




# FCC Test Report

FCC EVALUATION REPORT FOR CERTIFICATE	
Project Reference No.	273927
Product	Tablet PC
Brand Name	N/A
Model	W850
Alternate Model	N/A
Tested according to	FCC Rules and Regulations Part 15 Subpart C 2013, 15.247 ANSI C63.4-2009

Tested in period	2014-12-25 to 2014-12-30		
Issued date	2014-12-31		
Name and address of the Test House	 Nemko Shanghai Ltd. Shenzhen Branch Unit CD, Floor 10, Tower 2, Kefa Road 8#, Hi-Technology Park, Nanshan District, Shenzhen, China Phone : +86 755 8221 0420 Fax : +86 755 8221 3363		
Tested by			2014-12-31
	<b>Zone Peng</b>		<b>date</b>
Verified by			2014-12-31
	<b>Daria Liu</b>		<b>date</b>

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## 1. Client Information

### 1.1 Applicant

Company Name: South Holdings Industrial Limited  
Company Address: Building 1, Hao'er JiaShiTai Industrial Park, FengTang Rd.,  
Tangwei, FuYong Town, Bao'an District, Shenzhen, 518103,  
China

### 1.2 Manufacturer

Company Name: South Holdings Industrial Limited  
Company Address: Building 1, Hao'er JiaShiTai Industrial Park, FengTang Rd.,  
Tangwei, FuYong Town, Bao'an District, Shenzhen, 518103,  
China

### 1.3 Scope

●Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission under FCC part 15.247.

## 2. Equipment under Test (EUT)

### 2.1 Identification of EUT

Category: Bluetooth 4.0

Name: Tablet PC

Model Name: W850

Alternate model: N/A

Brand name: N/A

Remark: This report 273927 is on the basis of the report 274749,  
The model:W850, FCC ID:2ACEK-W850, trademark: N/A  
is electrically identical to the model:W850,  
FCC ID:2ACEK-W850-1, trademark:XTRATECH, only FCC ID  
number and trademark are different.  
Additional test is not need, all data are from the report 274749.

### 2.2 Detail spec:

Operation Frequency: **2402 MHz -2480MHz**

Protocal: **Bluetooth 4.0**

Type of Modulation : **GFSK**

Antenna Type: **Integral Antenna**

Antenna Number : **1**

Antenna gain: **1.31dBi**

Channel number: **40**

Data rate: **1Mbps**

Max PK Output power: **3.25dBm**

AC/DC Adapter: **KA24-0503000US**

Input: **100-240V~, 50/60Hz, 0.55A max.Class II**

Output: **5Vdc,3000mA**

### 2.3 Additional Information Related to Testing

**CH LOW:2402MHz**

**CH MID:2442MHz**

**CH HIGH:2480MHz**

**Remark: Only the worse case found by prescan is listed**

### 3. General Test Conditions

#### 3.1 Location

Global United Technology Services Co., Ltd. -- Nemko ELA 632  
2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China  
FCC Registration No.:600491  
IC Registration No.9079A-2  
Note: all test are witnessed by NEMKO engineer

#### 3.2 Operating Environment

All tests and measurements were performed in a shielded enclosure or a controlled environment suitable for the tests conducted. The climatic conditions in the test area are automatically controlled and recorded continuously.

Parameters	Recording during test	Accepted deviation
Ambient temperature	24-25°C	15 – 35 °C
Relative humidity	50-55%	30 - 60%
Atmospheric pressure	101.2 kPa -101.3kPa	86-106kPa

#### 3.3 Operating During Test

Test mode: 5Vdc 3A Full charged battery

TM1 : continuance TX MODE

TM2: Hopping on mode

**Remark : When measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, have been performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. No findable change appear.**

**And only choose the worse mode to be the representative test mode**

#### 3.4 Test Equipment

The test equipments used in testing are calibrated on a regular basis. For most of the testing equipments accredited calibration is conducted once a year. For certain equipment the calibration interval is longer. Between the calibrations all test equipment are controlled and verified on a regular basis. The test equipments used are defined in each test section of this report.

##### **A.E. used during testing:**

1. HDMI cable: detachable, shielded with electric conductivity fabric and 2 magnetic core fixed at both end of the HDMI line (1m).
2. Earphone: detachable, un-shield with a magnetic core at the jack end (0.8m).  
manufacture: Aoni, model no: MP-105 (FCC VOC)
3. AC power cable: detachable, un-shield (1.5m)
3. Monitor: manufacture: AOC, model no: V22T (FCC DOC)
4. SD CARD: manufacture:Sony, model no: SR-32C4 (FCC DOC)
- 5: USB cable: detachable, shielded (0.2m)

#### 4. Measurement Uncertainty

The Measurement Uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 with the confidence level of 95 %.

Conducted Emission :	0.15~30MHz	3.45dB
Radiated Emission:	30MHz~1000MHz	4.50dB
	1GHz-18GHz	4.70dB

## 5. Radiated Electromagnetic Disturbances

### 5.1 Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast.

The EUT were rotated 0 to 360 degree and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. The test result are reported as below.

For below 1GHz

RBW=120 kHz; VBW=300KHz.QP detector,The frequency range from 30MHz to 1000MHz is checked.

For above 1GHz. The frequency range from 1GHz to 25GHz(10<sup>th</sup> harmonics) is checked.

RBW=1MHz ; VBW=1MHz,PK detector for peak emissions measurement above 1GHz

RBW=1MHz ; VBW=3MHz, RMS detector for average emissions measure above 1GHz

### 5.2 Measurement Equipment

	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	EMI Test Receiver	Jul. 04 2015	ESU26	GTS203	R&S
<input checked="" type="checkbox"/>	BiConiLog Antenna	Feb. 26 2015	VULB9163	GTS214	SCHWARZBECK
<input checked="" type="checkbox"/>	Horn Antenna	Feb. 25 2015	BBHA9120D	GTS215	SCHWARZBECK
<input checked="" type="checkbox"/>	Coaxial Cable	Apr. 01 2015	N/A	GTS213	GTS
<input checked="" type="checkbox"/>	Coaxial Cable	Apr. 01 2015	N/A	GTS211	GTS
<input checked="" type="checkbox"/>	Coaxial Cable	Apr. 01 2015	N/A	GTS211	GTS
<input checked="" type="checkbox"/>	Coaxial cable	Apr. 01 2015	N/A	GTS210	GTS
<input checked="" type="checkbox"/>	Amplifier	Jul. 04 2015	8347A	GTS204	HP

### 5.3 Test Result

Remark: If PK value is lower than AV limit , only show PK diagram as below.

From 18GHz to 25GHz, Spurious Emission can not be found .

For restriction band test :Only list the restriction band test which there found emission.

For other restriction band: no emission found.

For Radiated emission test : The EUT have been tested at X,Y,Z axial direction, Only list the worse mode.

Mode	Freq range		Test ANT polarity	Diagram	Test Result
TX MODE	30MHz-1GHz:		H	5-1	Pass
	30MHz-1GHz:		V	5-2	Pass
Mode	Freq range	Channel	Test ANT polarity	Diagram	Test Result
GFSK	1GHz-18GHz:	CH LOW	H	5-3	Pass
	1GHz-18GHz:	CH LOW	V	5-4	Pass
	1GHz-18GHz:	CH MID	H	5-5	Pass
	1GHz-18GHz:	CH MID	V	5-6	Pass
	1GHz-18GHz:	CH HIGH	H	5-7	Pass
	1GHz-18GHz:	CH HIGH	V	5-8	Pass



Restricted band test:

Mode	Freq range	Channel	Test ANT polarity	Diagram	Test Result
GFSK	Restricted band	CH LOW	H	5-9	Pass
		CH LOW	V	5-10	Pass
		CH HIGH	H	5-11	Pass
		CH HIGH	V	5-12	Pass

#### NOTES:

1. All modes were measured and only the worst case emission was reported.
2. H =Horizontal V=Vertical
3. Emission = Reading +Antenna Factor + Cable Loss –Amp Factor
4. Emission level dB  $\mu$  V = 20 log Emission level  $\mu$  V/m
5. The lower limit shall apply at the transition frequencies
6. All the emissions appearing within 15.205 Restricted bands shall not exceed the limits shown in (15.209 limit )#.
7. Unwanted emissions not falling within restricted frequency bands shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits;

Remark :

The limit of “ # ” of 3 meter distance is

Frequency MHz	Distance m	Field strength		Distance m	Field strength dB $\mu$ V/m(QP)
		$\mu$ V/m	dB $\mu$ V/m(QP)		
30-88	3	100	40.0	10	30.0
88-216	3	150	43.5	10	33.5
216-960	3	200	46.0	10	36.0
960-1000	3	500	54.0	10	44.0
Above 1000	3	74.0 dB $\mu$ V/m (PK) 54.0 dB $\mu$ V/m (AV)		/	/

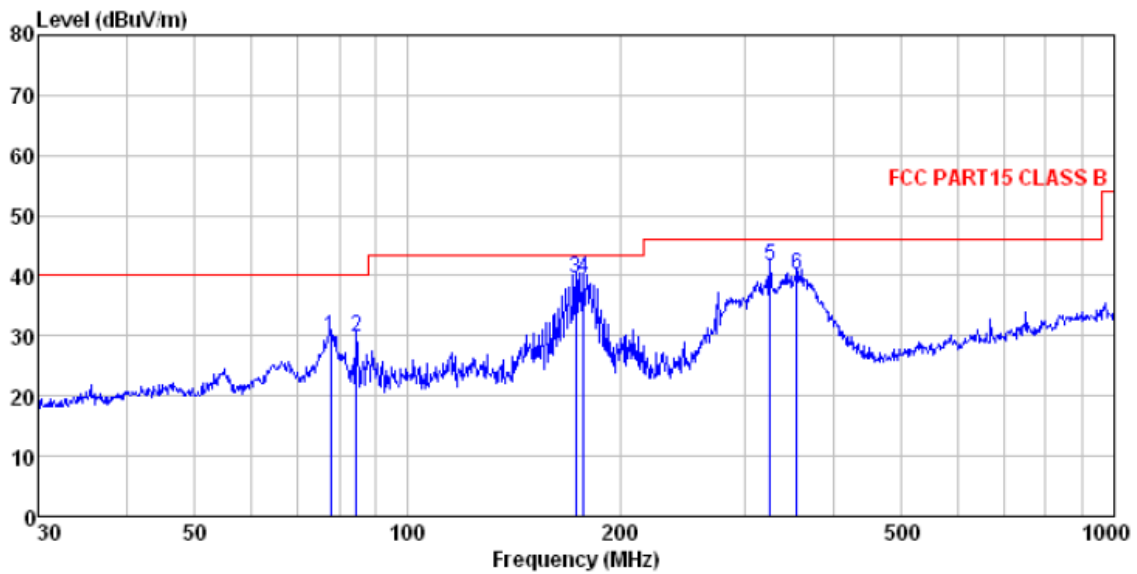
#### 15.205 Restricted bands:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

