If the peak scan value is under the limit for more than 20dB, the signal will not show in table.



4.1.8 TEST RESULTS- FUNDAMENTAL FREQUENCY & ABOVE 1000MHZ

E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH00_TX 920.2 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
920.20	V	48.46	47.07	-3.73	44.73	43.34			F
1840.41	V	50.03	47.05	-5.42	44.61	41.63	74.00	54.00	H
2760.61	V	47.13	42.11	-2.82	44.31	39.29	74.00	54.00	H
3680.85	V	43.39	34.17	-1.05	42.34	33.12	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

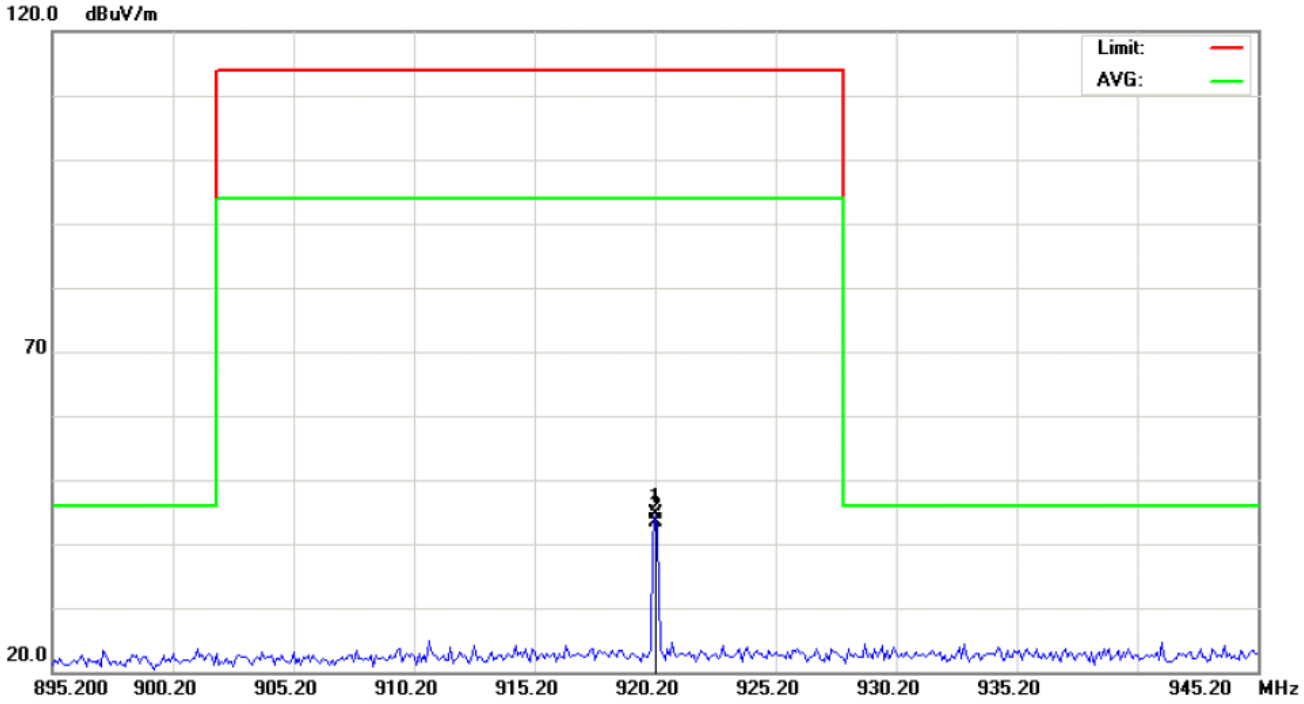
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

