



# FCC PART 15C TEST REPORT No. 2013TAR596

for

**TCT Mobile Limited**

**UMTS Triband / GSM Quadband mobile phone**

**Model Name: RAV4 TMOUS**

**Marketing Name: ONE TOUCH 7024W**

**FCC ID: RAD386**

with

**Hardware Version: PIO**

**Software Version: L15**

**Issued Date: 2013-08-23**



*DAR accreditation (DIN EN ISO/IEC 17025): No. D-PL-12123-01-01*

*FCC 2.948 Listed: No.733176*

*IC O.A.T.S listed: No.6629B*

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

**Test Laboratory:**

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## 1. Test Laboratory

### 1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT  
Address: Shouxiang Science Building, No 51, Xueyuan Road, Haidian District,  
Beijing, P.R.China  
Postal Code: 100191  
Telephone: 00861062304633  
Fax: 00861062304633

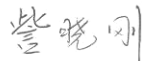
### 1.2. Testing Environment

Normal Temperature: 15-35°C  
Extreme Temperature: -20/+55°C  
Relative Humidity: 20-75%

### 1.3. Project data

Project Leader: Zi Xiaogang  
Testing Start Date: 2013-07-10  
Testing End Date: 2013-08-22

### 1.4. Signature



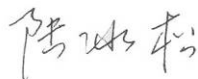
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**Zi Xiaogang**  
**(Prepared this test report)**



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**Sun Xiangqian**  
**(Reviewed this test report)**



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**Lu Bingsong**  
**Deputy Director of the laboratory**  
**(Approved this test report)**

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCT Mobile Limited  
Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,  
Pudong Area Shanghai, P.R. China.  
City: Shanghai  
Postal Code: 201203  
Country: China  
Contact Person: Gong Zhizhou  
Contact Email zhizhou.gong@jrdcom.com  
Telephone: 0086-21-61460890  
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### **2.2. Manufacturer Information**

Company Name: TCT Mobile Limited  
Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,  
Pudong Area Shanghai, P.R. China.  
City: Shanghai  
Postal Code: 201203  
Country: China  
Telephone: 0086-21-61460890  
Fax: 0086-21-61460602

### 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

Description	UMTS Triband / GSM Quadband mobile phone
Model Name	RAV4 TMOUS
Marketing Name	ONE TOUCH 7024W
FCC ID	RAD386
Frequency Band	ISM 2400MHz~2483.5MHz
Type of Modulation(LE mode)	GFSK
Number of Channels(LE mode)	40
Power Supply	3.8V DC by Battery

#### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
N25	013775000250326	PIO	L15
N16	013775000250417	PIO	L15

\*EUT ID: is used to identify the test sample in the lab internally.

#### 3.3. Internal Identification of AE used during the test

AE ID*	Description	
AE1	Battery	/
AE2	Travel charger	/
AE3	USB cable	/

##### AE1

Model	CAC1800000C3
Manufacturer	SCUD
Capacitance	1800 mAh
Nominal voltage	3.8 V

##### AE2

Model	CBA3000AG0C1
Manufacturer	Tenpao
Length of cable	100 cm (length of USB cable)

##### AE3

Model	CDA3122002C1
Manufacturer	Juwei
Length of cable	100 cm

\*AE ID: is used to identify the test sample in the lab internally.

### **3.4. Normal Accessory setting**

Fully charged battery should be used during the test.

### **3.5. General Description**

The Equipment Under Test (EUT) is a model of UMTS Triband / GSM Quadband mobile phone with integrated antenna. It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the Client.

## 4. Reference Documents

### 4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

	FCC CFR 47, Part 15, Subpart C:	
	15.205 Restricted bands of operation;	
FCC Part15	15.209 Radiated emission limits, general requirements;	10-1-12
	15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz.	
KDB 558074	Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247	v03r01

## 5. LABORATORY ENVIRONMENT

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Semi-anechoic chamber** (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.2 dB, 10 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz



## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

Abbreviations used in this clause:

- P** Pass, The EUT complies with the essential requirements in the standard.
- F** Fail, The EUT does not comply with the essential requirements in the standard
- NA** Not Applicable, The test was not applicable
- NP** Not Performed, The test was not performed by TMC

SUMMARY OF MEASUREMENT RESULTS	Sub-clause	Verdict
6dB Bandwidth	15.247 (a)(2)	<b>P</b>
Peak Output Power - Conducted	15.247 (b)(1)	<b>P</b>
Maximum Power Spectral Density Level	15.247(e)	<b>P</b>
Conducted Emission	15.247 (d)	<b>P</b>
Radiated Emission	15.247, 15.205, 15.209	<b>P</b>
Frequency Band Edges	15.247 (d)	<b>P</b>
AC Powerline Conducted Emission	15.107, 15.207	<b>P</b>

Please refer to **ANNEX A** for detail.

The measurement is made according to KDB 558074.

### 6.2. Statements

TMC has evaluated the test cases requested by the applicant /manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.2

## 7. Test Equipments Utilized

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Vector Signal Analyzer	FSU26	200030	Rohde & Schwarz	2014-06-12

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	2013-11-07
2	EMI Antenna	VULB 9163	9163482	Schwarzbeck	2014-02-17
3	EMI Antenna	3117	00119024	EMCO	2014-02-03
4	Dual-Ridge Waveguide Horn Antenna	3116	2663	ETS-Lindgren	2014-06-30
5	Dual-Ridge Waveguide Horn Antenna	3116	2661	ETS-Lindgren	2014-06-30
6	Bluetooth Tester	CBT	100153	Rohde & Schwarz	2013-09-13
7	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2014-03-17
8	Pre-amplifier(18GHz)	SCU18	1005277	Rohde & Schwarz	/
9	Pre-amplifier(26.5GHz)	SCU26	1006788	Rohde & Schwarz	/

### Anechoic chamber

Fully anechoic chamber by Frankonia German.

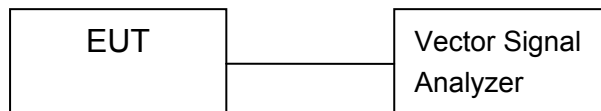
## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

#### A.1.1. Conducted Measurements

The measurement is made according to KDB 558074.

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode (Transmitter, receiver or transmitter & receiver).
- 3). Set the EUT to the required channel.
- 4). Set the EUT hopping mode (hopping or hopping off).
- 5). Set the spectrum analyzer to start measurement.
- 6). Record the values.



#### A.1.2. Radiated Emission Measurements

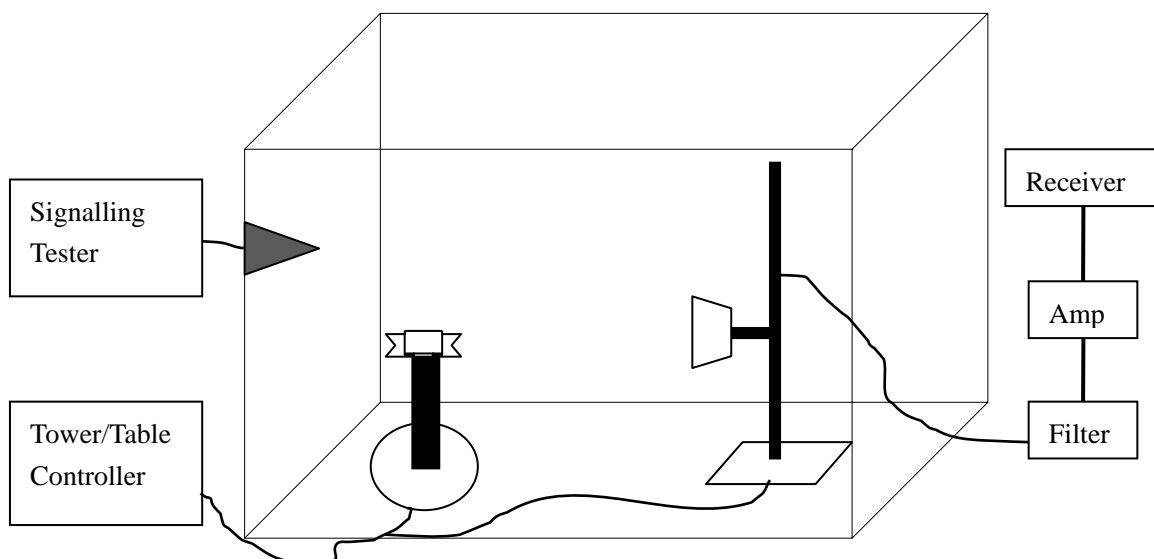
The measurement is made according to KDB 558074 and C63.4.

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 1MHz;



### A.2. 6dB Bandwidth

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a)(2)	$\geq 500\text{KHz}$

The measurement is made according to KDB 558074.