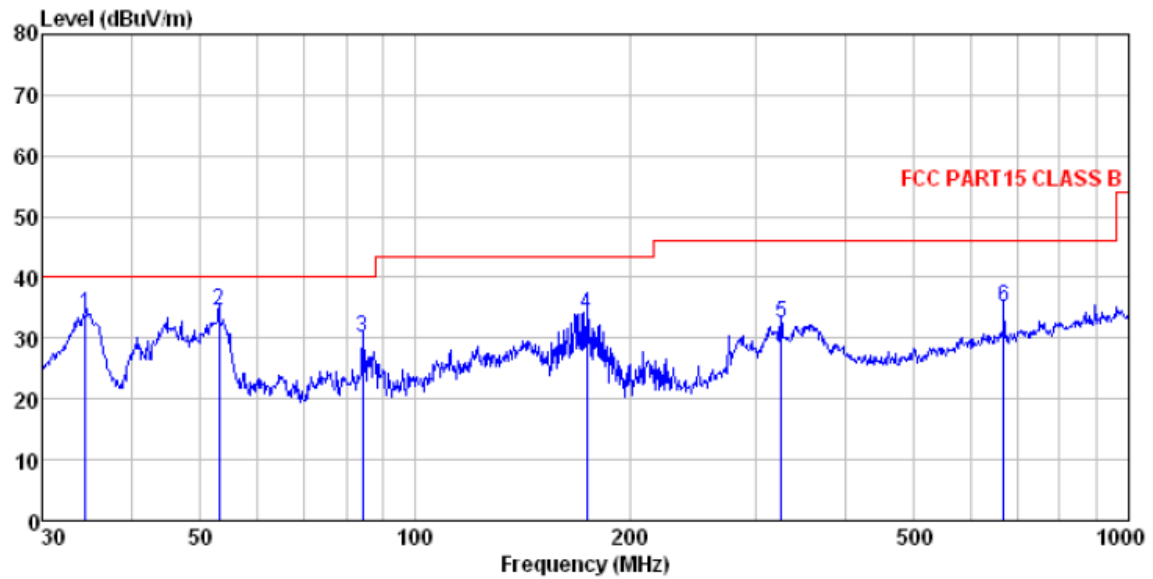
<sup>2</sup> Above 38.6

### 5.3.1 Diagram 5-1



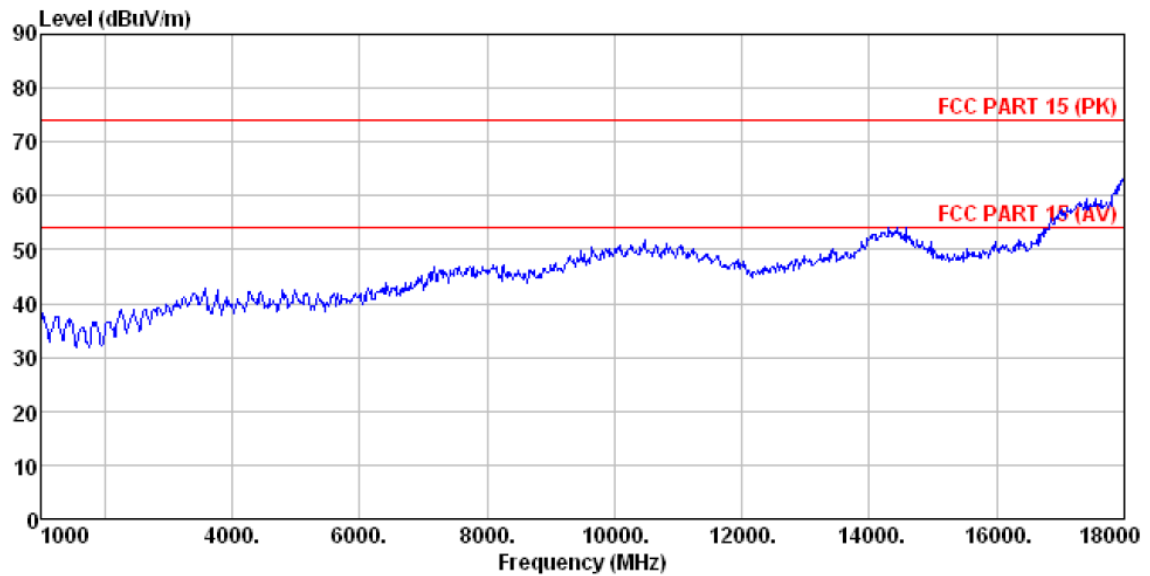
	Freq	ReadAntenna	Cable Preamp		Limit	Over	
	Level	Factor	Loss	Factor	Line	Limit	Remark
	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
	MHz						
1	77.865	50.38	10.26	1.01	31.78	29.87	40.00 -10.13 QP
2	84.702	48.18	12.16	1.07	31.74	29.67	40.00 -10.33 QP
3	173.205	58.90	11.16	1.70	32.06	39.70	43.50 -3.80 QP
4	177.509	58.39	11.49	1.73	32.07	39.54	43.50 -3.96 QP
5	325.596	55.77	15.59	2.49	32.09	41.76	46.00 -4.24 QP
6	355.427	53.10	16.35	2.64	32.01	40.08	46.00 -5.92 QP

### 5.3.2 Diagram 5-2

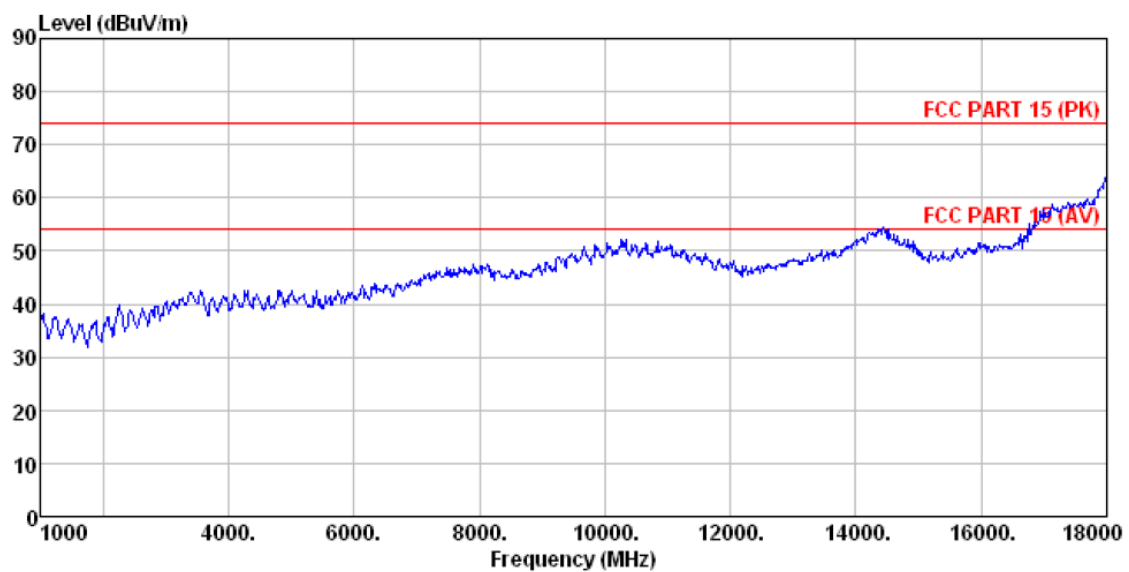


	Freq	ReadAntenna	Cable	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	34.517	51.00	14.30	0.60	32.06	33.84	40.00	-6.16 QP
2	53.131	50.70	15.10	0.80	31.95	34.65	40.00	-5.35 QP
3	84.405	48.55	12.16	1.07	31.74	30.04	40.00	-9.96 QP
4	173.814	53.19	11.23	1.71	32.06	34.07	43.50	-9.43 QP
5	325.596	46.56	15.59	2.49	32.09	32.55	46.00	-13.45 QP
6	668.142	41.47	20.69	3.97	31.15	34.98	46.00	-11.02 QP