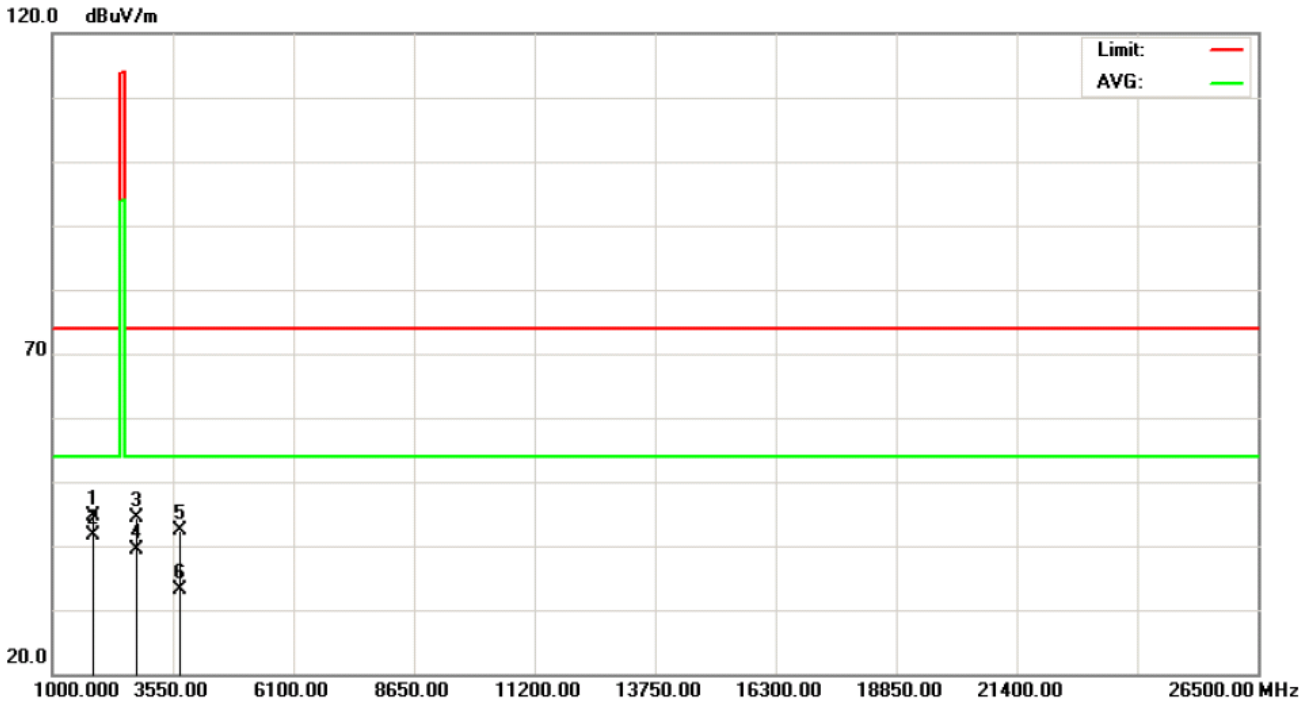
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(6) EUT Orthogonal Axis：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH00_TX 920.2 MHZ (Vertical)





E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH00_TX 920.2 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
920.20	H	46.05	44.53	-3.73	42.32	40.80			F
1840.41	H	47.83	43.36	-5.42	42.41	37.94	74.00	54.00	H
2760.61	H	49.08	46.08	-2.82	46.26	43.26	74.00	54.00	H
3680.81	H	47.96	42.10	-1.05	46.91	41.05	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

