



FCC RADIO TEST REPORT

Applicant : ELITEGROUP COMPUTER SYSTEMS CO., LTD.

Address : No.239, Sec. 2, Tiding Blvd., Neihu Dist, Taipei City 14, Taiwan (R.O.C)

Manufacturer : ELITEGROUP COMPUTER SYSTEMS CO., LTD.

Address : No.239, Sec. 2, Tiding Blvd., Neihu Dist, Taipei City 14, Taiwan (R.O.C)

Equipment : Tablet PC

Model No. : TF10EA2

I HEREBY CERTIFY THAT :

The sample was received on Jul 27, 2015 and the testing was carried out on Aug. 02, 2015 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Miro Chueh
EMC/RF B.U. Manager

Laboratory Accreditation:

☐ CerpPASS Technology Corporation Test Laboratory

NVLAP LAB Code:	200954-0
TAF LAB Code:	1439

☒ CerpPASS Technology(SuZhou) Co., Ltd.

NVLAP LAB Code:	200814-0
CNAS LAB Code:	L5515



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1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.10: 2013

FCC Rules and Regulations Part 15 Subpart C §15.247

KDB558074

FCC Rule	Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. AC Power Line Conducted Emission	Pass
15.209 15.205	. Spurious Emission(Radiated)	Pass
15.247(d)	. Spurious Emission(Conducted)	Pass
15.247(a)(2)	. 6dB Bandwidth	Pass
15.247(b)	. Maximum Peak Output Power	Pass
15.247(e)	. Power Spectral Density	Pass

This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report.



2. Test Configuration of Equipment under Test

2.2 Feature of Equipment under Test

Frequency	2.402GHz~2.480GHz
Number of Channel	40channel
Modulation type	GFSK
Transmit Power	5.31dBm
Adapter	Model: WB-10E05FB Input: 100-240V~50-60Hz 0.4A max. Output: DC5 V, 2A

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

2.3 Test Mode & Test Software

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
*00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	*19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	*39	2480
12	2426	26	2454	--	--
13	2428	27	2456	--	--

Note: Channels remarked * are selected to perform test.



2.4 Test Manner

Test Manner	
a	During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
	The complete test system included Notebook and EUT for RF test.
b	Adjust the EUT at the test mode and the test channel. Then test. Test Mode: Mode 1: GFSK(1Mbps)

2.5 Description of Test System

No	Device	Manufacturer	Model No.	Description
1	USB Mouse	DELL	OXN967	R41108
2	Notebook	SONY	PCG-71811P	R33021

Use Cable:

No.	Cable	Quantity	Description
A	USB Mouse Cable	1	1.5m Non Shielding
B	Micro USB Cable	1	1.0m Shielding



2.6 General Information of Test

☐	Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
	FCC	TW1079, TW1061,390316, 228391, 641184
	IC	4934B-1, 4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-3428, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
☒	Test Site	Cerpass Technology (Suzhou) Co.,Ltd Address: No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China Tel: +86-512-6917-5888 Fax: +86-512-6917-5666
	FCC	916572, 331395
	IC	7290A-1, 7290A-2
	VCCI	T-343 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test G-227 for radiated disturbance above 1GHz
Frequency Range Investigated:		Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25000MHz
Test Distance:		The test distance of radiated emission from antenna to EUT is 3 M.



3. Test Equipment and Ancillaries Used for Tests

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100564	2015.02.25	2016.02.24
LISN	SCHWARZBECK	NSLK 8127	8127748	2014.10.13	2015.10.12
LISN	SCHWARZBECK	NSLK 8127	8127749	2014.10.13	2015.10.12
Pulse Limiter with 10dB Attenuation	SCHWARZBECK	VTSD 9561-F	9561-F106	2014.10.13	2015.10.12
Temperature/ Humidity Meter	mingle	ETH529	N/A	2015.02.25	2016.02.24
EMI Test Receiver	R&S	ESCI	100853	2015.02.25	2016.02.24
Preamplifier	HP	8447F	3113A05915	2015.02.25	2016.02.24
Preamplifier	FIELD	AFS44-00101800-25-10P-44	1579008	2014.10.14	2015.10.13
Ultra Broadband Antenna	SCHAFFNER	CBL6112D	22241	2015.02.25	2016.02.24
Broad-Band Horn Antenna	Sunol	DRH-118	A072913	2014.10.14	2015.10.13
Spectrum Analyzer	Agilent	E4407B	MY45118947	2015.07.16	2016.07.15
Temperature/ Humidity Meter	mingle	ETH529	N/A	2015.02.25	2016.02.24



4. Antenna Requirements

4.7 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.8 Antenna Construction and Directional Gain

Antenna type: PCB Antenna

Antenna Gain: -2.89dBi



5. Test of Conducted Emission

5.9 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.10-2013 Section 6.2. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 6.2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

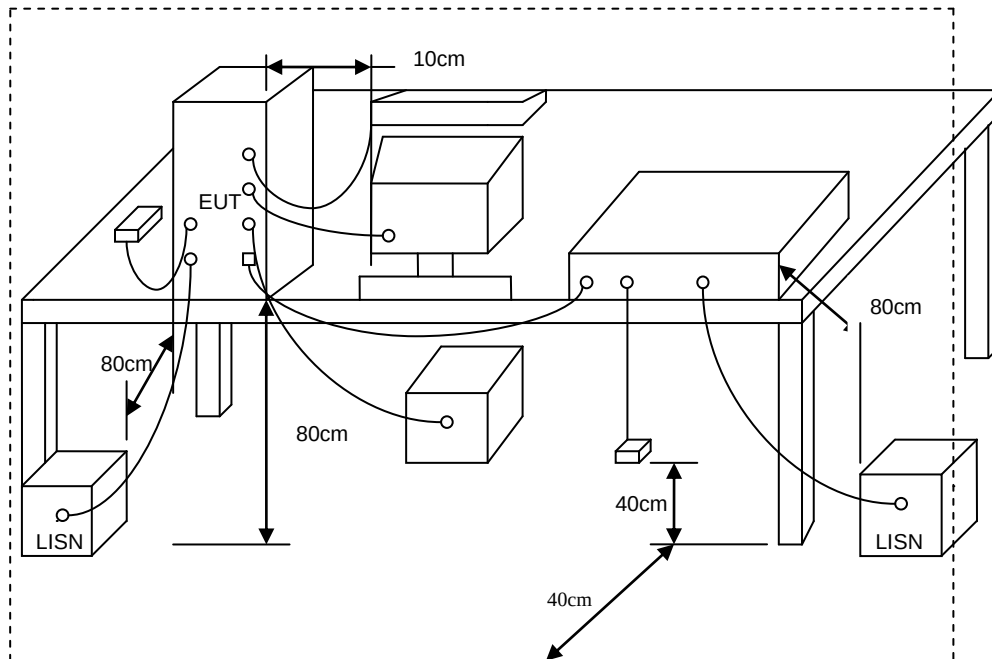
*Decreases with the logarithm of the frequency.

