FCC/IC Radio Test Report

FCC ID: PAB1LFS004
IC: 10556A-1LFS004

This report concerns (check one) : ■ **Original Grant** □ **Class II Change**

Issued Date	: Nov. 23, 2012
Project No.	: 1206C176B
Equipment	: Cavallino GT1 Air
Model Name	: 1LFS004
Applicant	: Logic3 plc
Address	: Rhodes Way, Watford, WD24 4YW, UK
Manufacturer	: Dongguan Kenwin Digital Technology Limited
Address	: No.8, Lin Chang Lu, Pinshan 188 Industry District, Tang Xia Town, Dongguan City, Guangdong Province, China.

Tested by:
Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Sep. 13, 2012
Date of Test:
Sep. 13, 2012 ~ Nov. 22, 2012

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

Neutron Engineering Inc.

No.3,Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.
TEL : (0769) 8318-3000 FAX : (0769) 8319-6000

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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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.

Table of Contents Page

Table of Contents Page

1. CERTIFICATION

Equipment	:	Cavallino GT1 Air
Brand Name	:	Logic3
Model Name	:	1LFS004
Applicant	:	Logic3 plc
Factory	:	Dongguan Kenwin Digital Technology Limited
Address	:	No.8, Lin Chang Lu, Pinshan 188 Industry District, Tang Xia Town, Dongguan City, Guangdong Province, China.
Date of Test	:	Sep. 13, 2012 ~ Nov. 22, 2012
Test Item	:	ENGINEERING SAMPLE
Standards	:	FCC Part15, Subpart C(15.247) / ANSI C63.4 : 2009 / Canada RSS-210:2010

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-FICP-2-1206C176B) 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).

Test result included in this report is only for the 802.11b/g approval part of the product.

2. SUMMARY OF TEST RESULTS

FCC Part15 (15.247) , Subpart C / RSS-210: 2010				
Standard	Section	Test Item	Judgment	Remark
RSS-GEN 7.2.2	15.207	Conducted Emission	PASS	
RSS-210 A8.5	15.247 (d)	Antenna conducted Spurious Emission	PASS	
RSS-210 A8.2(a)	15.247 (a)(2)	6dB Bandwidth	PASS	
RSS-210 A8.4(4)	15.247 (b)	Peak Output Power	PASS	
RSS-210 A8.2(b)	15.247 (e)	Power Spectral Density	PASS	
-	15.203	Antenna Requirement	PASS	
RSS-210 Annex 8 (A8.5)	15.247(d)	Transmitter Radiated Emissions FCC Limit: Table 15.209 RSS-210 Limit: Table 3	PASS	
RSS-Gen 7.2.3	Note(1)	Receiver Radiated Emissions RSS-210 Limit: Table 3	PASS	

Test procedures according to the technical standards:

NOTE:

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

(2) The test follows FCC KDB Publication No,558074(Measurement Guidelines of DTS)

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792
Neutron's test firm number for FCC 319330
Neutron's test firm number for IC 4428B-1

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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 %。

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U，(dB)	NOTE
DG-CB03	CISPR	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Cavallino GT1 Air</td></tr>
<tr><td>Brand Name</td><td>Logic3</td></tr>
<tr><td>Model Name</td><td>1LFS004</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Cavallino GT1 Air.

<table>
<tr><td>Operation Frequency</td><td>2412~2462 MHz</td></tr>
<tr><td>Modulation Type</td><td>802.11b:CCK, DQPSK, DBPSK
802.11g:OFDM</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6 Mbps</td></tr>
<tr><td>Number of Channel</td><td>11 CH, Please see note 3. (Page 9)</td></tr>
<tr><td>Antenna Designation</td><td rowspan="2">Please see note 4.(Page 9)</td></tr>
<tr><td>Antenna Gain(Peak)</td></tr>
<tr><td>Output Power</td><td>802.11b: 14.82 dBm
802.11g: 17.87 dBm</td></tr>
</table>

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.</td></tr>
<tr><td>Power Source</td><td>AC Mains</td></tr>
<tr><td>Power Rating</td><td>I/P AC 90-240V</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

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

2. CH 01 – CH 11 for 802.11b, 802.11g

Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	SENLING	SLB-400010270	Integral	U.FL	2
2	SENLING	SLB-400010270	Integral	U.FL	2
3	N/A	N/A	Printed	N/A	0

Note: The EUT is considered two different ANT types, Integral ANT(MHF port 50 Ohm connector) test item is testing and recording in test report, Printed ANT is not used (Used capacitance disable)

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 Mode	Description
Mode 1	TX Mode **NOTE (1)**
Mode 2	WIFI

The EUT system operated these modes is found to be the worst case during the pre-scanning test as Following:

For Conducted Test	
Final Test Mode	Description
Mode 2	WIFI

For Radiated Test	
Final Test Mode	Description
Mode 1	TX Mode **NOTE (1)**

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) 802.11b mode: DBPSK (1Mbps)
802.11g mode: OFDM (6Mbps)
For radiated emission tests, the highest output powers were set for final test.

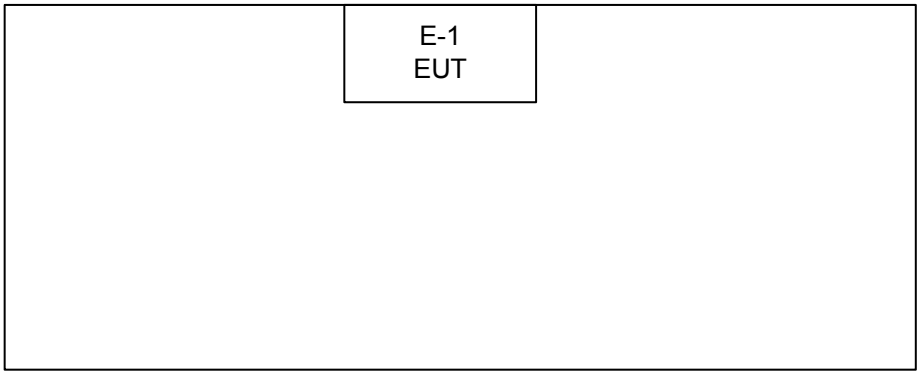
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

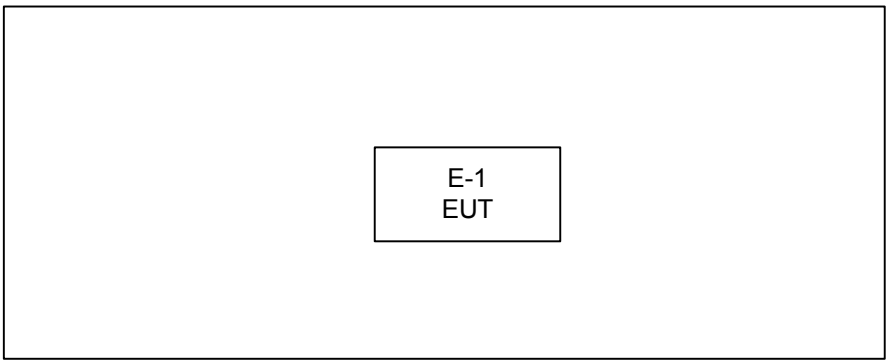
Test software Version	N/A		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b DSSS	N/A	N/A	N/A
IEEE 802.11g OFDM	N/A	N/A	N/A

3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted :



Radiated :



3.5 DESCRIPTION OF SUPPORT UNITS (RADIATED 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.

	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
E-1	Cavallino GT1 Air	Logic3	1LFS004	PAB1LFS004/ 10556A-1LFS004	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

Note:

(1) For detachable type I/O cable should be specified the length in m in『Length』column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
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.

4.1.2 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	May.04.2013
2	LISN	R&S	ENV216	100087	May.04.2013
3	Test Cable	N/A	C_17	N/A	Mar.28.2013
4	EMI TEST RECEIVER	R&S	ESCS30	826547/022	May.04.2013
5	50Ω Terminator	SHX	TF2-3G-A	08122902	May.04.2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

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

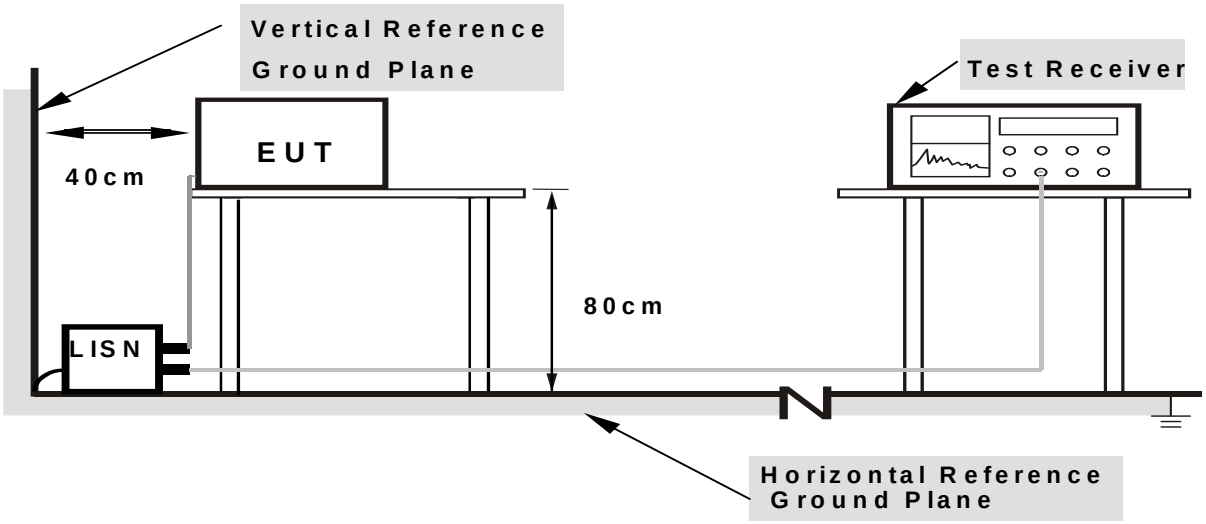
4.1.3 TEST PROCEDURE

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.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 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

4.1.6 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.
The EUT was programmed to be in continuously transmitting mode.

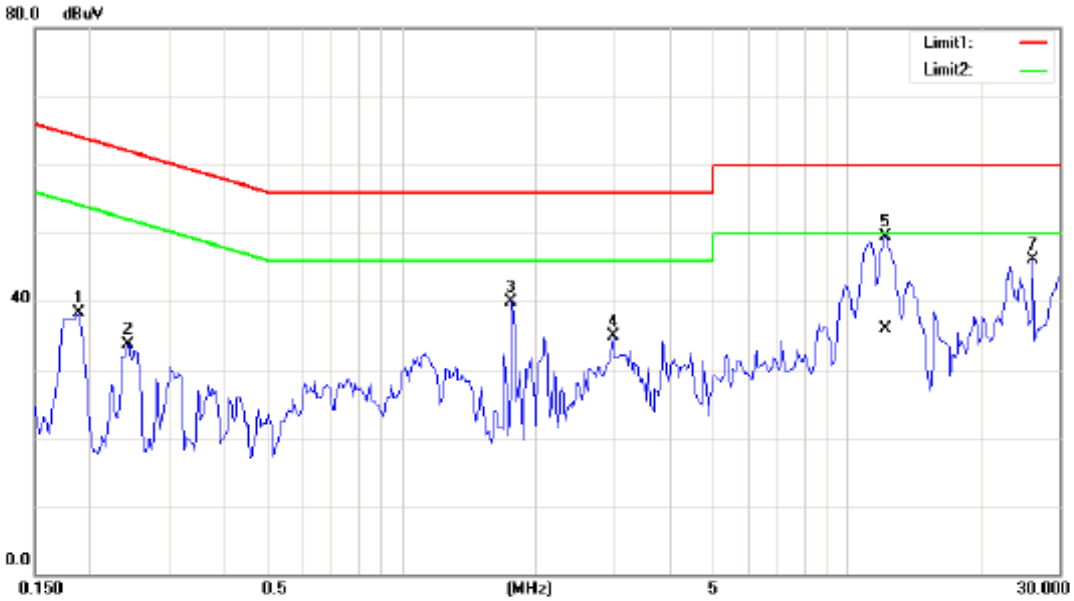
4.1.7 TEST RESULTS

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。

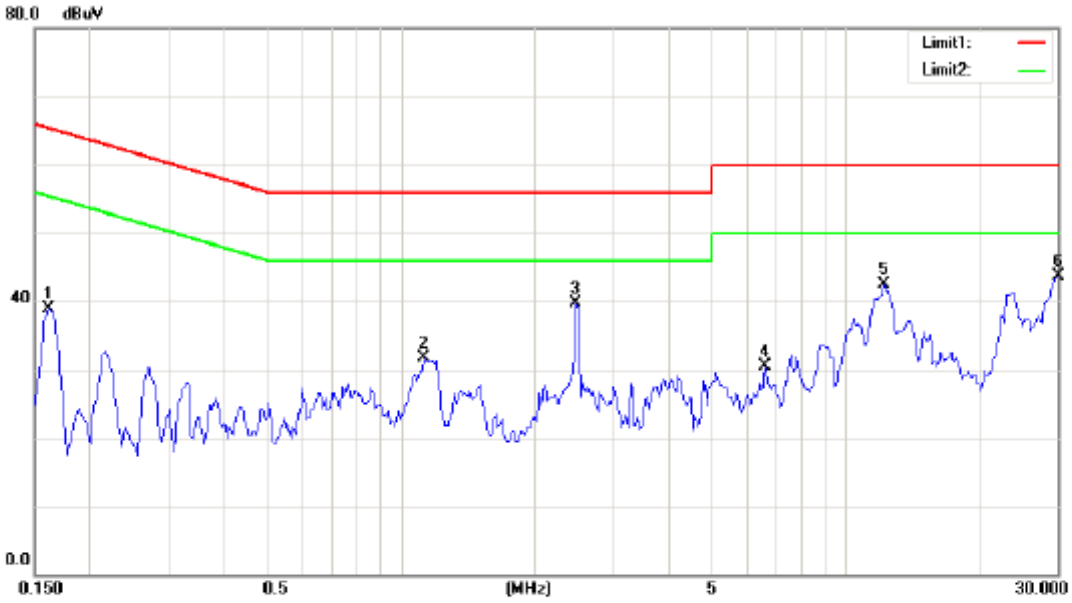
(2) Measuring frequency range from 150KHz to 30MHz.

E.U.T :	Cavallino GT1 Air	Model Name :	1LFS004
Temperature :	25 ℃	Relative Humidity :	67 %
Pressure :	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	WIFI	Phase:	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1891	28.66	9.58	38.24	64.08	-25.84	peak	
2		0.2437	24.18	9.59	33.77	61.97	-28.20	peak	
3		1.7711	30.14	9.78	39.92	56.00	-16.08	peak	
4		2.9860	25.04	9.85	34.89	56.00	-21.11	peak	
5	*	12.1952	39.22	10.27	49.49	60.00	-10.51	peak	
6		12.1952	25.70	10.27	35.97	50.00	-14.03	AVG	
7		26.1758	35.55	10.58	46.13	60.00	-13.87	peak	

E.U.T :	Cavallino GT1 Air	Model Name :	1LFS004
Temperature :	25 ℃	Relative Humidity :	67 %
Pressure :	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	WIFI	Phase:	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1617	29.47	9.53	39.00	65.38	-26.38	peak	
2		1.1266	21.95	9.78	31.73	56.00	-24.27	peak	
3		2.4820	29.75	9.91	39.66	56.00	-16.34	peak	
4		6.6133	20.36	10.11	30.47	60.00	-29.53	peak	
5		12.2147	32.13	10.30	42.43	60.00	-17.57	peak	
6	*	29.8750	32.98	10.74	43.72	60.00	-16.28	peak	

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz-1000MHz)

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

Frequencies (MHz)	Field Strength (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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3m)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

4.2.2 MEASUREMENT INSTRUMENTS LIST ANS SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	May.25.2013
2	Amplifier	HP	8447D	2944A09673	May.04.2013
3	Test Receiver	R&S	ESCI	100382	May.04.2013
4	Test Cable	N/A	C-01_CB03	N/A	Jul.01.2013
5	Antenna	ETS	3115	00075789	May.25.2013
6	Amplifier	Agilent	8449B	3008A02274	May.04.2013
7	Spectrum	Agilent	E4408B	US39240143	Nov.25.2012
8	Test Cable	HUBER+SUHNER	C-45	N/A	May.02.2013
9	Controller	CT	SC100	N/A	N/A
10	Active Loop Antenna	R&S	HFH2-Z2	830749/020	May.04.2013
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct.12.2013
12	Horn Antenna	EMCO	3115	9605-4803	May.25.2013

Remark: ” N/A” denotes No Model Name / Serial No. and No Calibration specified.
All calibration period of Equipment List is One Year.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz for PK/AVG detector
Start ~ Stop Frequency	90kHz~110kHz for QP detector
Start ~ Stop Frequency	110kHz~490kHz for PK/AVG detector
Start ~ Stop Frequency	490kHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

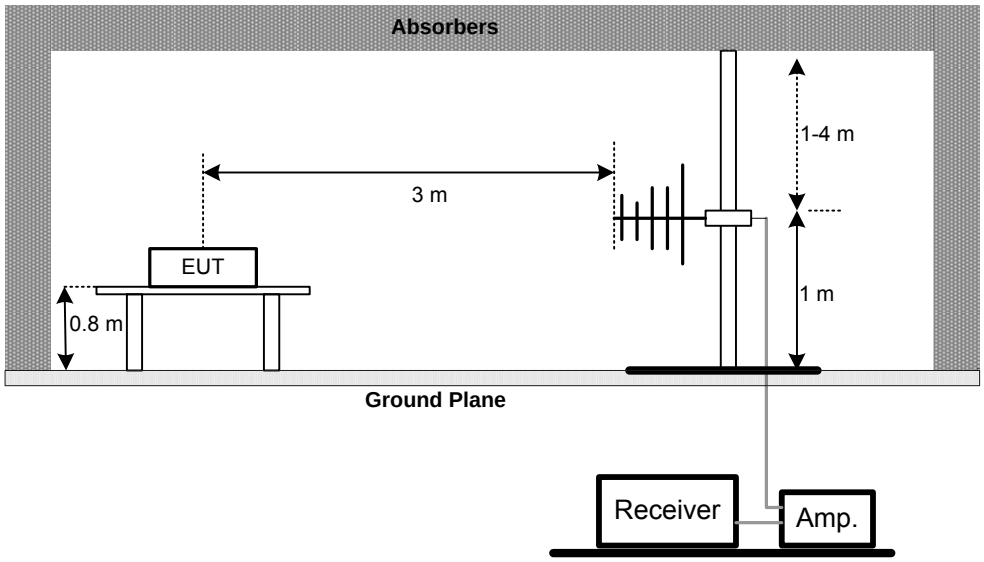
4.2.3 TEST PROCEDURE

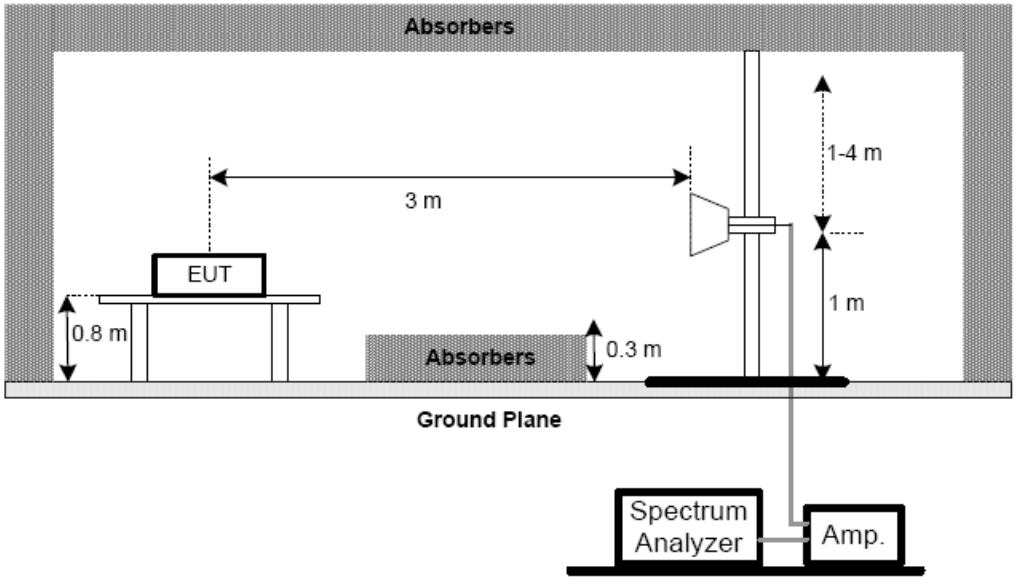
a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 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 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.

4.2.4 DEVIATION FROM TEST STANDARD

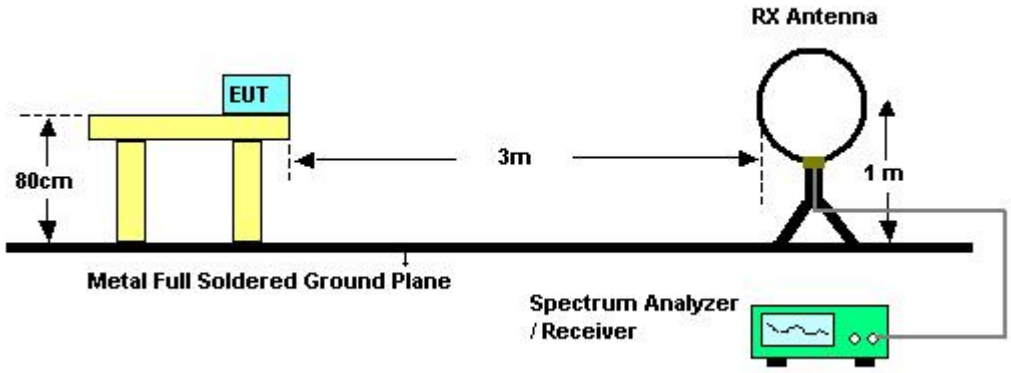
No deviation

4.2.5 TEST SETUP





(C) For radiated emissions below 30MHz



4.2.6 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.