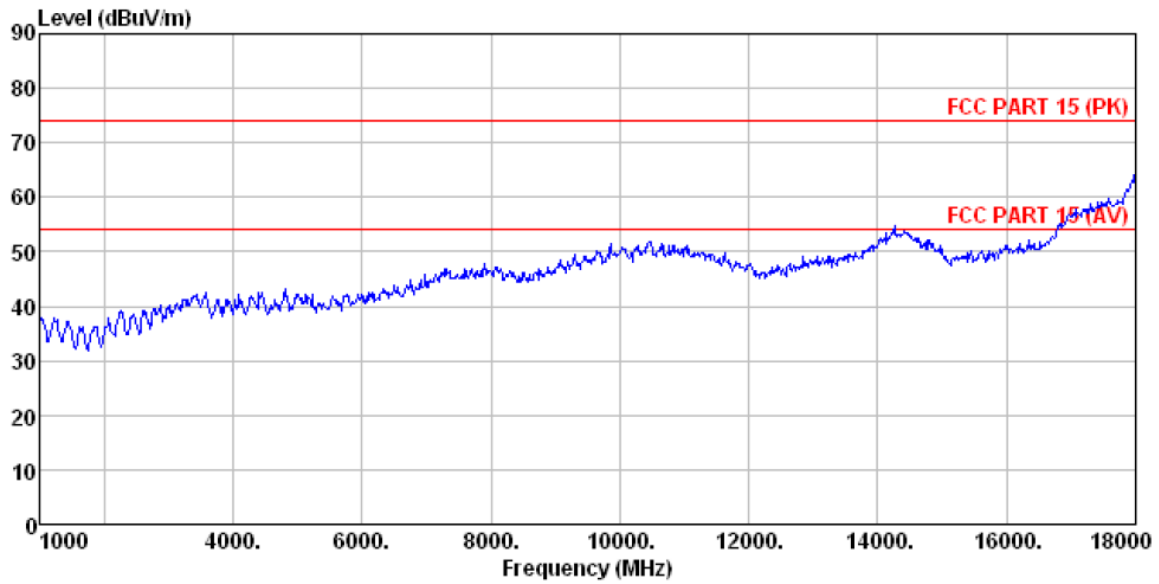
### 5.3.3 Diagram 5-3



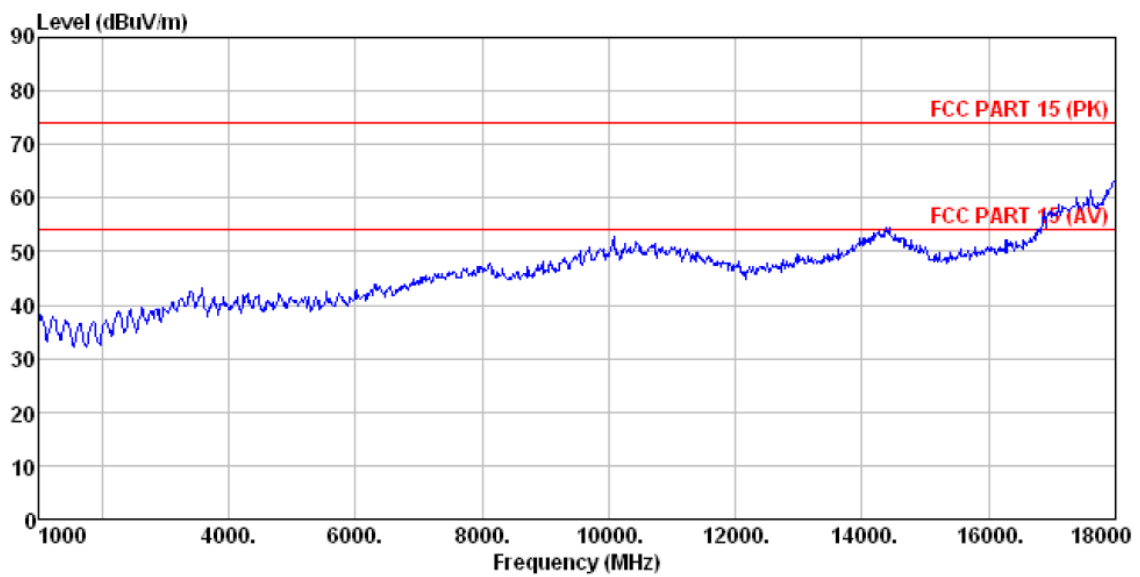
### 5.3.4 Diagram 5-4



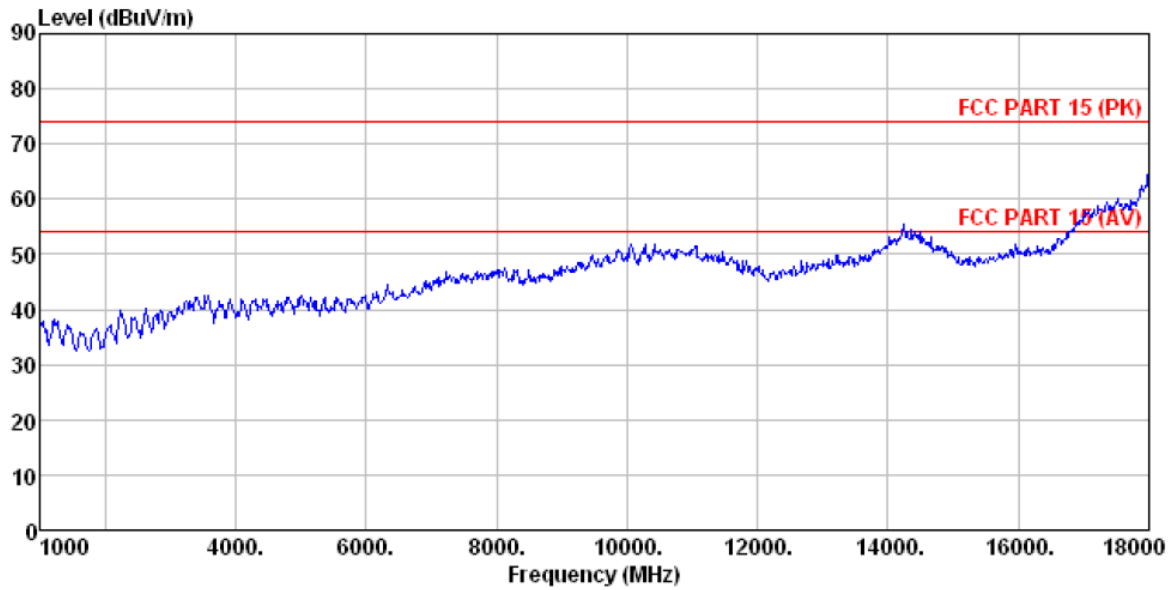
### 5.3.5 Diagram 5-5



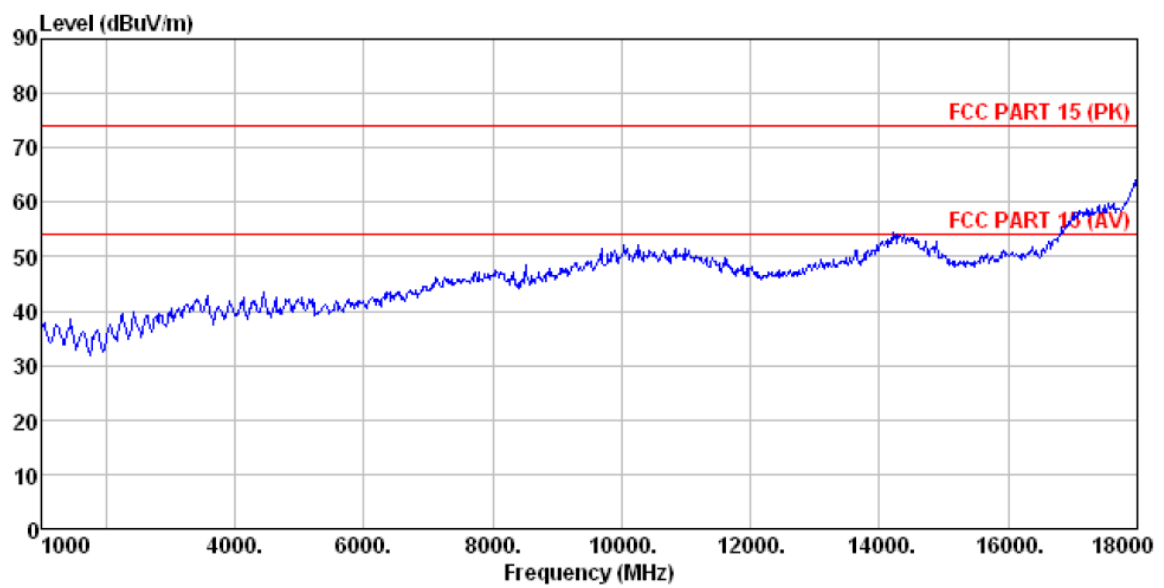
### 5.3.6 Diagram 5-6



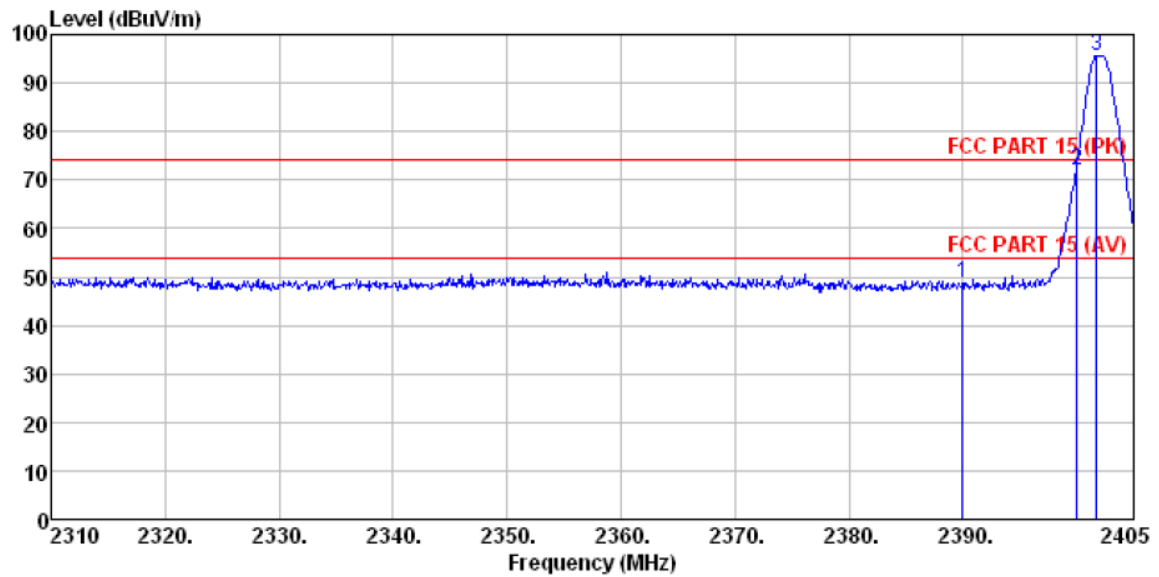
### 5.3.7 Diagram 5-7



### 5.3.8 Diagram 5-8

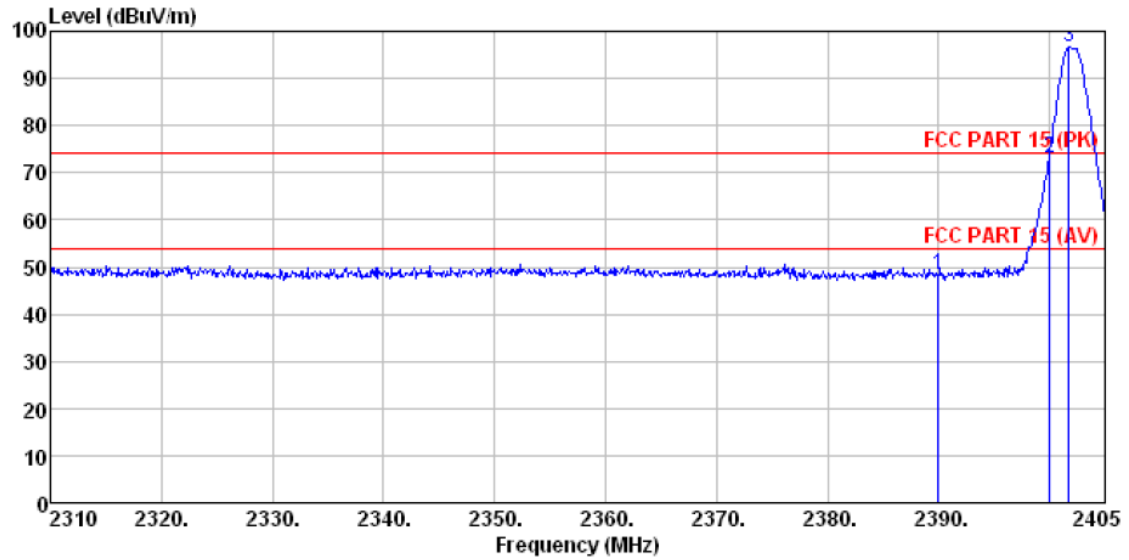


### 5.3.9 Diagram 5-9



	Freq	ReadAntenna Level	Cable Preamp Factor	Loss Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dB	
1	2390.000	46.09	27.59	5.38	30.18	48.88	74.00	-25.12 Peak
2	2400.000	69.23	27.58	5.39	30.18	72.02		Peak
3 *	2401.770	92.94	27.58	5.39	30.18	95.73		Peak

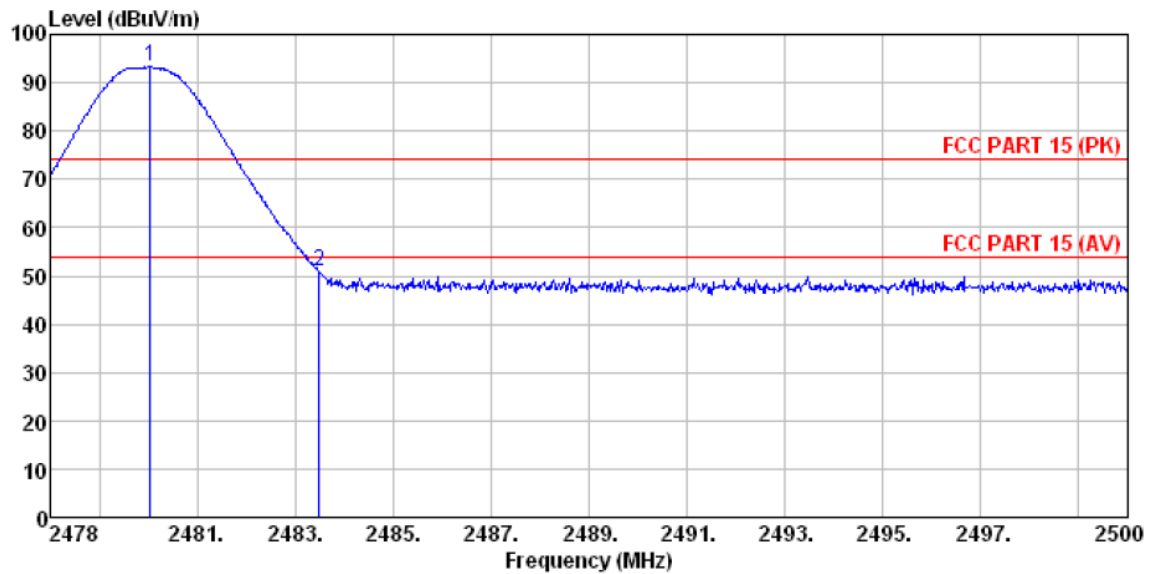
### 5.3.10 Diagram 5-10



	Freq	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	45.53	27.59	5.38	30.18	48.32	74.00	-25.68	Peak
2	2400.000	70.22	27.58	5.39	30.18	73.01			Peak
3 *	2401.770	93.80	27.58	5.39	30.18	96.59			Peak