5.10 Test Procedures

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of Oct 2014 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.



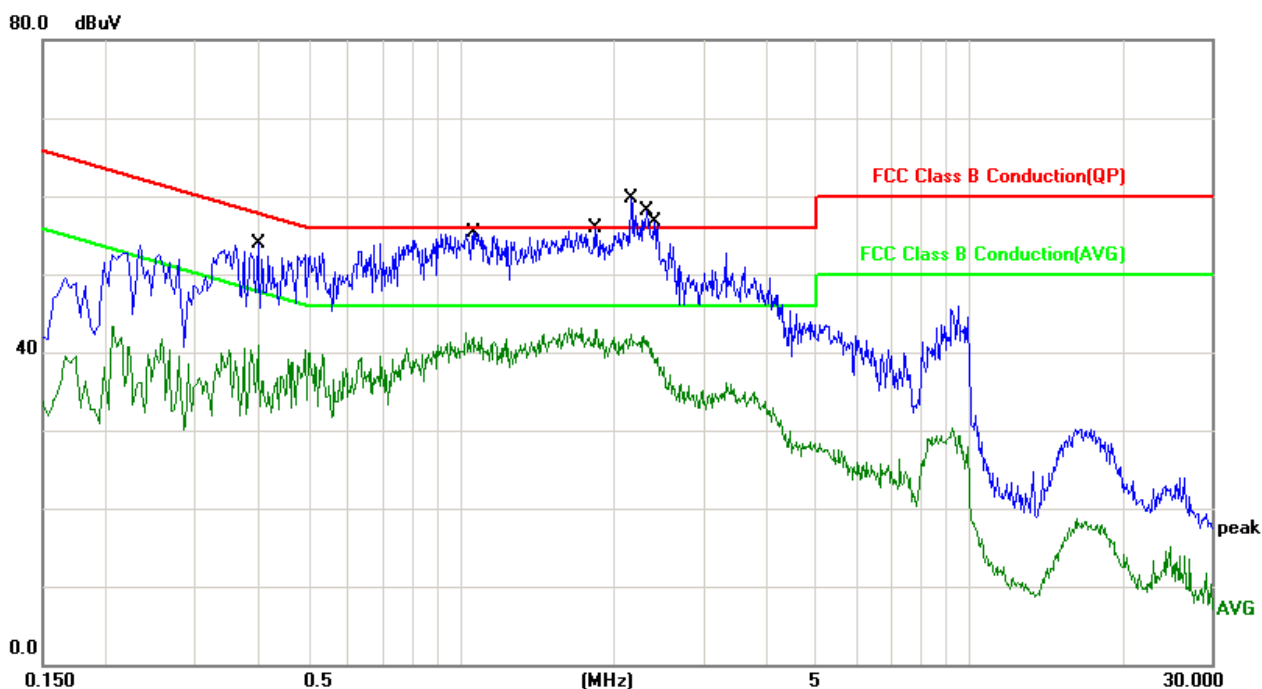
5.11 Typical Test Setup





5.12 Test Result and Data

Test Mode :	Normal Link	Phase :	Line
Temperature :	20 °C	Humidity:	51%
Pressur(mbar) :	1002	Date:	2015/08/01

