



# TEST REPORT

No. 2010TAR228

for

**ZTE Corporation**

**WCDMA/GPRS/GSM Mobile Handset**

**Model Name: F930**

**FCC ID: Q78-ZTEF930**

with

**Hardware Version: wu2B**

**Software Version: TEL\_AU\_P608D1V1.0.0B09-D**

**Issued Date: 2010-06-29**



**No. DGA-PL-114/01-02**

**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:**

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

Shouxiang Science Building, No 51, Xueyuan Road, Haidian District, Beijing, P.R.China 100191

Tel:+86(0)10-62304633-2678, Fax:+86(0)10-62304793 Email:welcome@emcite.com. [www.emcite.com](http://www.emcite.com)

## CONTENTS

<b>1. TEST LABORATORY .....</b>	<b>4</b>
1.1. TESTING LOCATION .....	4
1.2. TESTING ENVIRONMENT .....	4
1.3. PROJECT DATA .....	4
1.4. SIGNATURE .....	4
<b>2. CLIENT INFORMATION .....</b>	<b>5</b>
2.1. APPLICANT INFORMATION .....	5
2.2. MANUFACTURER INFORMATION .....	5
<b>3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) .....</b>	<b>6</b>
3.1. ABOUT EUT .....	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST .....	6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST .....	6
<b>4. REFERENCE DOCUMENTS .....</b>	<b>7</b>
4.1. DOCUMENTS SUPPLIED BY APPLICANT .....	7
4.2. REFERENCE DOCUMENTS FOR TESTING .....	7
<b>5. LABORATORY ENVIRONMENT .....</b>	<b>8</b>
<b>6. SUMMARY OF TEST RESULTS .....</b>	<b>9</b>
6.1. SUMMARY OF TEST RESULTS .....	9
6.2. STATEMENTS .....	9
<b>7. TEST EQUIPMENTS UTILIZED .....</b>	<b>10</b>
<b>ANNEX A: MEASUREMENT RESULTS .....</b>	<b>11</b>
A.1. MEASUREMENT METHOD .....	11
A.2. PEAK OUTPUT POWER - CONDUCTED .....	11
A.3. FREQUENCY BAND EDGES - CONDUCTED .....	12
A.4. CONDUCTED EMISSION .....	12
A.5. RADIATED EMISSION .....	12
A.6. TIME OF OCCUPANCY (DWELL TIME) .....	14
A.7. 20dB BANDWIDTH .....	15
A.8. CARRIER FREQUENCY SEPARATION .....	15
A.9. NUMBER OF HOPPING CHANNELS .....	15
A.10. AC POWERLINE CONDUCTED EMISSION .....	16
<b>ANNEX B: TEST FIGURE LIST .....</b>	<b>17</b>
FIG. 1 FREQUENCY BAND EDGES: CHANNEL 0, HOPPING OFF .....	17
FIG. 2 FREQUENCY BAND EDGES: CHANNEL 0, HOPPING ON .....	17
FIG. 3 FREQUENCY BAND EDGES: CHANNEL 78, HOPPING OFF .....	18
FIG. 4 FREQUENCY BAND EDGES: CHANNEL 78, HOPPING ON .....	18