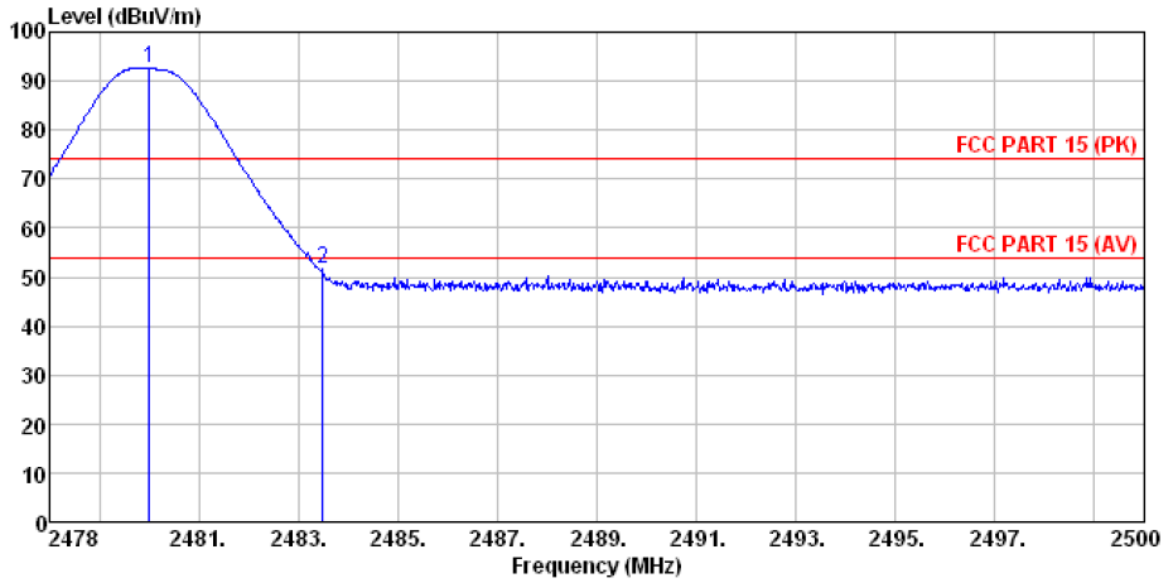


### 5.3.11 Diagram 5-11



	Freq	ReadAntenna Level	Cable Loss Factor	Preamp Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1 *	2480.046	90.33	27.52	5.47	29.93	93.39		Peak
2	2483.500	47.74	27.53	5.47	29.93	50.81	74.00	-23.19 Peak

### 5.3.12 Diagram 5-12



	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Gain	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 *	2480.002	89.72	27.52	5.47	29.93	92.78			Peak
2	2483.500	48.44	27.53	5.47	29.93	51.51	74.00	-22.49	Peak

## 6. 6dB and 99% Bandwidth test

### 6.1 Test Procedure

#### 6dB Bandwidth:

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

The transmitter output was connected to a spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 300 KHz VBW. The 6dB bandwidth is defined as the total spectrum with the power of which is lower than peak power for 6dB.

1. Set resolution bandwidth (RBW) = 100 kHz.
2. Set the video bandwidth (VBW) >= RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 6.2 Measurement Equipment

	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	Spectrum Analyzer	Dec. 04 2015	E4440A	GTS533	Agilent

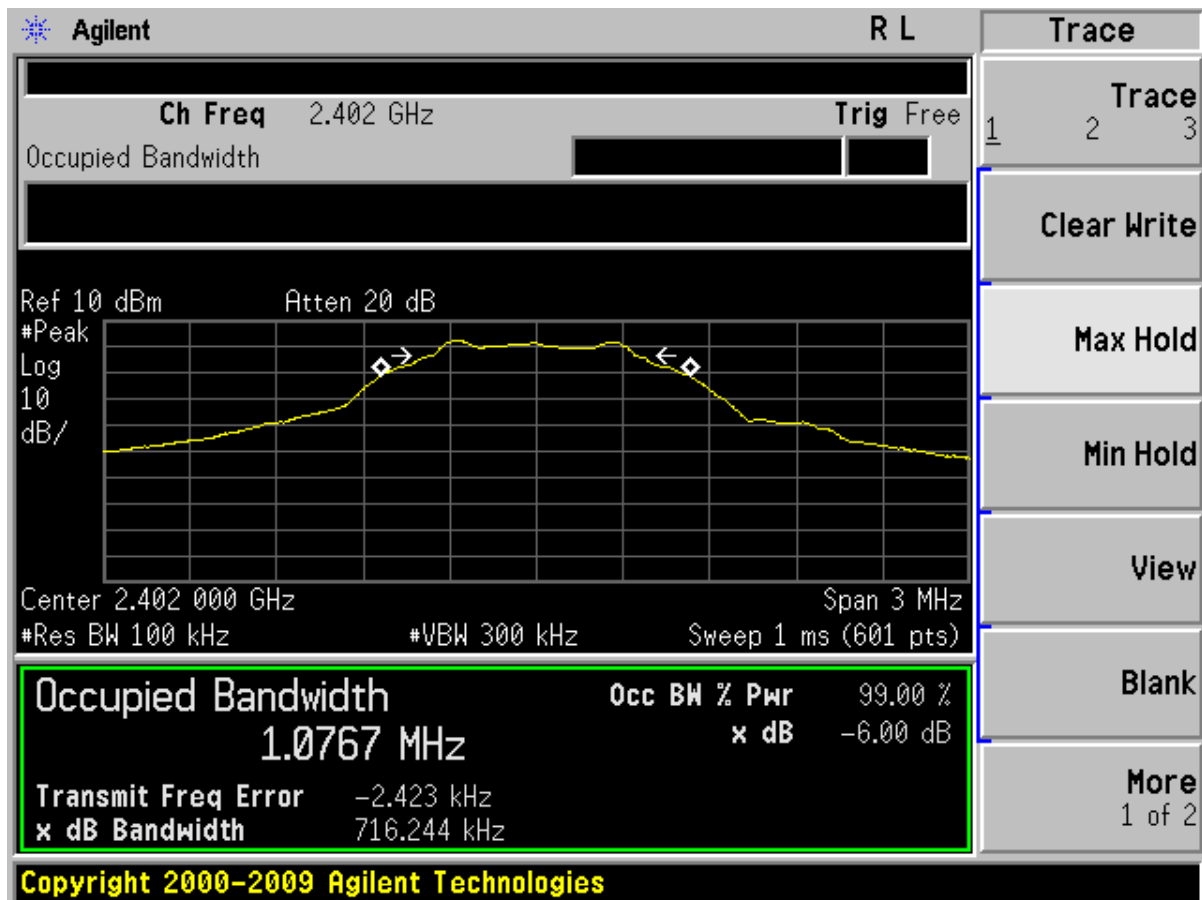
### 6.3 Test Result

Remark : Conducted measurement.

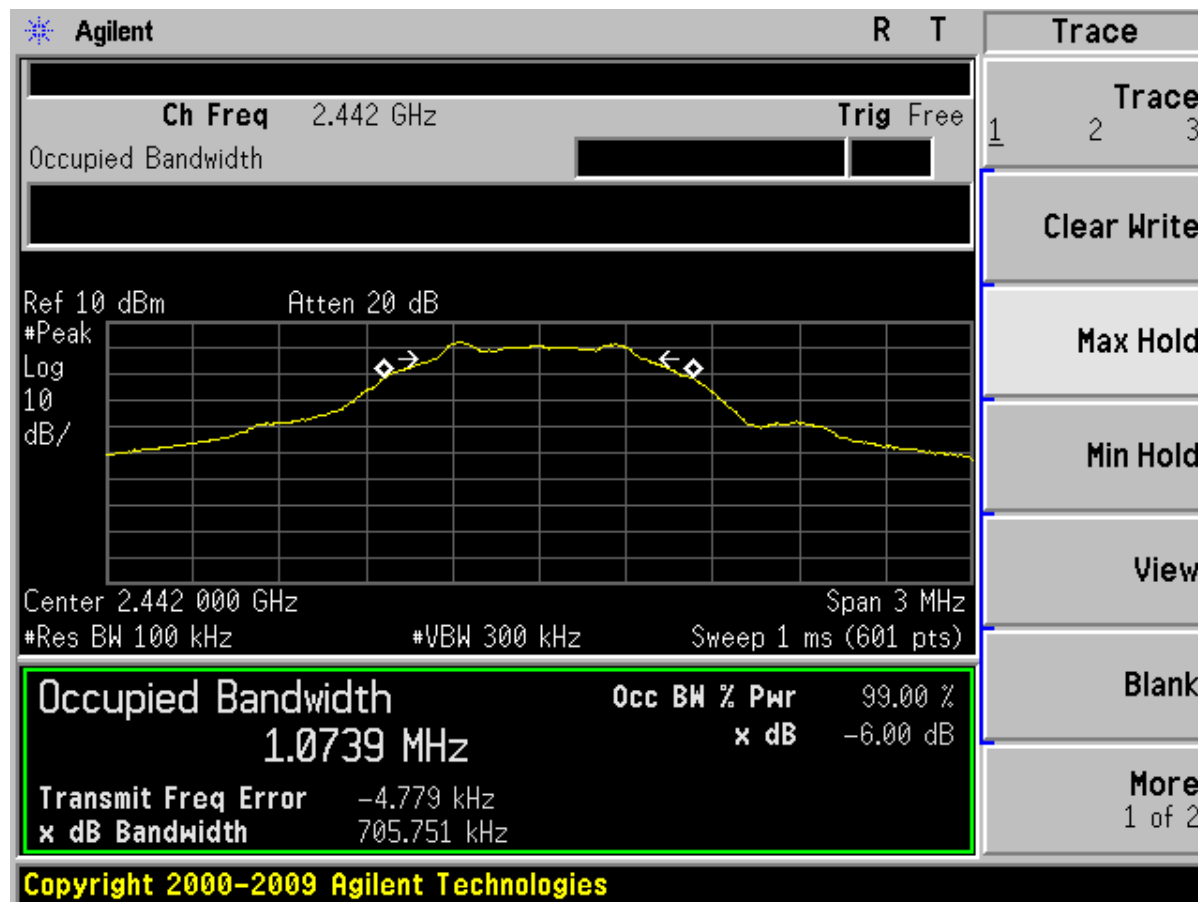
#### 6dB Bandwidth:

GFSK					
Channel	Diagram	6dB bandwidth (KHz)	99% bandwidth (MHz)	>Limit kHz	Result
CH LOW	6-1	716.244	1.0767	500	PASS
CH MID	6-2	705.751	1.0739	500	PASS
CH HIGH	6-3	712.647	1.0744	500	PASS

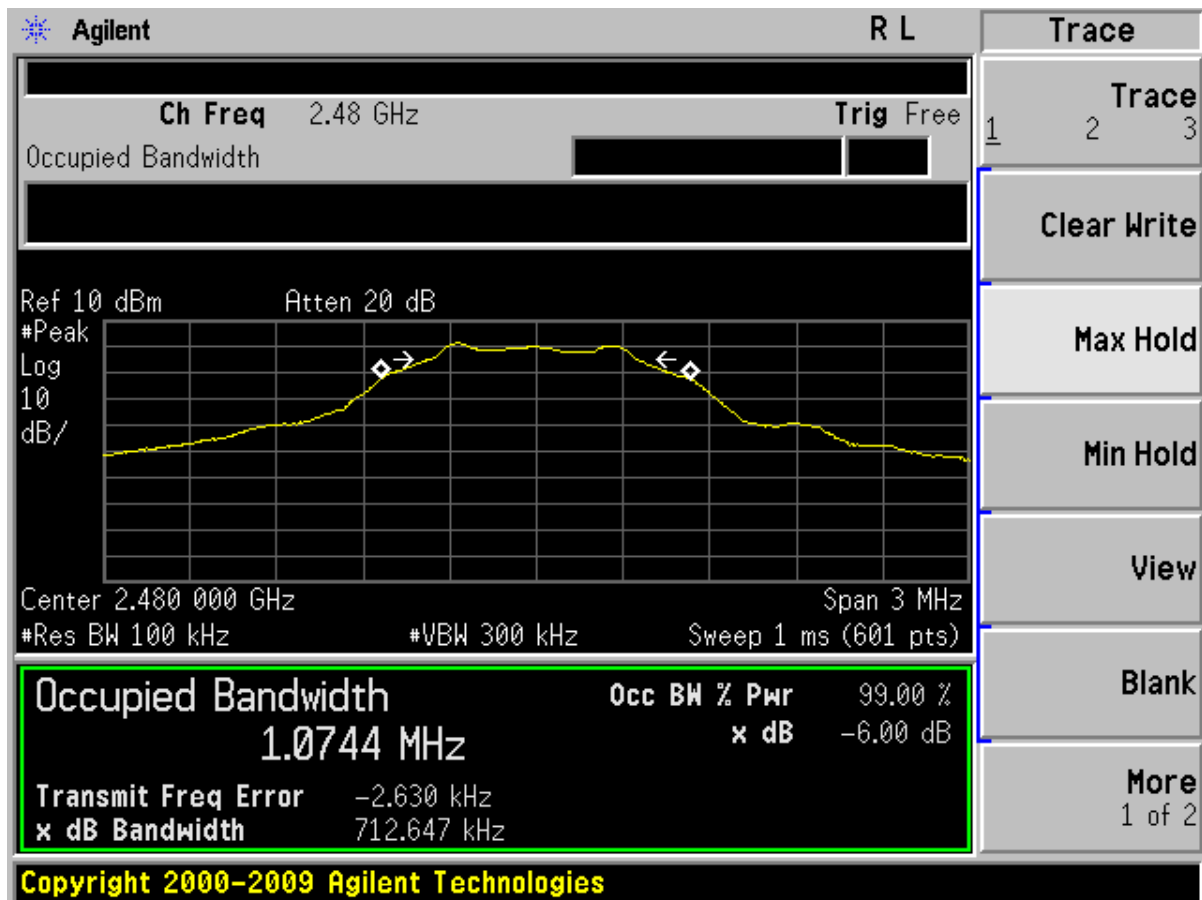
### 6.3.1 Diagram 6-1



### 6.3.2 Diagram 6-2



### 6.3.3 Diagram 6-3



## 7. Band Edge Compliance Test

### 7.1 Test Procedure

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum 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.