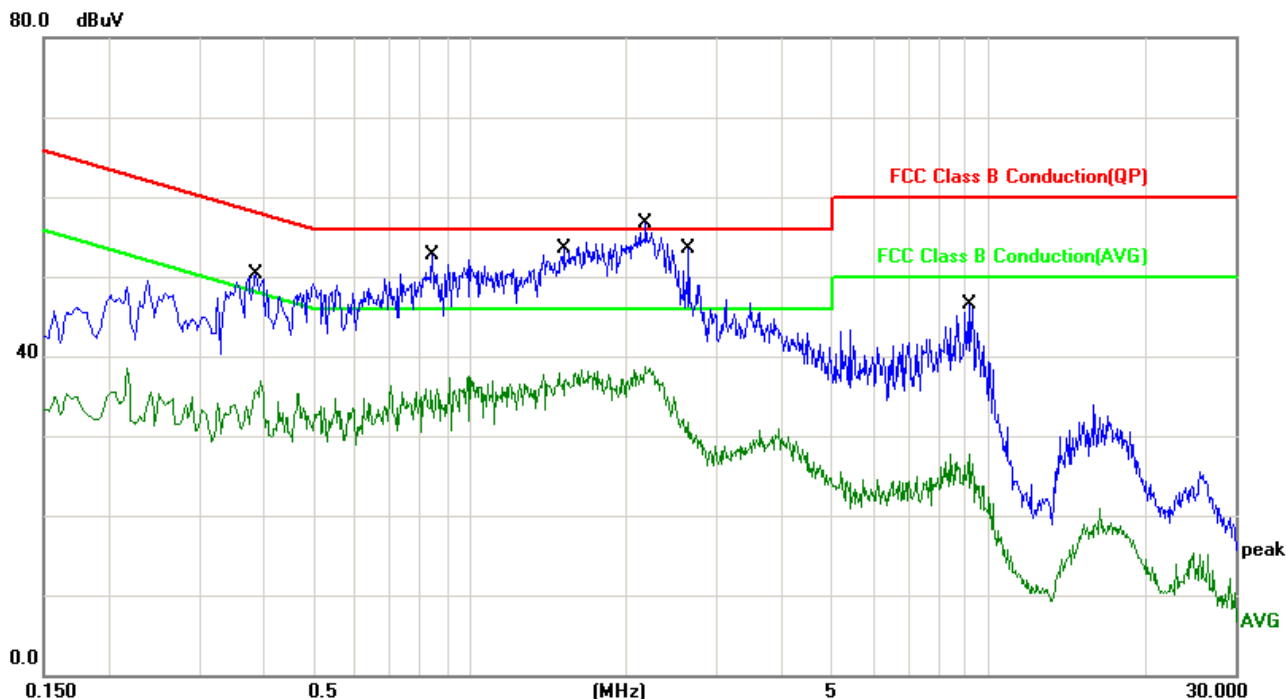


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3980	10.55	38.30	48.85	57.89	-9.04	QP
2	0.3980	10.55	25.93	36.48	47.89	-11.41	AVG
3	1.0580	10.30	39.45	49.75	56.00	-6.25	QP
4	1.0580	10.30	29.54	39.84	46.00	-6.16	AVG
5	1.8300	10.90	37.60	48.50	56.00	-7.50	QP
6	1.8300	10.90	27.84	38.74	46.00	-7.26	AVG
7	2.1660	10.99	39.65	50.64	56.00	-5.36	QP
8	2.1660	10.99	28.55	39.54	46.00	-6.46	AVG
9	2.3179	10.96	37.69	48.65	56.00	-7.35	QP
10	2.3179	10.96	26.30	37.26	46.00	-8.74	AVG
11	2.4020	10.94	35.56	46.50	56.00	-9.50	QP
12	2.4020	10.94	23.91	34.85	46.00	-11.15	AVG

Note: Measurement Level = Reading Level + Correct Factor+ Attenuator



Test Mode :	Normal Link	Phase :	Neutral
Temperature :	20° C	Humidity :	51%
Pressur(mbar) :	1002	Date :	2015/08/01



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3860	10.58	35.00	45.58	58.15	-12.57	QP
2	0.3860	10.58	23.54	34.12	48.15	-14.03	AVG
3	0.8460	10.29	36.00	46.29	56.00	-9.71	QP
4	0.8460	10.29	24.38	34.67	46.00	-11.33	AVG
5	1.5140	10.27	37.69	47.96	56.00	-8.04	QP
6	1.5140	10.27	25.15	35.42	46.00	-10.58	AVG
7	2.1820	10.28	40.12	50.40	56.00	-5.60	QP
8	2.1820	10.28	26.21	36.49	46.00	-9.51	AVG
9	2.6460	10.28	32.76	43.04	56.00	-12.96	QP
10	2.6460	10.28	19.39	29.67	46.00	-16.33	AVG
11	9.1740	10.36	23.79	34.15	60.00	-25.85	QP
12	9.1740	10.36	11.71	22.07	50.00	-27.93	AVG

Note: Measurement Level = Reading Level + Correct Factor+ Attenuator



6. Test of Radiated Emission

6.1 Test Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

Frequency (MHz)	Field Strength (microvolt/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

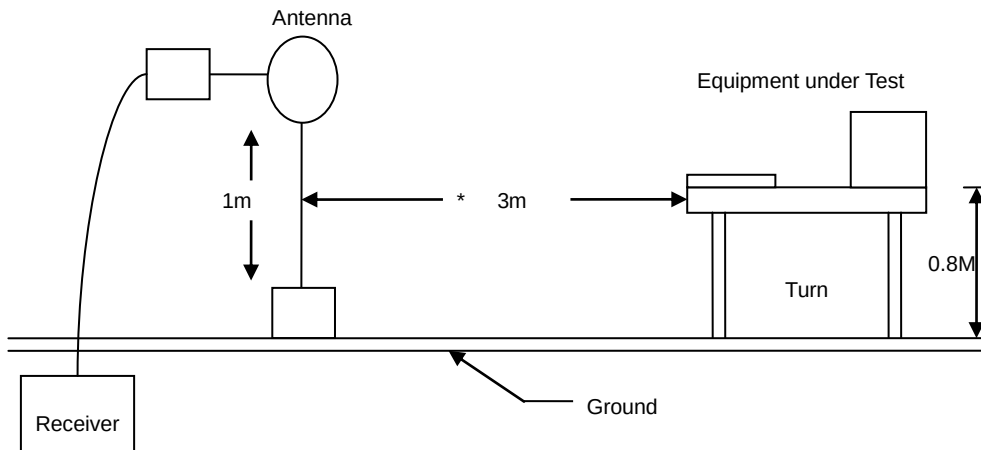
6.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter for frequency below 1GHz and 1.5meter for frequency above 1GHz above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

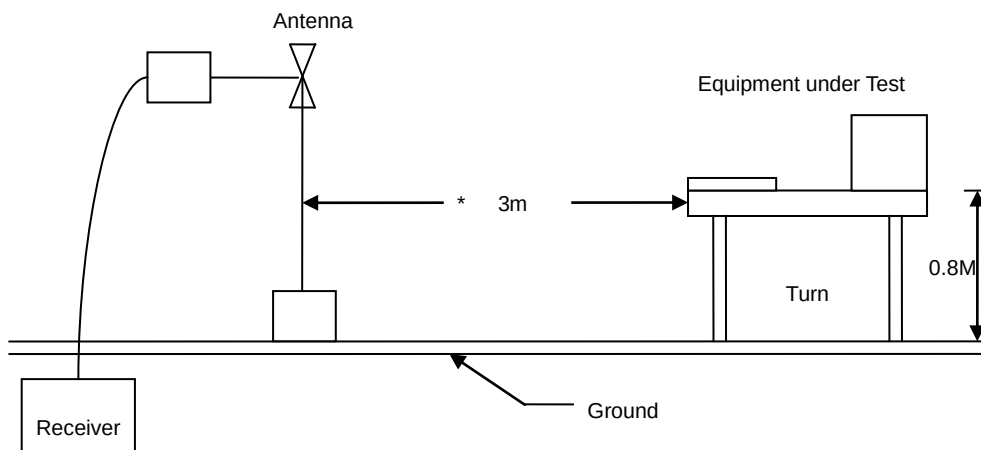


6.3 Typical Test Setup

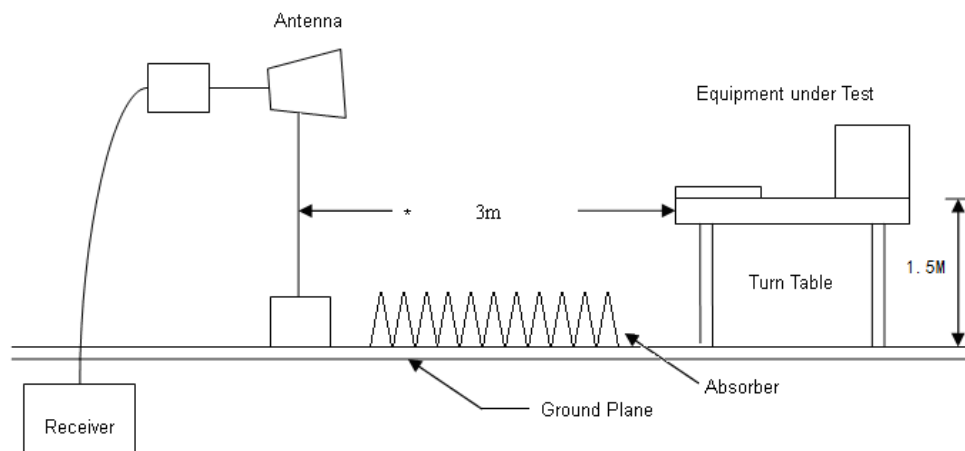
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup





6.4 Test Result and Data

The 9kHz-30MHz spurious emission is under limit 20dB more.