4.2.7 TEST RESULTS (BELOW 30MHZ)

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	26 ℃	Relative Humidity：	53 %
Pressure：	1010 Pa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX 2412MHz		

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0099	0°	27.14	24.30	51.44	127.69	-76.25	AVG
0.0099	0°	30.16	24.30	54.46	147.69	-93.23	PK
0.0276	0°	23.48	23.82	47.30	118.79	-71.49	AVG
0.0276	0°	26.04	23.82	49.86	138.79	-88.93	PK
0.0330	0°	21.86	23.48	45.34	117.25	-71.91	AVG
0.0330	0°	24.61	23.48	48.09	137.25	-89.16	PK
0.0546	0°	20.35	22.31	42.66	112.86	-70.20	AVG
0.0546	0°	24.89	22.31	47.20	132.86	-85.66	PK
0.3810	0°	22.80	20.09	42.89	95.99	-53.10	AVG
0.3810	0°	25.12	20.09	45.21	115.99	-70.78	PK
1.9250	0°	25.70	19.51	45.21	69.54	-24.33	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0096	90°	19.20	24.30	43.50	127.92	-84.42	AVG
0.0096	90°	22.65	24.30	46.95	147.92	-100.97	PK
0.3250	90°	16.74	23.51	40.25	117.37	-77.12	AVG
0.3250	90°	19.80	23.51	43.31	137.37	-94.06	PK
0.0487	90°	20.36	22.48	42.84	113.85	-71.01	AVG
0.0487	90°	24.50	22.48	46.98	133.85	-86.87	PK
0.0650	90°	20.74	22.10	42.84	111.35	-68.51	AVG
0.0650	90°	23.57	22.10	45.67	131.35	-85.68	PK
0.4170	90°	22.13	20.00	42.13	95.20	-53.07	AVG
0.4170	90°	25.61	20.00	45.61	115.20	-69.59	PK
1.5180	90°	24.90	19.55	44.45	63.98	-19.53	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。

(2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB);。

(3) Limit line = specific limits (dBuV) + distance extrapolation factor.。

4.2.8 TEST RESULTS (BETWEEN30 – 1000 MHZ)

Remark：

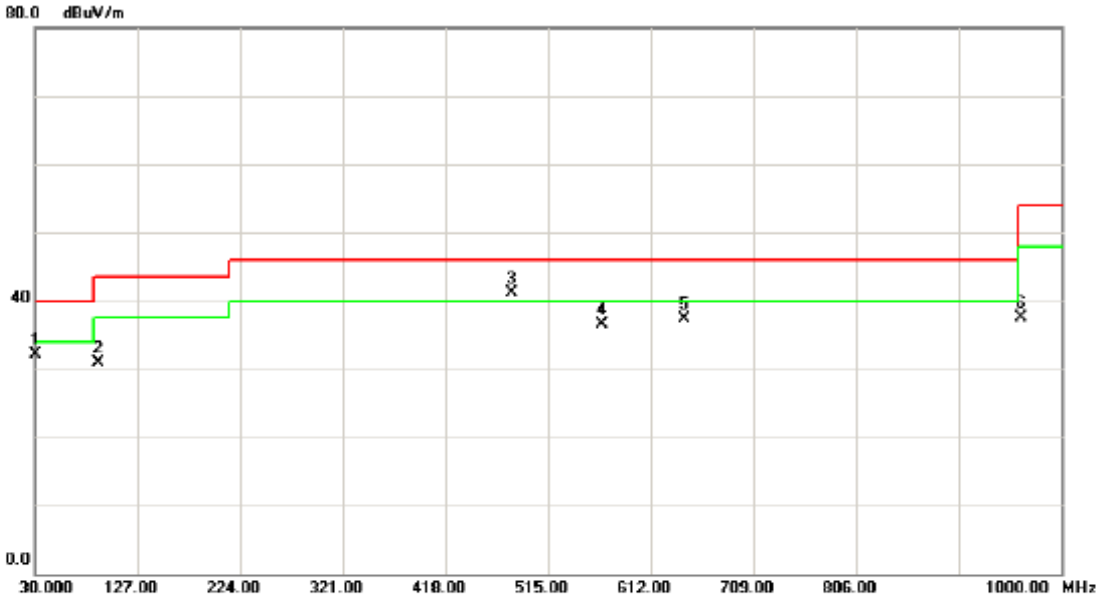
(1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz；SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz。

(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 30MHz to 1000MHz。

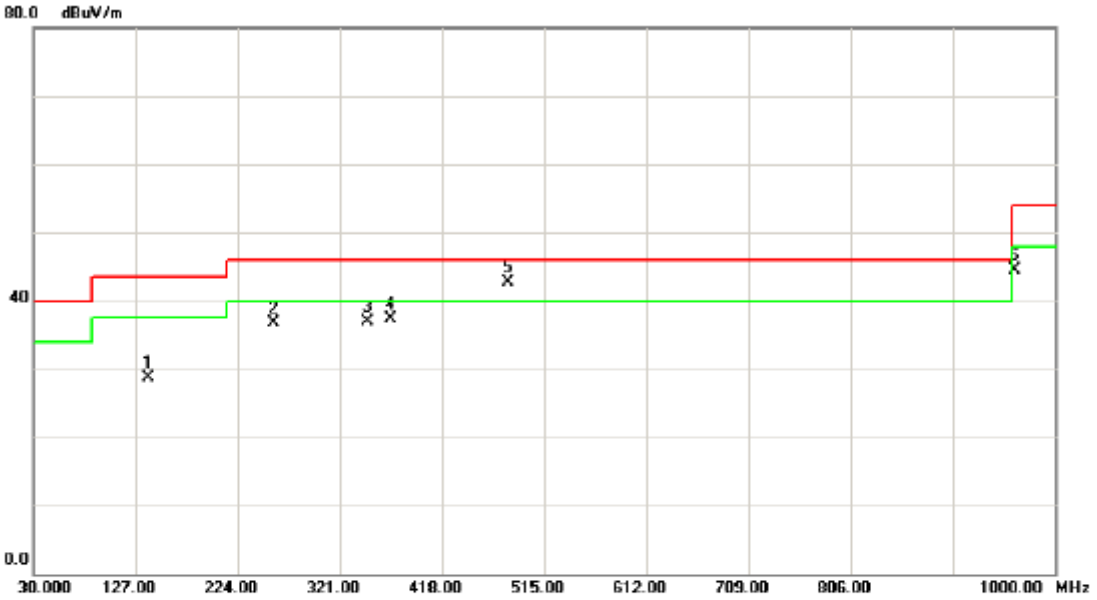
(4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table。

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B Mode 2412MHz	Polarization:	Vertical



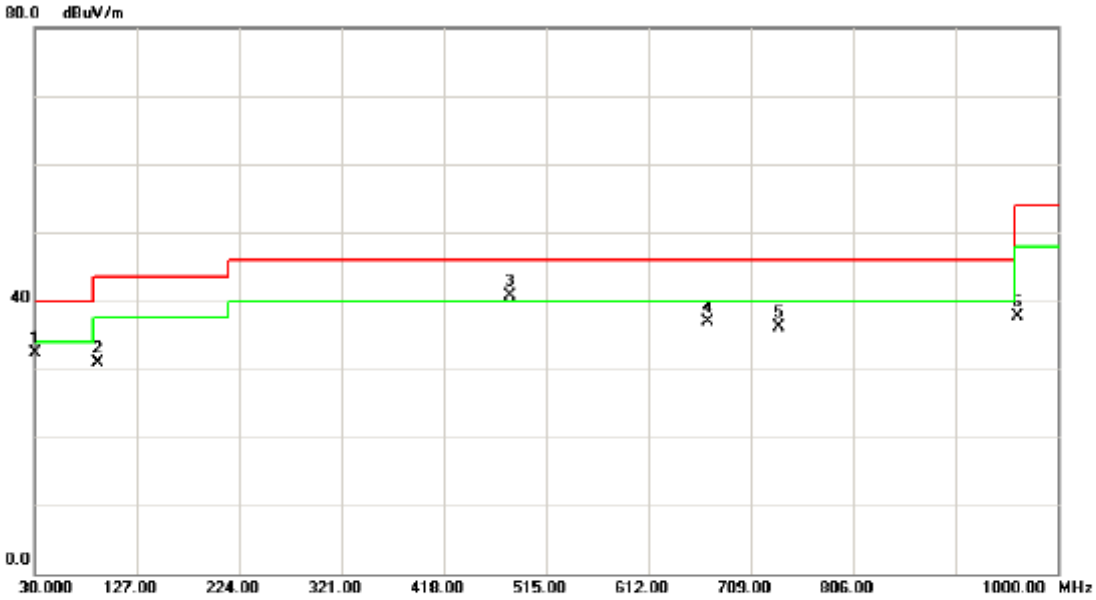
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.0000	48.12	-16.05	32.07	40.00	-7.93	peak	
2		90.6250	50.16	-19.18	30.98	43.50	-12.52	peak	
3	*	481.0500	49.65	-8.63	41.02	46.00	-4.98	peak	
4		565.9250	42.66	-6.25	36.41	46.00	-9.59	peak	
5		643.5250	42.05	-4.79	37.26	46.00	-8.74	peak	
6		961.2000	38.55	-1.10	37.45	54.00	-16.55	peak	

E.U.T :	Cavallino GT1 Air	Model Name :	1LFS004
Temperature :	25 ℃	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B Mode 2412MHz	Polarization:	Horizontal



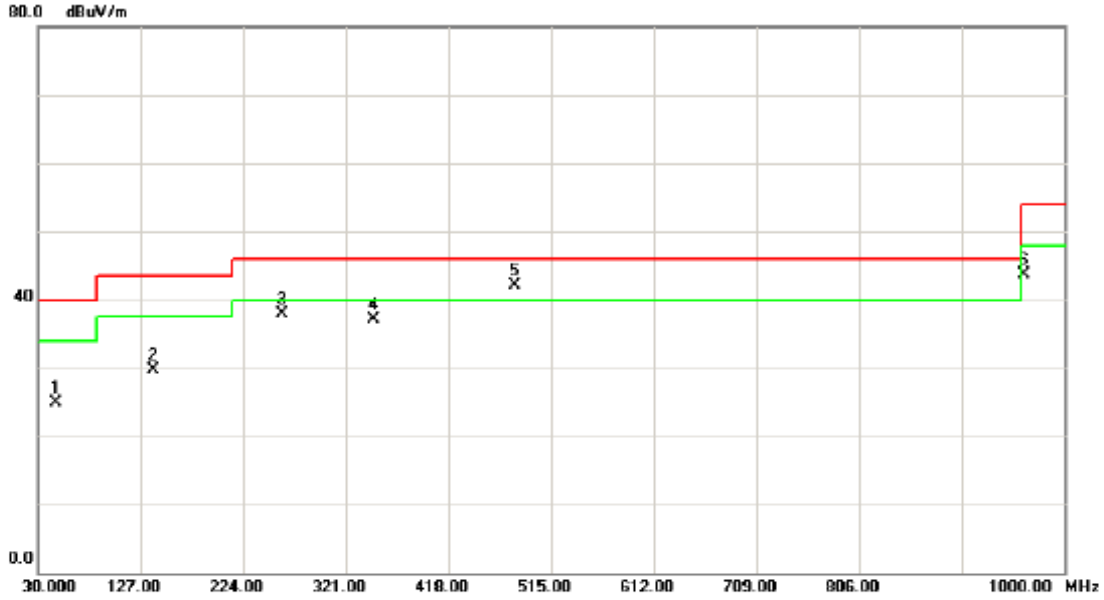
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		139.1250	46.67	-18.03	28.64	43.50	-14.86	peak	
2		257.9500	51.29	-14.51	36.78	46.00	-9.22	peak	
3		347.6750	48.57	-11.58	36.99	46.00	-9.01	peak	
4		369.5000	48.10	-10.85	37.25	46.00	-8.75	peak	
5	*	481.0500	51.30	-8.63	42.67	46.00	-3.33	peak	
6		961.2000	45.62	-1.10	44.52	54.00	-9.48	peak	

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B Mode 2437MHz	Polarization:	Vertical



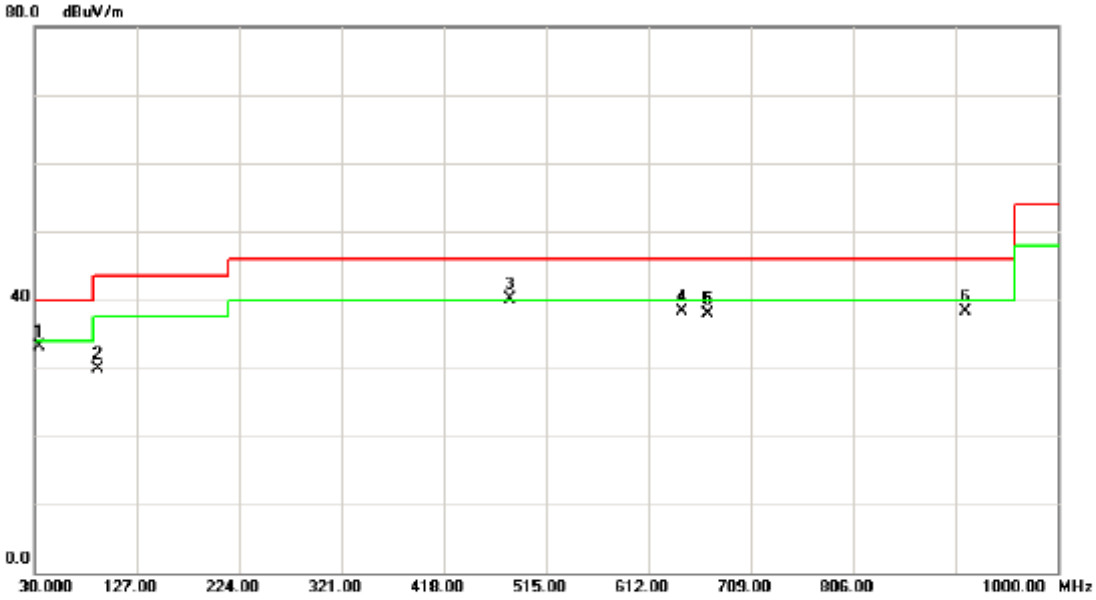
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.0000	48.41	-16.05	32.36	40.00	-7.64	peak	
2		90.6250	50.17	-19.18	30.99	43.50	-12.51	peak	
3	*	481.0500	49.42	-8.63	40.79	46.00	-5.21	peak	
4		667.7750	41.56	-4.67	36.89	46.00	-9.11	peak	
5		735.6750	40.46	-4.36	36.10	46.00	-9.90	peak	
6		961.2000	38.85	-1.10	37.75	54.00	-16.25	peak	

E.U.T :	Cavallino GT1 Air	Model Name :	1LFS004
Temperature :	25 ℃	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B Mode 2437MHz	Polarization:	Horizontal



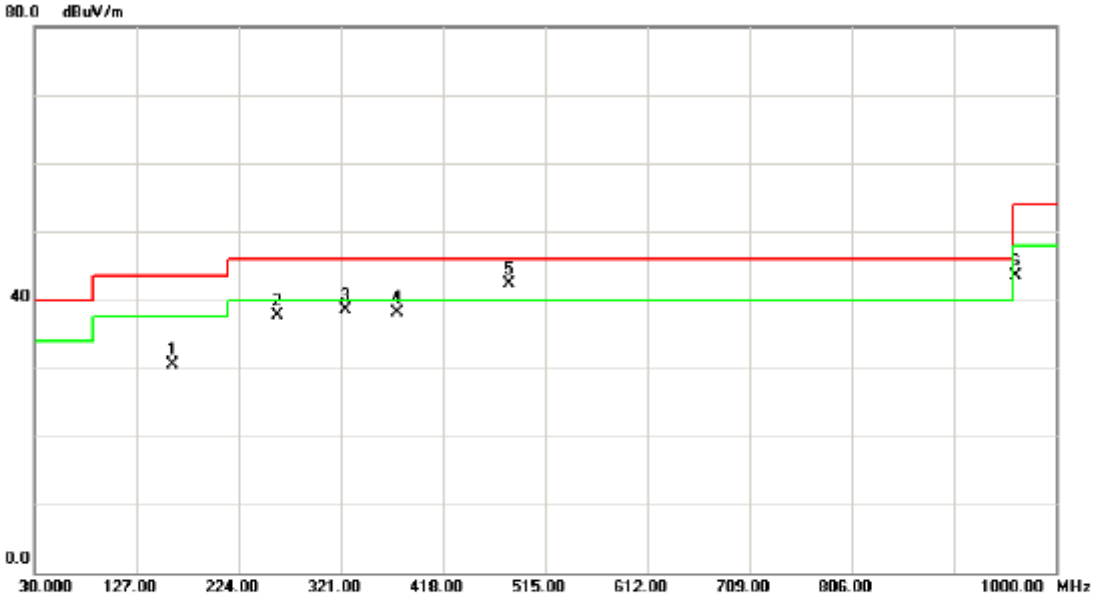
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		46.9750	42.14	-17.20	24.94	40.00	-15.06	peak	
2		139.1250	47.76	-18.03	29.73	43.50	-13.77	peak	
3		260.3750	52.25	-14.36	37.89	46.00	-8.11	peak	
4		347.6750	48.61	-11.58	37.03	46.00	-8.97	peak	
5	*	481.0500	50.82	-8.63	42.19	46.00	-3.81	peak	
6		961.2000	44.77	-1.10	43.67	54.00	-10.33	peak	

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B Mode 2462MHz	Polarization:	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		34.8500	49.99	-16.95	33.04	40.00	-6.96	peak	
2		90.6250	49.16	-19.18	29.98	43.50	-13.52	peak	
3	*	481.0500	48.65	-8.63	40.02	46.00	-5.98	peak	
4		643.5250	43.05	-4.79	38.26	46.00	-7.74	peak	
5		667.7750	42.56	-4.67	37.89	46.00	-8.11	peak	
6		912.7000	39.99	-1.76	38.23	46.00	-7.77	peak	

E.U.T :	Cavallino GT1 Air	Model Name :	1LFS004
Temperature :	25 ℃	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B Mode 2462MHz	Polarization:	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		160.9500	48.45	-17.94	30.51	43.50	-12.99	peak	
2		260.3750	52.01	-14.36	37.65	46.00	-8.35	peak	
3		325.8500	50.47	-12.06	38.41	46.00	-7.59	peak	
4		374.3500	48.89	-10.69	38.20	46.00	-7.80	peak	
5	*	481.0500	50.87	-8.63	42.24	46.00	-3.76	peak	
6		961.2000	44.69	-1.10	43.59	54.00	-10.41	peak	

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2412MHz		

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)	
2385.00	V	37.50	14.49	32.28	69.78	46.77	74.00	54.00	X/E
2390.00	V	40.33	12.11	32.28	72.61	44.39	74.00	54.00	X/E
2412.00	**V**	**80.38**	**71.08**	**32.26**	**112.64**	**103.34**			**X/F**
4824.05	V	43.96	32.25	6.19	50.15	38.44	74.00	54.00	X/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 。

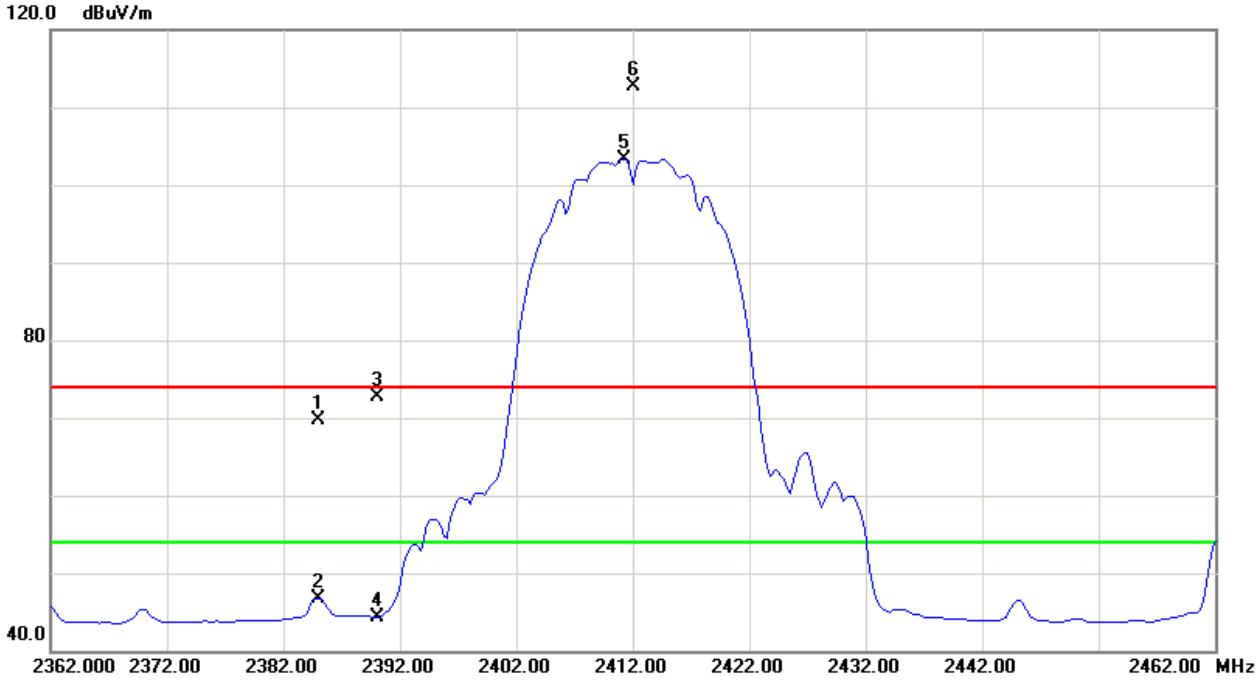
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