### 7.2 Measurement Equipment

	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	Spectrum Analyzer	Dec. 04 2015	E4440A	GTS533	Agilent

### 7.3 Test Result

Conducted measurement

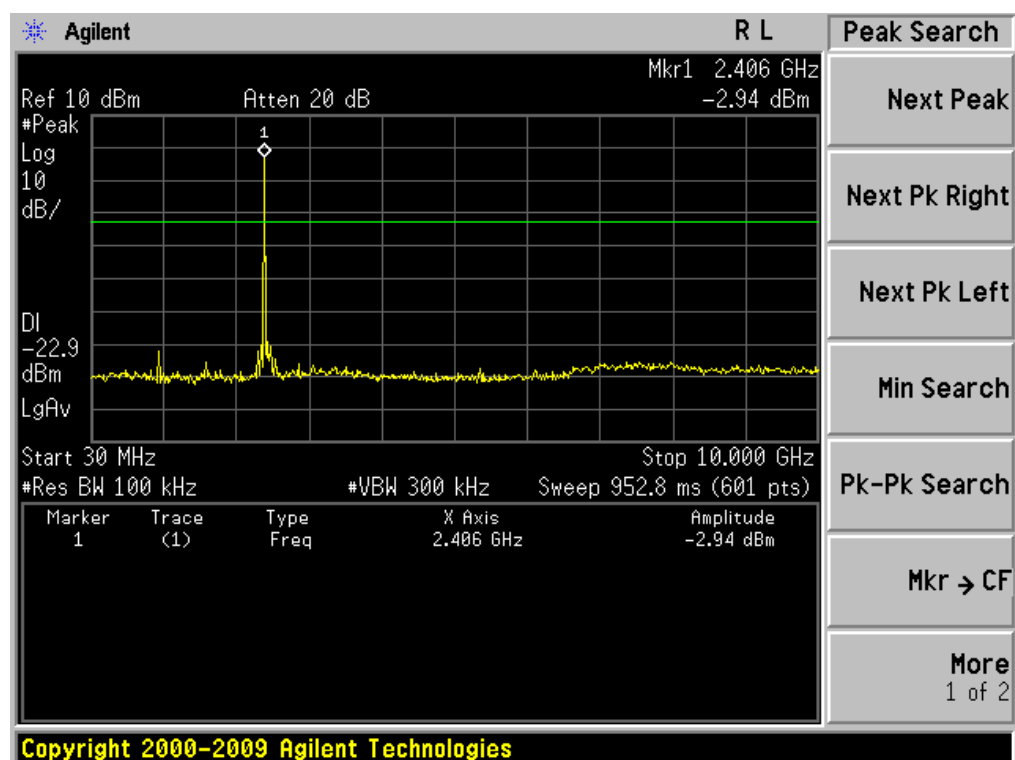
PK detector

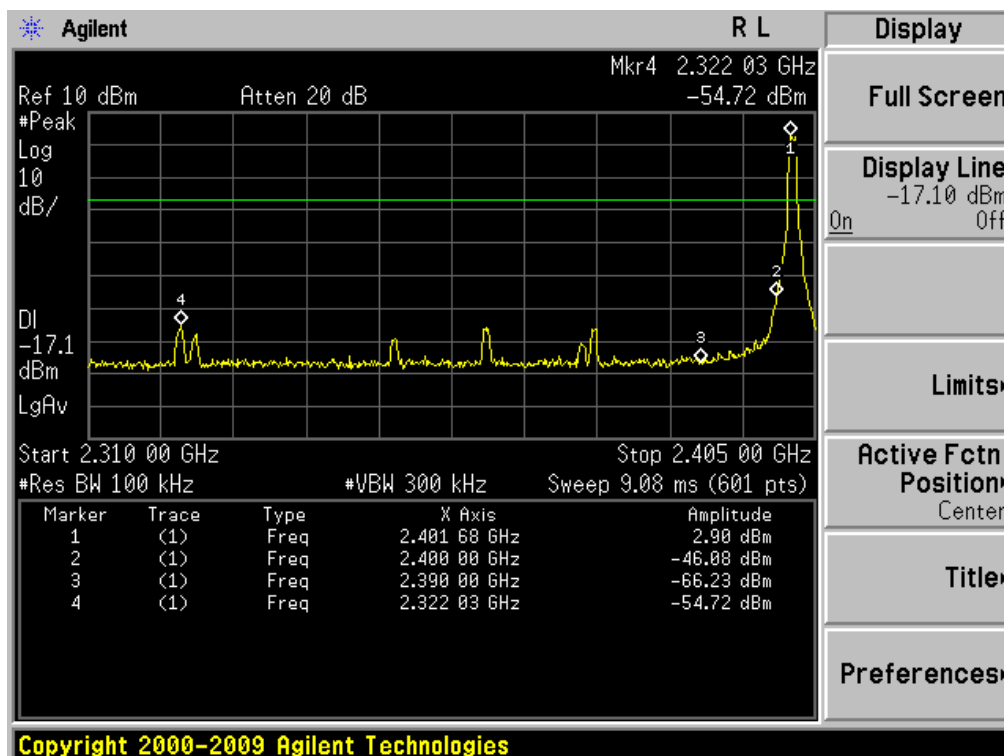
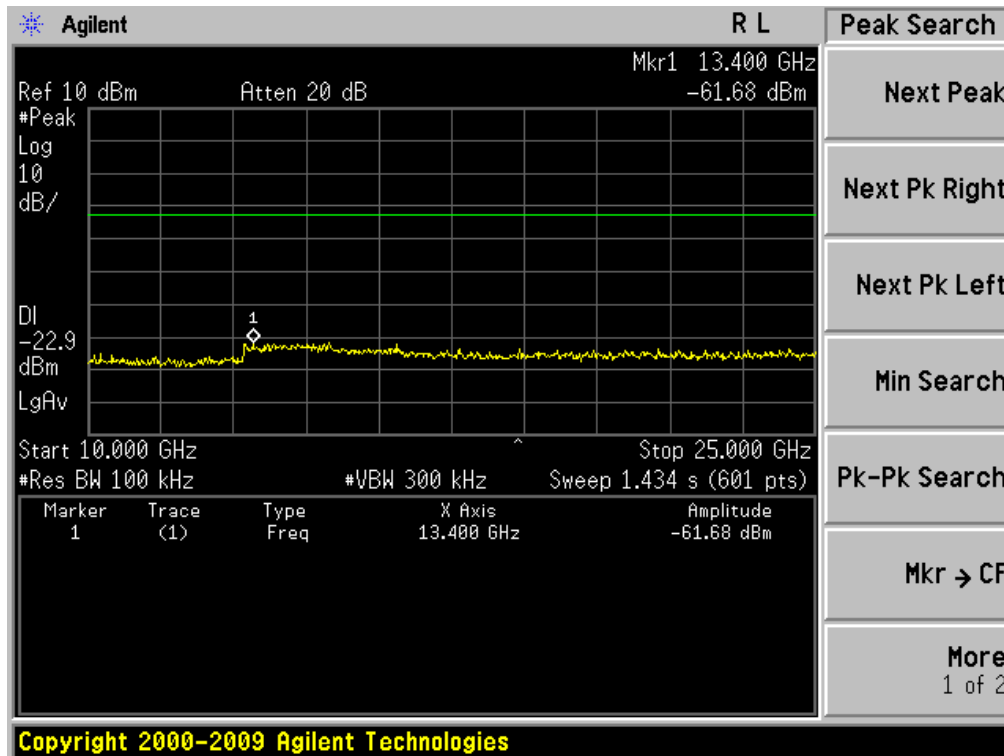
Max hold

RMB=100kHz VBW=300kHz

Mode	Channel	Test Data	Test Result
GFSK	CH LOW	Diagram 7-1	Pass
	CH MID	Diagram 7-2	Pass
	CH HIGH	Diagram 7-3	Pass

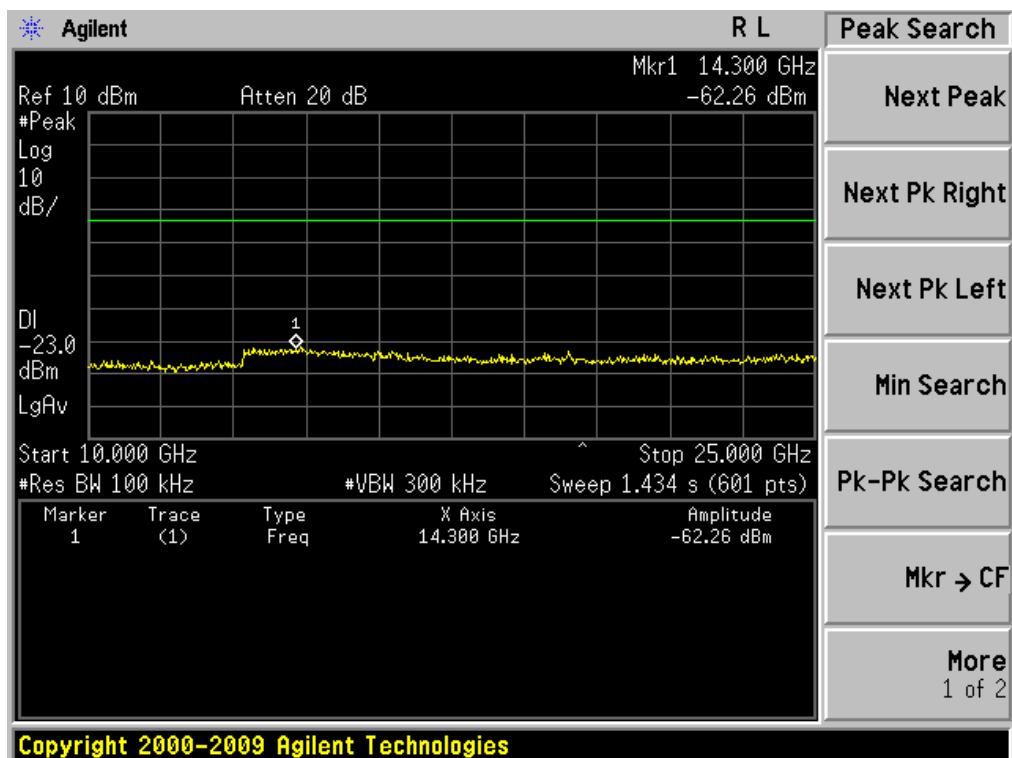
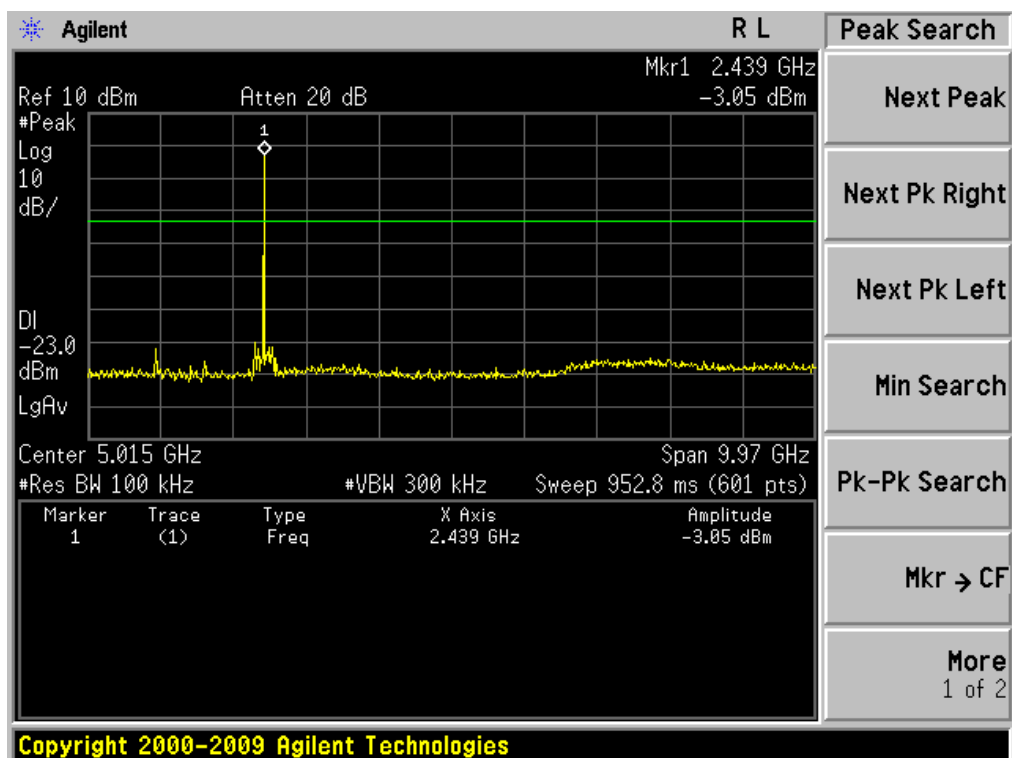
#### 7.3.1 Diagram 7-1