6.5 Test Result and Data (30MHz ~ 1GHz)

Below 1GHz

Engineer :Amos	
Site : EMC Lab AC 102	Time : 2015/08/01
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : TF10EA2	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Normal Link

Frequency (MHz)	AntPol. H/V	Correct Factor (dB)	Reading level (dBuV)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector mode (PK/QP)
188.1100	H	-10.49	44.24	33.75	43.50	-9.75	QP
441.2800	H	-3.94	35.74	31.80	46.00	-14.20	QP
469.4100	H	-1.62	32.11	30.49	46.00	-15.51	QP
504.3300	H	-2.30	32.50	30.20	46.00	-15.80	QP
601.3300	H	-1.09	33.07	31.98	46.00	-14.02	QP
800.1800	H	0.37	34.53	34.90	46.00	-11.10	QP
33.8800	V	-5.41	37.26	31.85	40.00	-8.15	QP
51.3400	V	-14.25	46.29	32.04	40.00	-7.96	QP
133.7899	V	-9.38	44.51	35.13	43.50	-8.37	QP
189.0800	V	-10.38	40.03	29.65	43.50	-13.85	QP
469.4100	V	-1.62	34.95	33.33	46.00	-12.67	QP
601.3300	V	-1.09	34.40	33.31	46.00	-12.69	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

**6.6 Test Result and Data (1GHz ~ 25GHz)**

Engineer :Amos	
Site : EMC Lab AC 102	Time : 2015-08-02
Limit : FCC_15_03M_PK	Margin : 6
EUT : TF10EA2	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 2402MHz

VERTICAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1637.500	-6.82	50.15	43.33	74.00	-30.67	peak
2	2020.000	-4.64	51.22	46.58	74.00	-27.42	peak
3	2827.500	-0.39	46.00	45.61	74.00	-28.39	peak
4	2955.000	0.47	45.80	46.27	74.00	-27.73	peak
5	4612.500	7.87	37.31	45.18	74.00	-28.82	peak
6	5845.000	9.88	35.94	45.82	74.00	-28.18	peak

HORIZONTAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1765.000	-6.08	51.73	45.65	74.00	-28.35	peak
2	2062.500	-4.46	52.50	48.04	74.00	-25.96	peak
3	2870.000	-0.10	43.42	43.32	74.00	-30.68	peak
4	3762.500	4.30	41.58	45.88	74.00	-28.12	peak
5	4867.500	8.35	38.15	46.50	74.00	-27.50	peak
6	5505.000	9.03	37.78	46.81	74.00	-27.19	peak

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



Engineer :Amos	
Site : EMC Lab AC 102	Time : 2015-08-02
Limit : FCC_15_03M_PK	Margin : 6
EUT : TF10EA2	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 2440MH

VERTICAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1637.500	-6.82	53.41	46.59	74.00	-27.41	peak
2	2317.500	-3.36	48.16	44.80	74.00	-29.20	peak
3	3550.000	3.57	39.09	42.66	74.00	-31.34	peak
4	4485.000	7.58	38.90	46.48	74.00	-27.52	peak
5	5377.500	8.92	38.08	47.00	74.00	-27.00	peak
6	5887.500	9.98	37.98	47.96	74.00	-26.04	peak

HORIZONTAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1637.500	-6.82	51.27	44.45	74.00	-29.55	peak
2	2020.000	-4.64	49.83	45.19	74.00	-28.81	peak
3	2700.000	-1.24	46.85	45.61	74.00	-28.39	peak
4	3762.500	4.30	36.51	40.81	74.00	-33.19	peak
5	4315.000	6.72	34.52	41.24	74.00	-32.76	peak
6	4995.000	8.59	39.83	48.42	74.00	-25.58	peak

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



Engineer :Amos	
Site : EMC Lab AC 102	Time : 2015-08-02
Limit : FCC_15_03M_PK	Margin : 6
EUT : TF10EA2	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 2480MHz

VERTICAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1297.500	-9.46	56.49	47.03	74.00	-26.97	peak
2	1552.500	-7.31	54.14	46.83	74.00	-27.17	peak
3	1977.500	-4.86	45.84	40.98	74.00	-33.02	peak
4	2870.000	-0.10	42.99	42.89	74.00	-31.11	peak
5	5037.500	8.63	42.37	51.00	74.00	-23.00	peak
6	5505.000	9.03	33.73	42.76	74.00	-31.24	peak

HORIZONTAL

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1637.500	-6.82	51.88	45.06	74.00	-28.94	peak
2	2317.500	-3.36	48.27	44.91	74.00	-29.09	peak
3	2955.000	0.47	43.99	44.46	74.00	-29.54	peak
4	4357.500	6.93	35.60	42.53	74.00	-31.47	peak
5	4782.500	8.19	37.09	45.28	74.00	-28.72	peak
6	5760.000	9.66	37.30	46.96	74.00	-27.04	peak

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



6.7 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz



6.8 Restrict Band Emission Measurement Data

Test Date : 2015-06-08
Temperature : 24 °C
Humidity : 52 %
Atmospheric Pressure : 1023 hPa