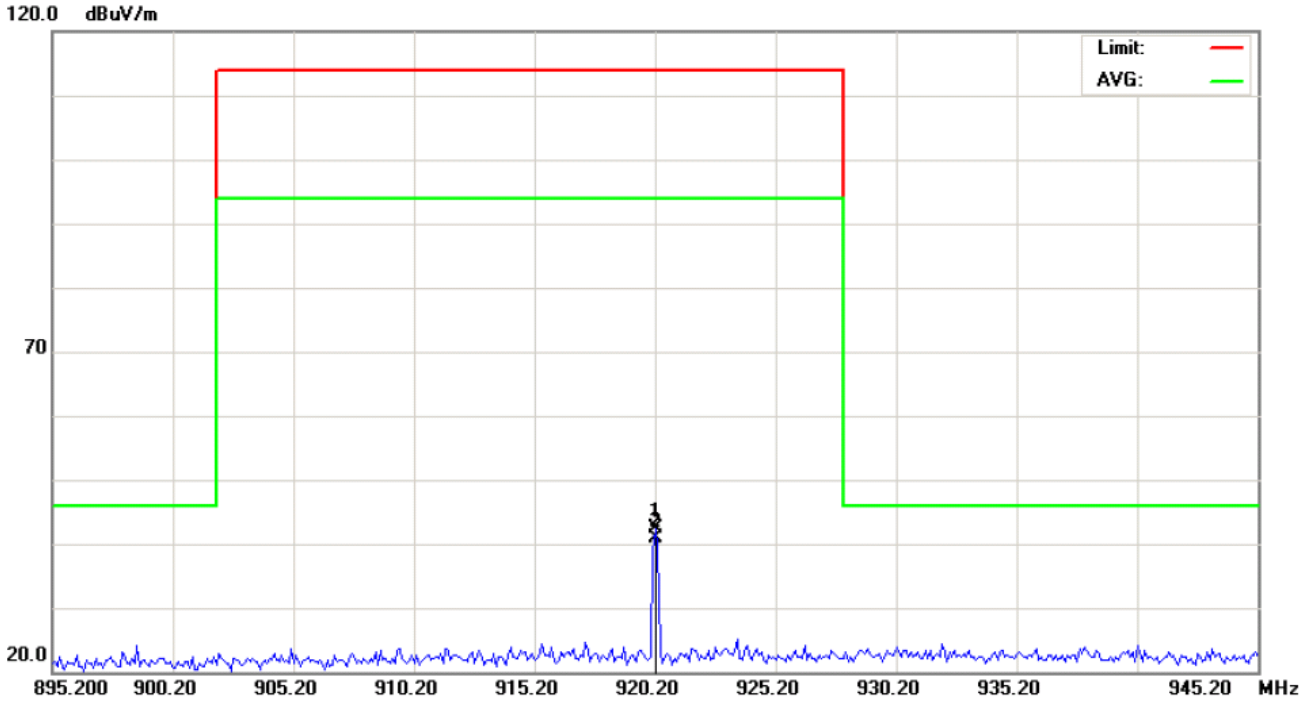
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

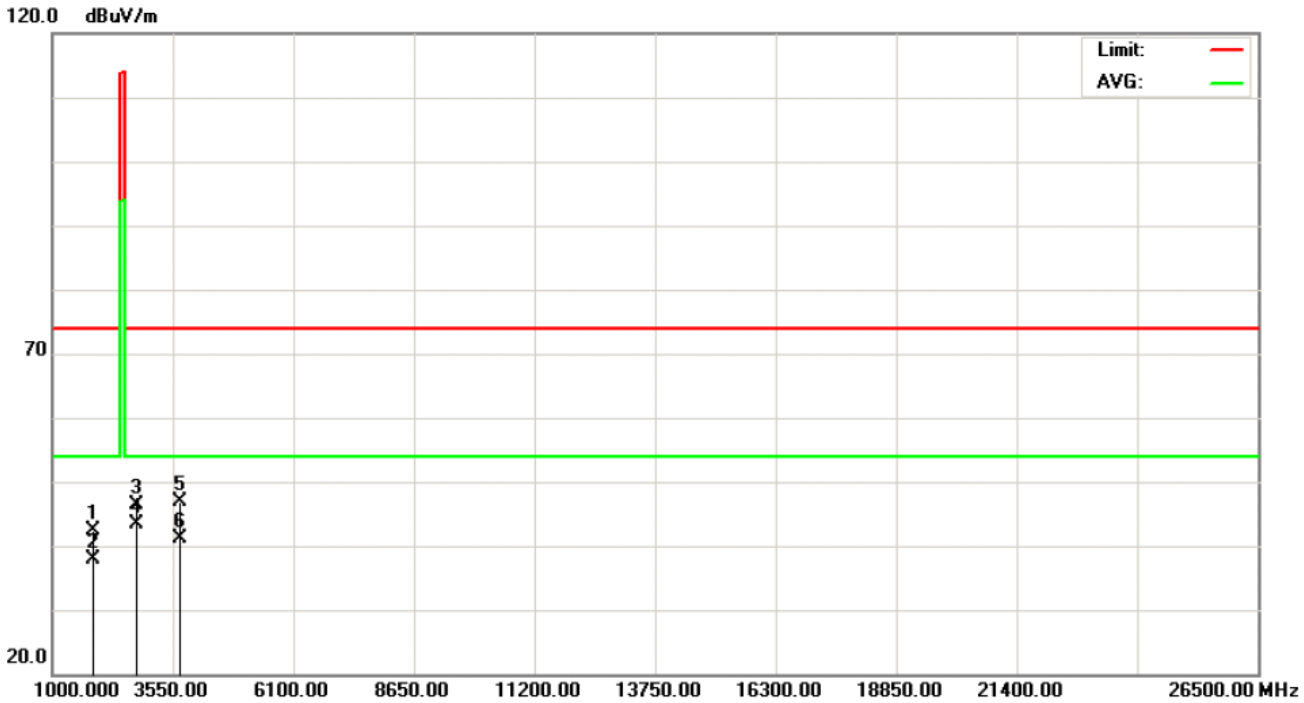
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(6) EUT Orthogonal Axis：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH00_TX 920.2 MHZ (Horizontal)