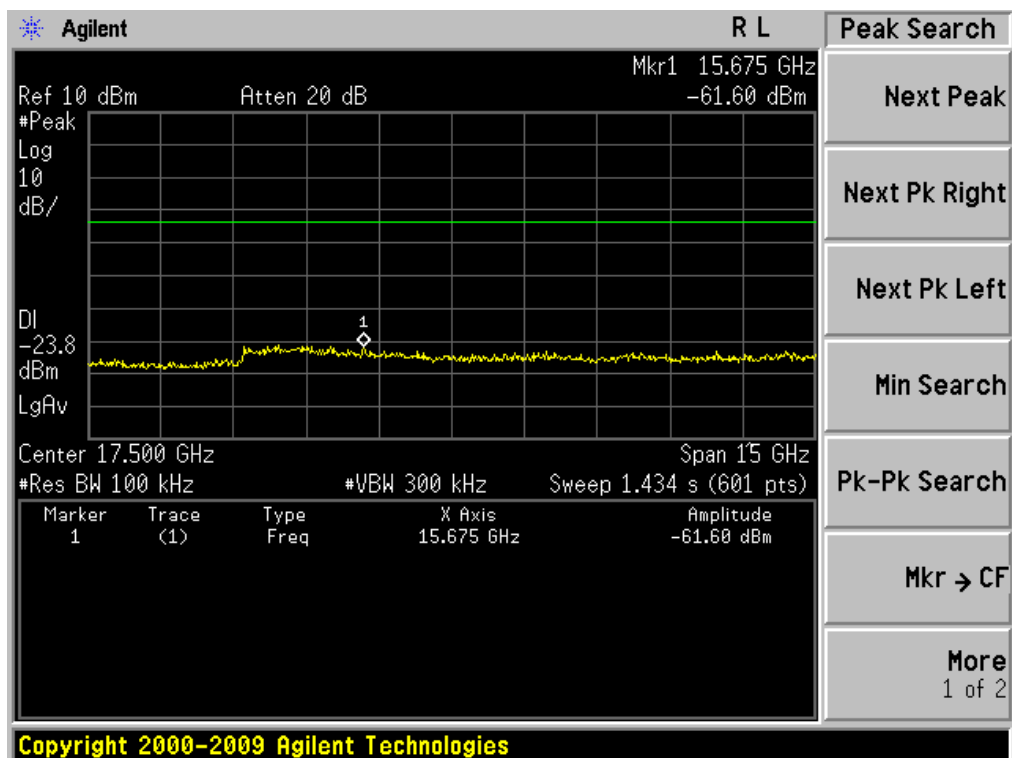
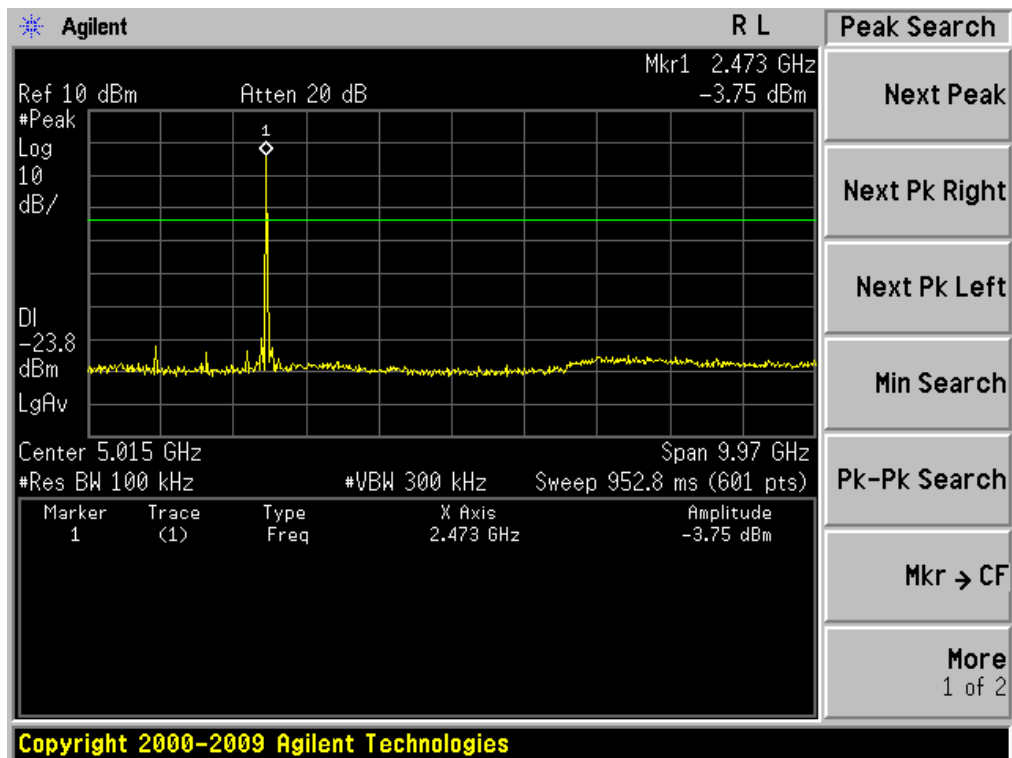


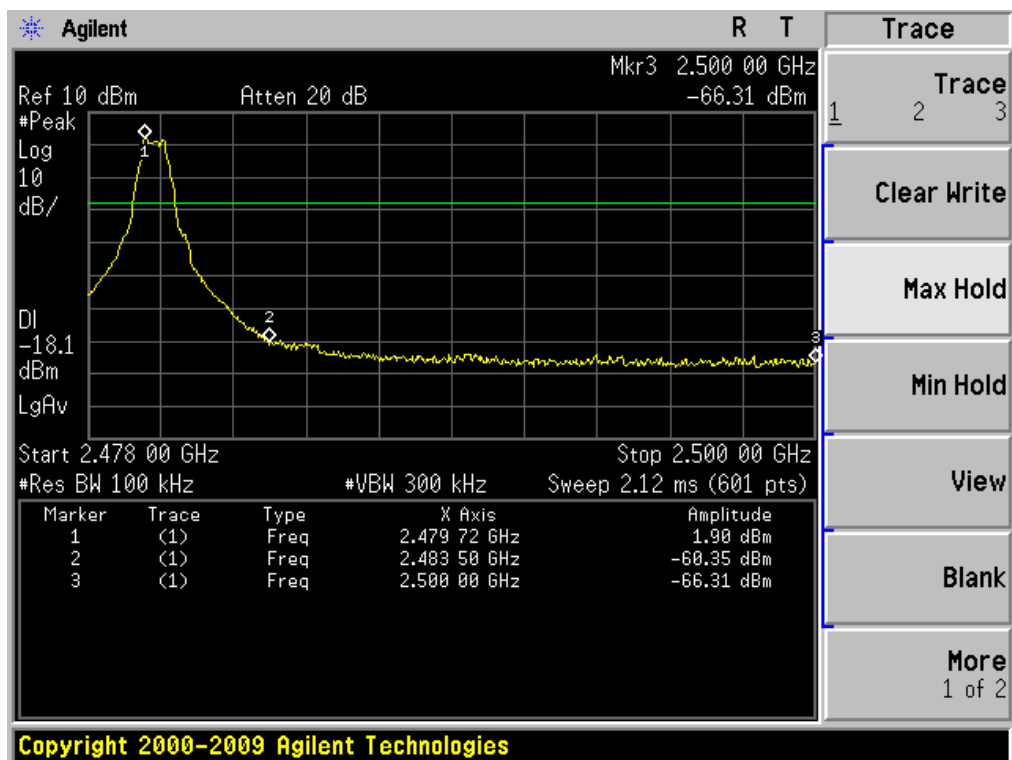


### 7.3.2 Diagram 7-2



### 7.3.3 Diagram 7-3





## 8. Power Spectral Density Test

### 8.1 Test Procedure

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

The transmitter output was connected to a spectrum analyzer. The maximum power density level was measured by spectrum analyzer with RBW >3kHz and Detector: PK  
Cable loss and attenuator loss have been added in Spectrum setting offset .

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW >=3 kHz.
4. Set the VBW >= 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

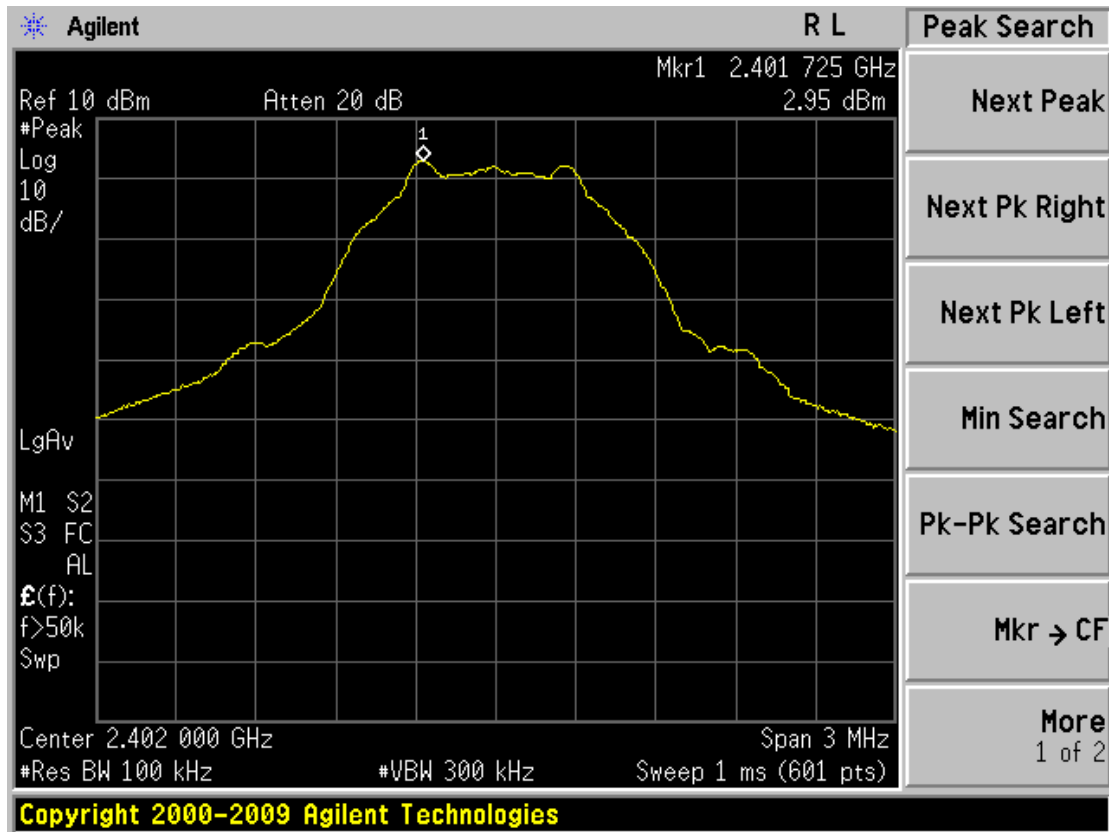
### 8.2 Measurement Equipment

	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	Spectrum Analyzer	Dec. 04 2015	E4440A	GTS533	Agilent