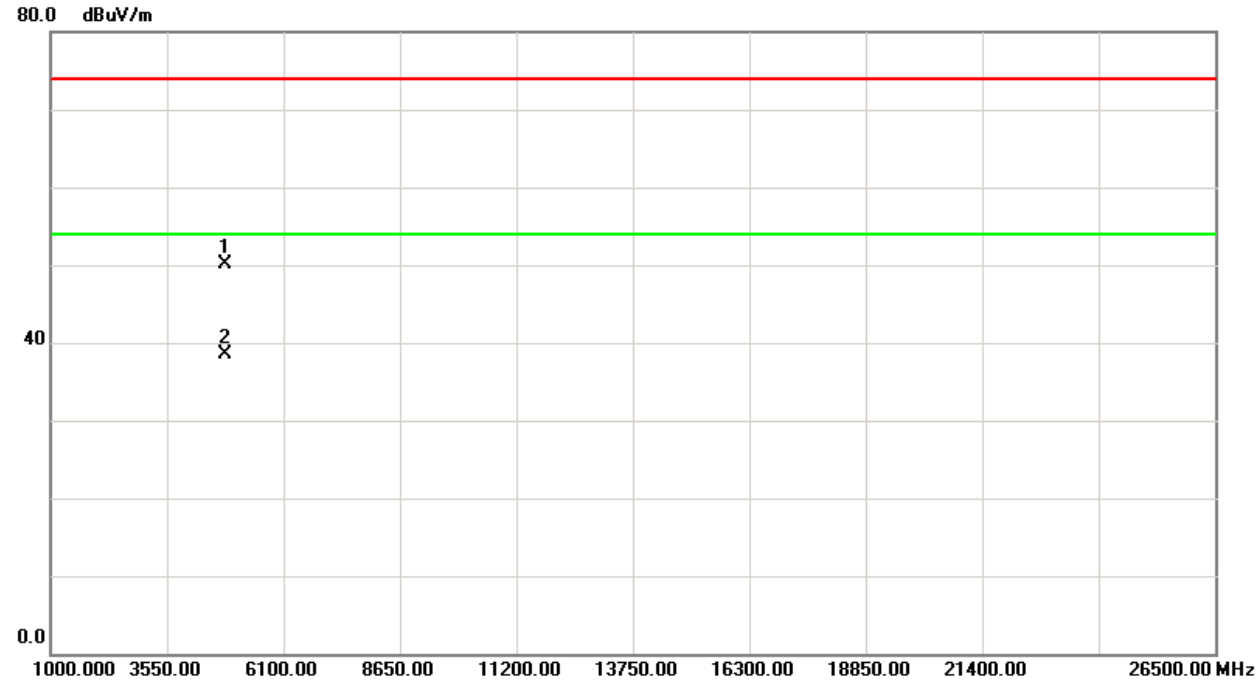
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH01 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2412MHz		

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)	
2390.00	H	32.14	11.00	32.28	64.42	43.28	74.00	54.00	X/E
2412.25	**H**	**69.73**	**60.66**	**32.26**	**101.99**	**92.92**			**X/F**
4823.85	H	42.58	31.54	6.19	48.77	37.73	74.00	54.00	X/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 。

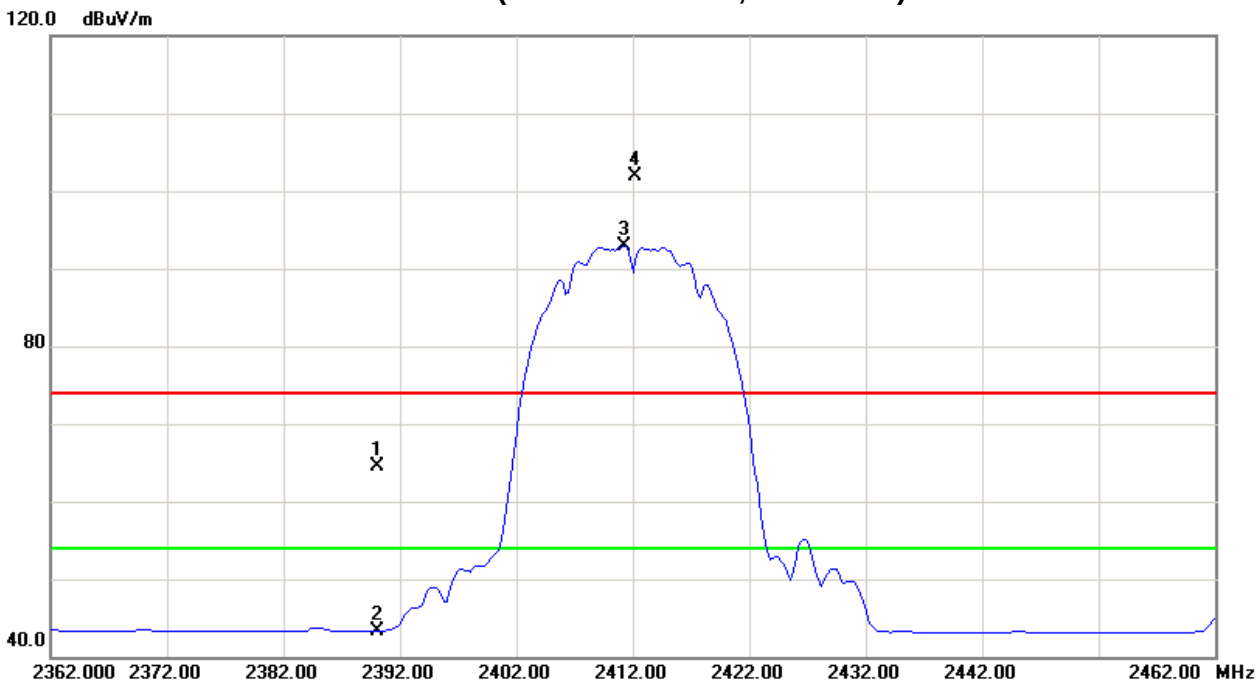
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

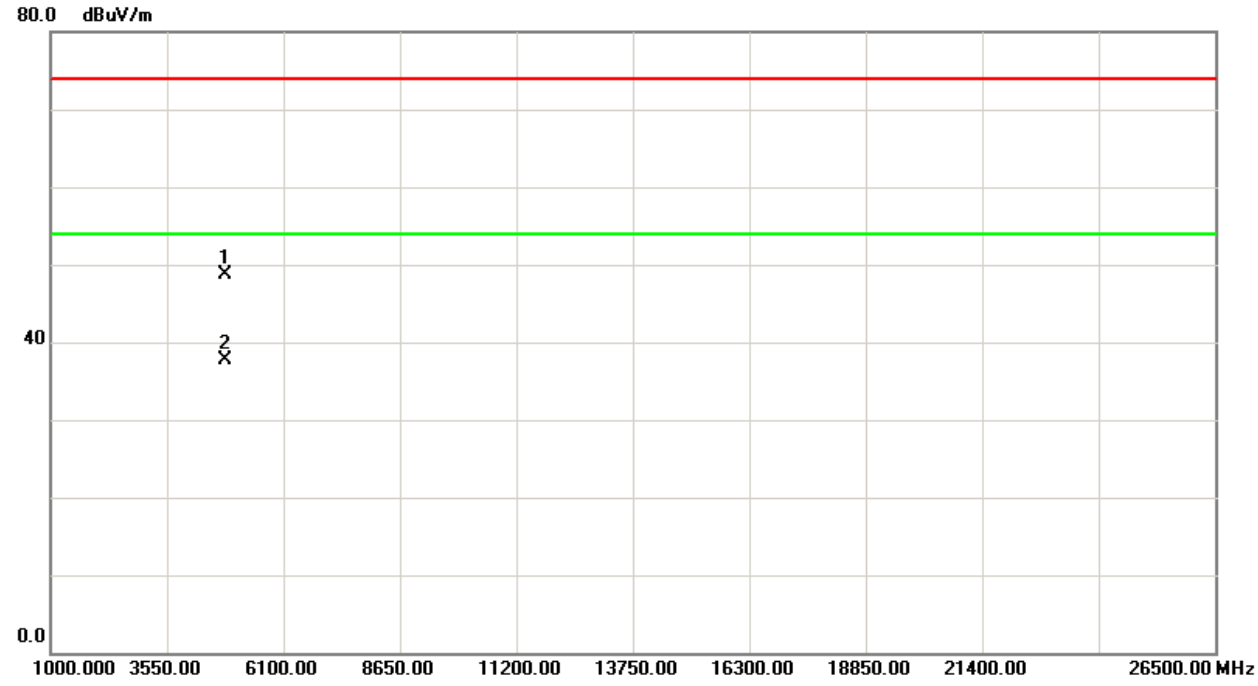
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH01 (Above 1000 MHz, Horizontal)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2437MHz		

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)	
2435.75	**V**	**79.22**	**71.41**	**32.23**	**111.45**	**103.64**			**X/F**
4874.06	V	43.56	31.78	6.39	49.95	38.17	74.00	54.00	X/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 。

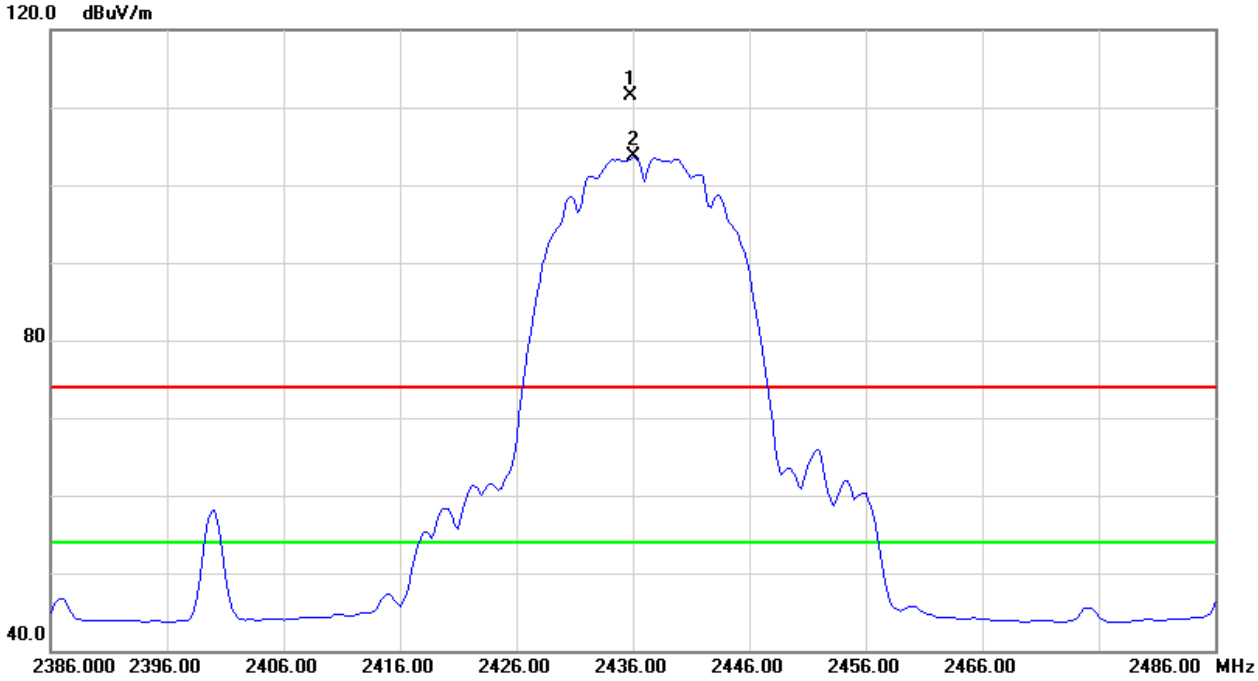
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

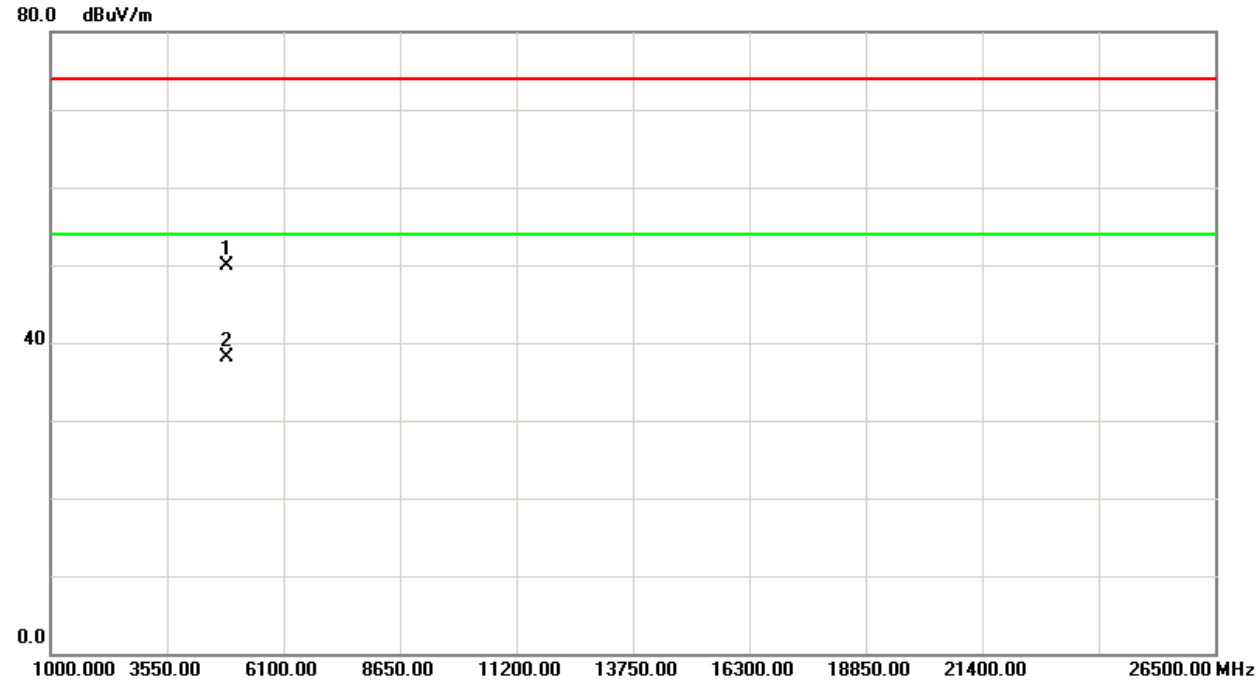
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH06 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2437MHz		

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)	
2436.00	**H**	**68.50**	**59.61**	**32.23**	**100.73**	**91.84**			**X/F**
4874.32	H	42.64	30.97	6.39	49.03	37.36	74.00	54.00	X/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 。

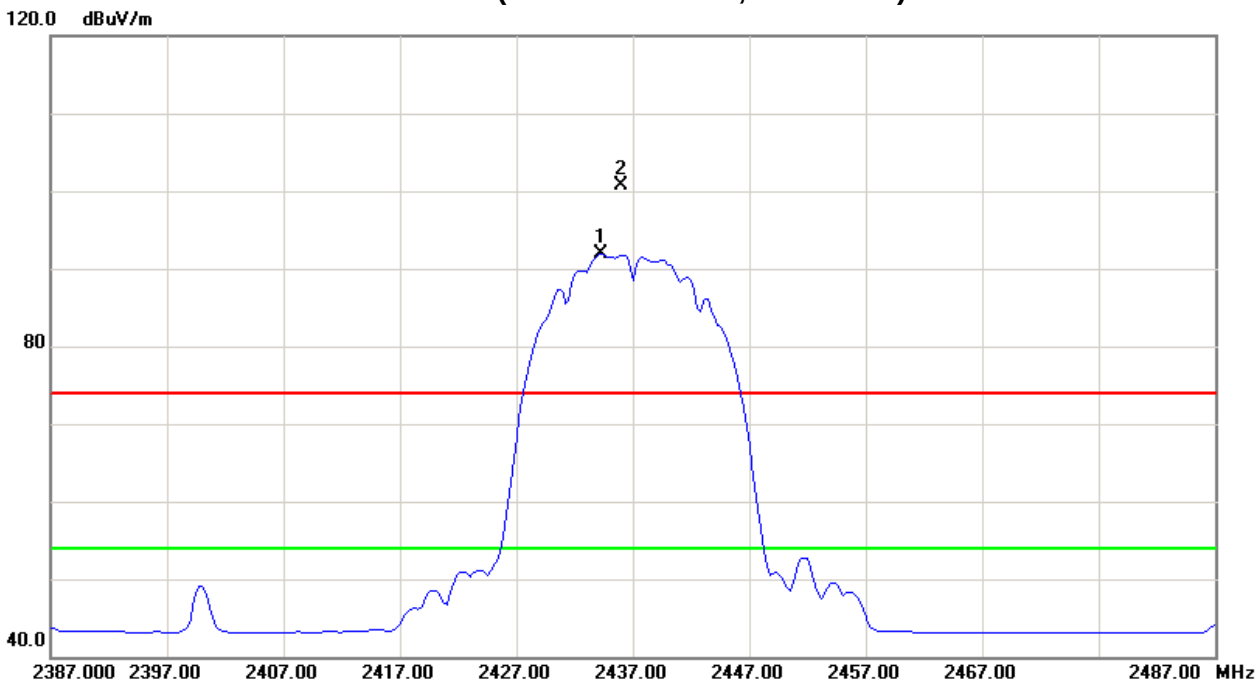
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

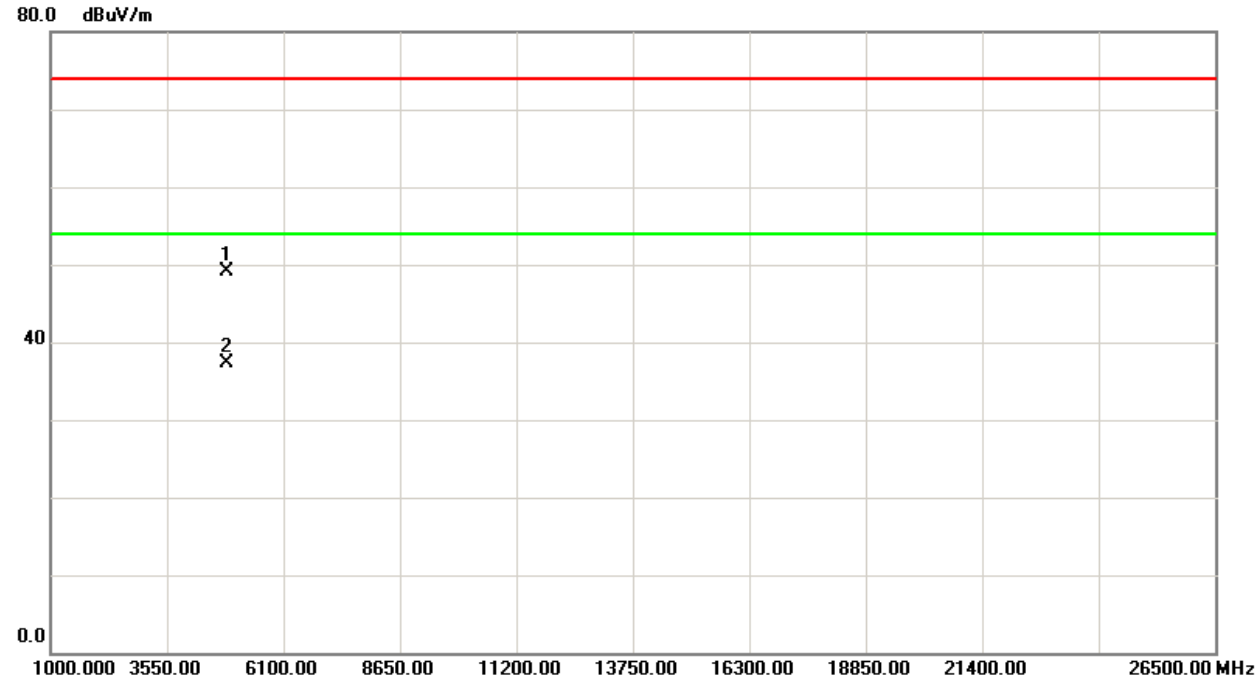
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH06 (Above 1000 MHz, Horizontal)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2462MHz		

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)	
2462.00	**V**	**79.77**	**70.80**	**32.21**	**111.98**	**103.01**			**X/F**
2483.50	V	40.16	12.89	32.17	72.33	45.06	74.00	54.00	X/E
2500.00	V	32.26	13.18	32.16	64.42	45.34	74.00	54.00	X/E
4924.24	V	43.26	32.71	6.59	49.85	39.30	74.00	54.00	X/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.