Modulation Standard:GFSK

Channel 1						Fundamental Frequency: 2402 MHz				
Frequency (MHz)	Ant-Pol H/V	Corrected Factor	Meter Reading	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (cm)
						Peak	Ave.			
2390.00	H	-3.05	55.29	52.24	Peak	74	54	-21.76	348	200
2390.00	H	-3.05	45.63	42.58	Ave	74	54	-11.42	348	200
2390.00	V	-3.05	56.73	53.68	Peak	74	54	-20.32	360	100
2390.00	V	-3.05	46.02	42.97	Ave	74	54	-11.03	360	100
Channel 40						Fundamental Frequency: 2480 MHz				
Frequency (MHz)	Ant-Pol H/V	Corrected Factor	Meter Reading	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (cm)
						Peak	Ave.			
2483.50	H	-2.65	63.41	60.76	Peak	74	54	-13.24	0	200
2483.50	H	-2.65	50.00	47.35	Ave	74	54	-6.65	249	200
2483.50	V	-2.65	69.86	67.21	Peak	74	54	-6.79	251	100
2483.50	V	-2.65	51.99	49.34	Ave	74	54	-4.66	251	100

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector peak mode) for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector sample mode) for Average detection at frequency above 1GHz



7. Test of Spurious Emission (Conducted)

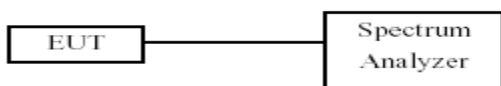
7.1 Test Limit

Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer via a low lose cable.
- Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- The band edges was measured and recorded.

7.3 Test Setup Layout

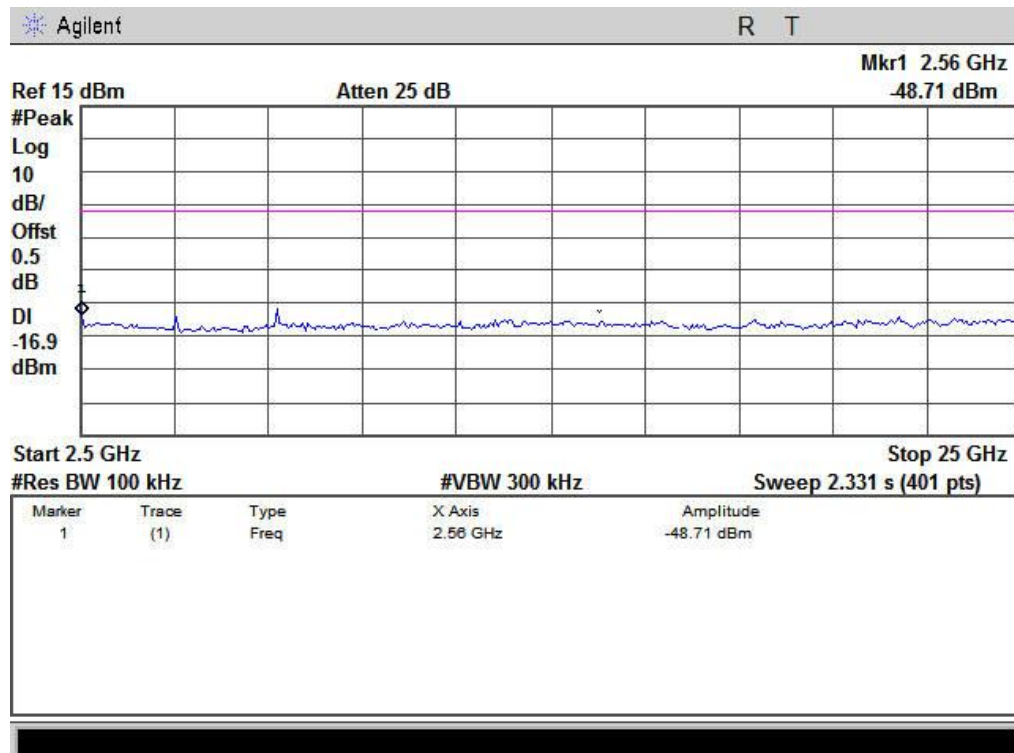
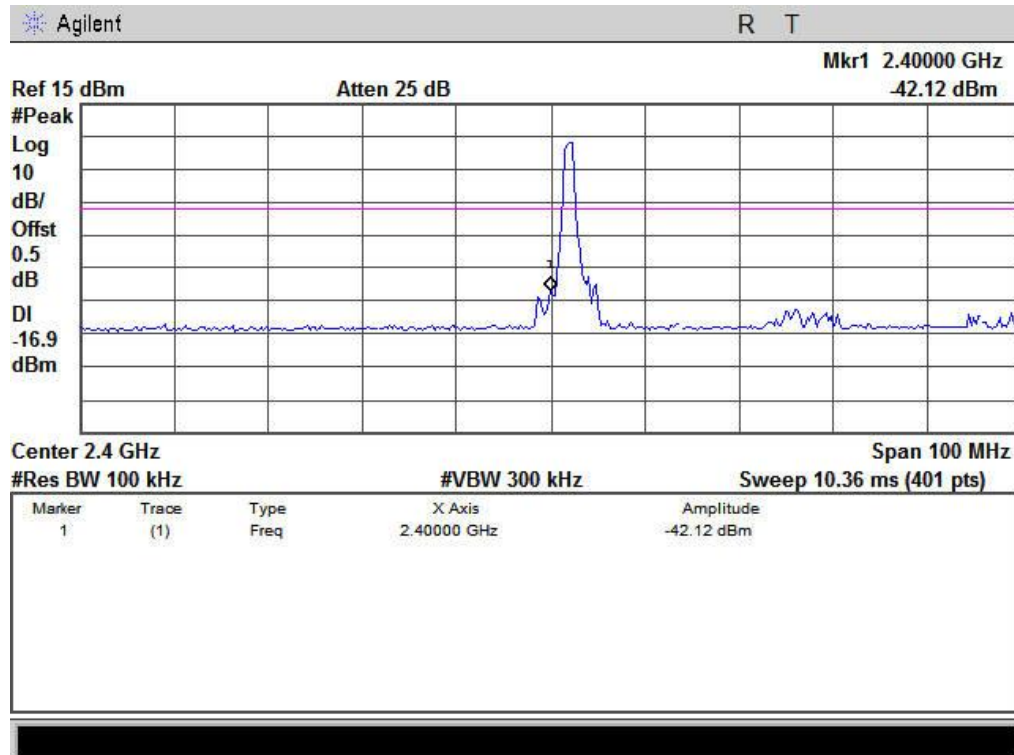


7.4 Test Result and Data

Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)	maximum value(dBm)
GFSK	01	2402	2400.00	-42.12
	40	2480	7440.00	-42.33