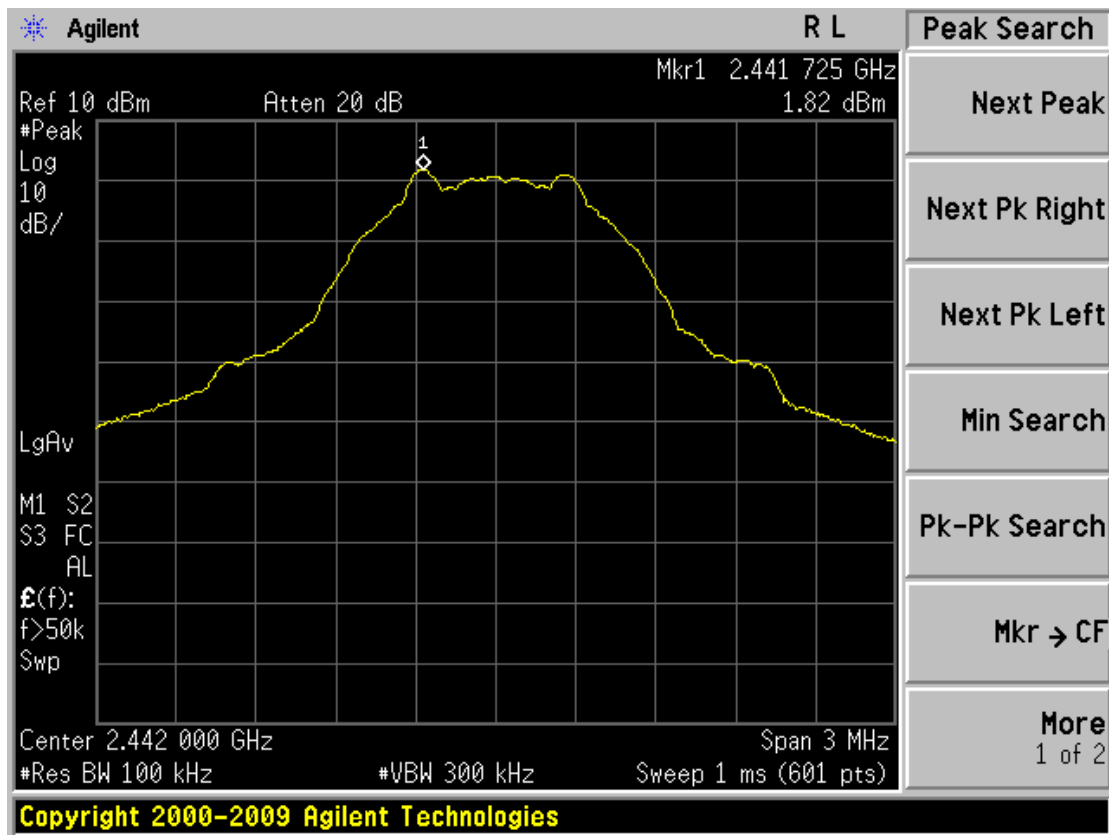
### 8.3 Test Result

Mode	Channel	Diagram	Result (dBm)	<Limit (dBm)	Result
GFSK	CH LOW	8-1	2.95	8	Pass
GFSK	CH MID	8-2	1.82	8	Pass
GFSK	CH HIGH	8-3	1.05	8	Pass

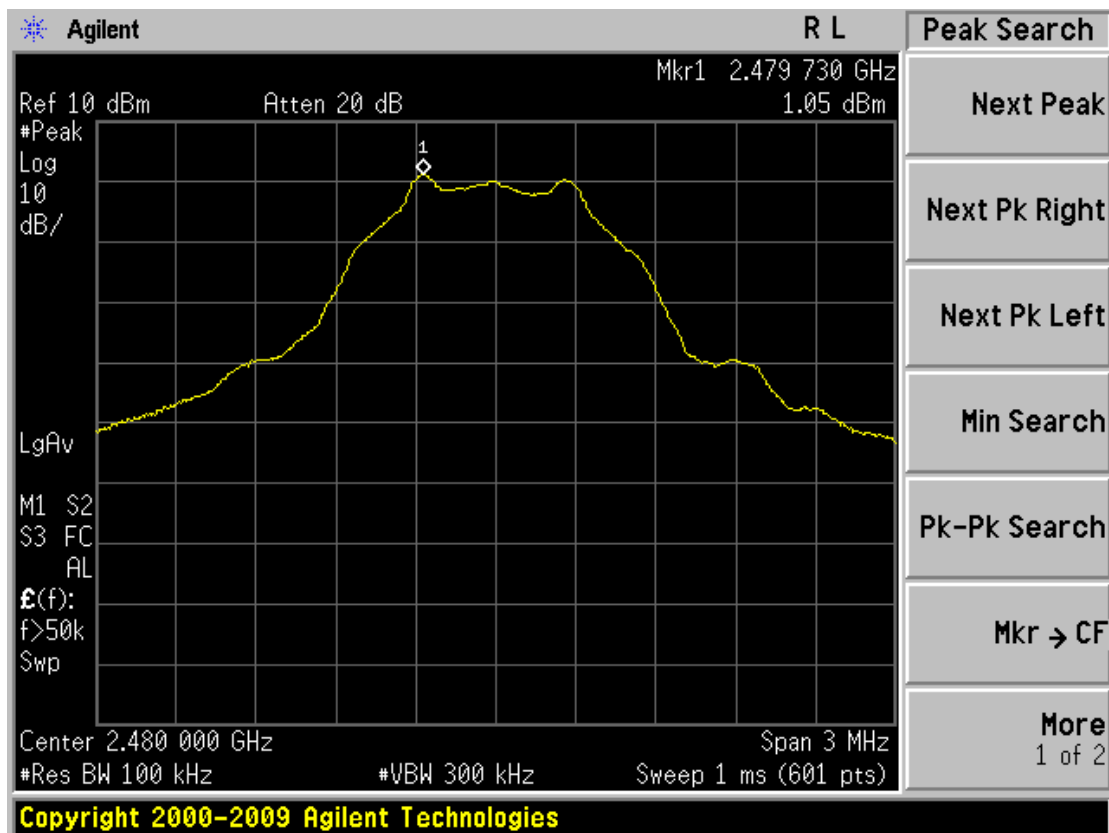
### 8.3.1 Diagram 8-1



### 8.3.2 Diagram 8-2



### 8.3.3 Diagram 8-3



## 9. Peak Output Power Test

### 9.1 Test Procedure

For systems using digital modulation in the 2400-2483.5MHz, The Peak output power shall not exceed 1W(30dBm)

PEAK detector

RBW>6dB Bandwidth

VBW>=RBW

Sweep time :AUTO

### 9.2 Measurement Equipment

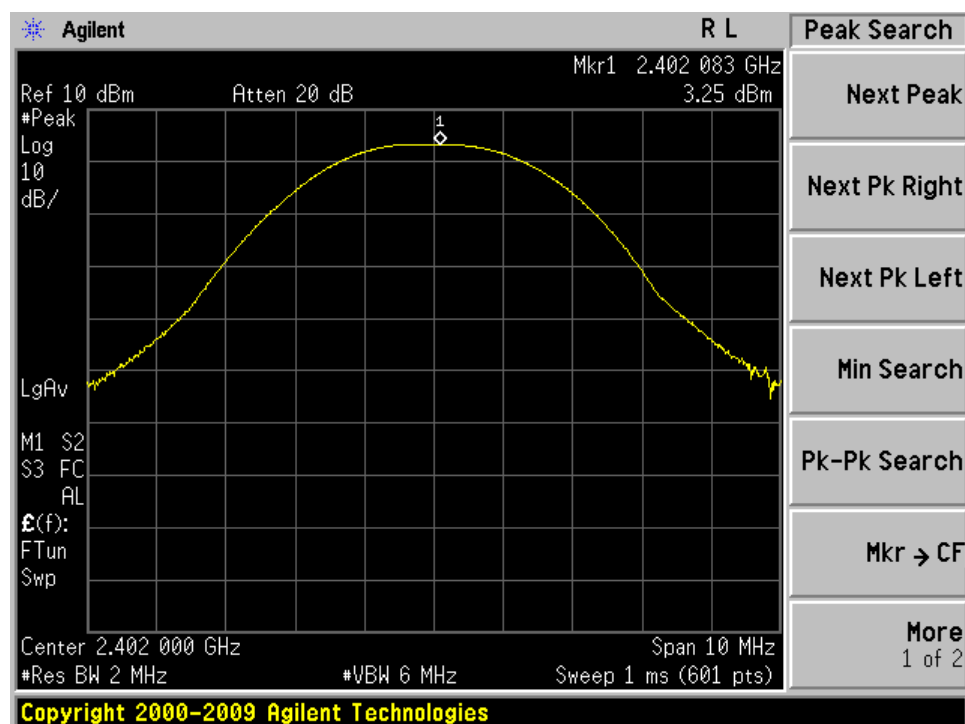
	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	Spectrum Analyzer	Dec. 04 2015	E4440A	GTS533	Agilent

### 9.3 Test Result

**PEAK Output power : PASS**

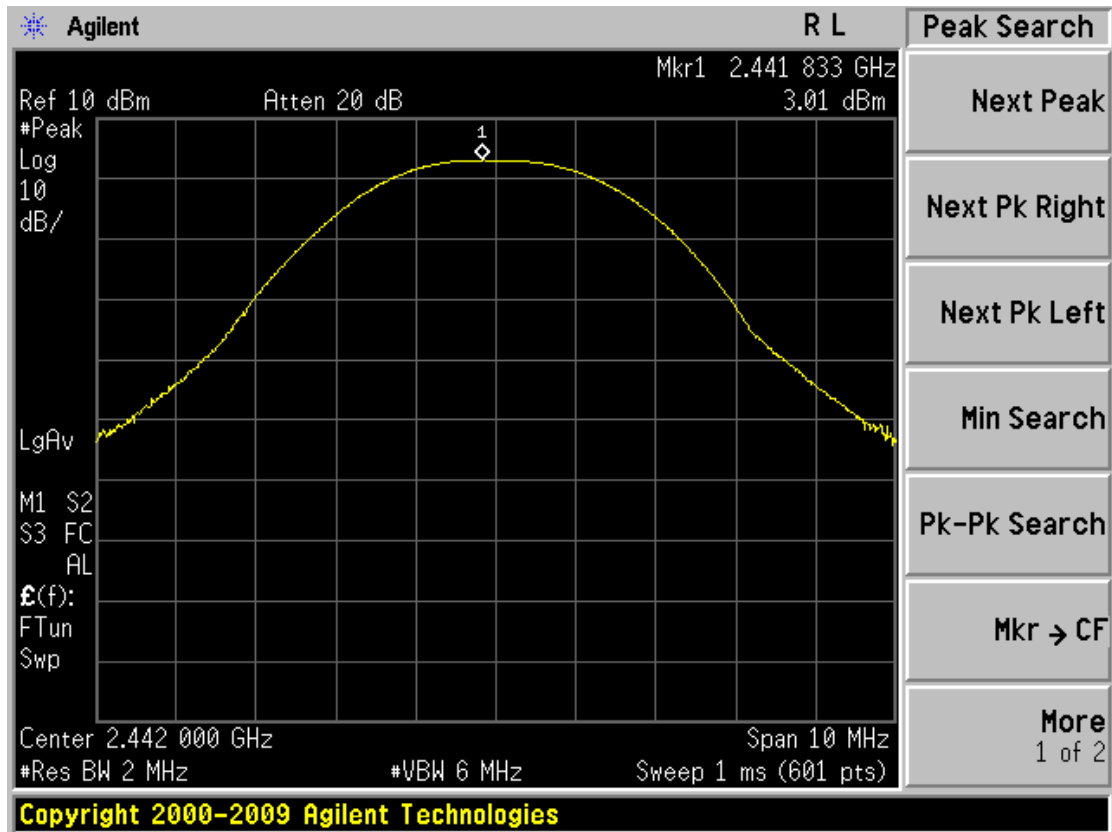
Test Mode	CH	Peak output Power (dBm)	Limit (dBm)
GFSK	CH LOW	3.25	30
	CH MID	3.01	30
	CH HIGH	2.33	30