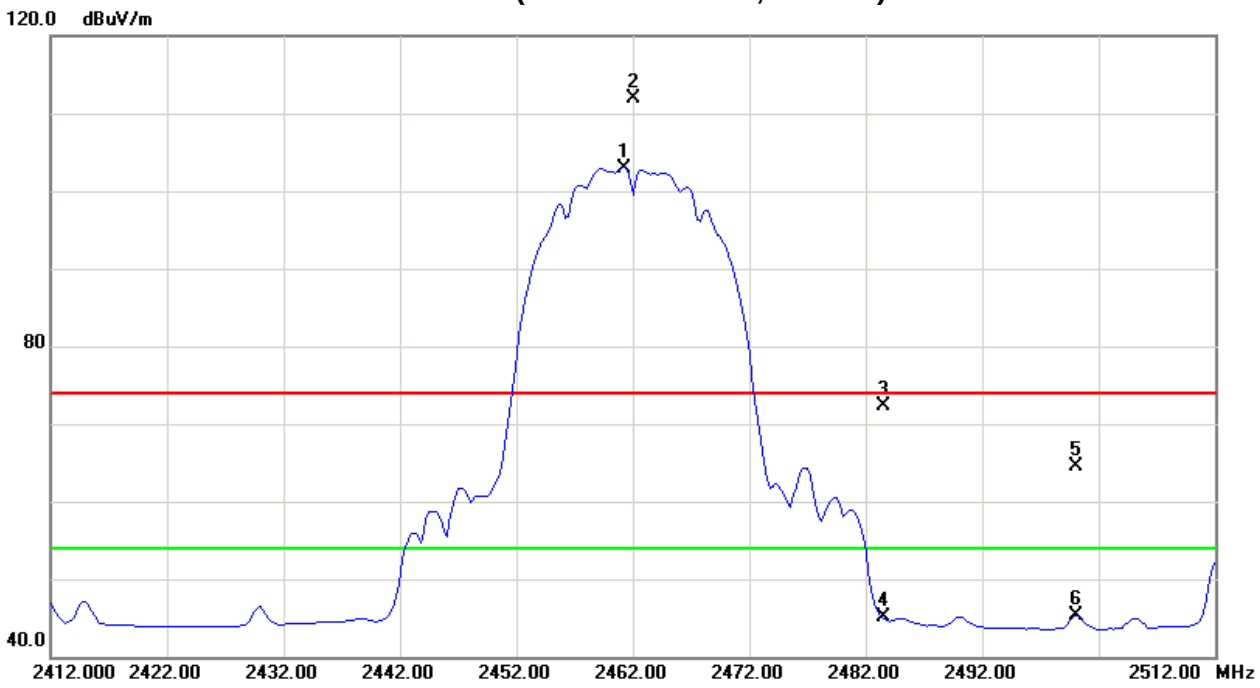
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

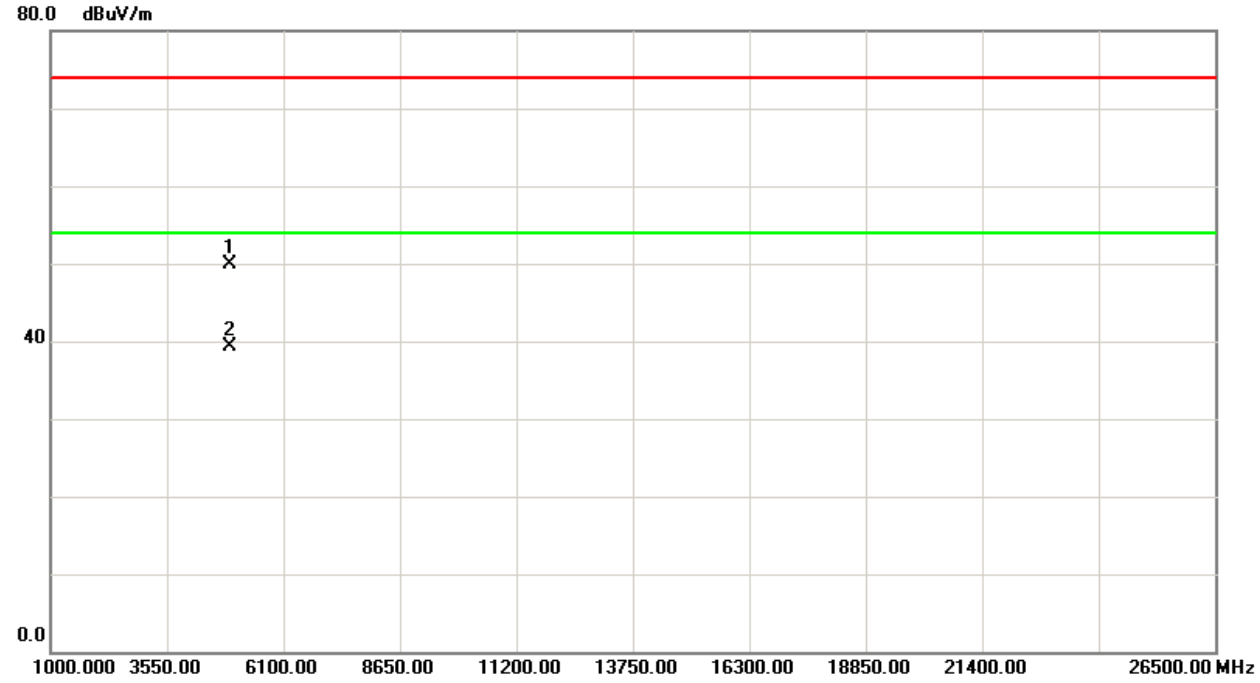
(6) EUT Orthogonal Axis：

"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

TX CH11 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX B MODE 2462MHz		

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)	
2462.25	**H**	**70.64**	**62.23**	**32.21**	**102.85**	**94.44**			**X/F**
2483.50	H	32.43	11.22	32.17	64.60	43.39	74.00	54.00	X/E
4924.05	H	42.94	32.12	6.59	49.53	38.71	74.00	54.00	X/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 。

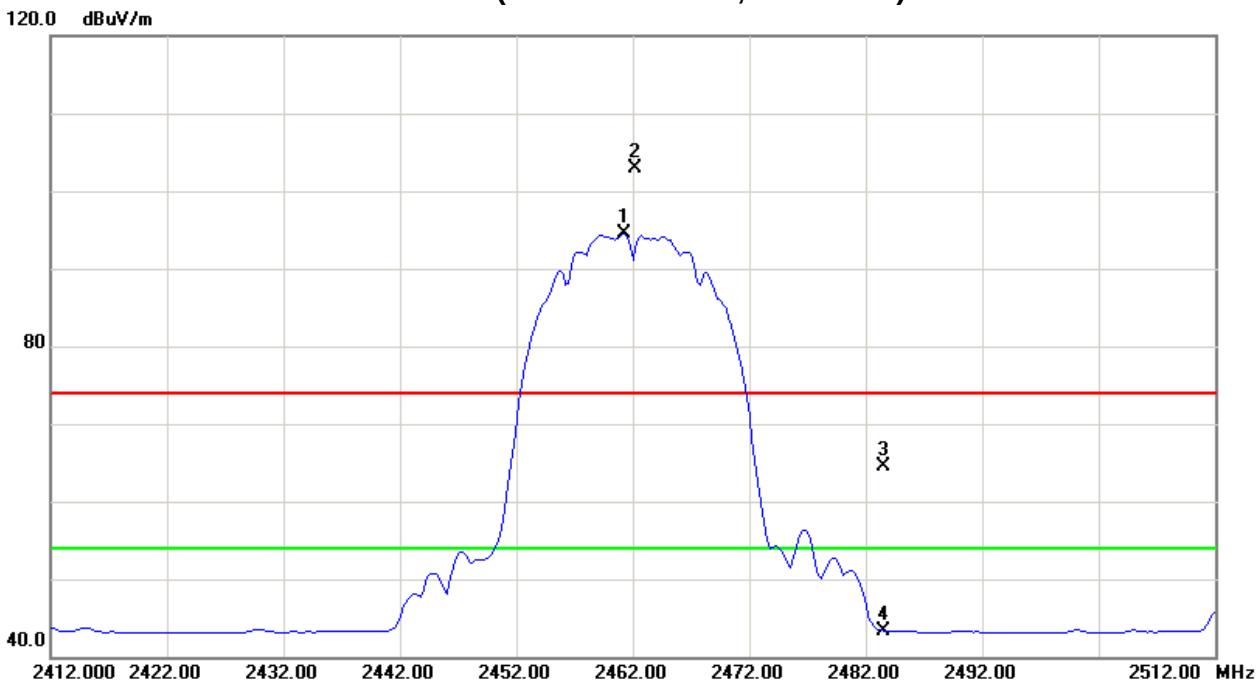
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

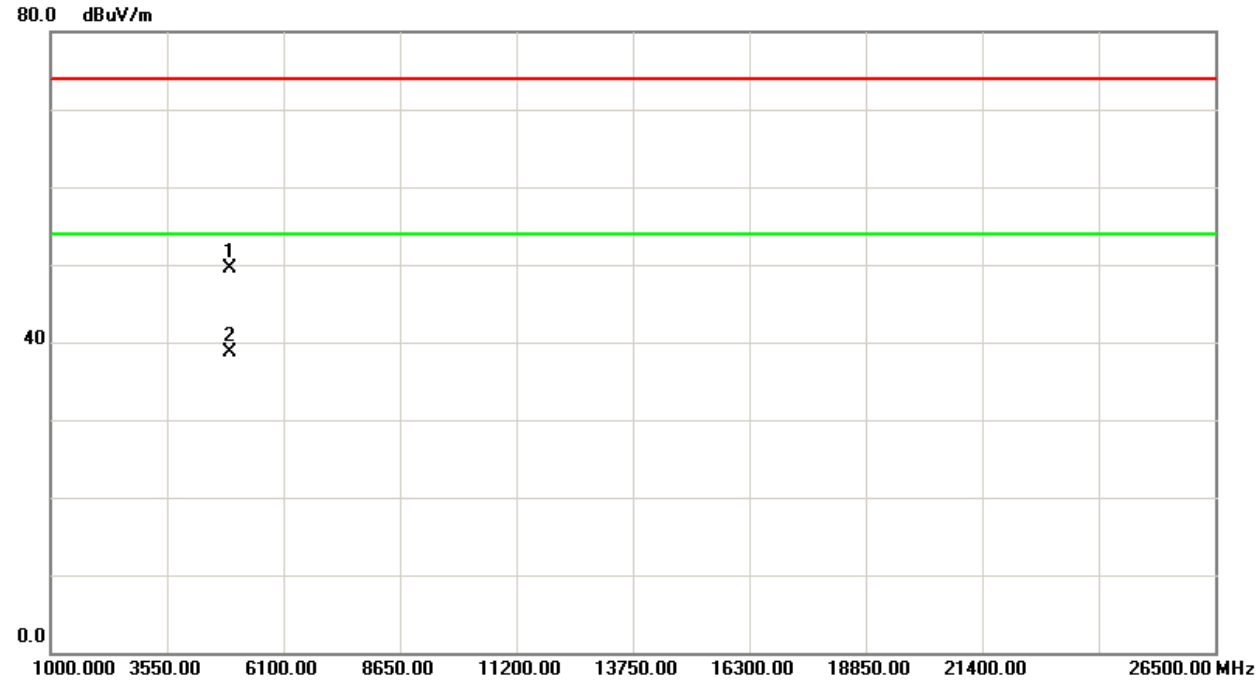
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH11 (Above 1000 MHz, Horizontal)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2412MHz		

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)	
2390.00	V	34.74	18.73	32.28	67.02	51.01	74.00	54.00	X/E
2415.75	**V**	**78.66**	**66.00**	**32.25**	**110.91**	**98.25**			**X/F**
4824.12	V	43.28	31.01	6.19	49.47	37.20	74.00	54.00	X/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 。

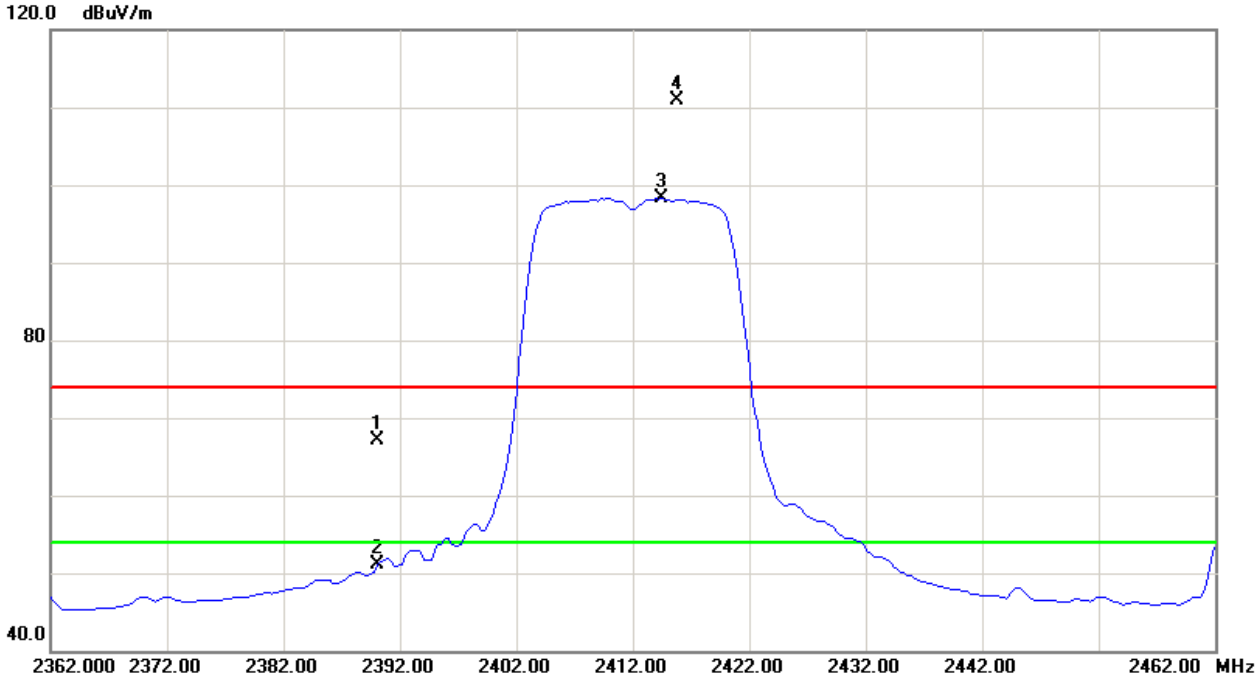
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

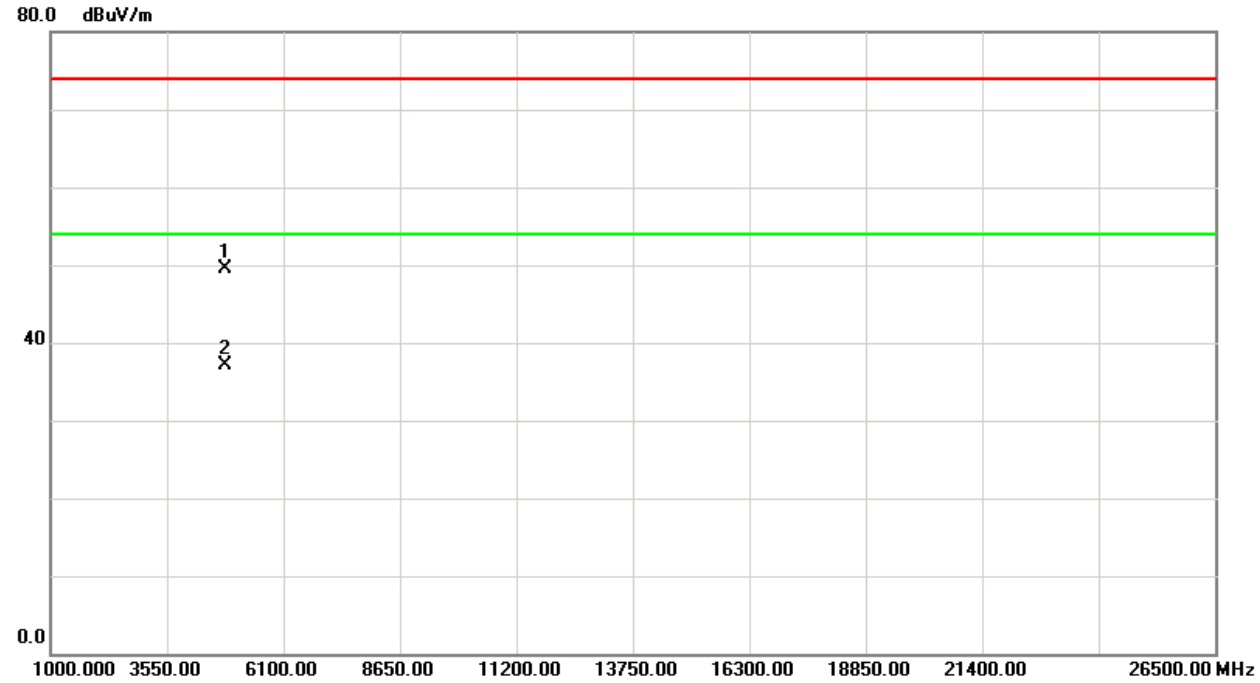
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH01 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2412MHz		

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)	
2390.00	H	26.72	13.17	32.28	59.00	45.45	74.00	54.00	X/E
2415.50	**H**	**67.46**	**55.72**	**32.25**	**99.71**	**87.97**			**X/F**
4823.95	H	42.15	30.36	6.19	48.34	36.55	74.00	54.00	X/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 。

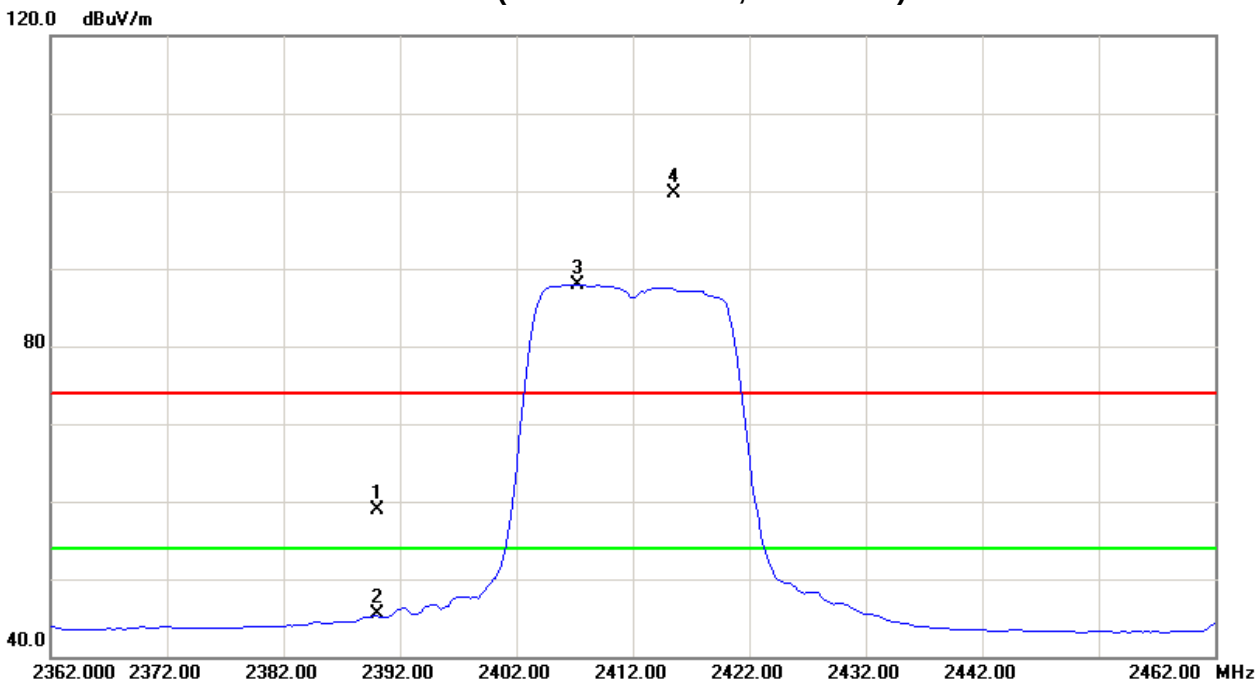
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

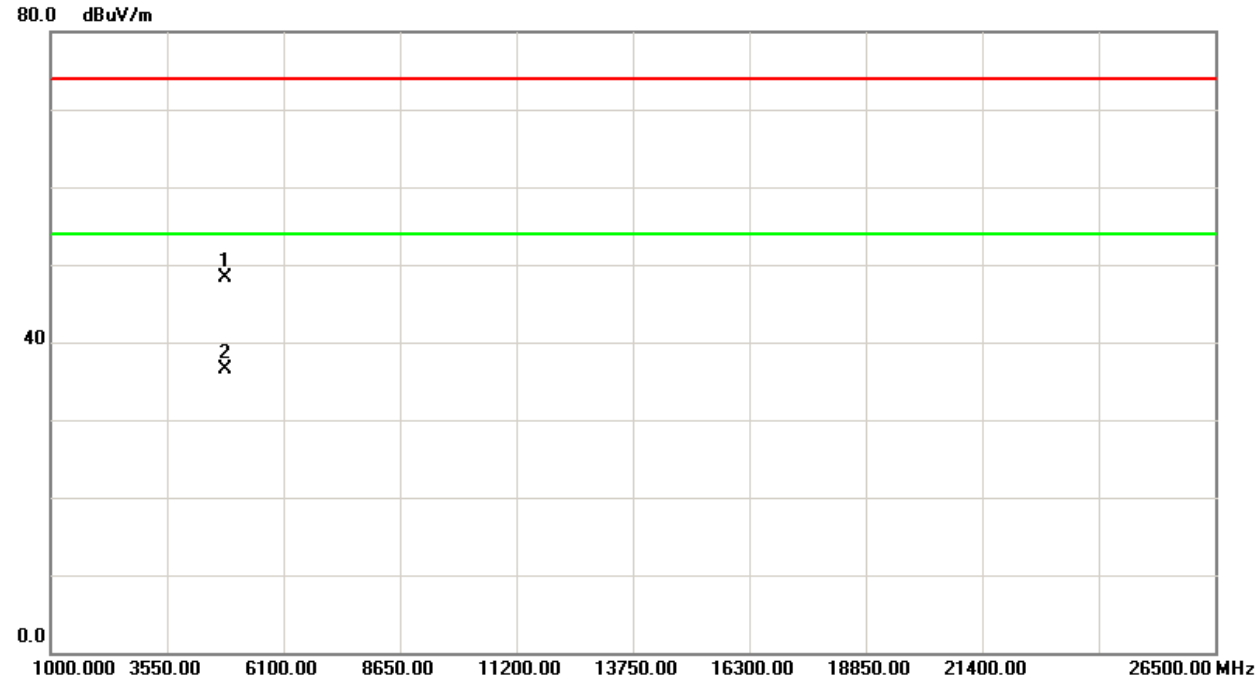
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH01 (Above 1000 MHz, Horizontal)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2437MHz		

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)	
2441.00	**V**	**77.85**	**65.59**	**32.23**	**110.08**	**97.82**			**X/F**
4874.10	V	43.96	31.36	6.39	50.35	37.75	74.00	54.00	X/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 。