E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH05_TX 921.2 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
921.20	V	48.02	46.46	-3.71	44.31	42.75			F
1842.41	V	50.17	47.10	-5.42	44.75	41.68	74.00	54.00	H
2763.61	V	46.00	41.74	-2.82	43.18	38.92	74.00	54.00	H
3684.89	V	44.86	34.36	-1.04	43.82	33.32	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

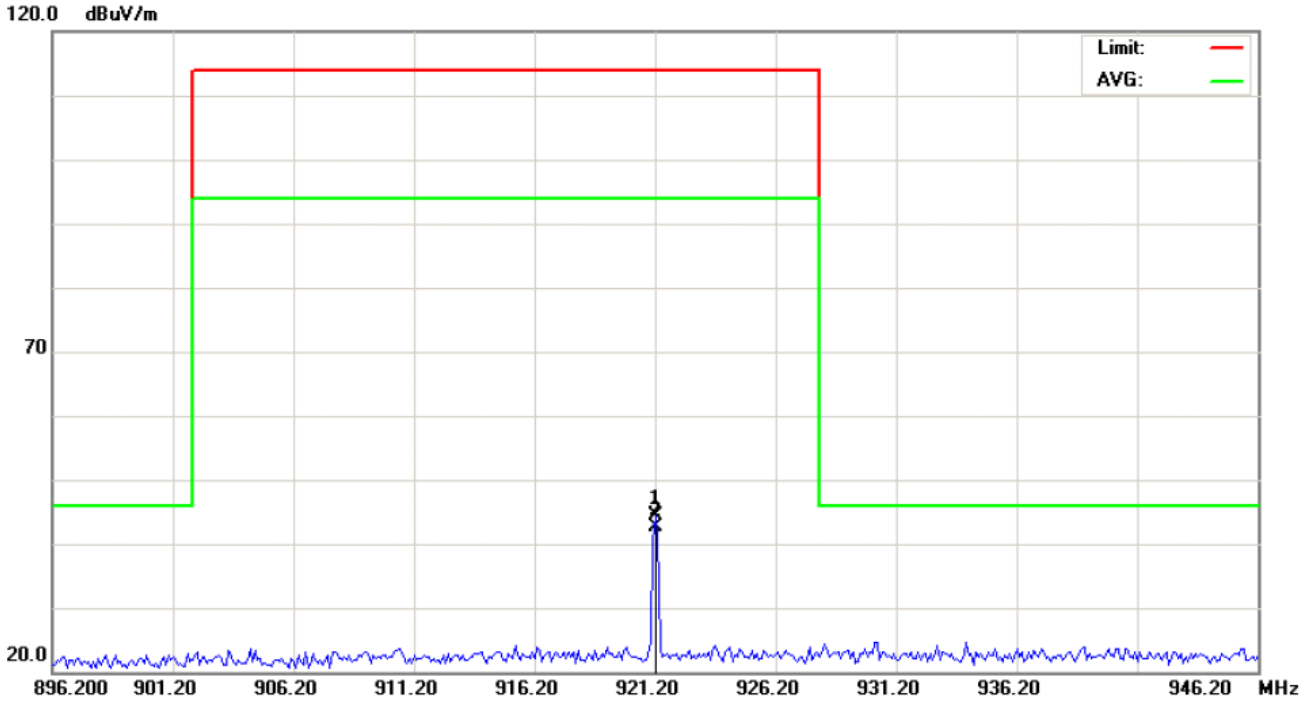
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