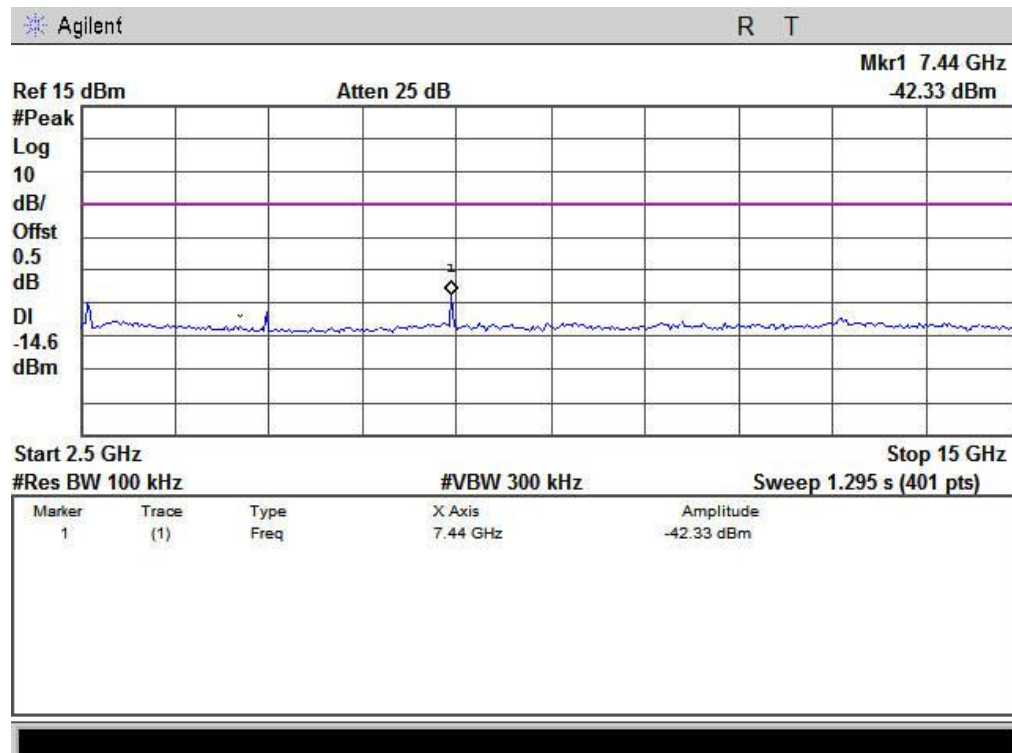
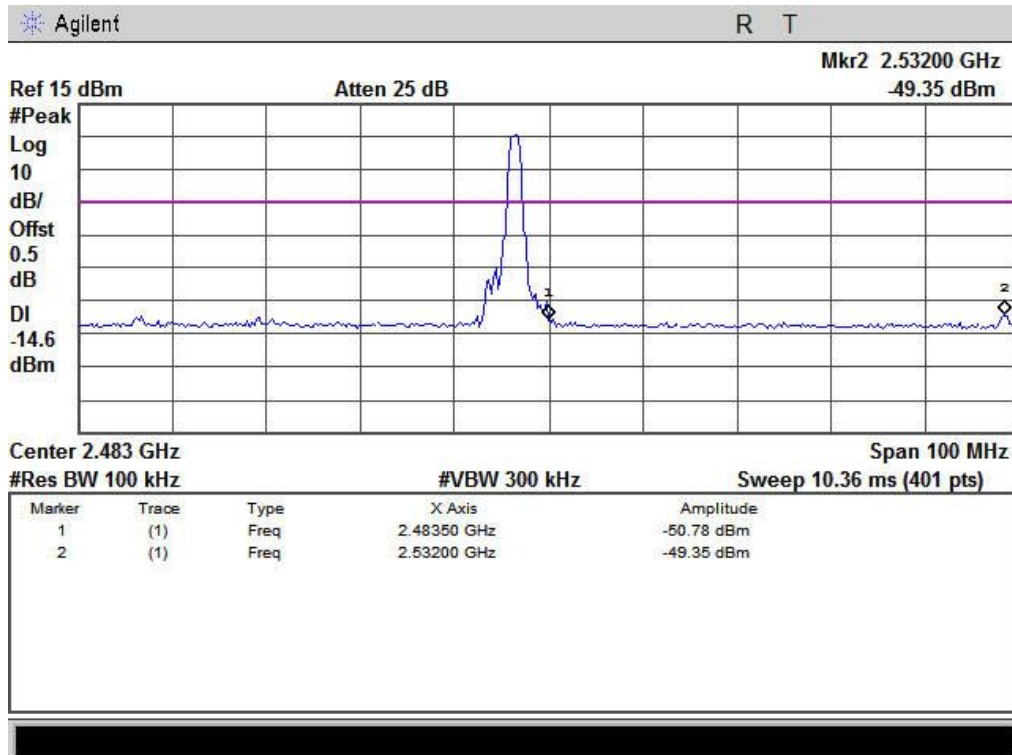