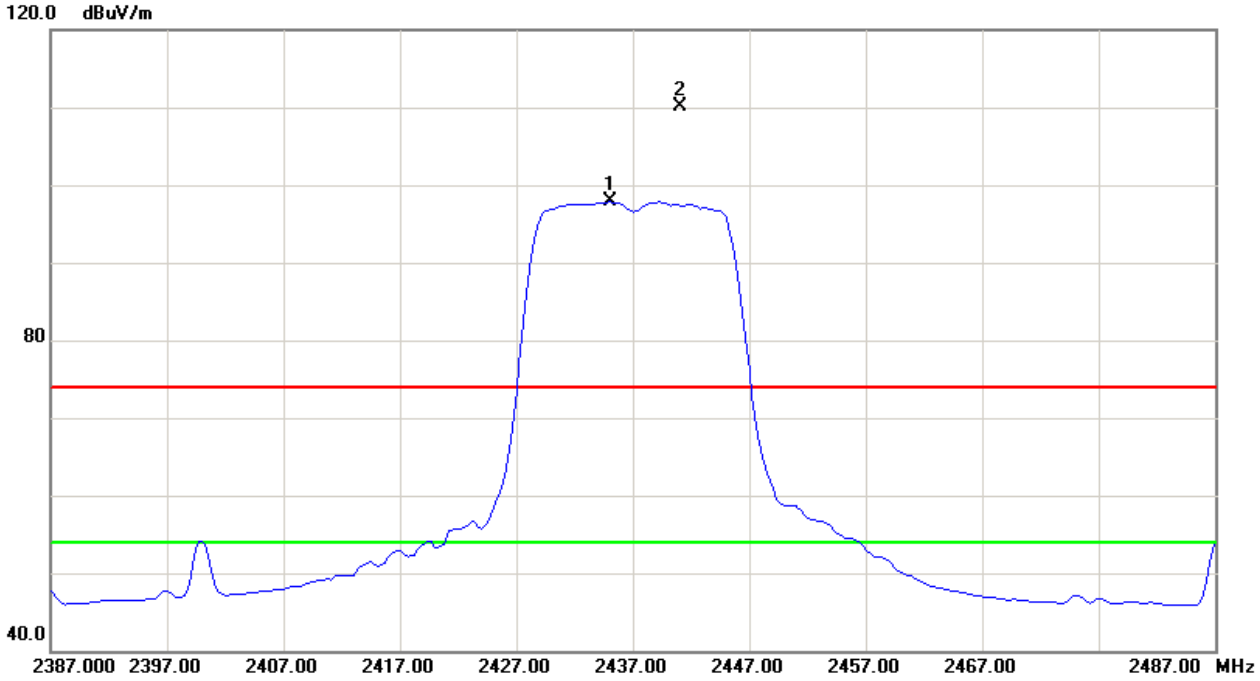
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

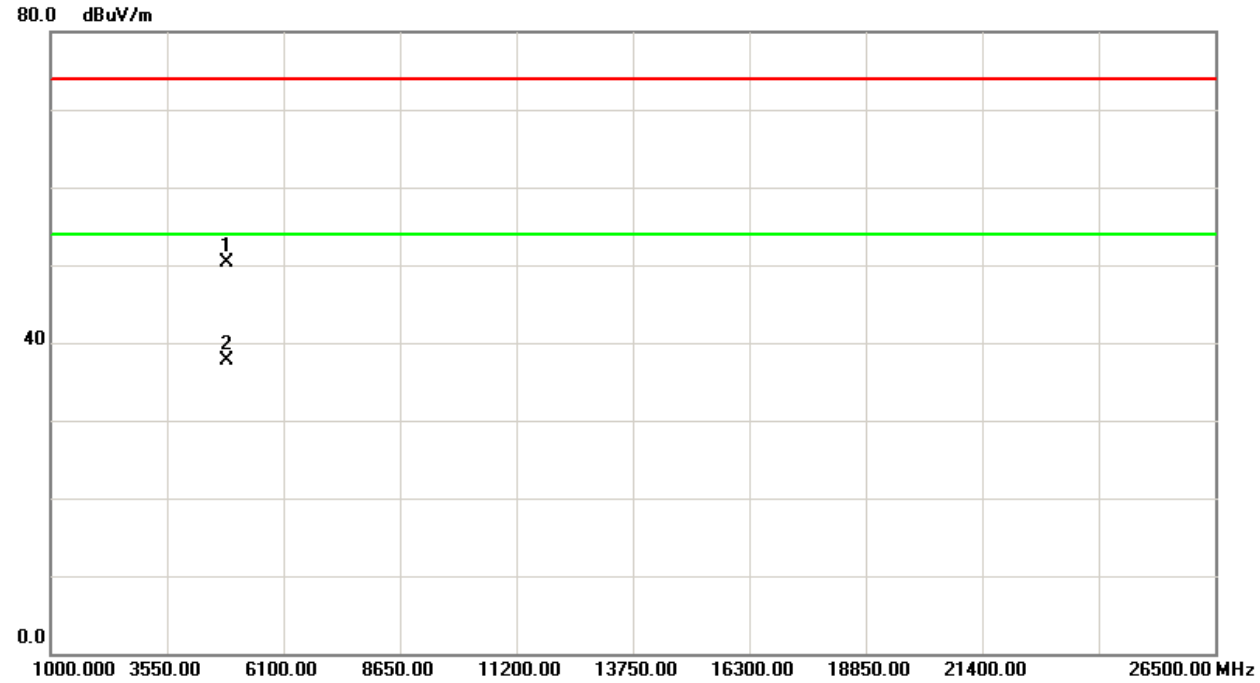
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH06 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2437MHz		

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)	
2440.75	**H**	**68.82**	**56.75**	**32.23**	**101.05**	**88.98**			**X/F**
4874.04	H	42.84	30.41	6.39	49.23	36.80	74.00	54.00	X/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 。

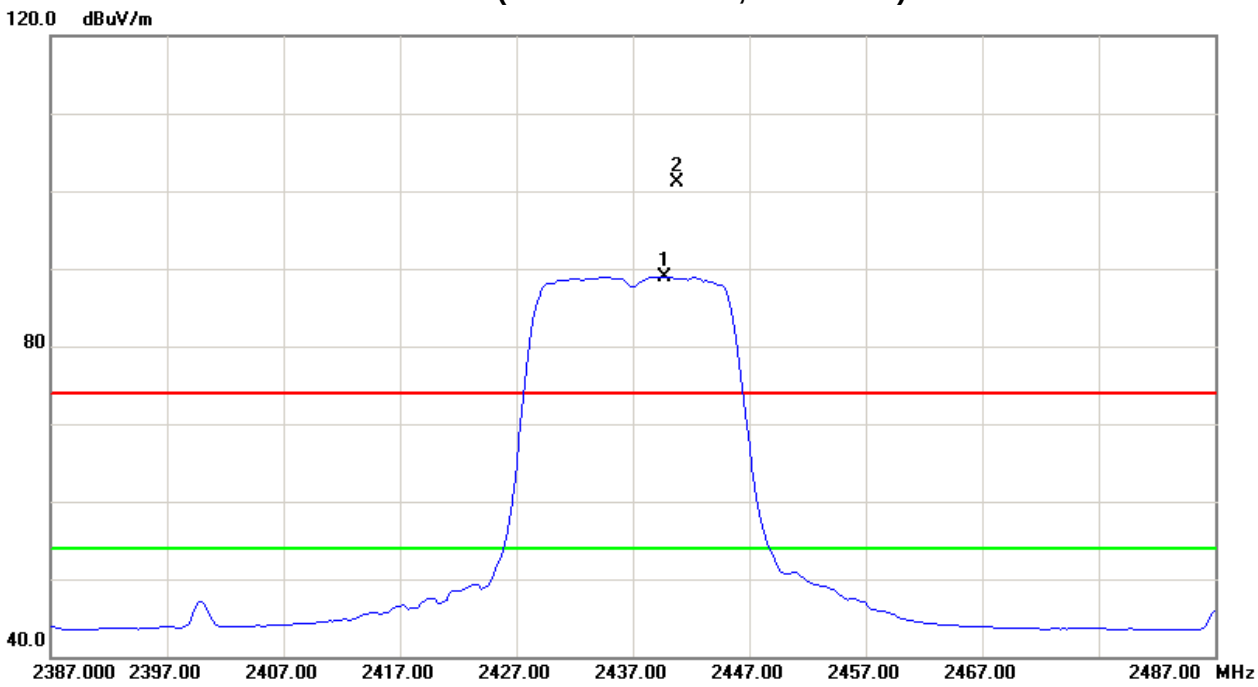
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

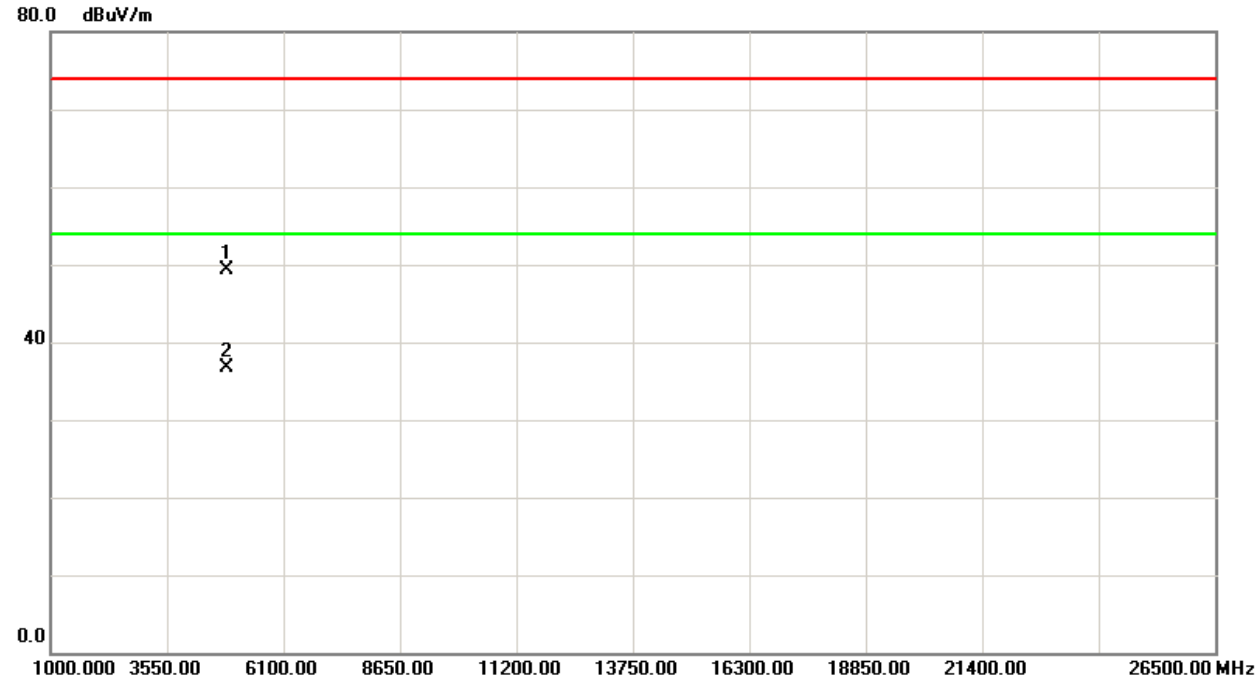
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH06 (Above 1000 MHz, Horizontal)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2462MHz		

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)	
2465.75	**V**	**77.04**	**64.80**	**32.20**	**109.24**	**97.00**			**X/F**
2483.50	V	38.02	18.60	32.17	70.19	50.77	74.00	54.00	X/E
4924.04	V	42.83	31.69	6.59	49.42	38.28	74.00	54.00	X/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 。

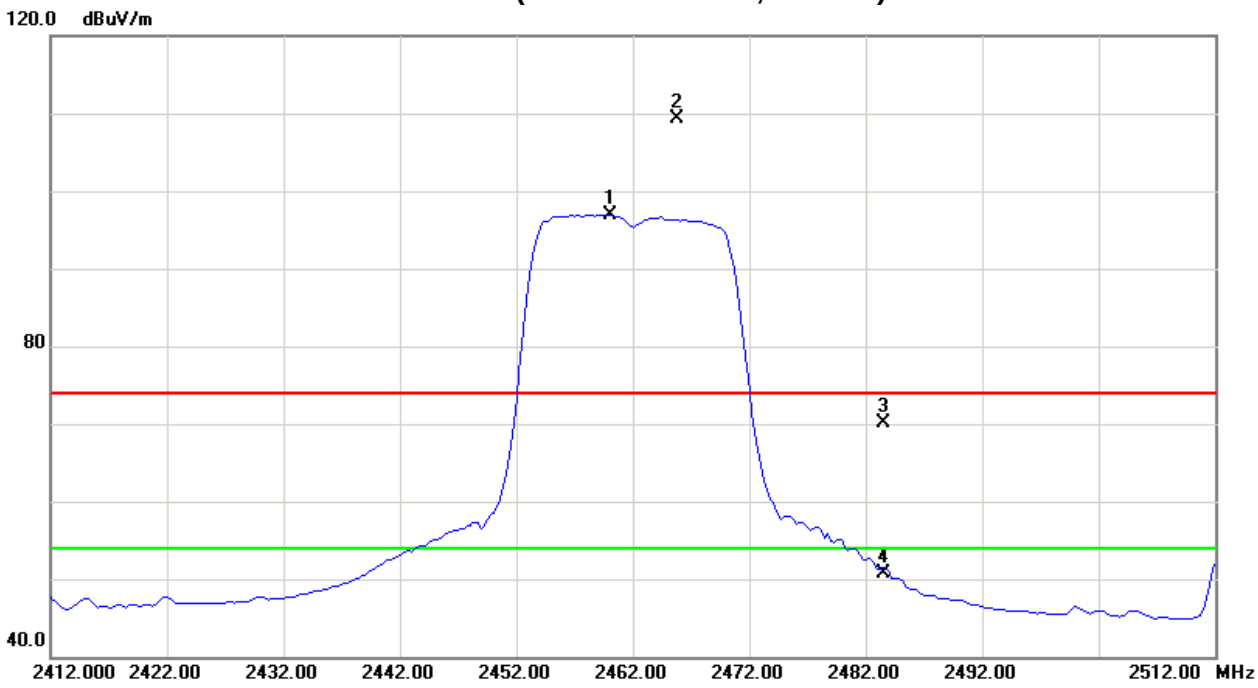
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

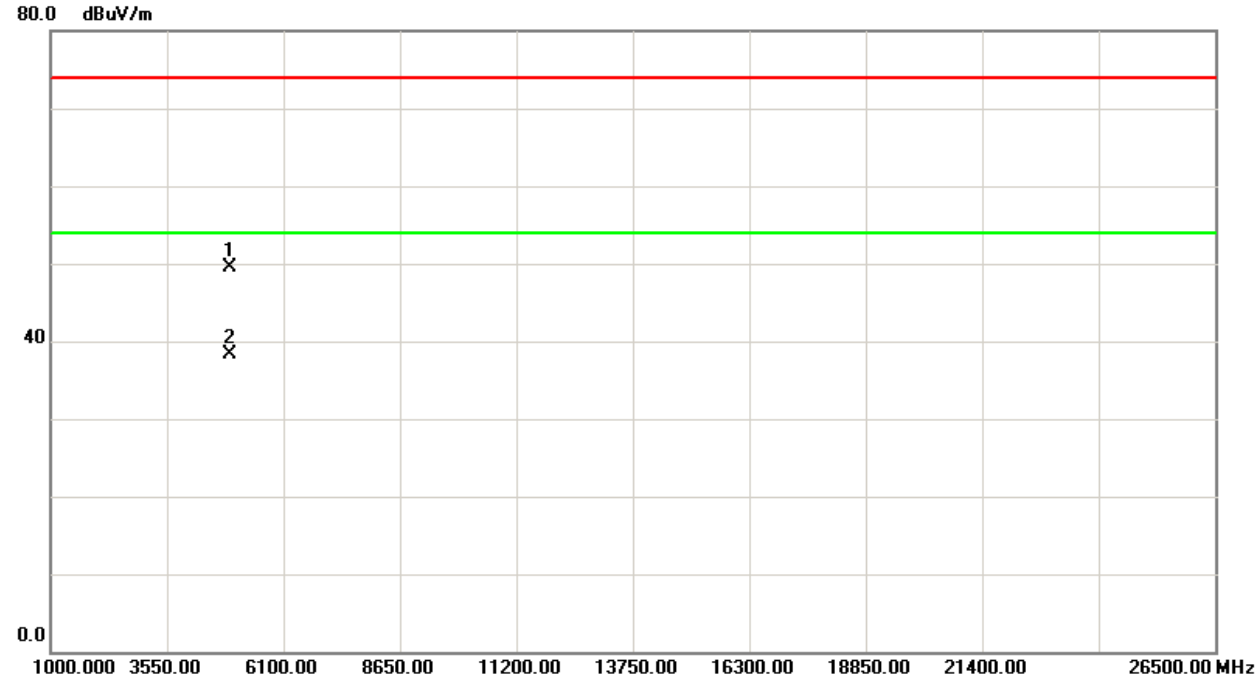
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH11 (Above 1000 MHz, Vertical)





EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	25 ℃	Relative Humidity：	58 %
Pressure：	1010 hPa	Test Voltage ：	AC 120V/60HZ
Test Mode ：	TX G MODE 2462MHz		

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)	
2465.75	**H**	**68.52**	**56.13**	**32.20**	**100.72**	**88.33**			**X/F**
2483.50	H	29.39	13.43	32.17	61.56	45.60	74.00	54.00	X/E
4924.08	H	42.05	30.47	6.59	48.64	37.06	74.00	54.00	X/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 。

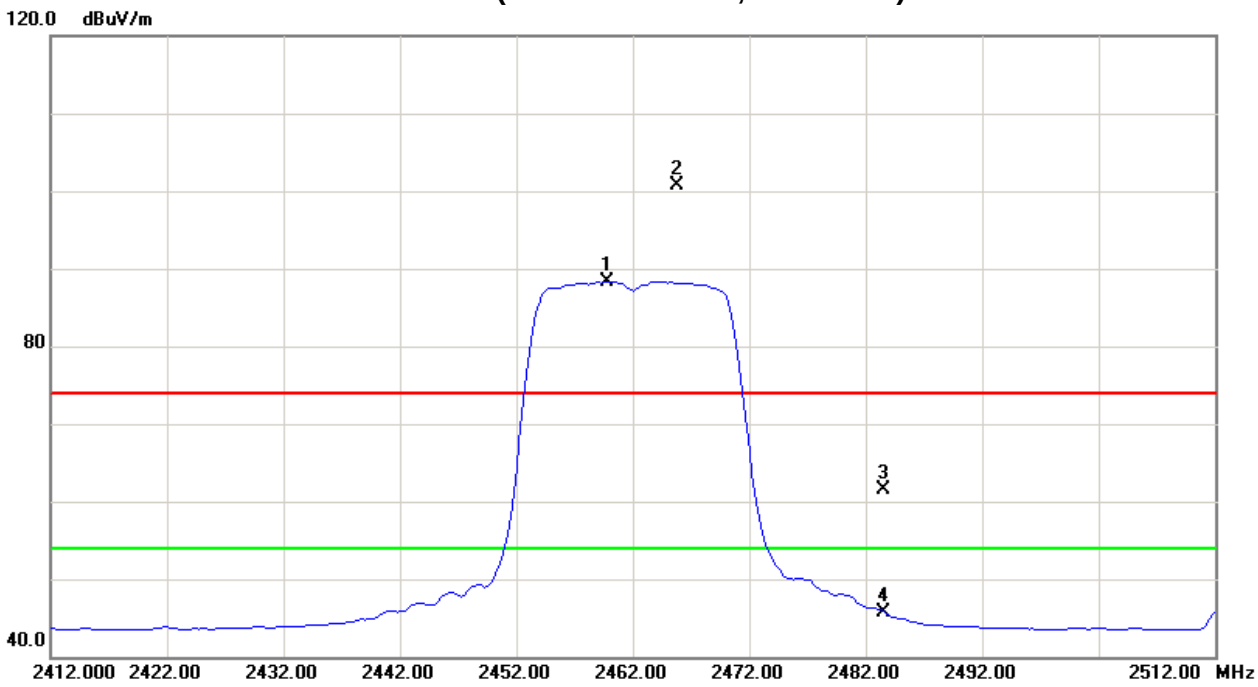
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

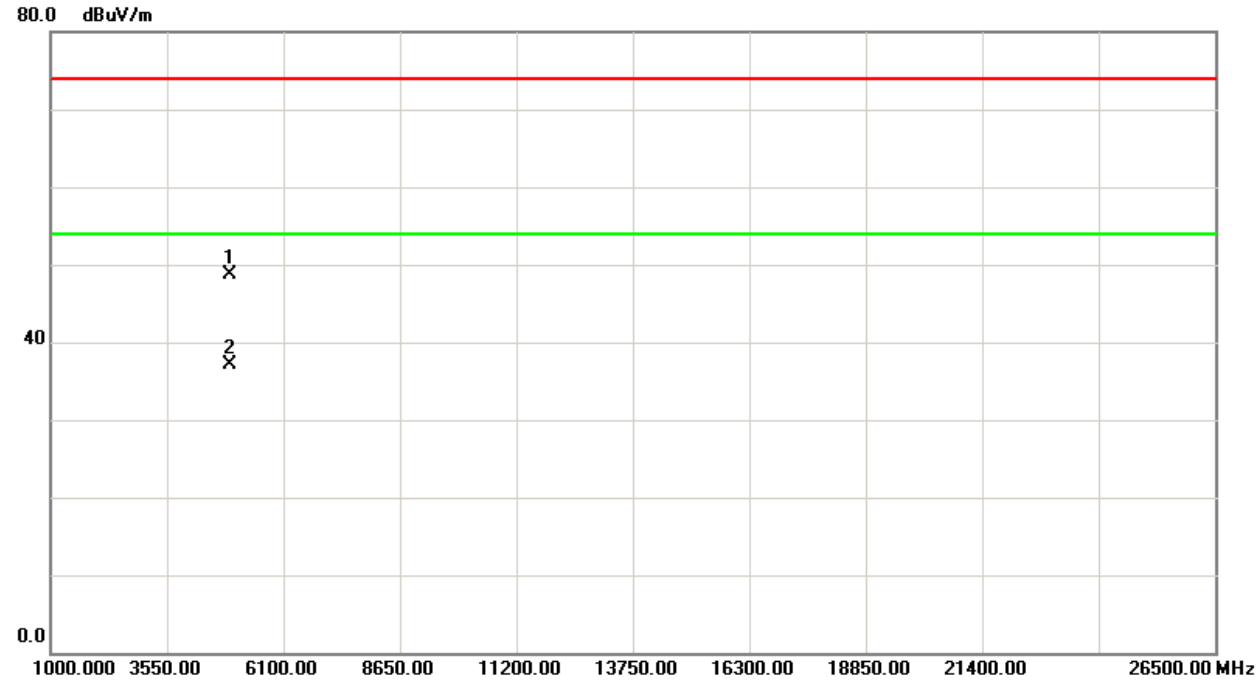
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(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

TX CH11 (Above 1000 MHz, Horizontal)





5. BANDWIDTH TEST

5.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Jan. 04, 2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

5.1.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 300KHz, VBW=1MHz, Sweep time = 2.5 ms.