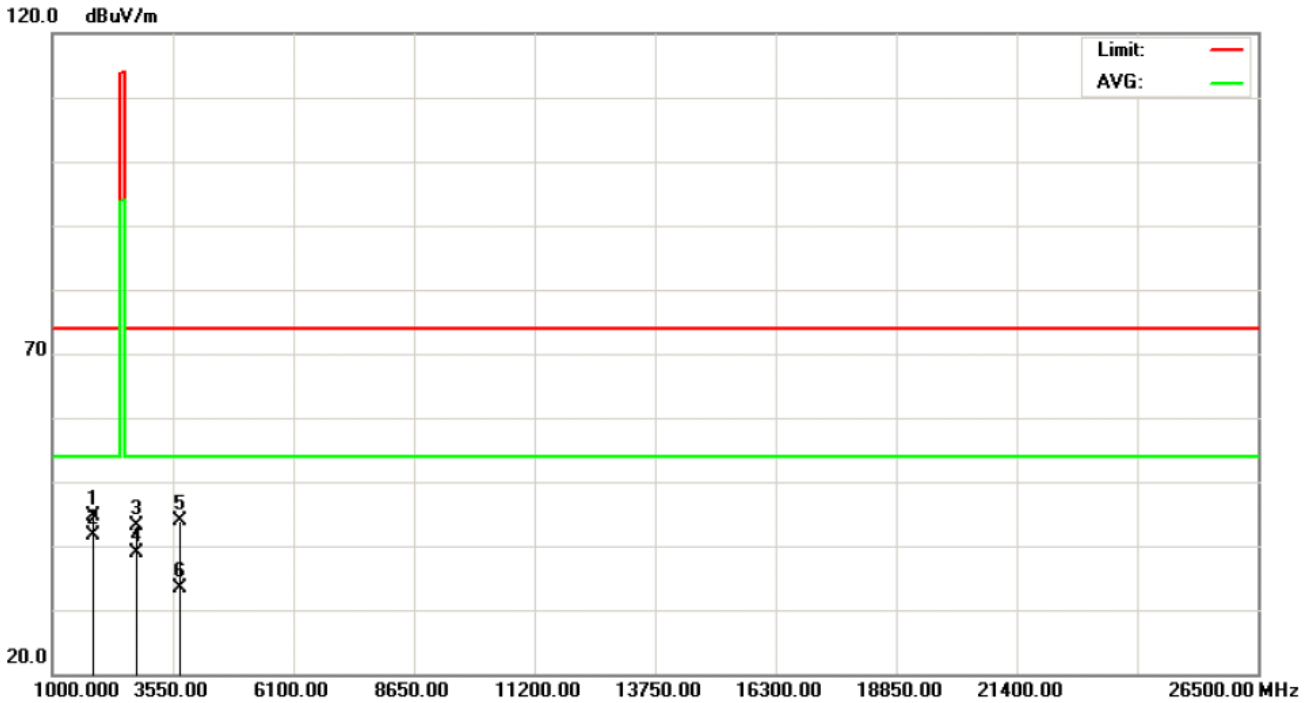
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(6) EUT Orthogonal Axis：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH05_TX 921.2 MHZ (Vertical)





E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH05_TX 921.2 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
921.20	H	47.42	45.98	-3.71	43.71	42.27			F
1842.41	H	47.57	42.80	-5.42	42.15	37.38	74.00	54.00	H
2763.61	H	49.42	46.91	-2.82	46.60	44.09	74.00	54.00	H
3684.83	H	47.86	42.01	-1.04	46.82	40.97	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