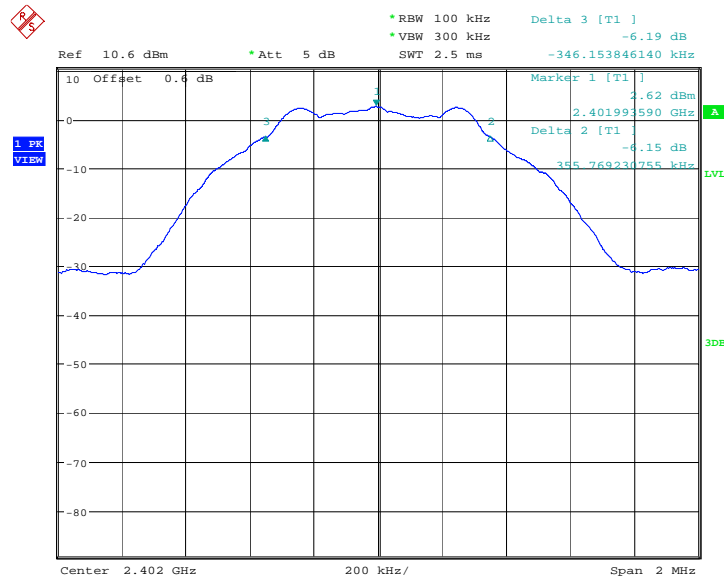
#### Measurement Results:

##### For GFSK

Frequency	6dB Bandwidth (kHz)		Conclusion
2402MHz	Fig.1	701.92	P
2440MHz	Fig.2	698.72	P
2480MHz	Fig.3	698.72	P

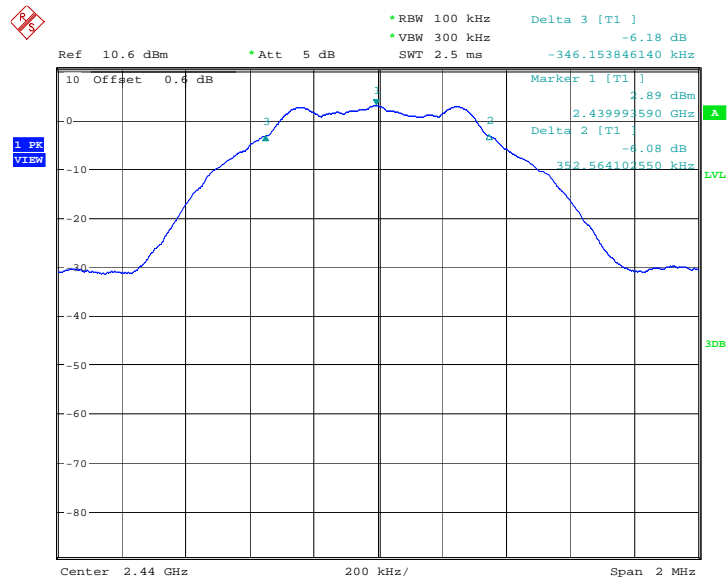
**Conclusion: PASS**

Test graphs as below:



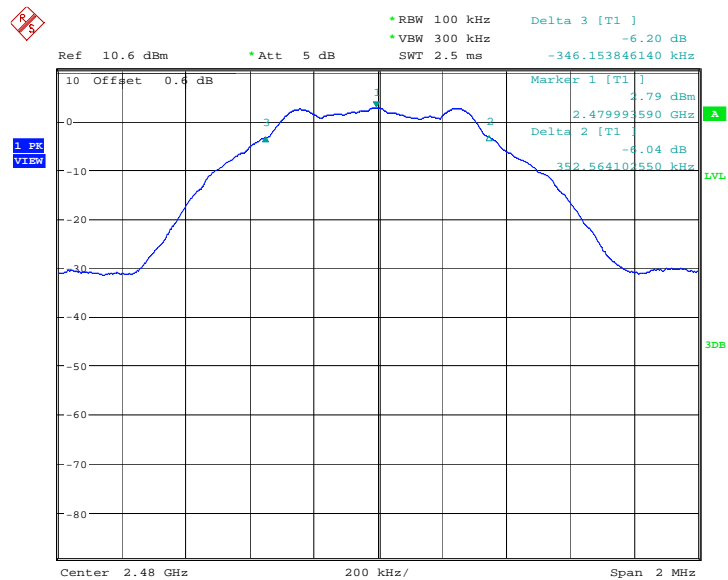
Date: 8.AUG.2013 10:03:08

Fig.1. 6dB Bandwidth: GFSK, 2402 MHz



Date: 8.AUG.2013 10:08:21

Fig.2. 6dB Bandwidth: GFSK, 2440 MHz



Date: 8.AUG.2013 10:14:46

Fig.3. 6dB Bandwidth: GFSK, 2480 MHz

**A.3. Peak Output Power - Conducted****Measurement Limit:**

Standard	Limit (dBm)
FCC Part 15.247(b)(1)	< 30

The measurement is made according to KDB 558074.

**Measurement Results:****For GFSK**

Frequency	2402 MHz	2440 MHz	2480 MHz	Conclusion
Peak Conducted Output Power (dBm)	3.56	3.82	3.72	P

**Conclusion: PASS**

### A.4. Maximum Power Spectral Density Level

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(e)	<=8.0dBm

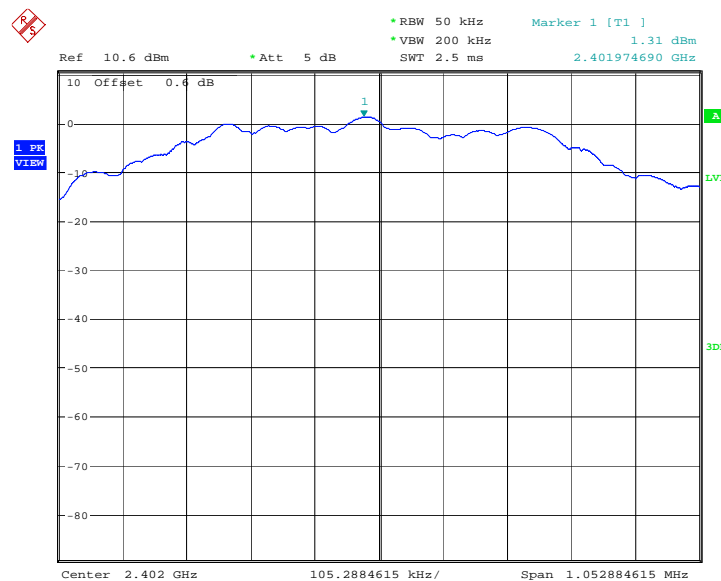
The measurement is made according to KDB 558074 in which the RBW of spectrum analyzer is required to be set between 3 KHz to 100 KHz. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat. The RBW is set to 50KHz in measurement which corresponds to the KDB 558074.

#### Measurement Results:

##### For GFSK

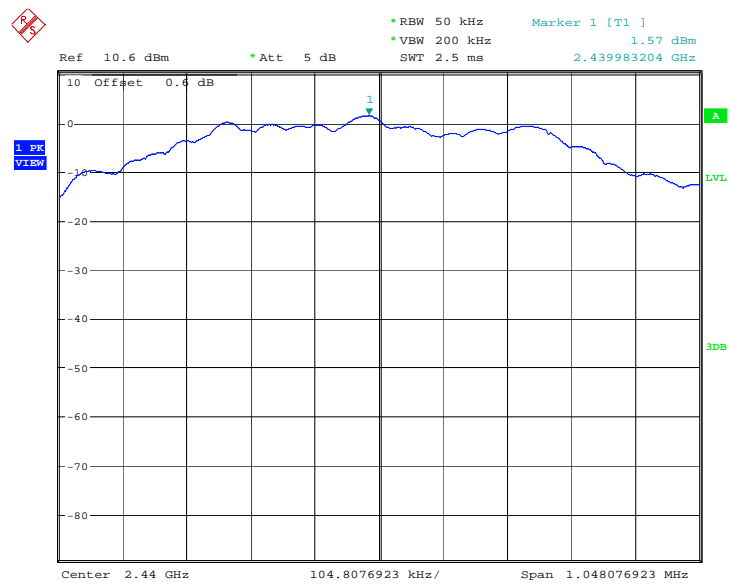
Frequency	Maximum Power Spectral Density Level(dBm)	Conclusion
2402MHz	Fig.4	P
2440MHz	Fig.5	P
2480MHz	Fig.6	P

Test graphs as below:



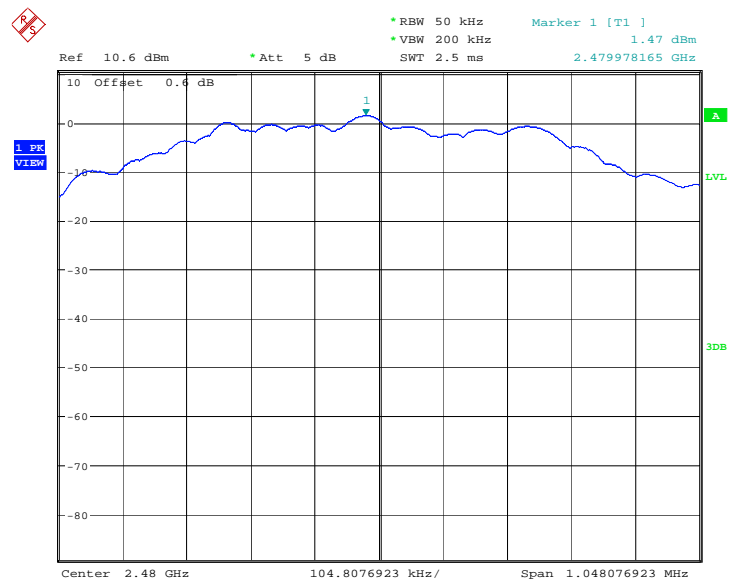
Date: 8.AUG.2013 10:03:35

Fig.4. Maximum Power Spectral Density Level Function: GFSK, 2402 MHz



Date: 8.AUG.2013 10:08:47

Fig.5. Maximum Power Spectral Density Level Function: GFSK, 2440 MHz



Date: 8.AUG.2013 10:15:12

Fig.6. Maximum Power Spectral Density Level Function: GFSK, 2480 MHz



### A.5. Conducted Emission

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

The measurement is made according to KDB 558074.