#### 9.3.1 Diagram 9-1

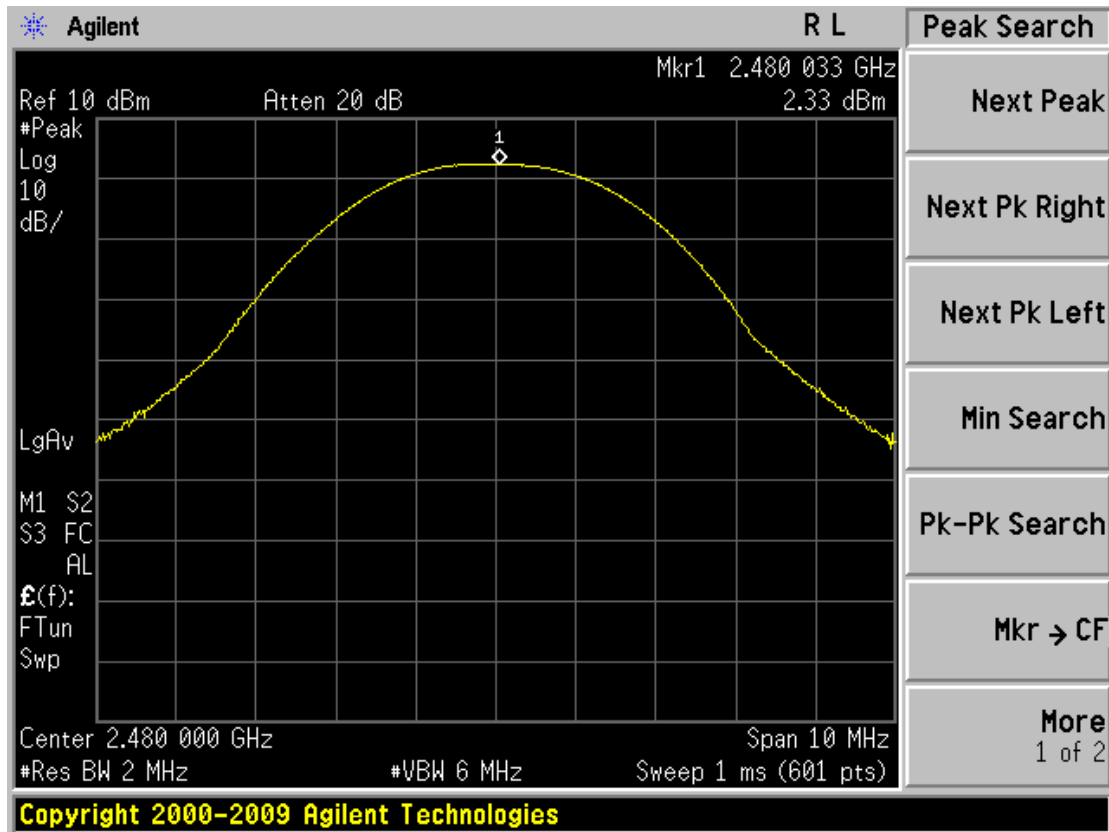




### 9.3.2 Diagram 9-2



### 9.3.3 Diagram 9-3



## 10 POWER LINE CONDUCTED EMISSION TEST

### 10.1 Test Procedure

An intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50  $\Omega$  line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50
*-Decreases with the logarithm of the frequency.		

### 10.2 Measurement Equipment

	Equipment	Calibration due	Type	Serial No.	Manufacturer
<input checked="" type="checkbox"/>	Shielding Room	Jul. 04 2015	7.0(L)x3.0(W)x3.0(H)	GTS252	ZhongYu Electron
<input checked="" type="checkbox"/>	EMI Test Receiver	Jul. 04 2015	ESCS30	1102.4500K30	Rohde & Schwarz
<input checked="" type="checkbox"/>	10dB Pulse Limita	Jul. 04 2015	N/A	GTS224	Rohde & Schwarz
<input checked="" type="checkbox"/>	LISN	Jul. 04 2015	NSLK 8127	8127549	SCHWARZBECK MESS-ELEKTRONIK
<input checked="" type="checkbox"/>	Coaxial Cable	Apr. 01 2015	N/A	N/A	GTS

### 10.3 Test Result

The EUT was placed on a non-metallic table, 80cm above the ground plane. The other peripheral devices power cord connected to the power mains through another line impedance stabilization network. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4-2009 on conducted Emission test.

#### Preview measurements:

0.15 MHz to 30 MHz

Receiver settings: PK&AV detector

RBW:9 kHz

#### Final measurement:

0.15 MHz to 30 MHz

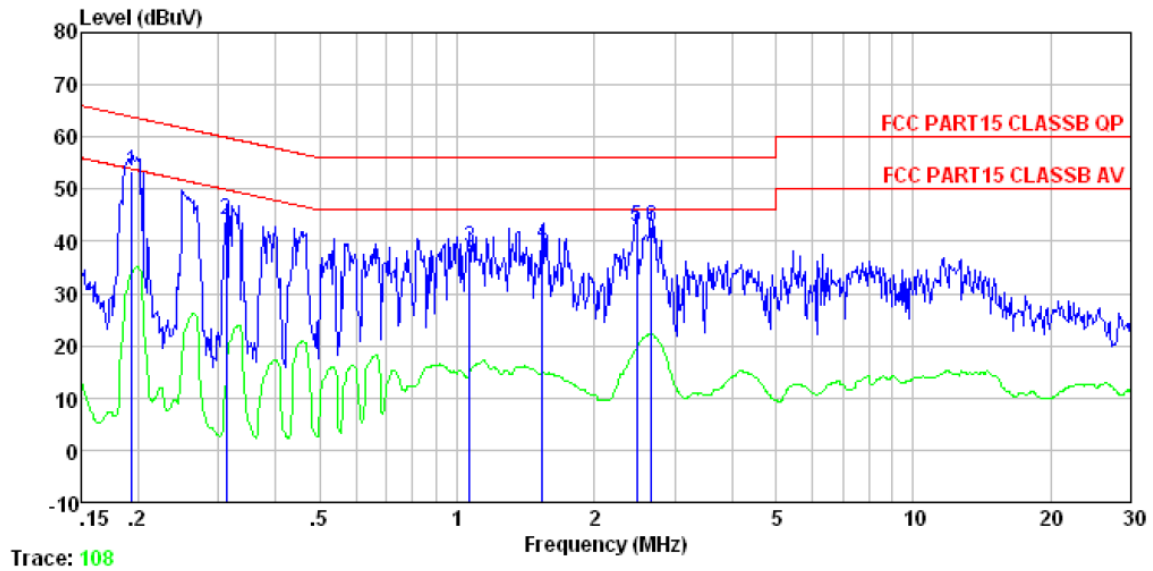
Receiver settings:QP&AV detector

Test mode	Power Line	Test Data	Test Result
TM1	Line	Diagram 10-1	Pass
	Neutral	Diagram 10-2	Pass

#### NOTES:

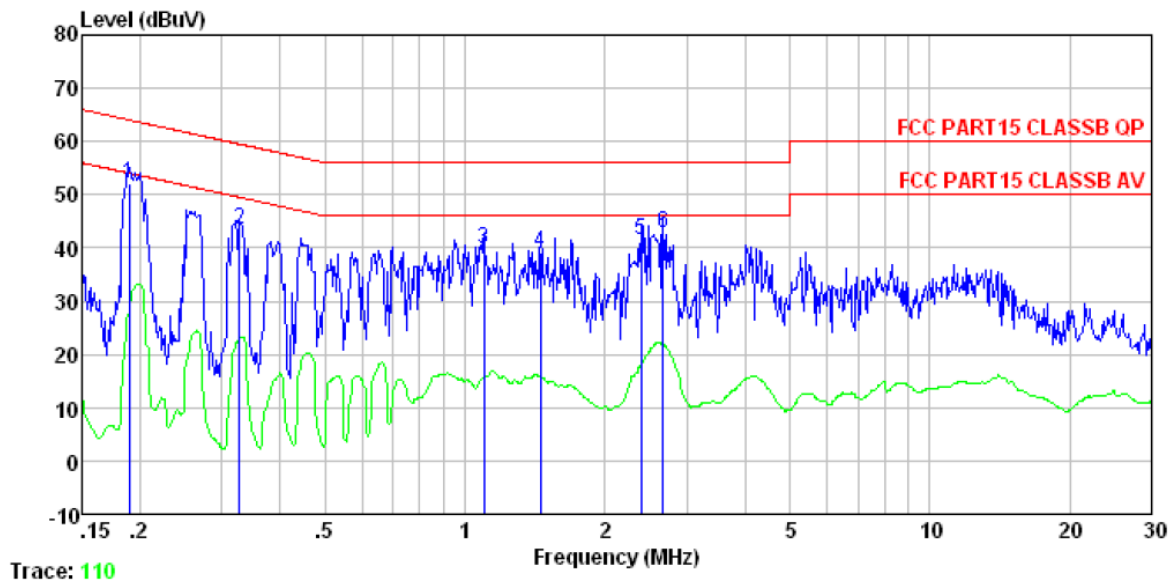
- Measurements using CISPR quasi-peak mode & average mode.
- All modes of operation were investigated and the worst -case emission are reported. See attached Plots.
- If PK value is lower than AV limit then QP and AV value are deemed to be complied with rules and only diagram will be shown as below.

### 10.3.1 Diagram 10-1



	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.193	53.19	0.14	0.13	53.46	63.89	-10.43	QP
2	0.312	44.03	0.11	0.10	44.24	59.93	-15.69	QP
3	1.065	38.44	0.14	0.13	38.71	56.00	-17.29	QP
4	1.535	39.23	0.12	0.14	39.49	56.00	-16.51	QP
5	2.474	42.42	0.13	0.15	42.70	56.00	-13.30	QP
6	2.664	42.59	0.14	0.15	42.88	56.00	-13.12	QP

### 10.3.2 Diagram 10-2



	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.189	51.93	0.07	0.13	52.13	64.06	-11.93	QP
2	0.327	43.15	0.06	0.10	43.31	59.53	-16.22	QP
3	1.100	39.47	0.08	0.13	39.68	56.00	-16.32	QP
4	1.456	39.06	0.09	0.13	39.28	56.00	-16.72	QP
5	2.396	41.11	0.10	0.15	41.36	56.00	-14.64	QP
6	2.664	42.47	0.10	0.15	42.72	56.00	-13.28	QP

**11. Antenna requirement****11.1 Requirement**

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.

**11.2 Result**

The antenna used for this product is Internal Patch antenna that no antenna other than that furnished by the responsible party shall be used with the device, The maximum peak gain of this antenna is 1.31dBi.

\*\*\*\*\*END OF REPORT\*\*\*\*\*