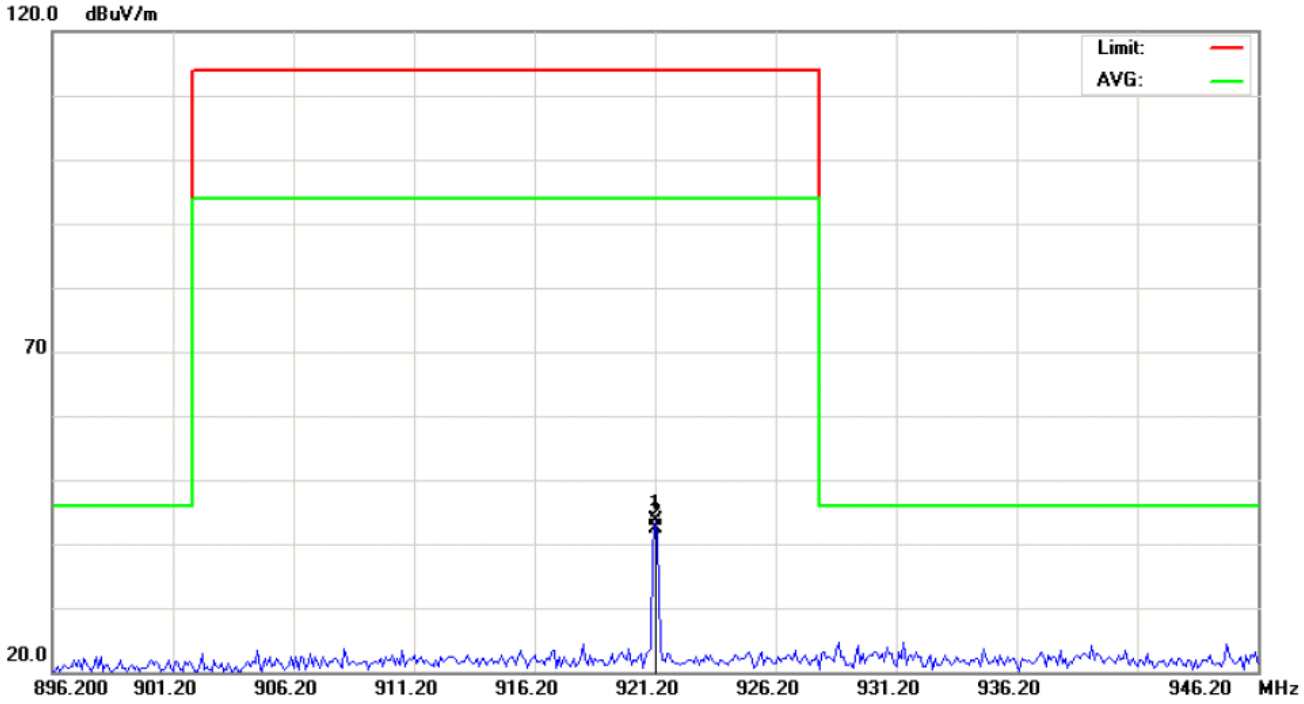
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

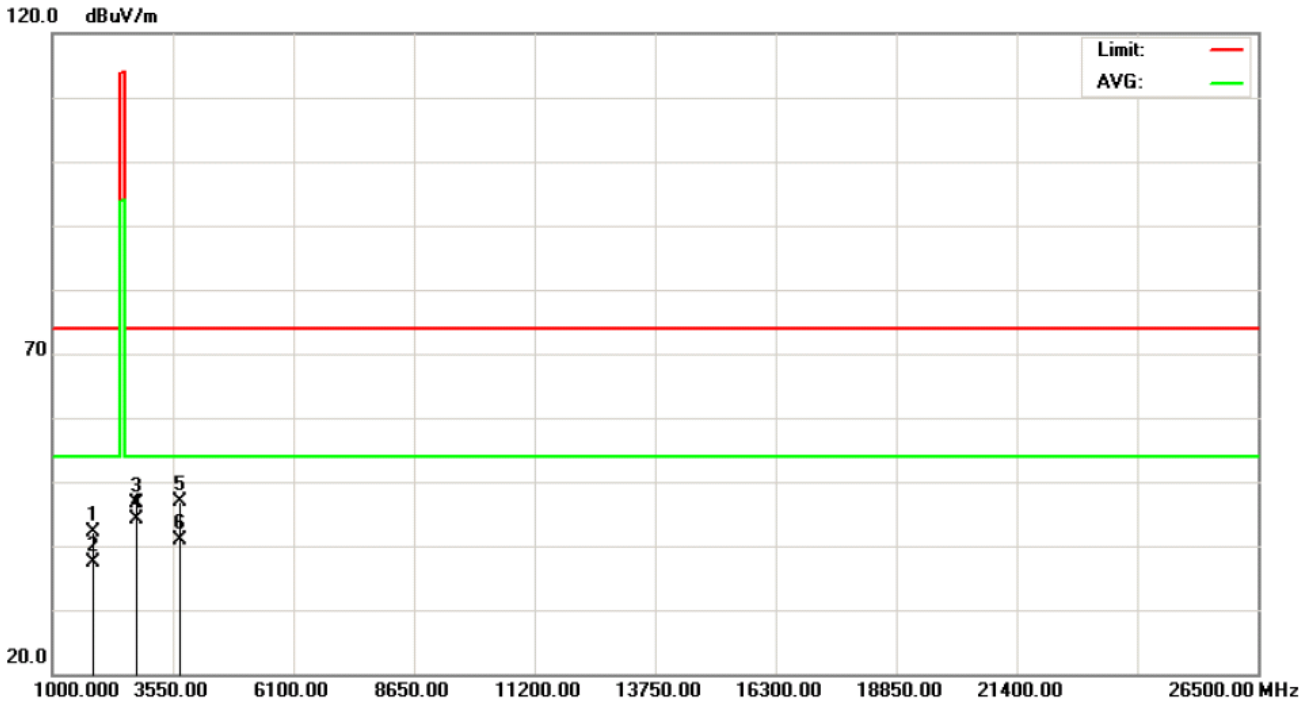
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(6) EUT Orthogonal Axis：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH05_TX 921.2 MHZ (Horizontal)