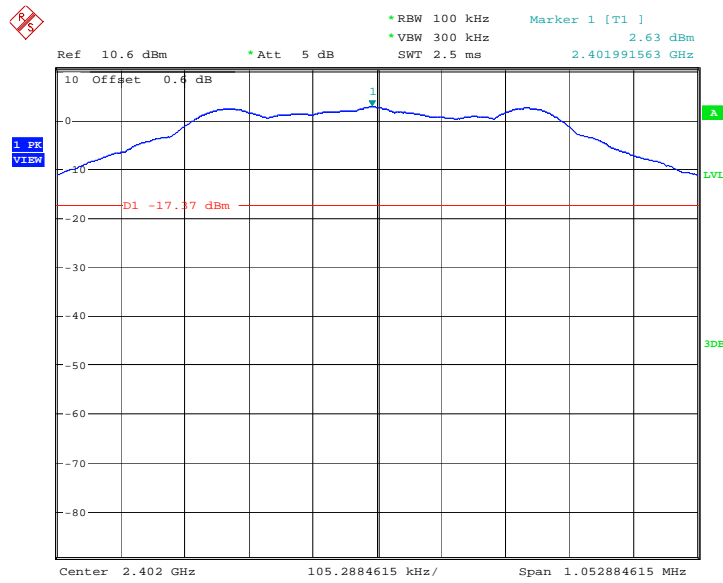
#### Measurement Results:

##### For GFSK

Frequency	Frequency Range	Test Results	Conclusion
2402 MHz	Center Frequency	Fig.7	P
	30 MHz ~ 1 GHz	Fig.8	P
	1 GHz ~ 3 GHz	Fig.9	P
	3 GHz ~ 10 GHz	Fig.10	P
	10GHz ~ 26 GHz	Fig.11	P
2440 MHz	Center Frequency	Fig.12	P
	30 MHz ~ 1 GHz	Fig.13	P
	1 GHz ~ 3 GHz	Fig.14	P
	3 GHz ~ 10 GHz	Fig.15	P
	10GHz ~ 26 GHz	Fig.16	P
2480 MHz	Center Frequency	Fig.17	P
	30 MHz ~ 1 GHz	Fig.18	P
	1 GHz ~ 3GHz	Fig.19	P
	3 GHz ~ 10 GHz	Fig.20	P
	10 GHz ~ 26 GHz	Fig.21	P