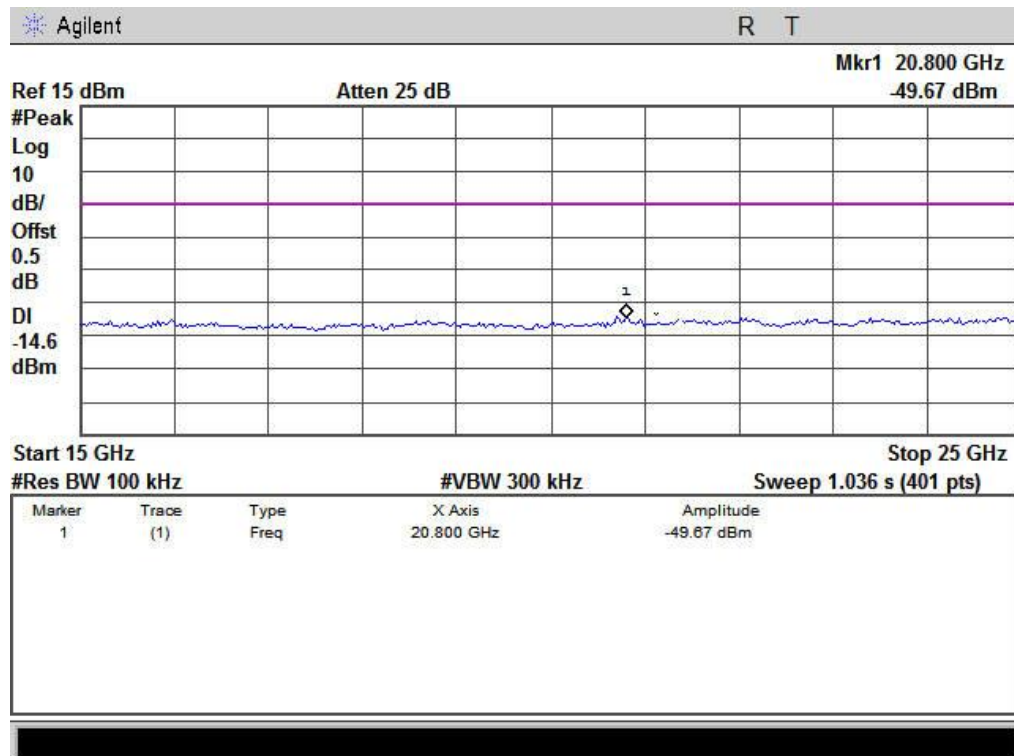
Transmit by GFSK Channel 01





Transmit by GFSK Channel 40







8. 6dB Bandwidth Measurement Data

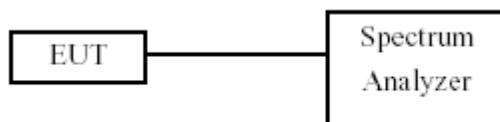
8.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

8.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 1~5% of the emission bandwidth and $VBW \geq 3x RBW$.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- The 6dB Bandwidth was measured and recorded.

8.3 Test Setup Layout





8.4 Test Result and Data

Test Date: Aug. 02, 2015

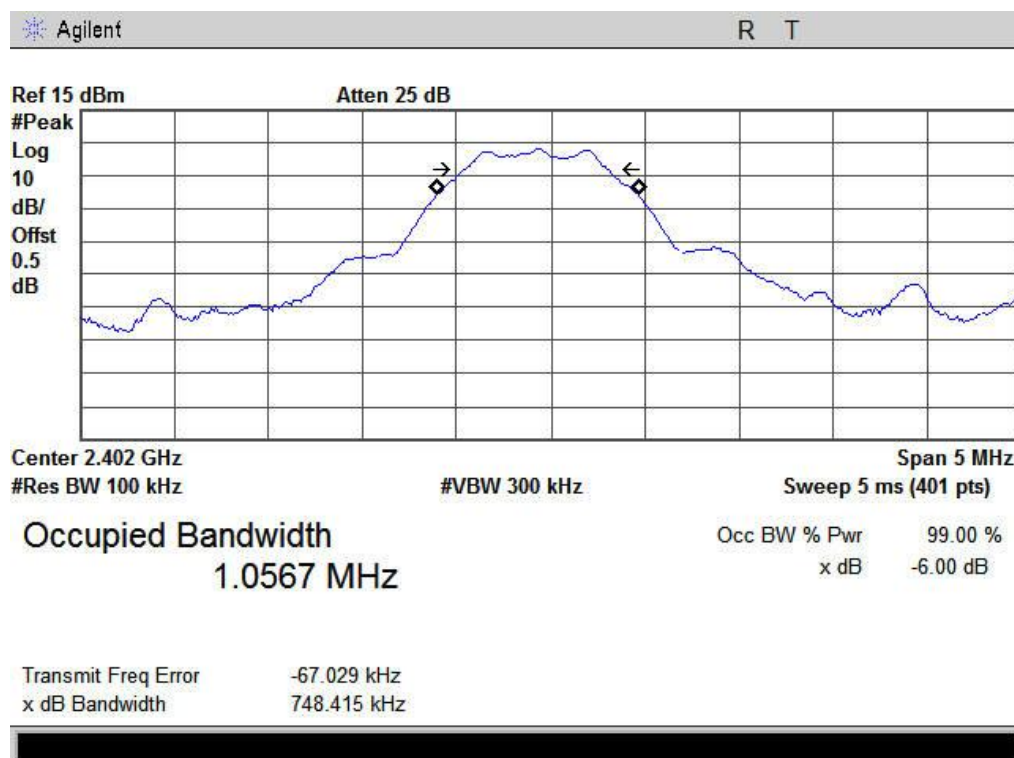
Temperature: 23 °C

Atmospheric pressure: 1087 hPa

Humidity: 54 %

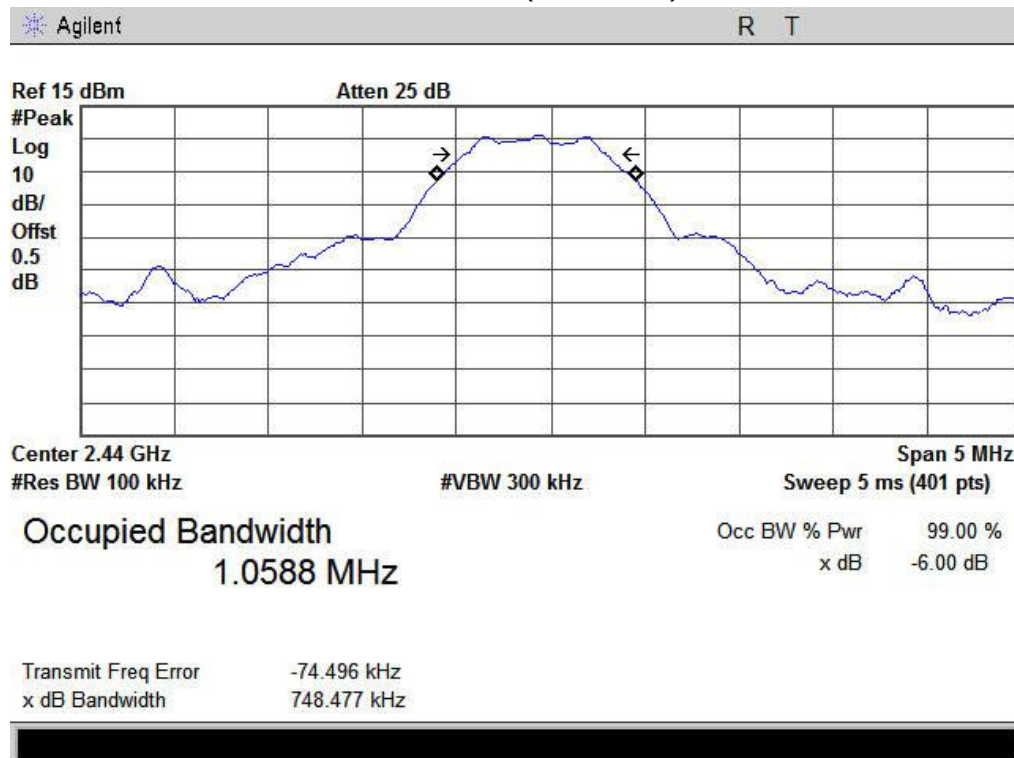
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (KHz)
GFSK	00	2402	748
	19	2441	748
	39	2480	747