E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH09_TX 922 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
922.00	V	51.72	51.11	-3.70	48.02	47.41			F
1844.00	V	51.60	47.81	-5.41	46.19	42.40	74.00	54.00	H
2766.03	V	48.16	42.51	-2.82	45.34	39.69	74.00	54.00	H
3688.01	V	44.05	33.78	-1.04	43.01	32.74	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

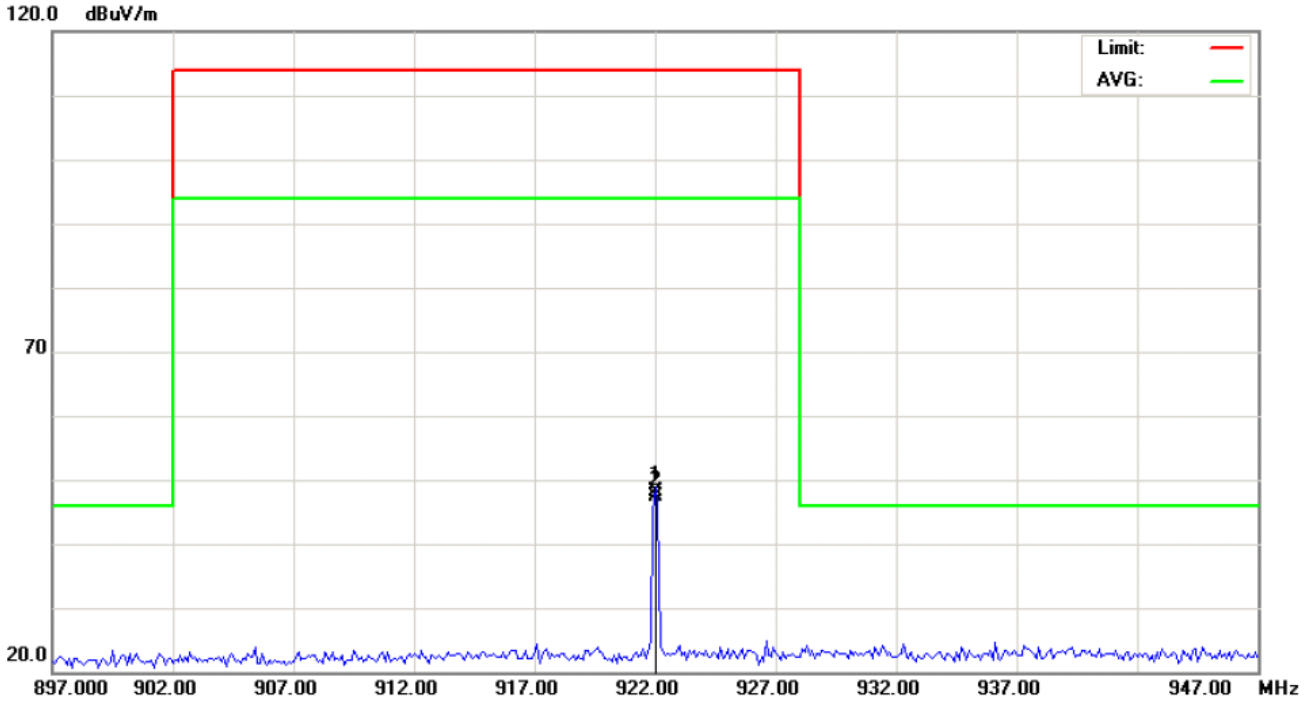
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