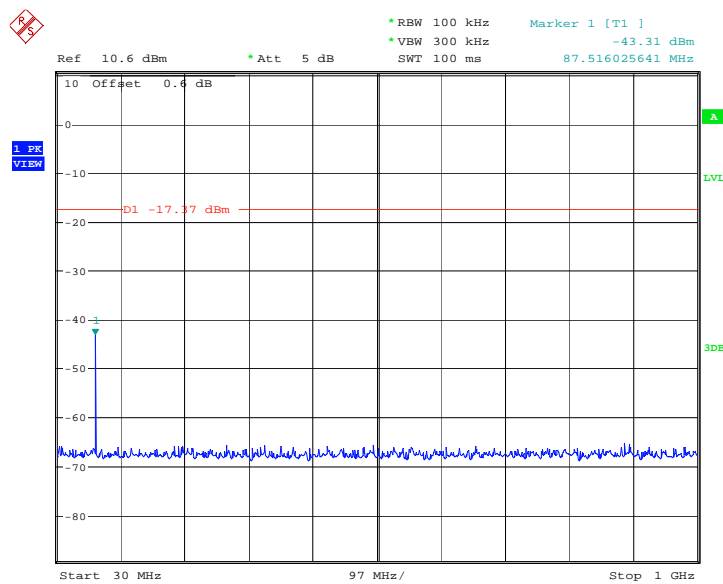
**Conclusion: PASS**

Test graphs as below



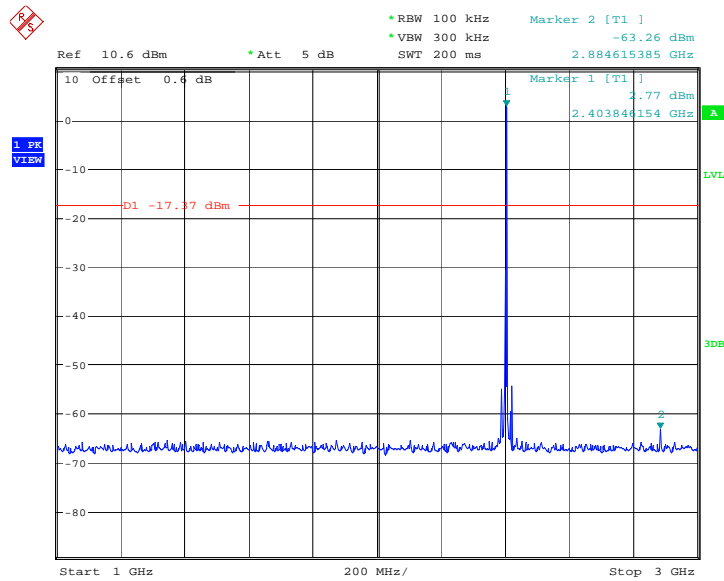
Date: 8.AUG.2013 10:03:53

Fig.7. Conducted spurious emission: GFSK,2402MHz



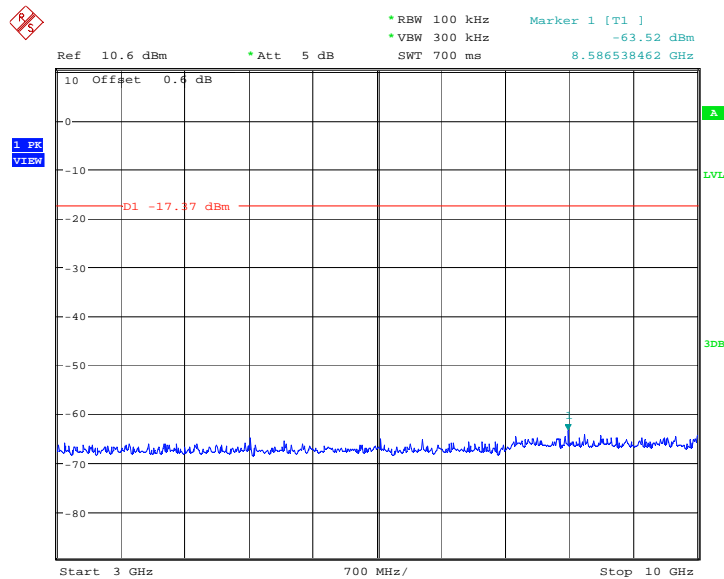
Date: 8.AUG.2013 10:04:10

Fig.8. Conducted spurious emission: GFSK, 2402 MHz, 30MHz - 1GHz



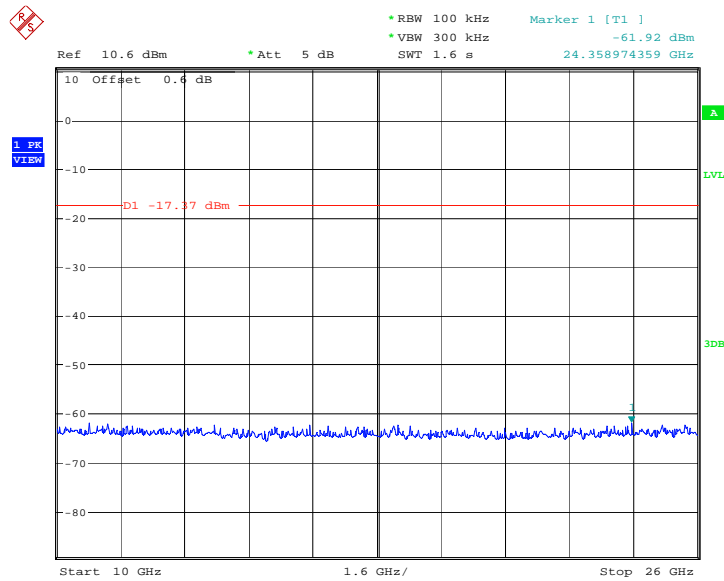
Date: 8.AUG.2013 10:04:42

Fig.9. Conducted spurious emission: GFSK, 2402 MHz,1GHz - 3GHz



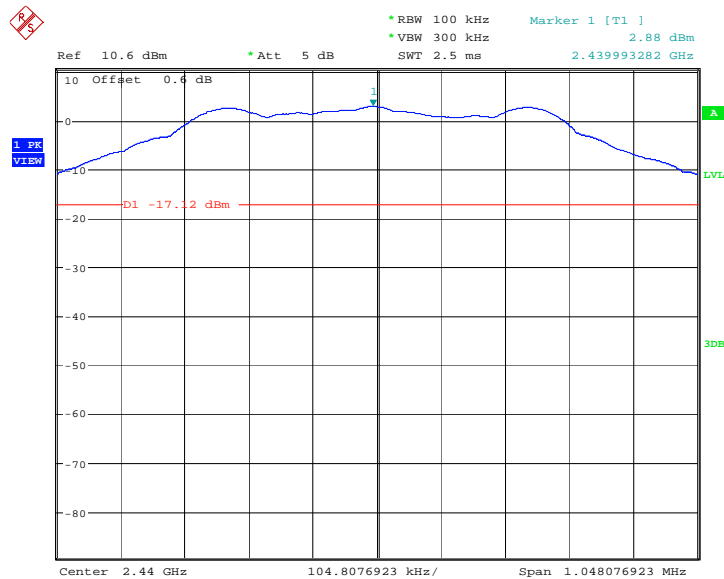
Date: 8.AUG.2013 10:04:58

Fig.10. Conducted spurious emission: GFSK, 2402 MHz,3GHz - 10GHz



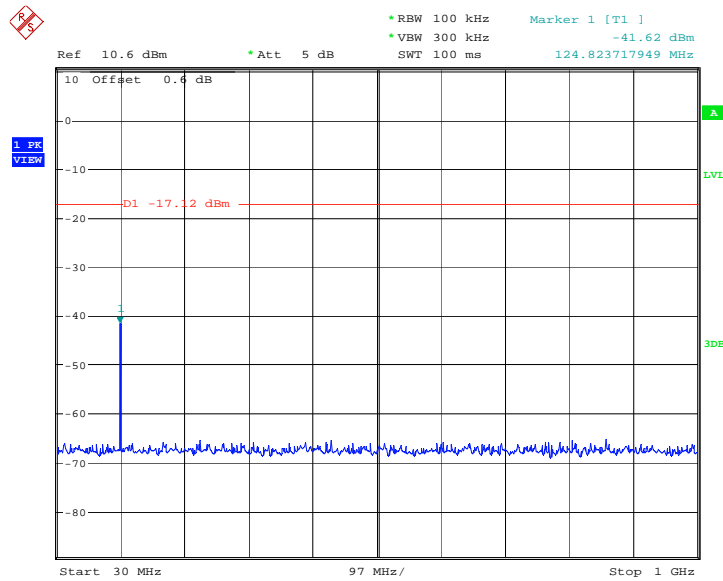
Date: 8.AUG.2013 10:05:15

Fig.11. Conducted spurious emission: GFSK, 2402 MHz, 10GHz - 26GHz



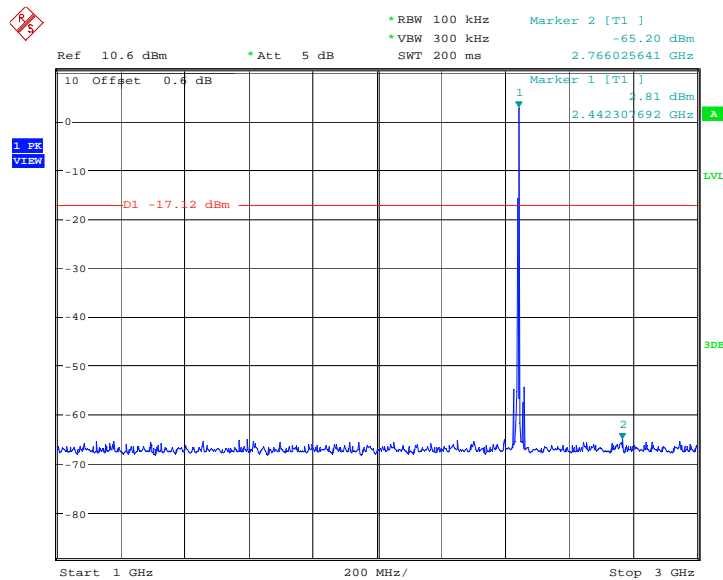
Date: 8.AUG.2013 10:09:06

Fig.12. Conducted spurious emission: GFSK, 2440MHz



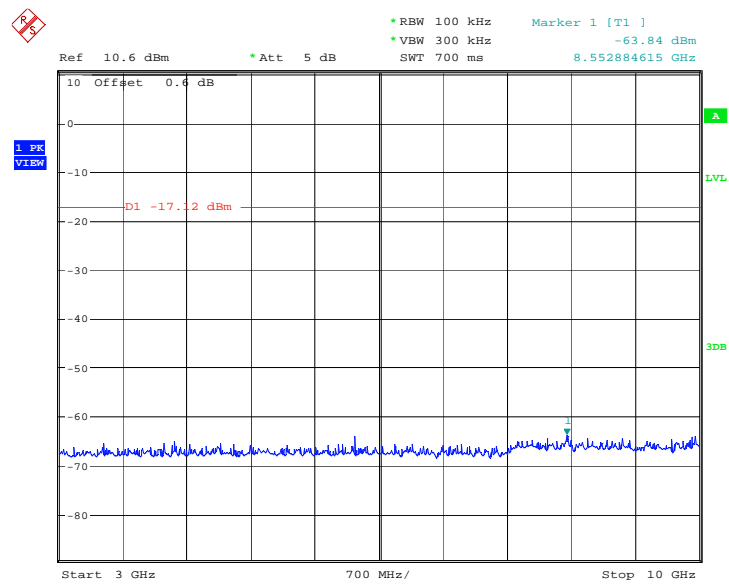
Date: 8.AUG.2013 10:09:22

Fig.13. Conducted spurious emission: GFSK, 2440 MHz, 30MHz - 1GHz



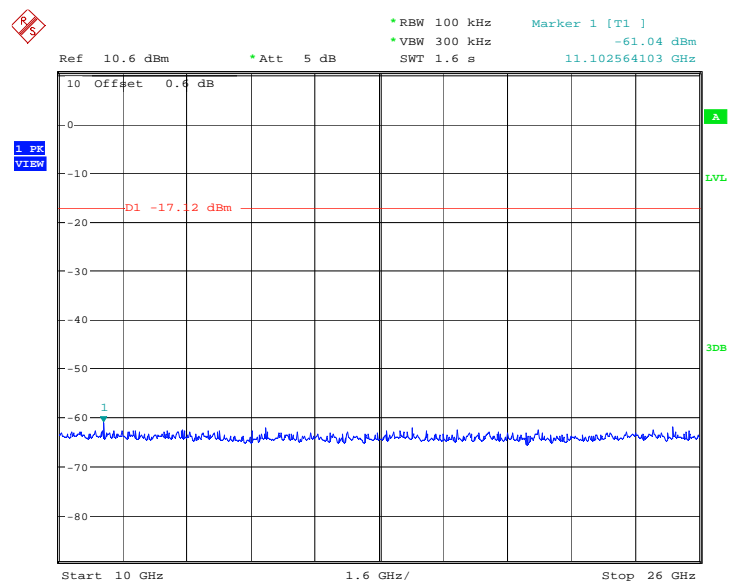
Date: 8.AUG.2013 10:09:54

Fig.14. Conducted spurious emission: GFSK, 2440 MHz, 1GHz - 3GHz



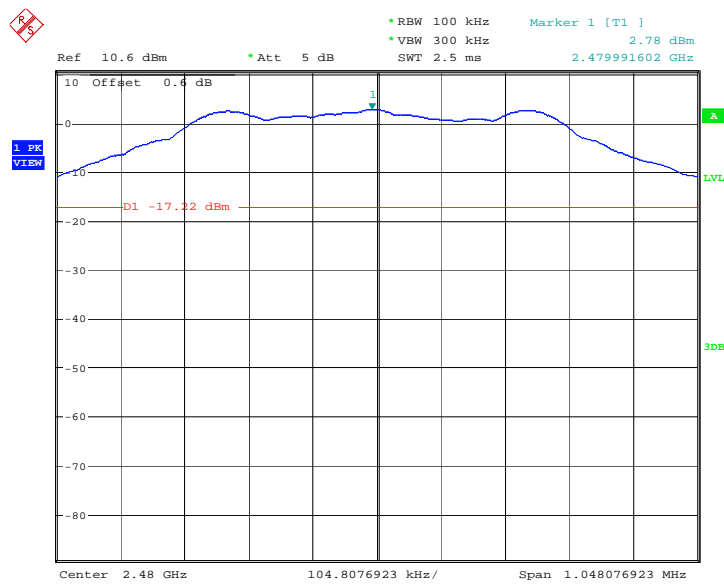
Date: 8.AUG.2013 10:10:11

Fig.15. Conducted spurious emission: GFSK, 2440 MHz, 3GHz – 10GHz



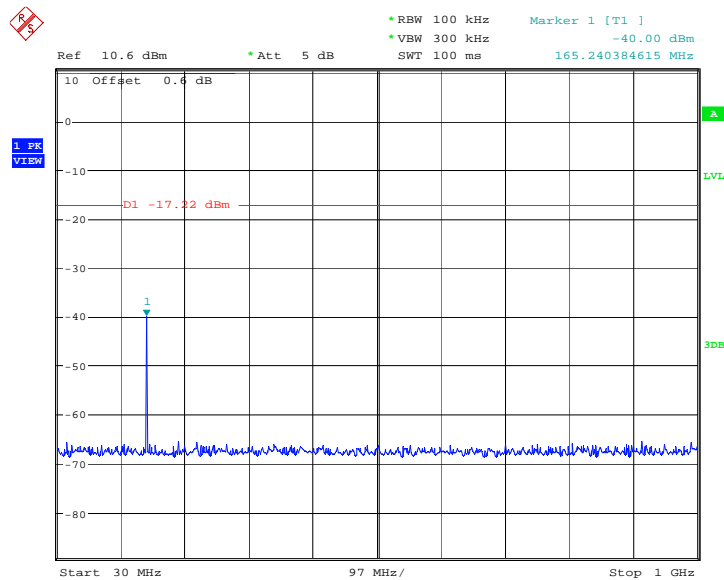
Date: 8.AUG.2013 10:10:27

Fig.16. Conducted spurious emission: GFSK, 2440 MHz, 10GHz – 26GHz



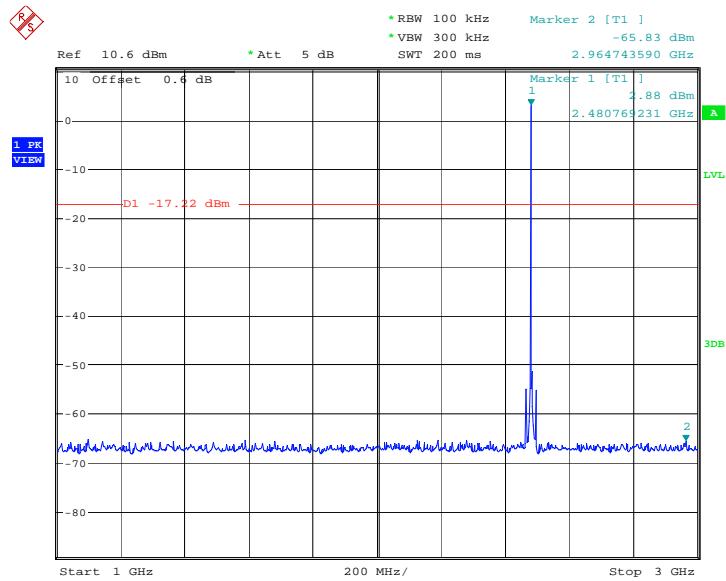
Date: 8.AUG.2013 10:15:31

Fig.17. Conducted spurious emission: GFSK, 2480 MHz



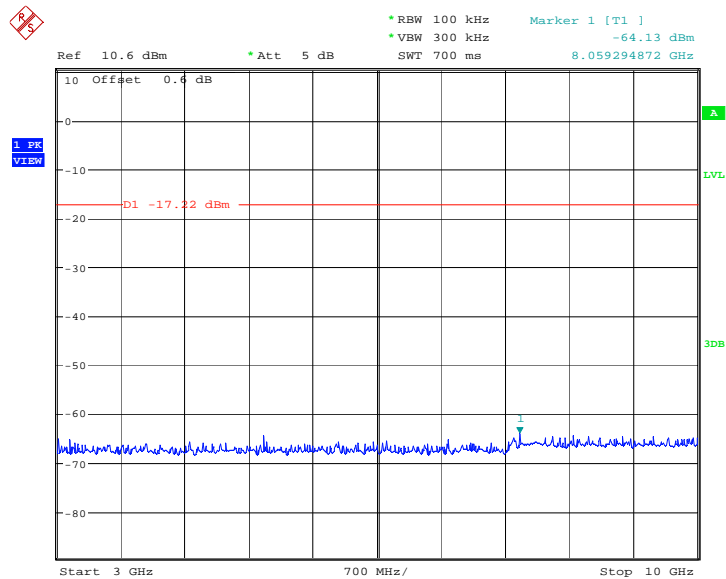
Date: 8.AUG.2013 10:15:47

Fig.18. Conducted spurious emission: GFSK, 2480 MHz, 30MHz - 1GHz



Date: 8.AUG.2013 10:16:19

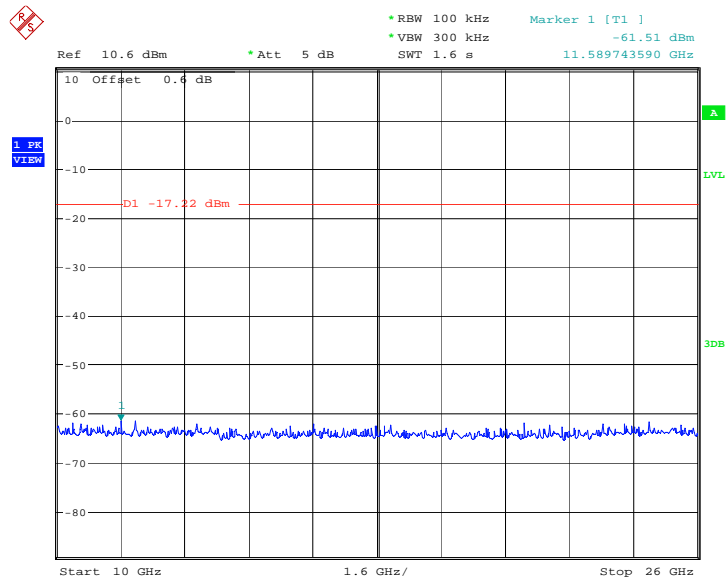
Fig.19. Conducted spurious emission: GFSK, 2480 MHz, 1GHz - 3GHz



Date: 8.AUG.2013 10:16:36

Fig.20. Conducted spurious emission: GFSK, 2480 MHz, 3GHz - 10GHz





Date: 8.AUG.2013 10:16:52

Fig.21. Conducted spurious emission: GFSK, 2480 MHz, 10GHz - 26GHz

## A.6. Radiated Emission

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

The measurement is made according to KDB 558074.

### Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

### Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