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP

5.1.5 EUT OPERATION CONDITIONS

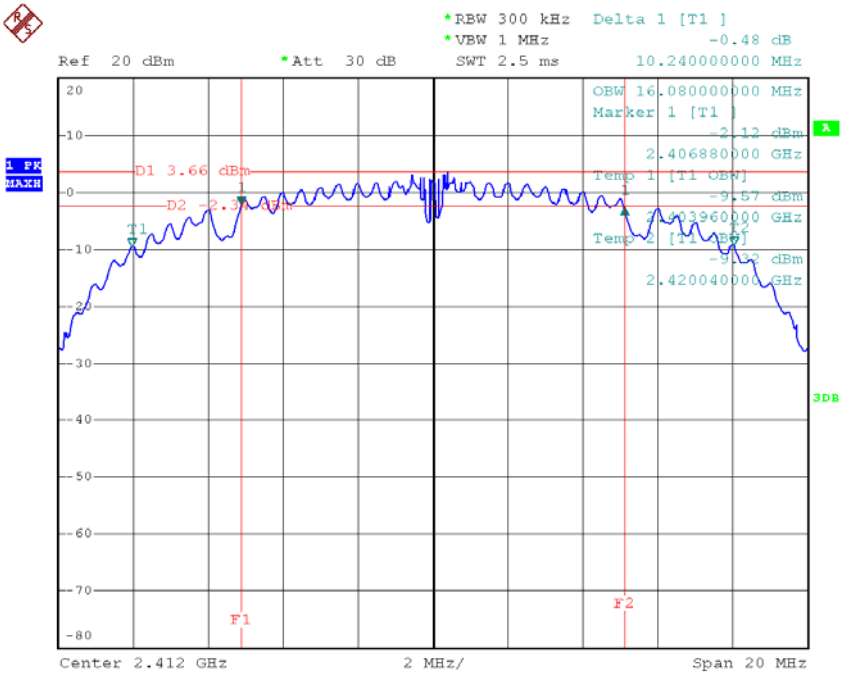
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.6 TEST RESULTS

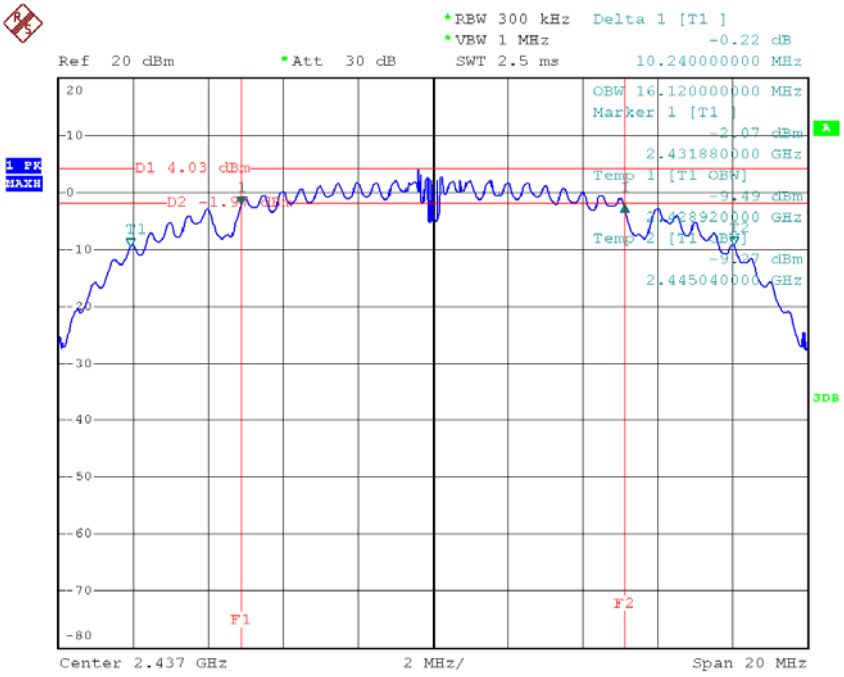
EUT：	Cavallino GT1 Air	Model Name. ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)
CH01	2412	10.24	16.00
CH06	2437	10.24	16.12
CH11	2462	10.28	16.12

TX CH 01

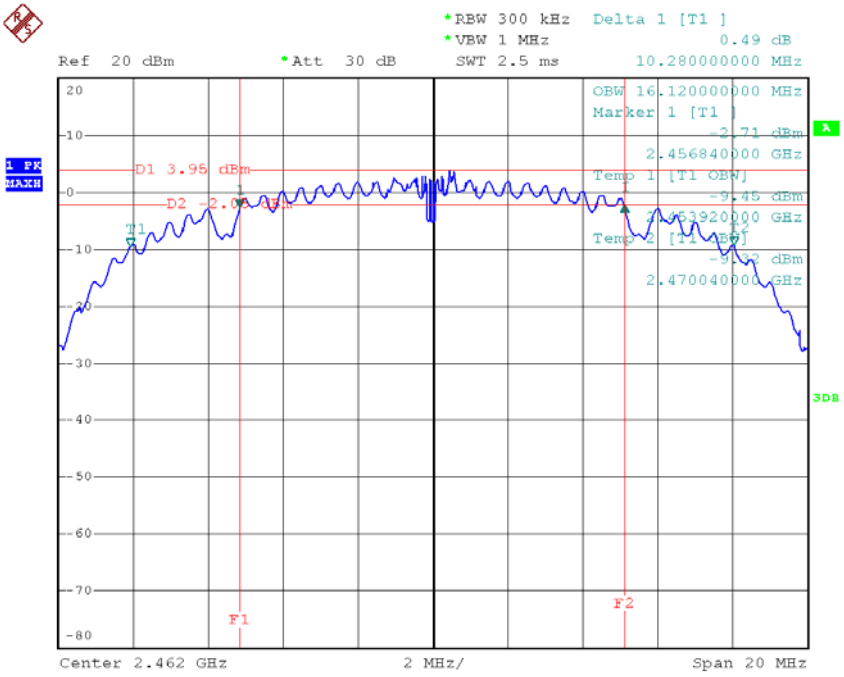


TX CH 06



Date: 20.NOV.2012 19:13:11

TX CH 11

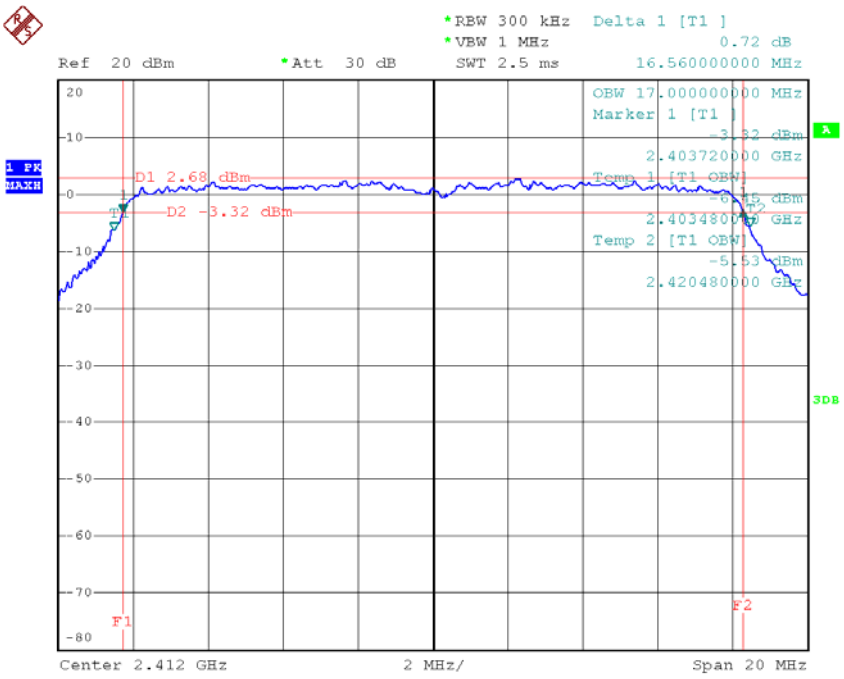


Date: 20.NOV.2012 19:15:20

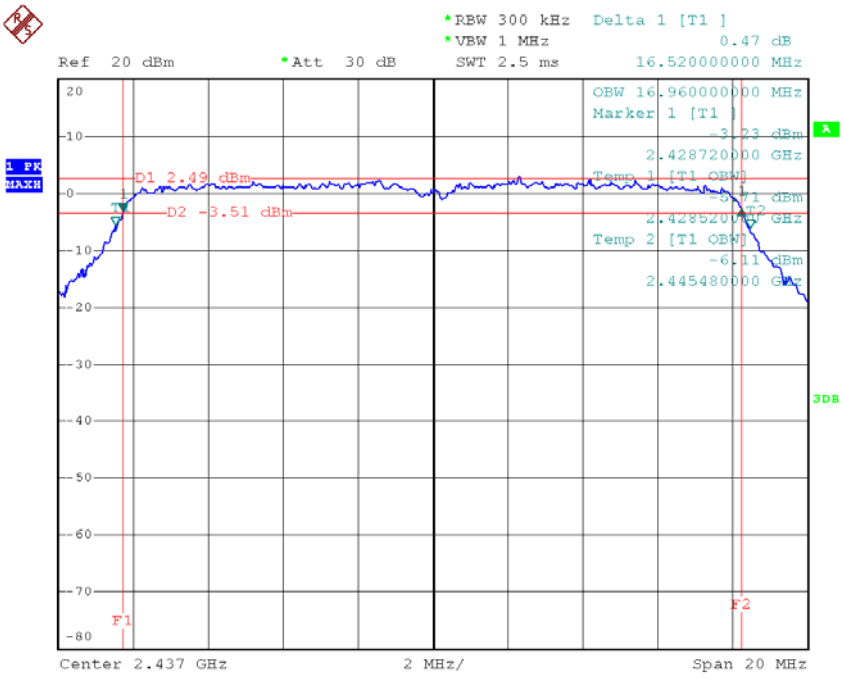
EUT：	Cavallino GT1 Air	Model Name. ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)
CH01	2412	16.56	17.00
CH06	2437	16.52	16.96
CH11	2462	16.52	17.00

TX CH 01

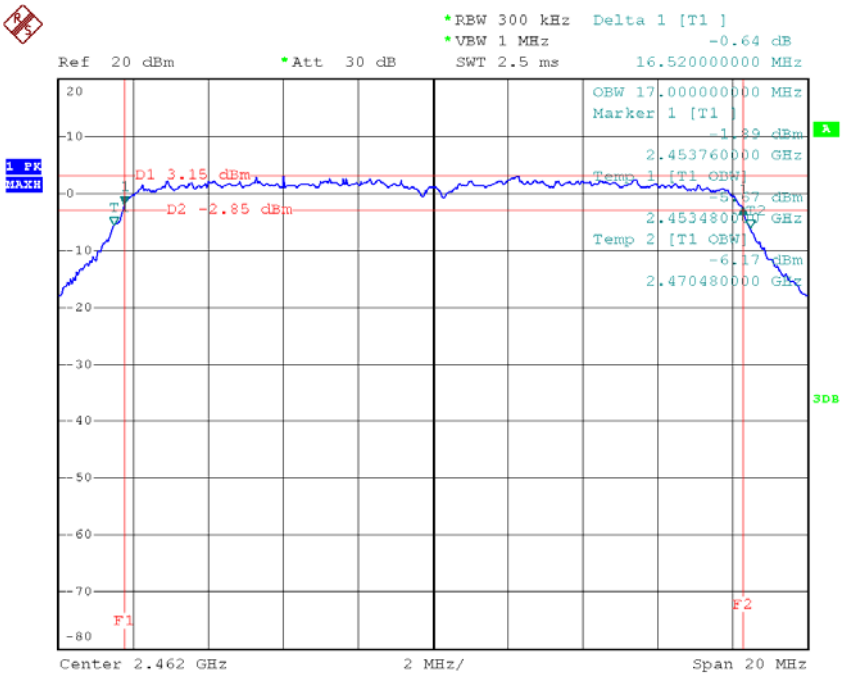


TX CH 06



Date: 20.NOV.2012 19:21:40

TX CH 11



Date: 20.NOV.2012 19:25:55

6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 watt or 30dBm	2400-2483.5	PASS

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Apr.28.2013
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Apr.28.2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

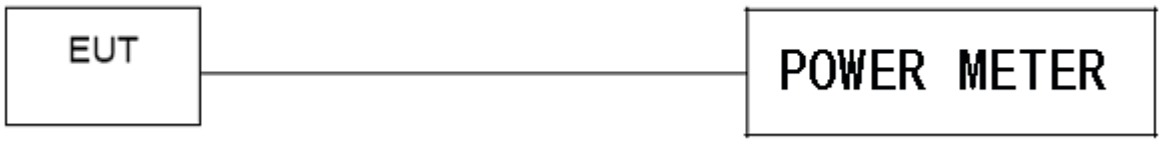
6.1.2 TEST PROCEDURE

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

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP



6.1.5 EUT OPERATION 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.

6.1.6 TEST RESULTS

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	14.82	30	1
CH06	2437 MHz	14.50	30	1
CH11	2462 MHz	14.51	30	1

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	17.72	30	1
CH06	2437 MHz	17.80	30	1
CH11	2462 MHz	17.87	30	1

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 Applied procedures / limit

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

Frequencies (MHz)	Field Strength (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

7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Jan. 05, 2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

7.1.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 100KHz, VBW=300KHz, Sweep time = 10 ms.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

7.1.5 EUT OPERATION CONDITIONS

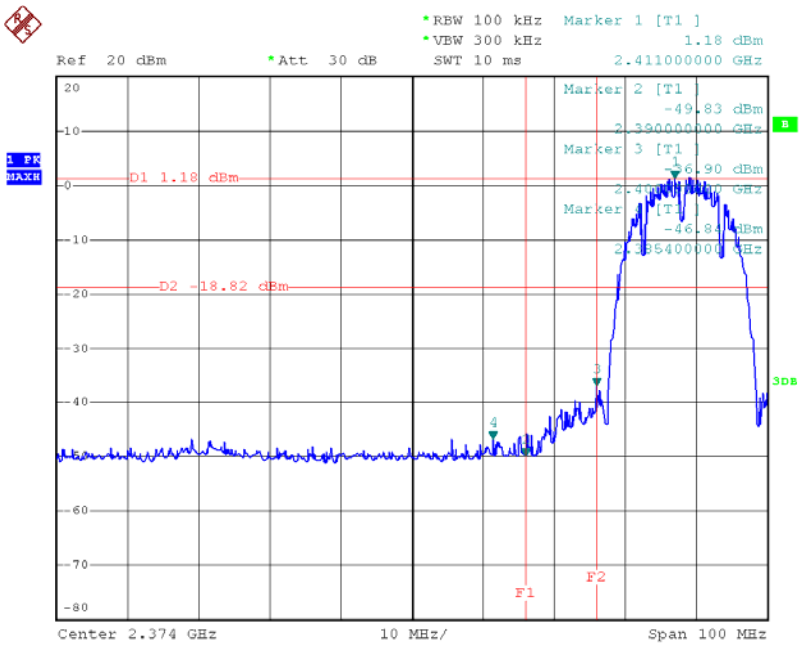
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.6 TEST RESULTS

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B MODE /CH01, CH06 , CH11		

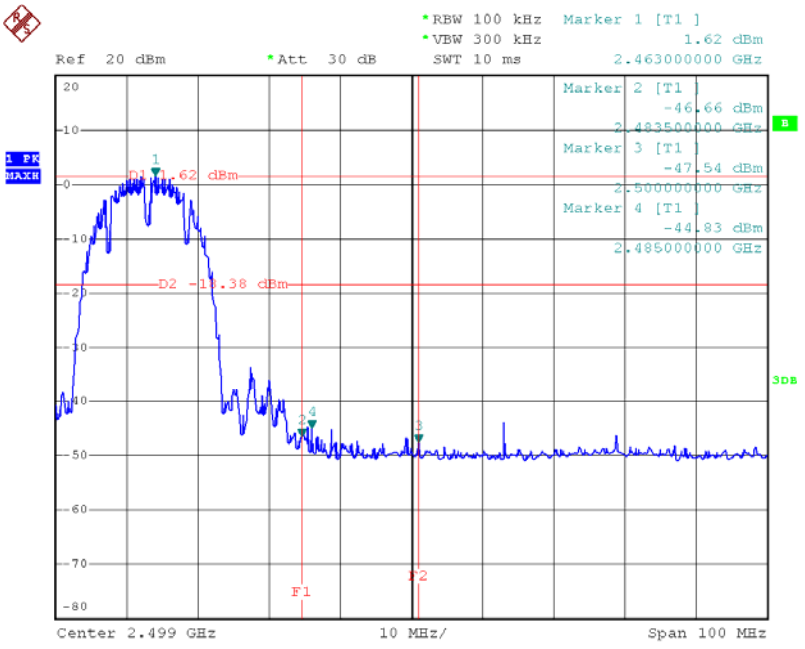
Channel of Worst Data: CH01			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-36.90	2485.00	-44.83
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX B mode CH01



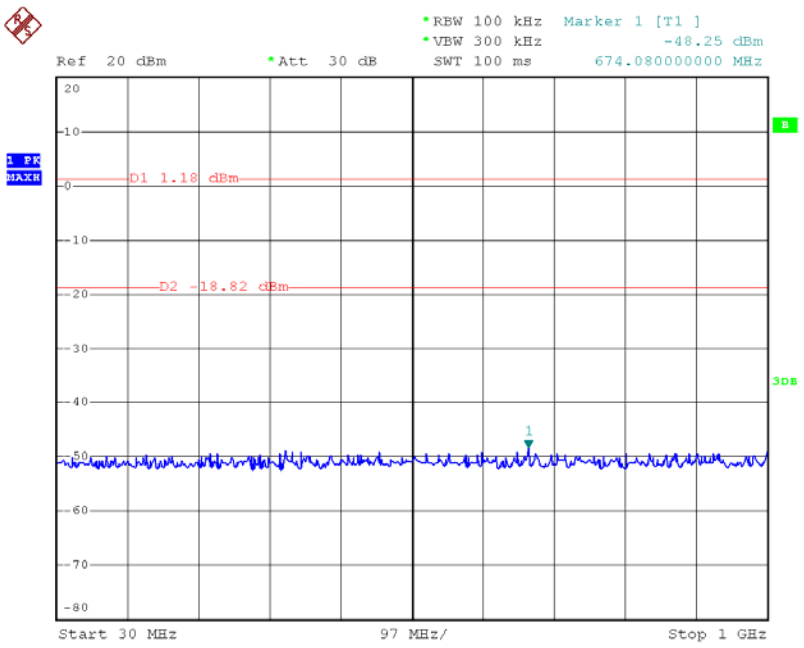
Date: 20.NOV.2012 19:08:58

TX B mode CH11



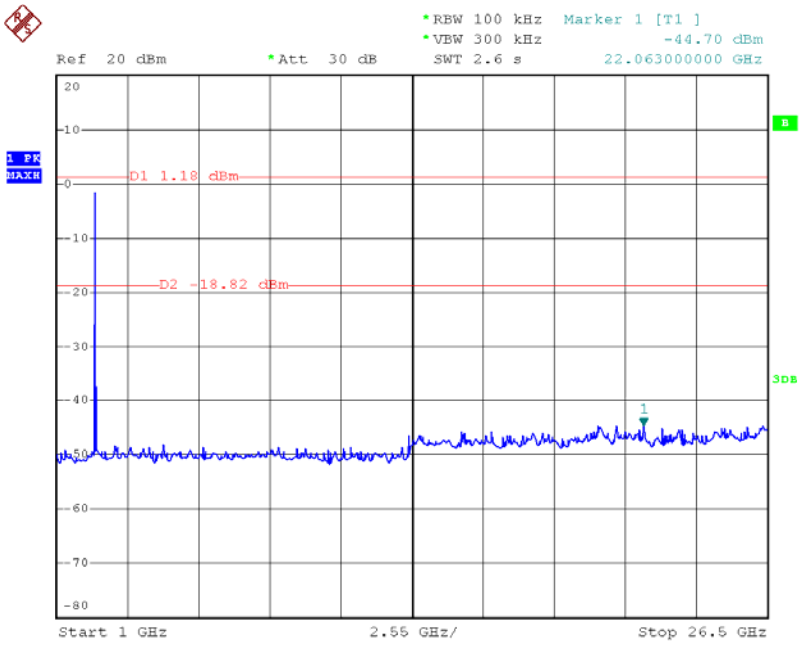
Date: 20.NOV.2012 19:16:30

TX B mode CH01 (30M~1000MHz)