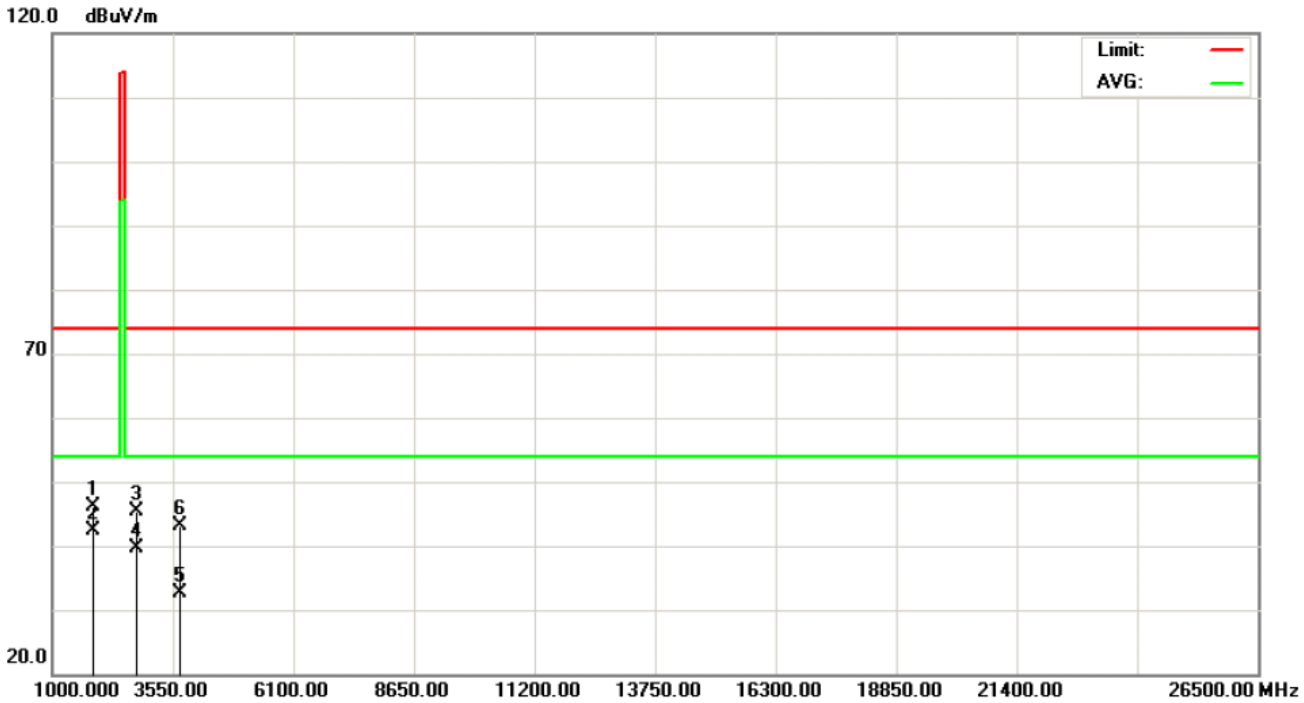
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(6) EUT Orthogonal Axis：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH09_TX 922 MHZ (Vertical)





E.U.T :	One Way Transceiver Guide System	Model Name :	HEI-18Y-1
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	DC 3V	EUT Orthogonal Axis:	Y
Test Mode :	CH09_TX 922 MHZ		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
922.00	H	51.49	49.71	-3.70	47.79	46.01			F
1843.99	H	47.58	42.44	-5.41	42.17	37.03	74.00	54.00	H
2766.01	H	50.54	47.79	-2.82	47.72	44.97	74.00	54.00	H
3687.99	H	47.82	42.63	-1.04	46.78	41.59	74.00	54.00	H

Remark：

(1) 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。

(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

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"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

Orthogonal Axis：Y
CH09_TX 922 MHZ (Horizontal)