### Measurement Results:

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable los.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{Mea}} + A_{\text{Rpl}}$$

### For GFSK

Frequency	Frequency Range	Test Results	Conclusion
2402 MHz	30 MHz ~ 1 GHz	Fig.22	P
	1 GHz ~ 3 GHz	Fig.23	P
	3 GHz ~ 18 GHz	Fig.24	P
2441 MHz	30 MHz ~ 1 GHz	Fig.25	P
	1 GHz ~ 3 GHz	Fig.26	P
	3 GHz ~ 18 GHz	Fig.27	P

2480 MHz	30 MHz ~ 1 GHz	Fig.28	P
	1 GHz ~ 3 GHz	Fig.29	P
	3 GHz ~ 18 GHz	Fig.30	P
Power	2.38GHz~2.4GHz---L (VBW=10Hz)	Fig.31	P
Power	2.38GHz~2.4GHz---L (VBW=1MHz)	Fig.32	P
Power	2.45GHz~2.5GHz---H (VBW=10Hz)	Fig.33	P
Power	2.45GHz~2.5GHz---H (VBW=1MHz)	Fig.34	P
For all channels	18 GHz ~ 26 GHz	Fig.35	P

#### GFSK 2402MHz-10Hz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17482.90	44.60	20.22	24.34	H
17482.85	44.60	20.22	24.34	H
17482.80	44.60	20.22	24.34	H
17487.00	44.60	20.22	24.34	H
17489.30	44.60	20.22	24.34	V
17459.70	44.60	19.82	24.78	V

#### GFSK 2402MHz-1MHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17529.00	58.10	20.12	37.95	V
17729.25	58.00	19.26	38.76	H
17999.25	57.80	19.77	38.07	V
17409.75	57.80	18.98	38.81	V
17522.25	57.60	20.02	37.61	V
17444.25	57.60	18.98	38.58	V

#### GFSK 2440MHz-10Hz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17483.00	44.60	20.22	24.34	V
17459.00	44.60	19.82	24.78	V
17458.80	44.60	19.82	24.78	V
17479.60	44.60	20.22	24.34	H
17482.80	44.60	20.22	24.34	V
17473.60	44.60	19.82	24.78	H

#### GFSK 2440MHz-1MHz

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17481.75	58.30	20.22	38.04	H
17950.50	57.90	19.82	38.08	H
17457.00	57.70	18.88	38.82	H
17532.00	57.60	20.12	37.45	V
17932.50	57.50	19.52	37.99	V
17496.75	57.40	20.22	37.14	V

**GFSK 2480MHz-10Hz**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17500.60	44.60	20.02	24.61	H
17500.50	44.50	20.02	24.51	H
17500.00	44.50	20.02	24.51	V
17500.20	44.50	20.02	24.51	V
17500.70	44.50	20.02	24.51	H
17501.00	44.50	20.02	24.51	V

**GFSK 2480MHz-1MHz**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
17463.00	58.70	19.82	38.88	V
17488.50	57.80	20.22	37.54	H
17998.50	57.80	19.77	38.07	H
17494.50	57.60	20.22	37.34	V
17429.25	57.60	18.98	38.58	V
17913.75	57.50	19.82	37.73	V

**Conclusion: PASS**

Test graphs as below:

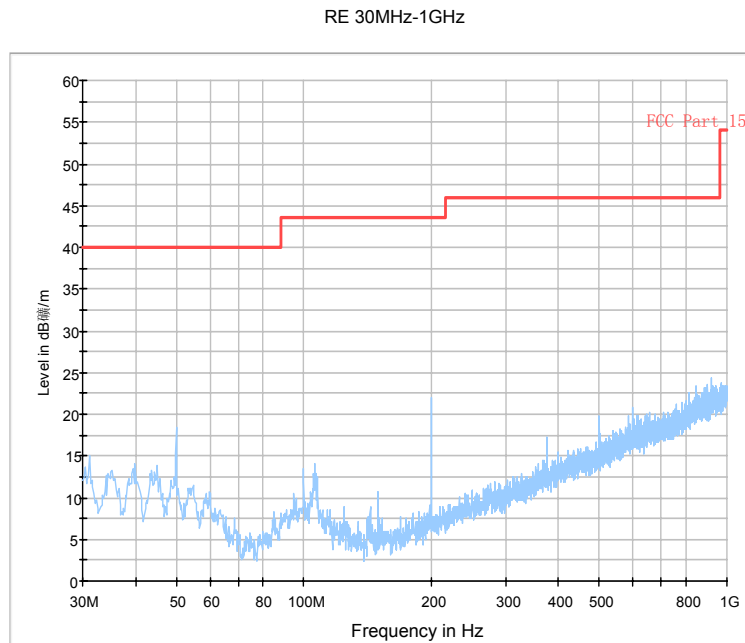


Fig.22. Radiated emission: GFSK, 2402MHz, 30 MHz - 1 GHz

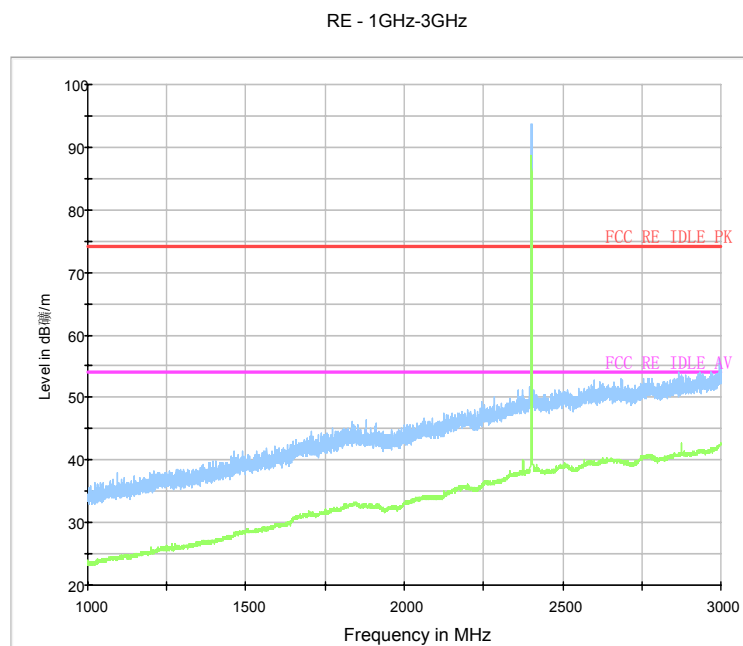


Fig.23. Radiated emission: GFSK, 2402MHz, 1 GHz - 3GHz

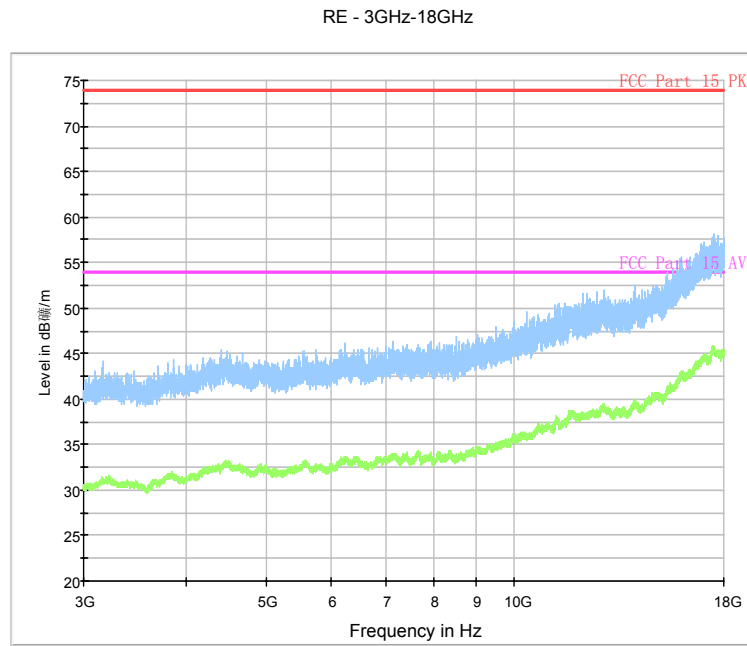


Fig.24. Radiated emission: GFSK, 2402MHz, 3 GHz - 18 GHz

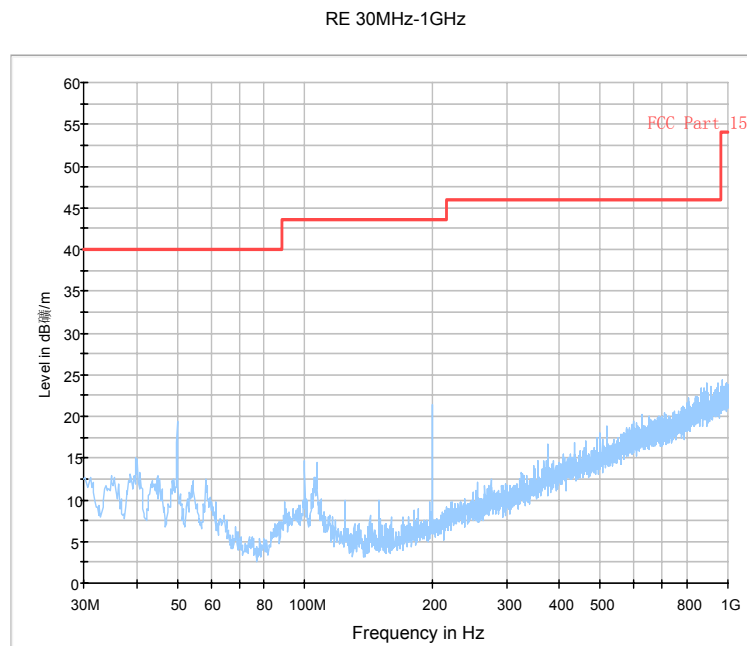


Fig.25. Radiated emission: GFSK, 2440MHz, 30 MHz - 1 GHz

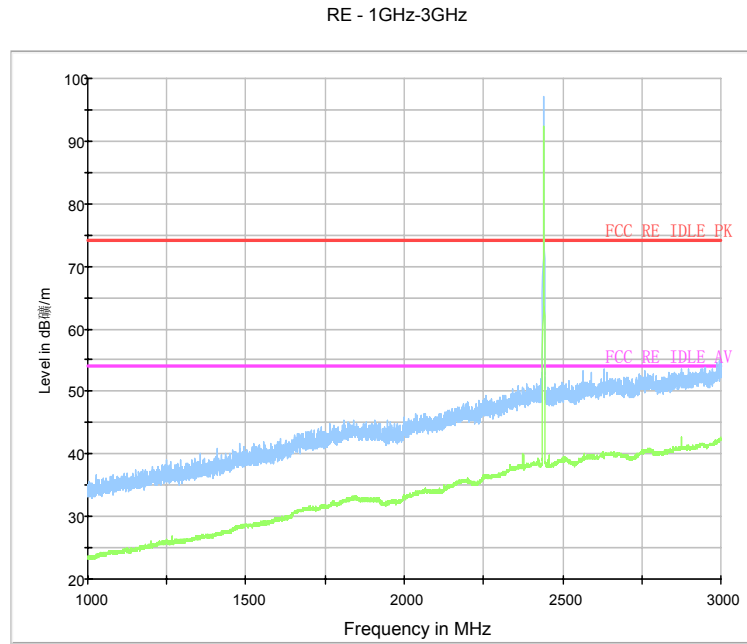


Fig.26. Radiated emission: GFSK, 2440MHz, 1 GHz - 3 GHz

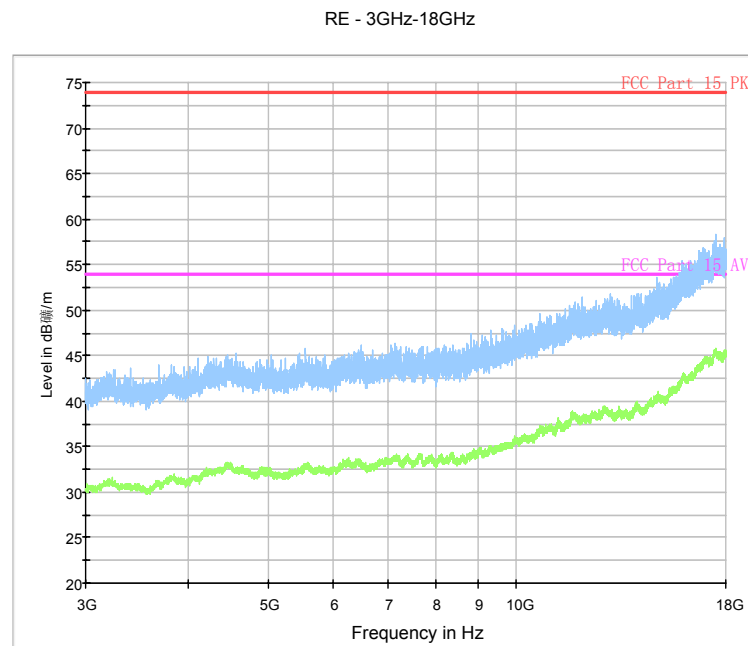


Fig.27. Radiated emission: GFSK, 2440MHz, 3 GHz - 18 GHz

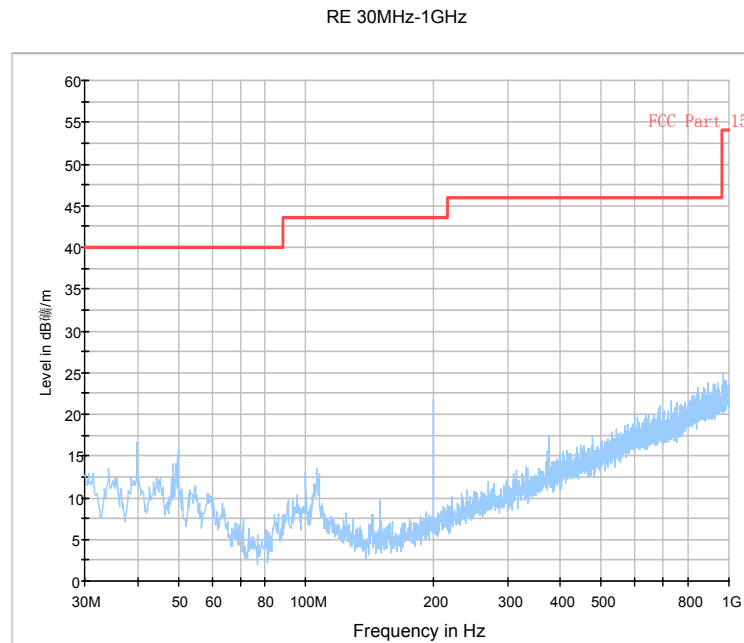


Fig.28. Radiated emission: GFSK, 2480MHz, 30 MHz - 1 GHz

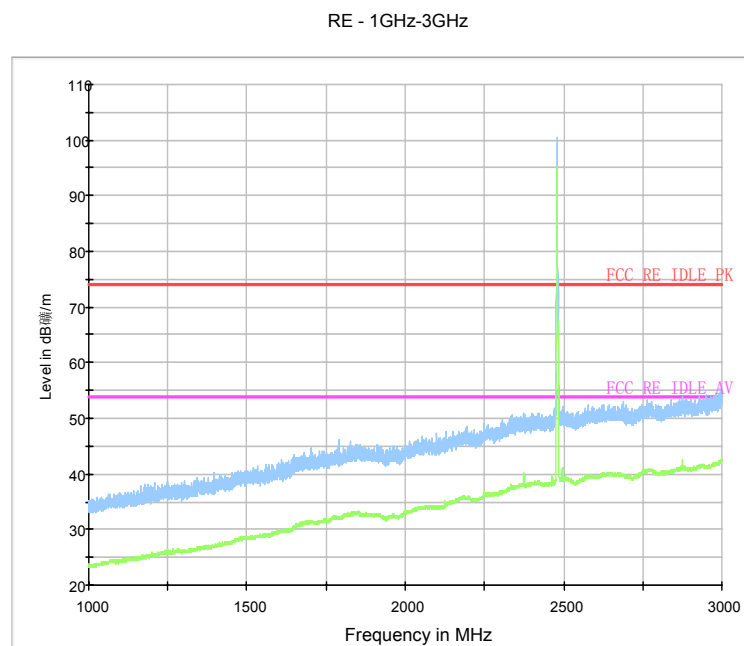


Fig.29. Radiated emission: GFSK, 2480MHz, 1 GHz - 3 GHz



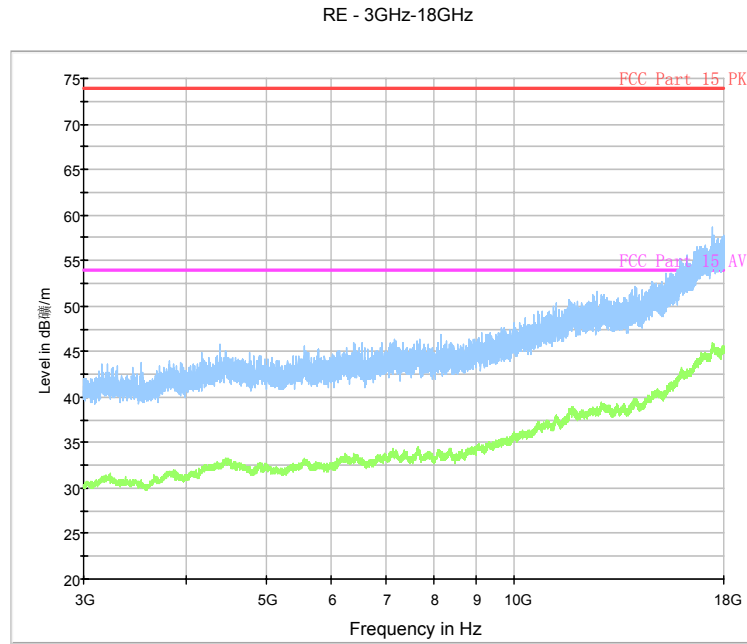


Fig.30. Radiated emission: GFSK, 2480MHz, 3 GHz - 18 GHz

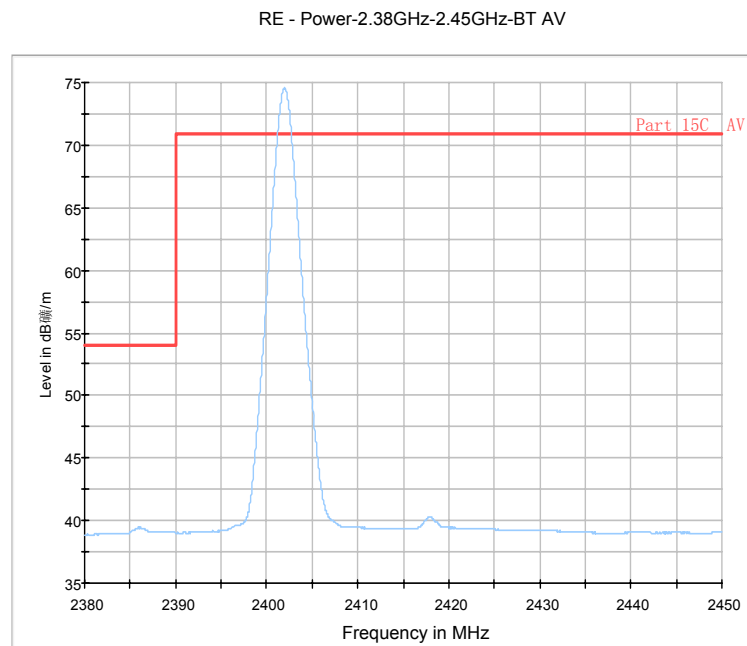