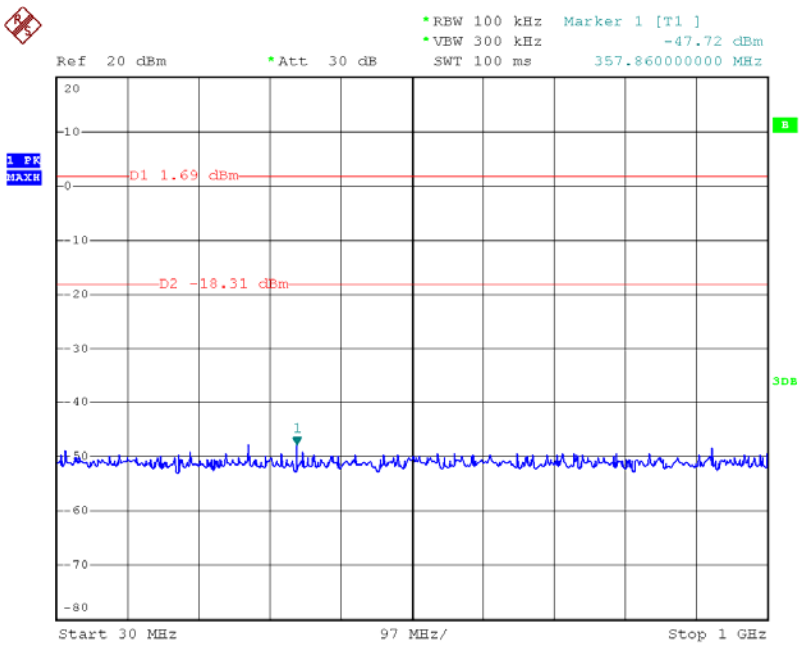
Date: 20.NOV.2012 19:09:17

TX B mode CH01 (1000MHz~10th Harmonic)



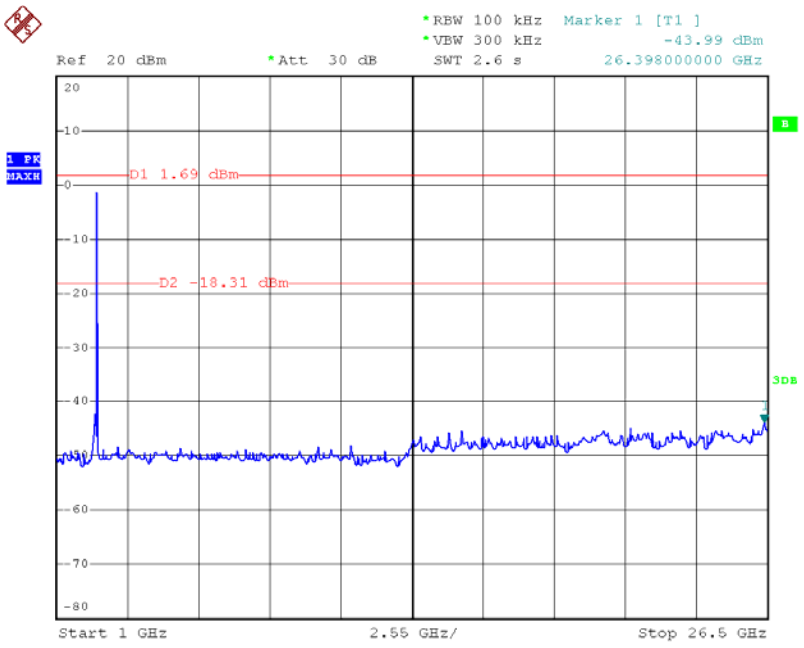
Date: 20.NOV.2012 19:09:31

TX B mode CH06 (30M~1000MHz)



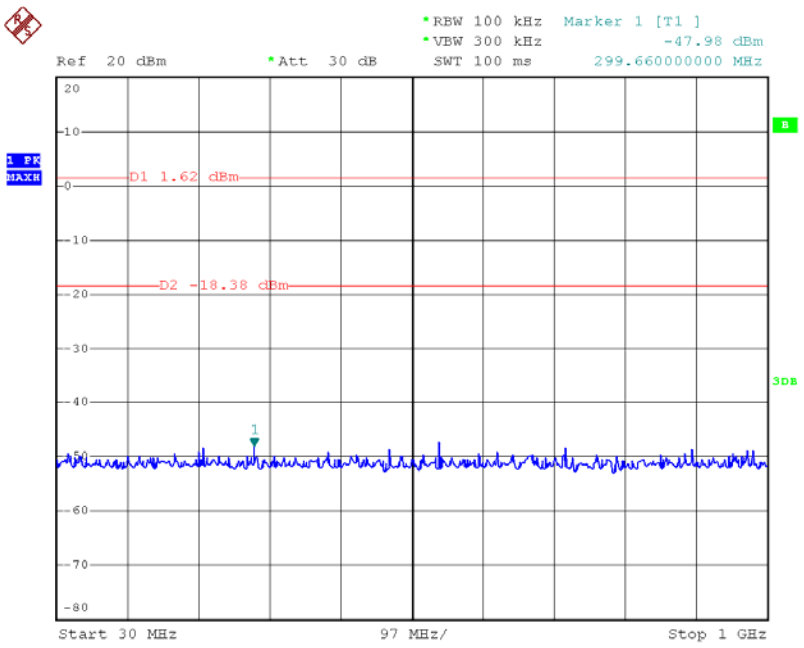
Date: 20.NOV.2012 19:11:28

TX B mode CH06 (1000MHz~10th Harmonic)



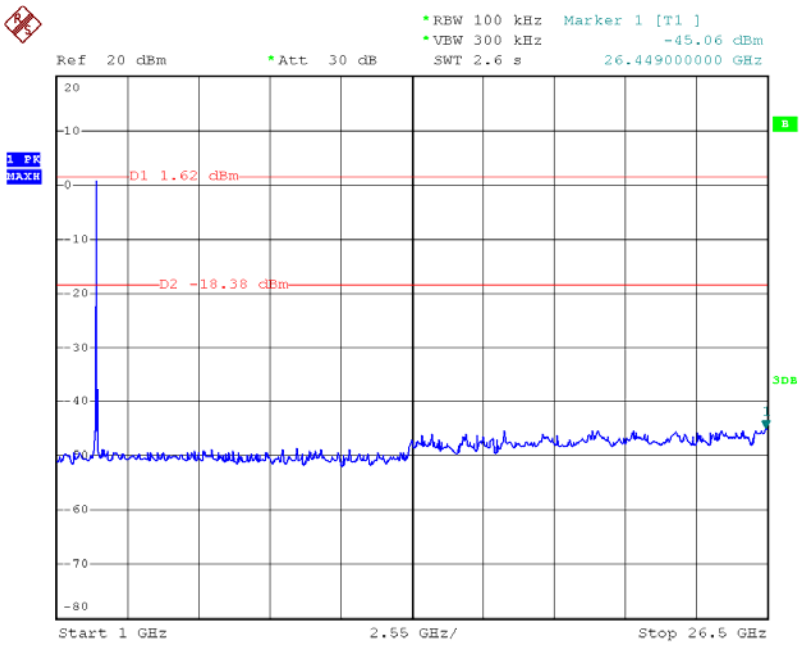
Date: 20.NOV.2012 19:11:40

TX B mode CH11 (30M~1000MHz)



Date: 20.NOV.2012 19:16:47

TX B mode CH11 (1000MHz~10th Harmonic)

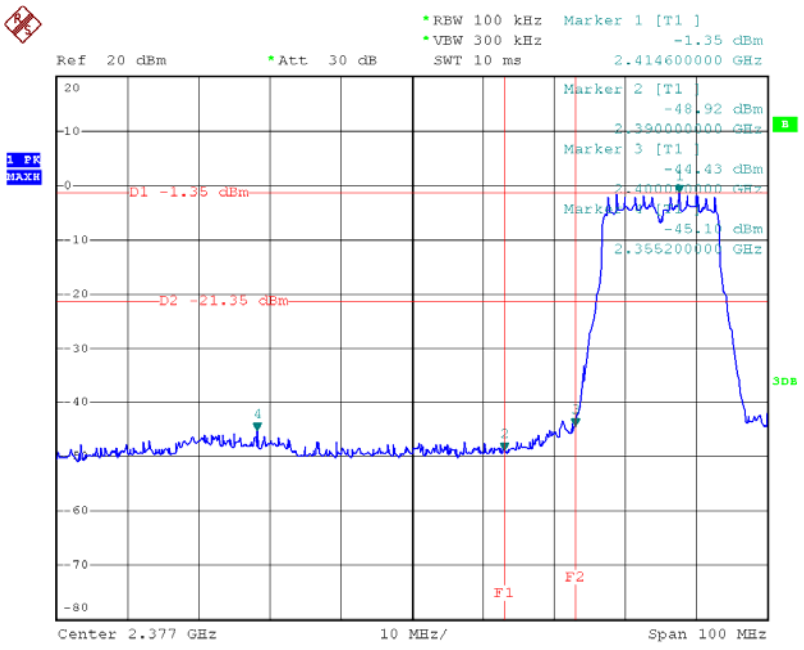


Date: 20.NOV.2012 19:16:58

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX G MODE / CH01, CH06 , CH11		

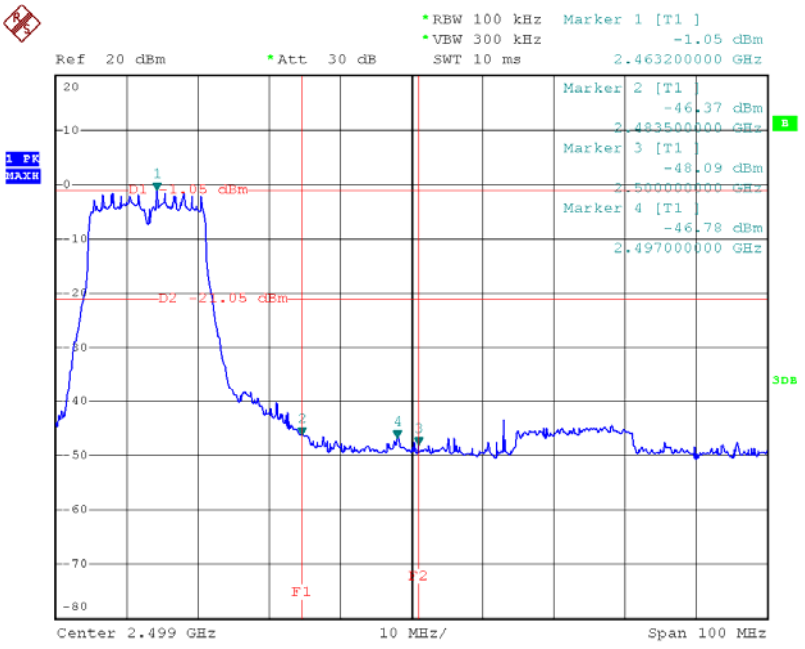
Channel of Worst Data: CH01			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-44.43	2483.50	-46.37
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX G mode CH01



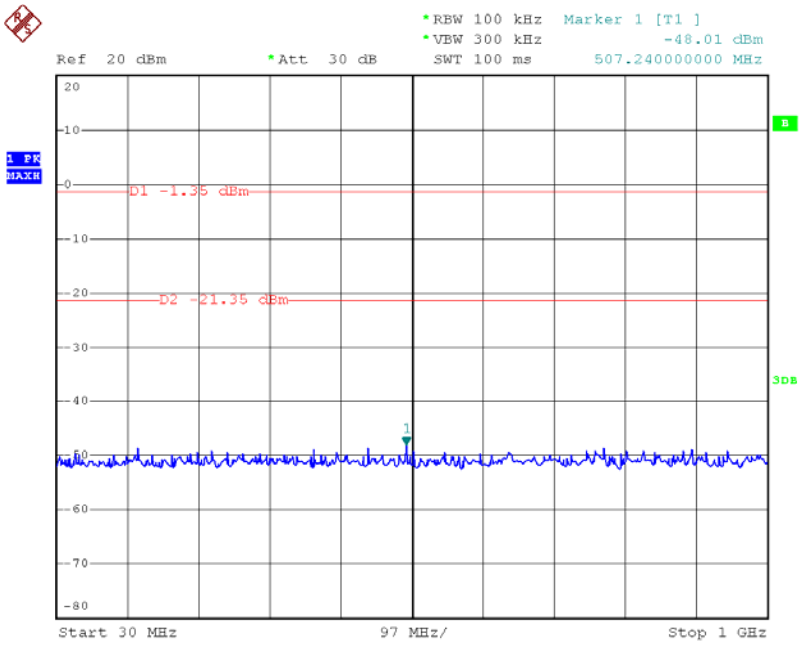
Date: 20.NOV.2012 19:18:05

TX G mode CH11



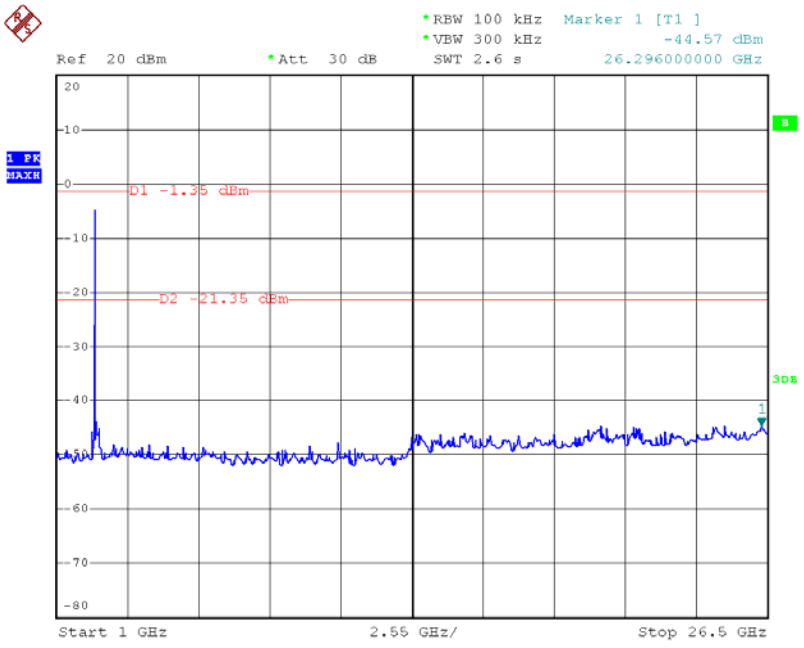
Date: 20.NOV.2012 19:24:00

TX G mode CH01 (30M~1000MHz)



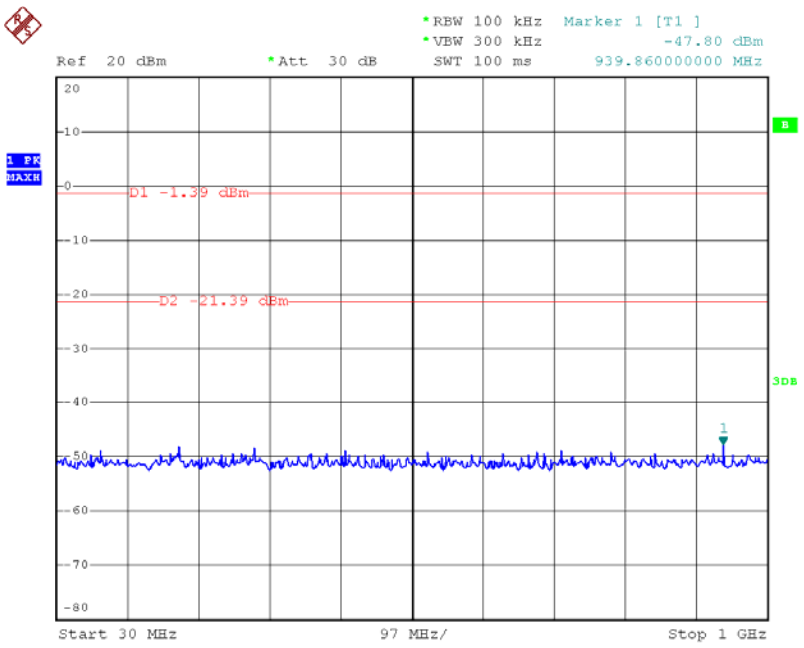
Date: 20.NOV.2012 19:18:21

TX G mode CH01 (1000MHz~10th Harmonic)



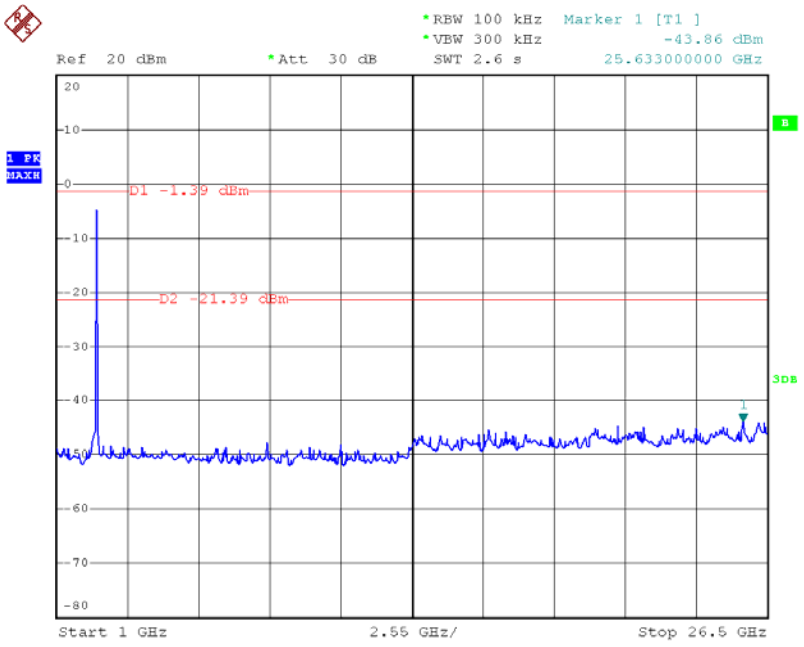
Date: 20.NOV.2012 19:18:32

TX G mode CH06 (30M~1000MHz)



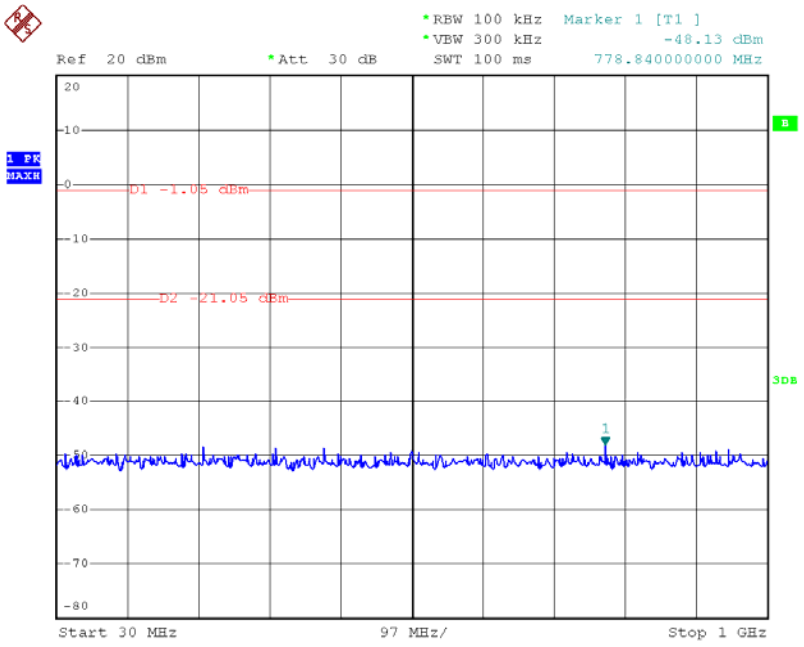
Date: 20.NOV.2012 19:22:36

TX G mode CH06 (1000MHz~10th Harmonic)



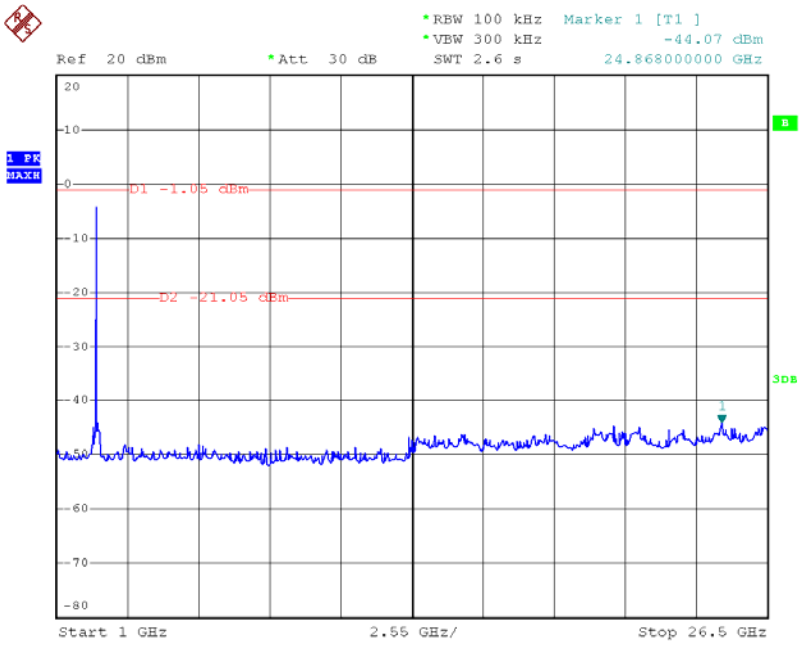
Date: 20.NOV.2012 19:22:47

TX G mode CH11 (30M~1000MHz)



Date: 20.NOV.2012 19:24:13

TX G mode CH11 (1000MHz~10th Harmonic)



Date: 20.NOV.2012 19:24:24

8. POWER SPECTRAL DENSITY TEST

8.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

8.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Jan. 05, 2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.

8.1.2 TEST PROCEDURE

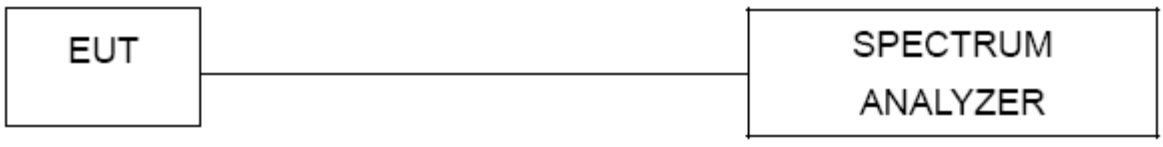
a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

b. Spectrum Setting : RBW=100KHz, VBW=300 KHz, Sweep time = 2.5 ms.