Channel 00 (2402MHz)

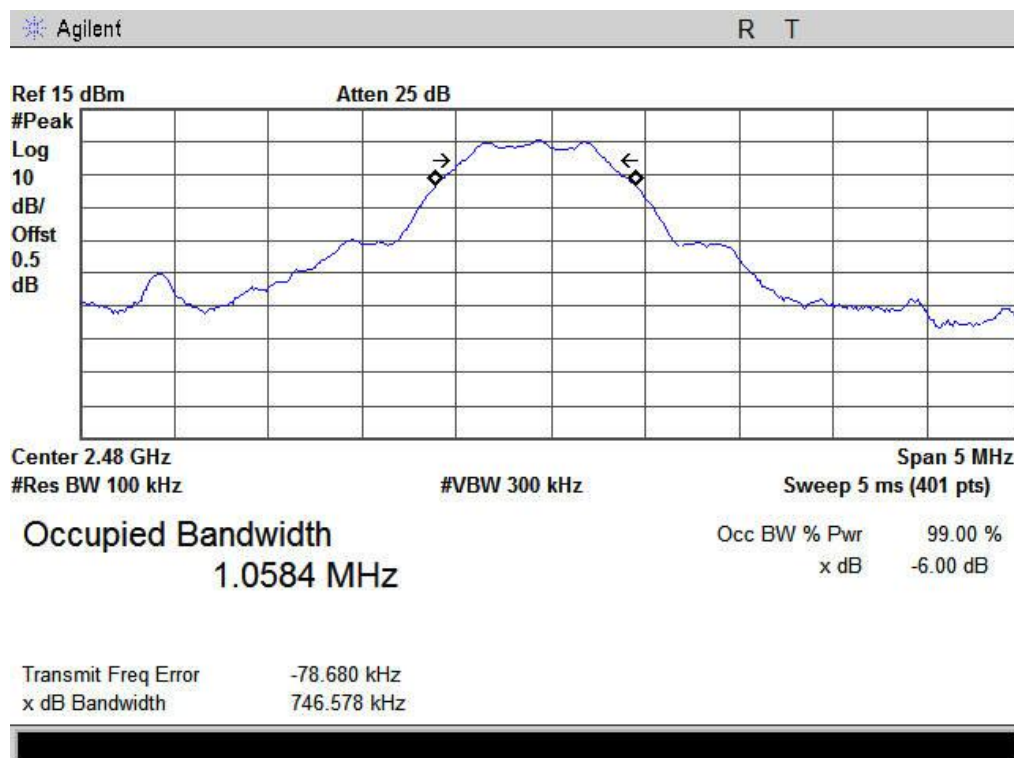




Channel 19 (2440MHz)



Channel 39(2480MHz)





9. Maximum Peak and Average Output Power

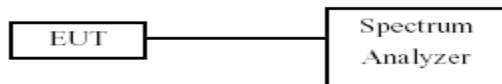
9.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

9.2 Test Procedure

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

9.3 Test Setup Layout



**9.4 Test Result and Data**

Test Date: Aug. 02, 2015

Temperature: 23°C

Atmospheric pressure: 1087 hPa

Humidity: 54%

Modulation Standard	Channel	Frequency (MHz)	Power Output (dBm)	Peak Power Output (mW)
GFSK	00	2402	2.27	1.687
	19	2440	5.31	3.396
	39	2480	4.76	2.992



10. Power Spectral Density

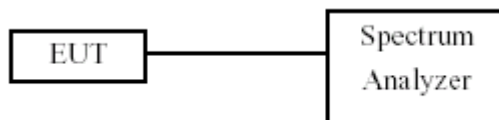
10.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

10.2 Test Procedure

- a. The transmitter output was connected to spectrum analyzer.
- b. The spectrum analyzer's resolution bandwidth were set at 3KHz RBW and 10KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.
- c. The power spectral density was measured and recorded.

10.3 Test Setup Layout



**10.4 Test Result and Data**

Test Date: Aug. 02, 2015

Temperature: 23°C

Atmospheric pressure: 1087 hPa

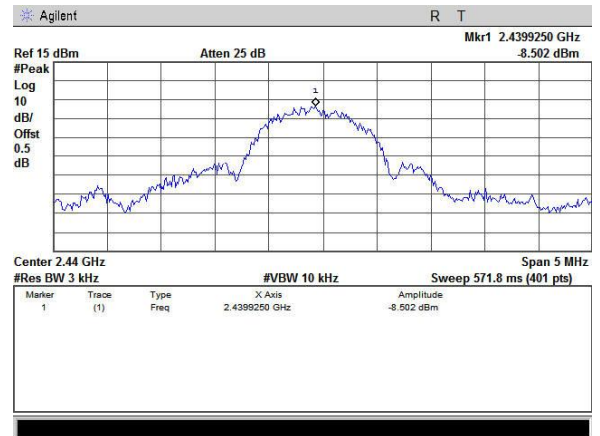
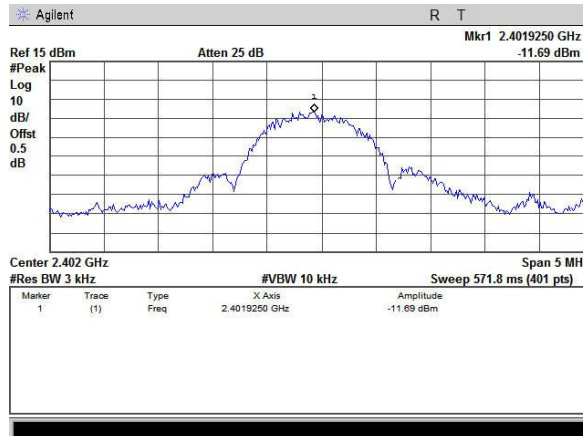
Humidity: 54%

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
GFSK	00	2402	-11.69
	19	2440	-8.50
	39	2480	-9.34



Modulation Type: GFSK(1Mbps), CH0

CH19



CH39