Fig.31. Radiated emission (Power): GFSK low channel (VBW=10Hz)

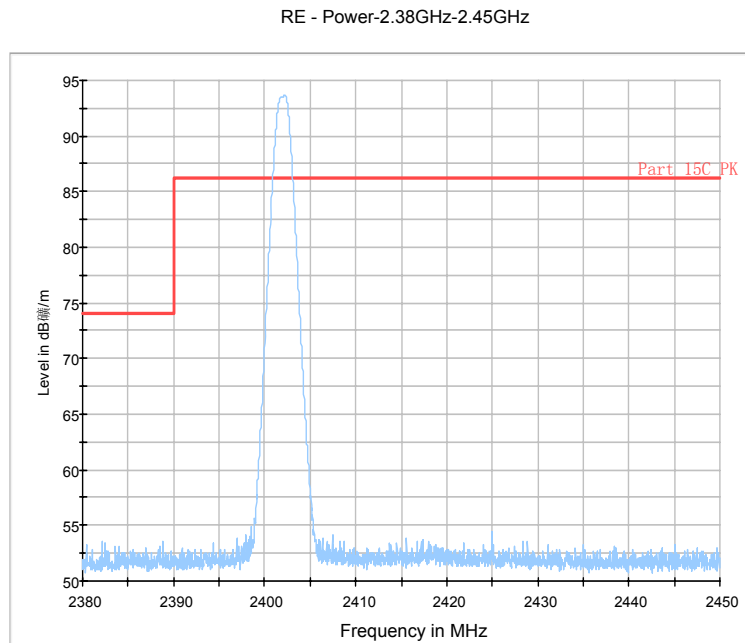


Fig.32. Radiated emission (Power): GFSK low channel (VBW=1MHz)

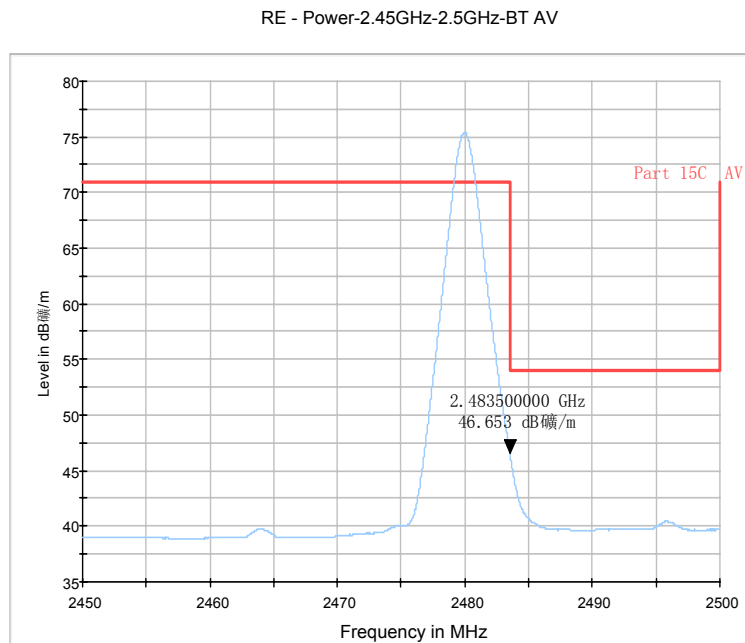


Fig.33. Radiated emission (Power): GFSK high channel (VBW=10Hz)

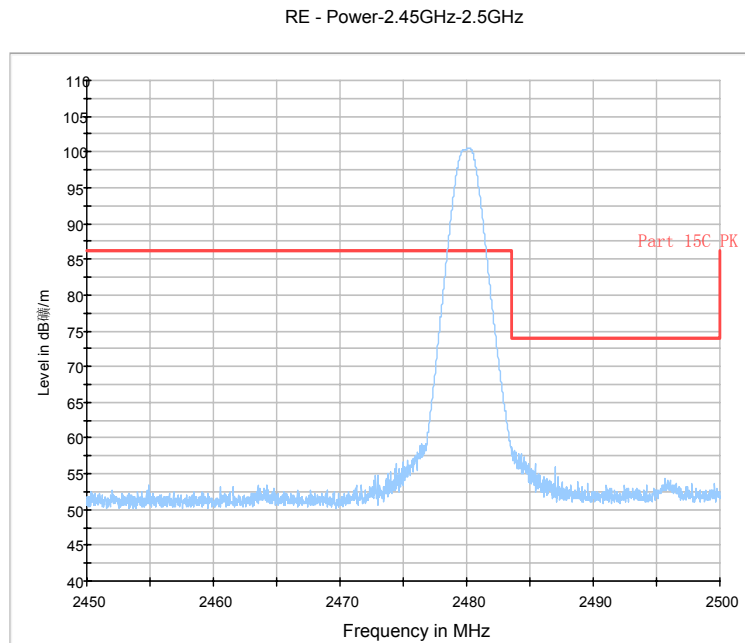


Fig.34. Radiated emission (Power): GFSK high channel (VBW=1MHz)

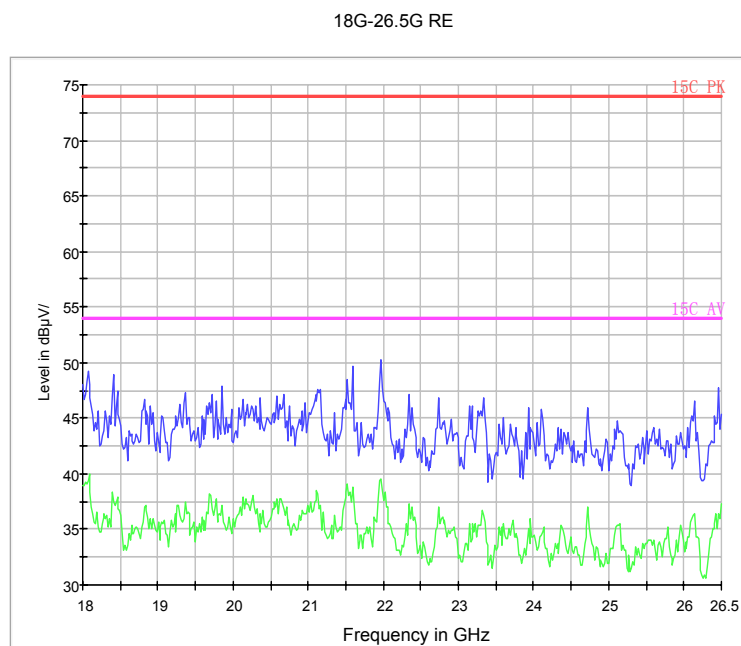


Fig.35. Radiated emission: GFSK, 18 GHz - 26 GHz

### A.7. Frequency Band Edges - Conducted

#### Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247(d)	< -20

The measurement is made according to KDB 558074. Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency ( $f_{\text{emission}} \pm 0.5\text{MHz}$ ). If the instrument does not have a band power measurement function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by  $f_{\text{emission}} \pm 0.5\text{MHz}$ .