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP



8.1.5 EUT OPERATION 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.

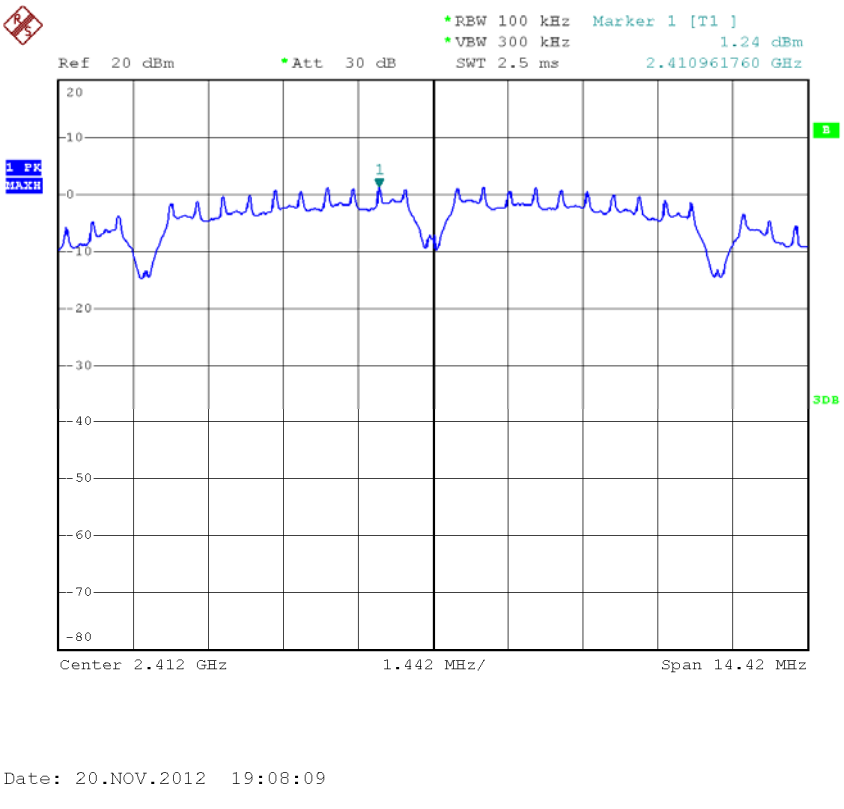
8.1.6 TEST RESULTS

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX B MODE /CH01, CH06, CH11		

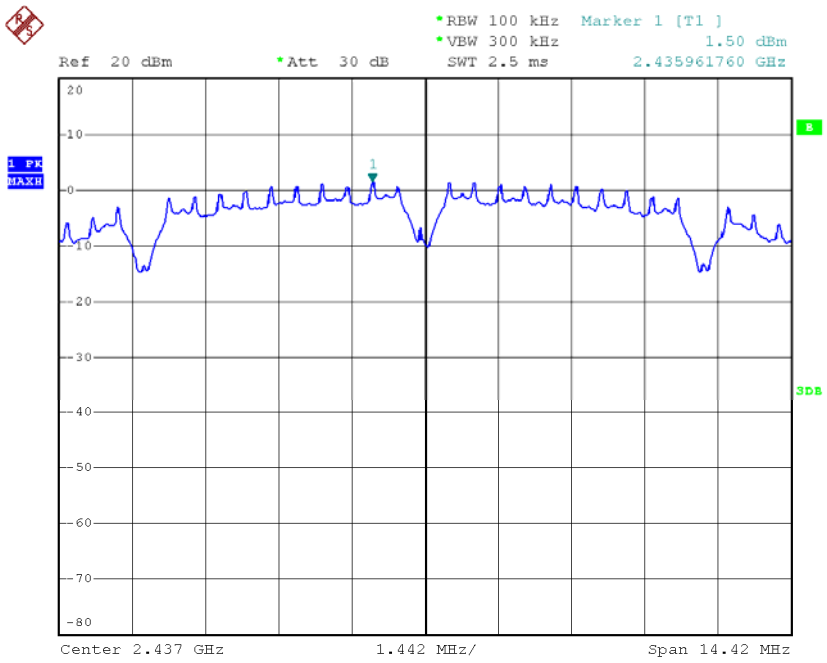
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-13.98	8
CH06	2437 MHz	-13.72	8
CH11	2462 MHz	-13.60	8

Note: DWCF (dB) = 10 log (3K/100K) = -15.22dB

TX CH01

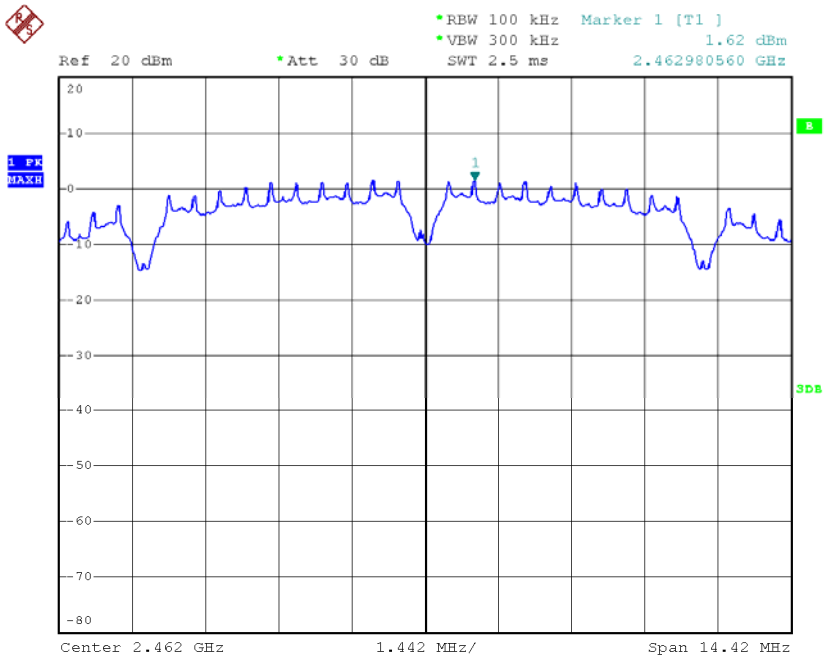


TX CH06



Date: 20.NOV.2012 19:12:06

TX CH11



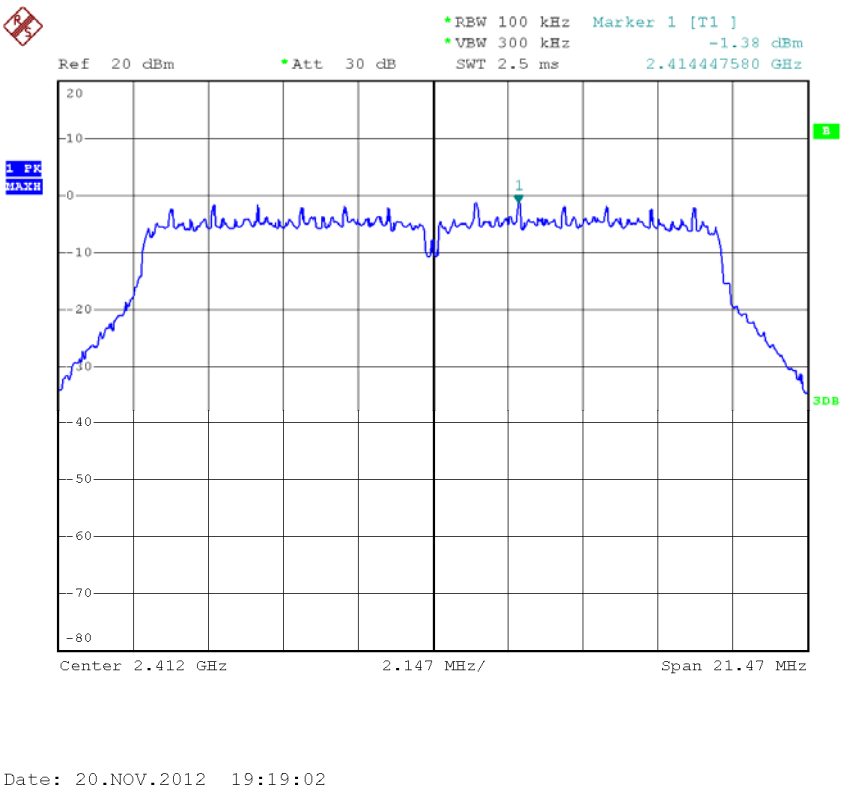
Date: 20.NOV.2012 19:15:36

EUT：	Cavallino GT1 Air	Model Name ：	1LFS004
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX G MODE /CH01, CH06, CH11		

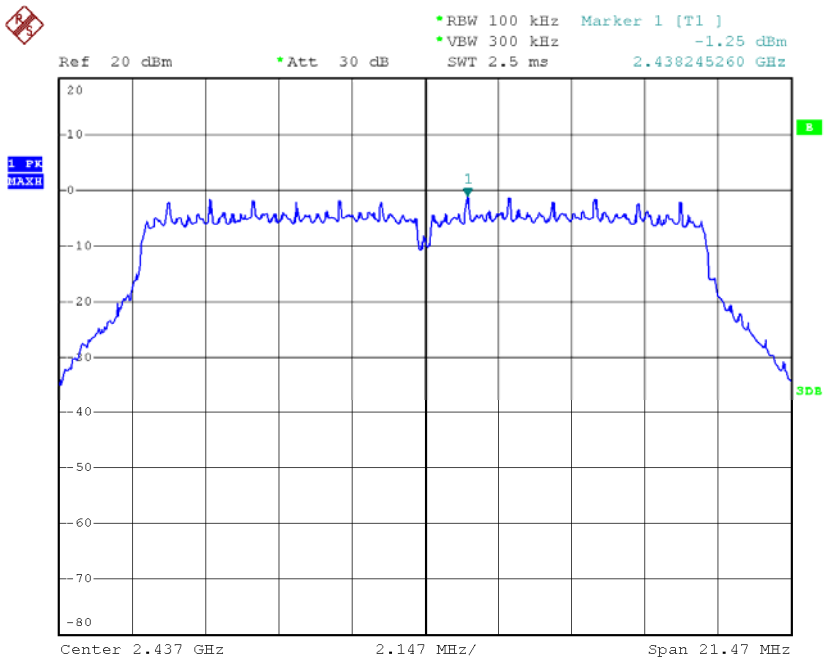
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-16.60	8
CH06	2437 MHz	-16.47	8
CH11	2462 MHz	-16.26	8

Note: DWCF (dB) = 10 log (3K/100K) = -15.22dB

TX CH01

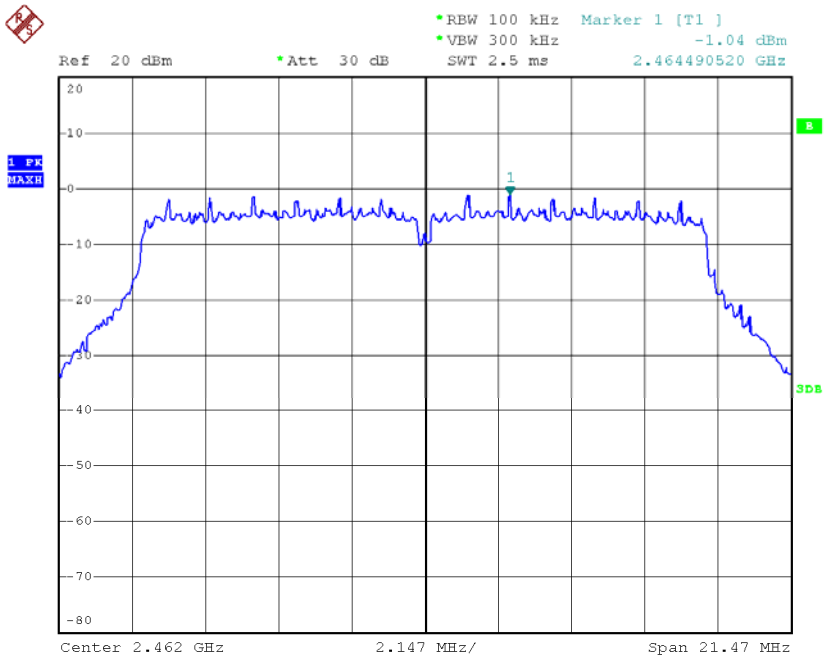


TX CH06



Date: 20.NOV.2012 19:21:59

TX CH11

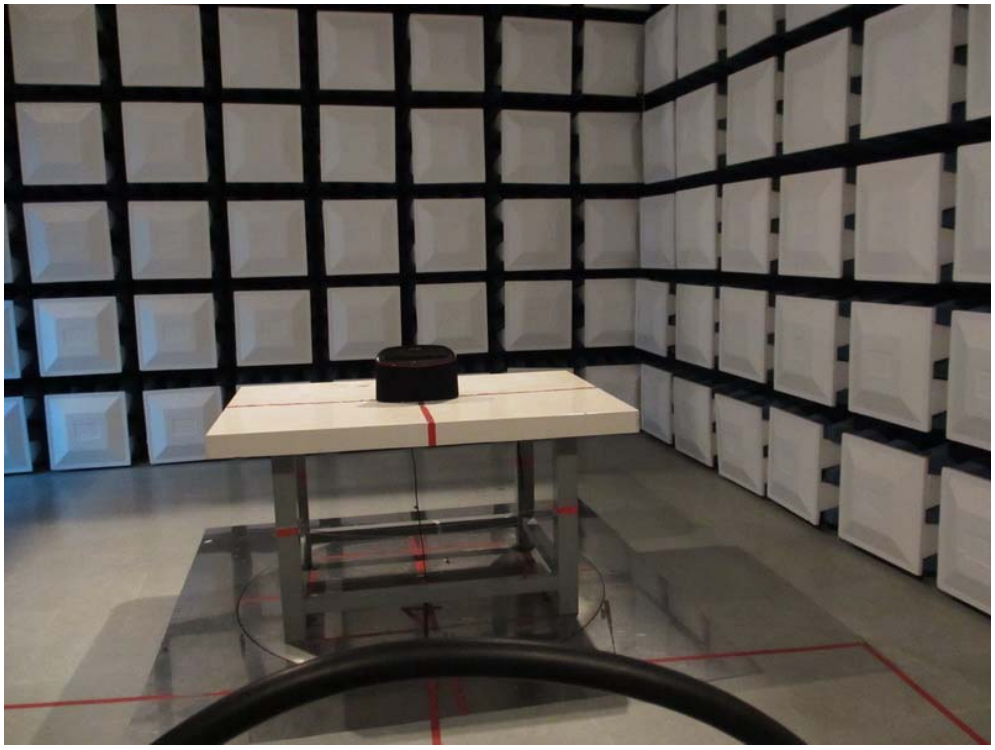


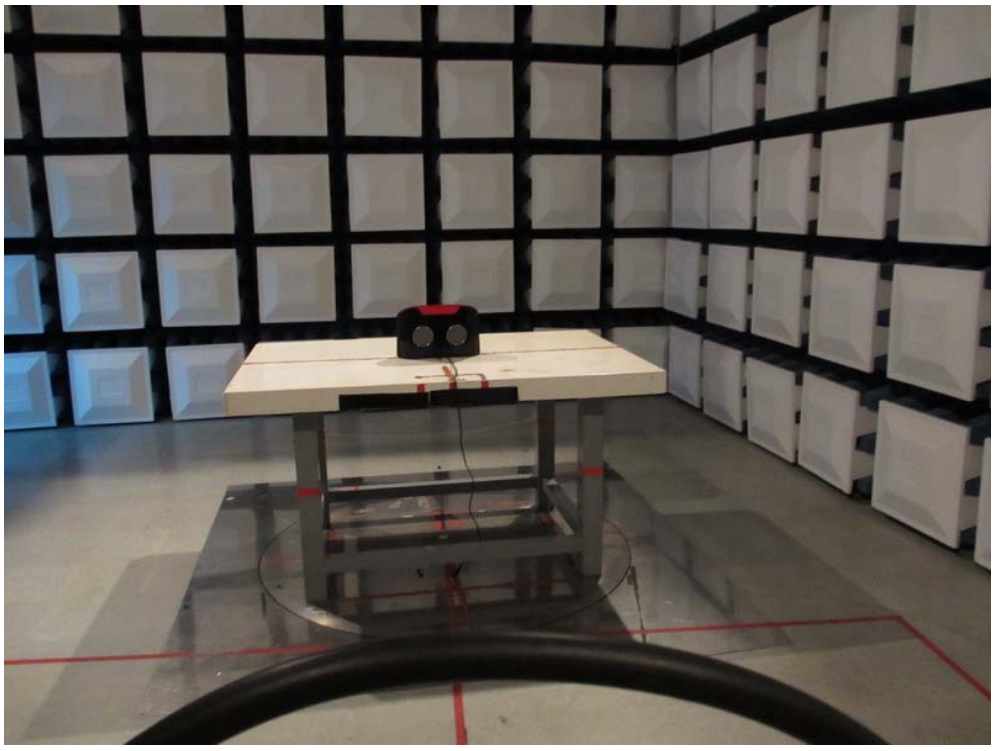
Date: 20.NOV.2012 19:24:51

9. EUT TEST PHOTO

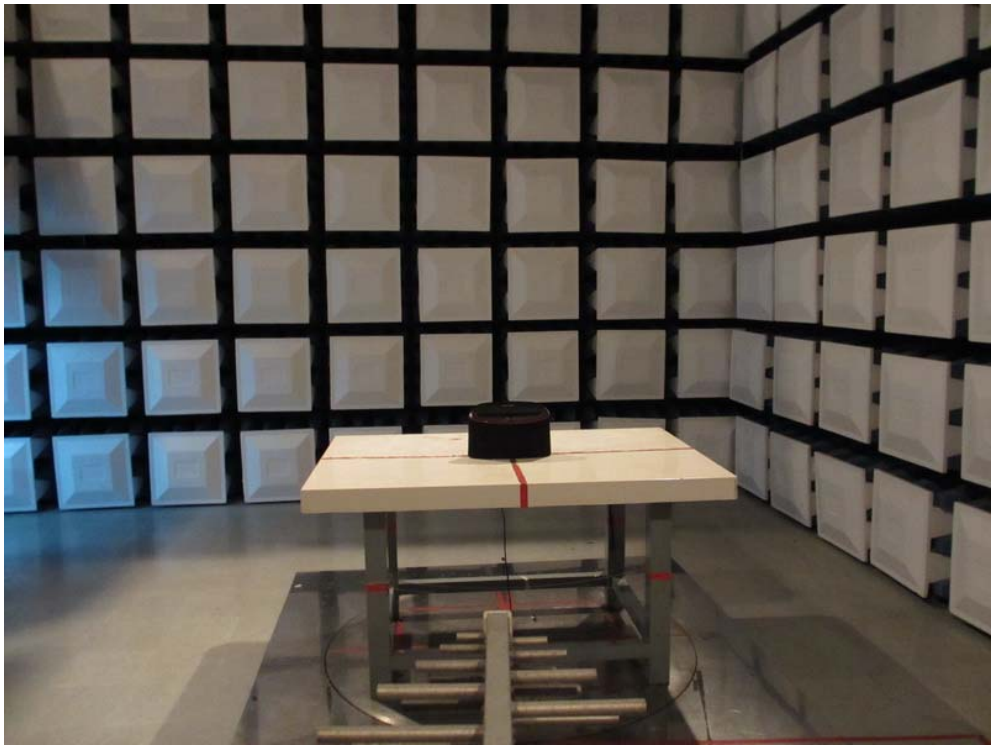
Conducted Measurement Photos

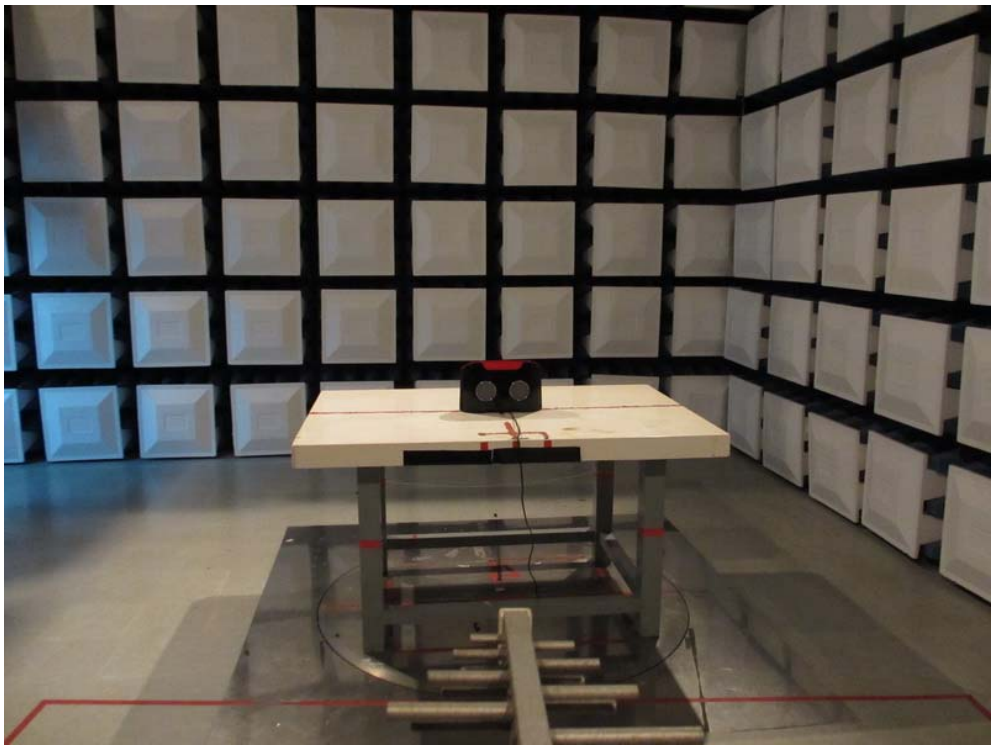
Radiated Measurement Photos
9K~30MHz





Radiated Measurement Photos
30M~1000MHz





Radiated Measurement Photos
Above 1000MHz