The results below are yielded by the result in Fig.34/Fig.35 minus the result in Fig.7/Fig.17.

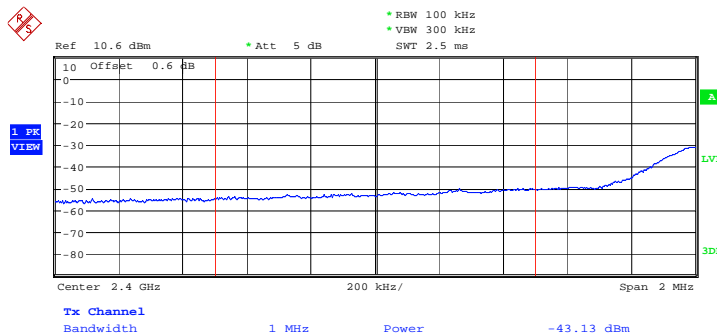
#### Measurement Result:

##### For GFSK

Frequency	Hopping	Band Edge Power ( dBc)		Conclusion
2402MHz	Hopping OFF	Fig.36	-45.76	P
2480MHz	Hopping OFF	Fig.37	-49.94	P

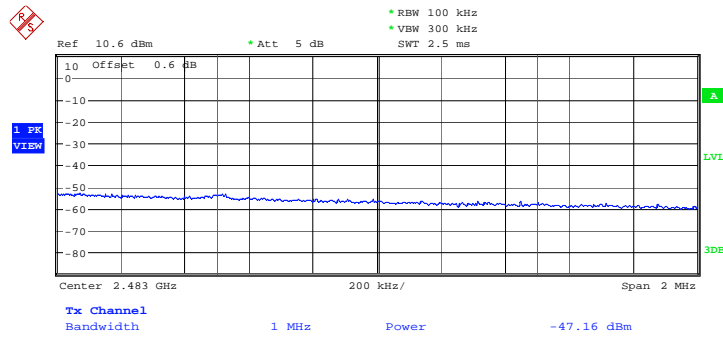
**Conclusion: PASS**

Test graphs as below



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Fig.36. Frequency Band Edges: GFSK, 2402 MHz, Hopping Off



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Fig.37. Frequency Band Edges: GFSK, 2480 MHz, Hopping Off

### A.8. AC Powerline Conducted Emission

#### Test Condition

Voltage (V)	Frequency (Hz)
120	60

#### Measurement Result and limit:

##### Bluetooth (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Conclusion
0.15 to 0.5	66 o 56	P
0.5 to 5	56	
5 to 30	60	
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

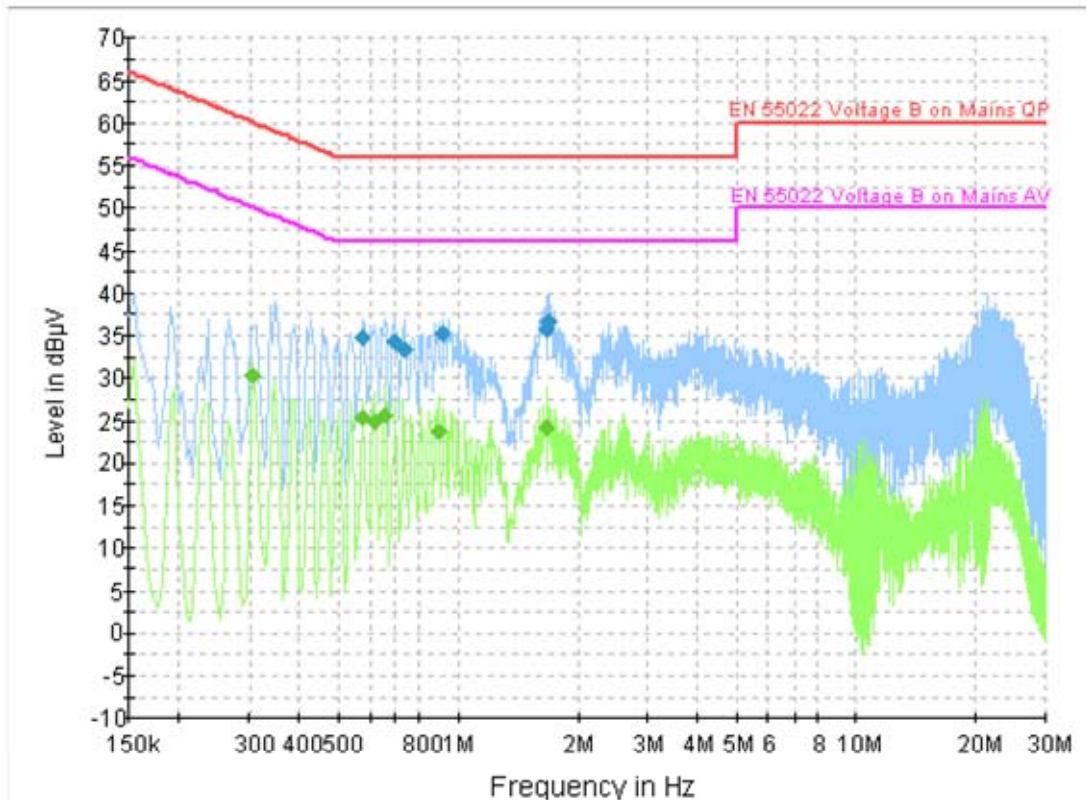
##### Bluetooth (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Conclusion
0.15 to 0.5	56 to 46	P
0.5 to 5	46	
5 to 30	50	
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

The measurement is made according to KDB 558074 and C63.4.

**Conclusion: PASS**

**Test graphs as below:**



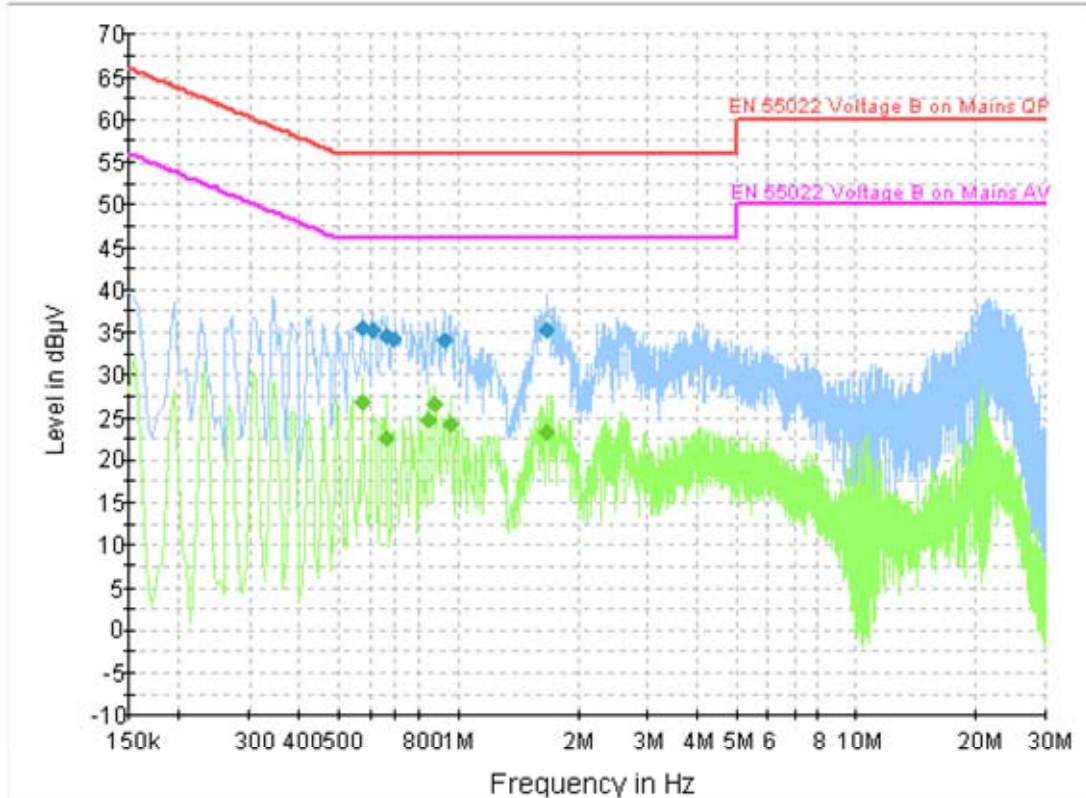
### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.573000	34.7	GND	L1	9.8	21.3	56.0
0.690000	34.3	GND	N	9.8	21.7	56.0
0.735000	33.4	GND	N	9.8	22.6	56.0
0.915000	35.3	GND	L1	9.7	20.7	56.0
1.671000	35.7	GND	L1	9.7	20.3	56.0
1.702500	36.6	GND	L1	9.7	19.4	56.0

### Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.307500	30.4	GND	L1	9.8	19.7	50.0
0.573000	25.2	GND	L1	9.8	20.8	46.0
0.618000	24.9	GND	L1	9.8	21.1	46.0
0.654000	25.6	GND	L1	9.8	20.4	46.0
0.892500	23.5	GND	L1	9.7	22.5	46.0
1.671000	24.2	GND	L1	9.7	21.8	46.0

IDLE:



### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.577500	35.4	GND	L1	9.8	20.6	56.0
0.613500	35.2	GND	L1	9.8	20.8	56.0
0.658500	34.6	GND	L1	9.8	21.4	56.0
0.694500	34.2	GND	N	9.8	21.8	56.0
0.928500	34.0	GND	L1	9.7	22.0	56.0
1.671000	35.2	GND	L1	9.7	20.8	56.0

### Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.577500	26.8	GND	L1	9.8	19.2	46.0
0.658500	22.5	GND	L1	9.8	23.5	46.0
0.847500	24.6	GND	L1	9.8	21.4	46.0
0.883500	26.5	GND	L1	9.7	19.5	46.0
0.964500	24.2	GND	L1	9.7	21.8	46.0
1.662000	23.2	GND	L1	9.7	22.8	46.0

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