FIG. 5	CONDUCTED SPURIOUS EMISSION: CHANNEL 0,2402MHZ .....	19
FIG. 6	CONDUCTED SPURIOUS EMISSION: CHANNEL 0, 30MHZ - 1GHZ .....	19
FIG. 7	CONDUCTED SPURIOUS EMISSION: CHANNEL 0,1GHZ - 26GHZ .....	20
FIG. 8	CONDUCTED SPURIOUS EMISSION: CHANNEL 39, 2441MHZ .....	20
FIG. 9	CONDUCTED SPURIOUS EMISSION: CHANNEL 39, 30MHZ - 1GHZ .....	21
FIG. 10	CONDUCTED SPURIOUS EMISSION: CHANNEL 39, 1GHZ – 26GHZ.....	21
FIG. 11	CONDUCTED SPURIOUS EMISSION: CHANNEL 78, 2480MHZ .....	22
FIG. 12	CONDUCTED SPURIOUS EMISSION: CHANNEL 78, 30MHZ - 1GHZ .....	22
FIG. 13	CONDUCTED SPURIOUS EMISSION: CHANNEL 78, 1GHZ - 26GHZ .....	23
FIG. 14	RADIATED EMISSION: CHANNEL 0, 30 MHz - 1 GHz.....	23
FIG. 15	RADIATED EMISSION: CHANNEL 0, 1 GHz - 4 GHz .....	24
FIG. 16	RADIATED EMISSION: CHANNEL 0, 4 GHz - 18 GHz .....	24
FIG. 17	RADIATED EMISSION: CHANNEL 39, 30 MHz - 1 GHz.....	25
FIG. 18	RADIATED EMISSION: CHANNEL 39, 1 GHz - 4 GHz .....	25
FIG. 19	RADIATED EMISSION: CHANNEL 39, 4 GHz - 18 GHz .....	26
FIG. 20	RADIATED EMISSION: CHANNEL 78, 30 MHz - 1 GHz.....	26
FIG. 21	RADIATED EMISSION: CHANNEL 78, 1 GHz - 4 GHz .....	27
FIG. 22	RADIATED EMISSION: CHANNEL 78, 4 GHz - 18 GHz .....	27
FIG. 23	RADIATED EMISSION (POWER): 2.45GHZ - 2.5GHZ .....	28
FIG. 24	RADIATED EMISSION: 18 GHz - 26 GHz .....	28
FIG. 25	TIME OF OCCUPANCY (DWELL TIME): CHANNEL 39, PACKET DH1.....	29
FIG. 26	NUMBER OF TRANSMISSIONS MEASUREMENT:CHANNEL 39,PACKET DH1 .....	29
FIG. 27	TIME OF OCCUPANCY (DWELL TIME): CHANNEL 39, PACKET DH3.....	30
FIG. 28	NUMBER OF TRANSMISSIONS MEASUREMENT:CHANNEL 39,PACKET DH3 .....	30
FIG. 29	TIME OF OCCUPANCY (DWELL TIME): CHANNEL 39, PACKET DH5.....	31
FIG. 30	NUMBER OF TRANSMISSIONS MEASUREMENT:CHANNEL 39,PACKET DH5 .....	31
FIG. 31	20DB BANDWIDTH: CHANNEL 0.....	32
FIG. 32	20DB BANDWIDTH: CHANNEL 39.....	32
FIG. 33	20DB BANDWIDTH: CHANNEL 78.....	33
FIG. 34	CARRIER FREQUENCY SEPARATION MEASUREMENT: CHANNEL 39.....	33
FIG. 35	NUMBER OF HOPPING FREQUENCIES: CHANNEL 0 - 39.....	34
FIG. 36	NUMBER OF HOPPING FREQUENCIES: CHANNEL 40 - 78.....	34
FIG. 37	AC POWERLINE CONDUCTED EMISSION WITH CHARGER.....	35

## 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: 00861062304793

### 1.2. Testing Environment

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

### 1.3. Project data

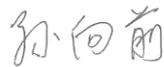
Project Leader: Zi Xiaogang  
Testing Start Date: 2010-05-27  
Testing End Date: 2010-06-10

### 1.4. Signature



---

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



---

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



---

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

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: ZTE CORPORATION  
Address /Post: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China  
City: Shenzhen  
Postal Code: 518057  
Country: China  
Telephone: 0086 21 68897541  
Fax: 0086 21 50801070

### **2.2. Manufacturer Information**

Company Name: ZTE CORPORATION  
Address /Post: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China  
City: Shenzhen  
Postal Code: 518057  
Country: China  
Telephone: 0086 21 68897541  
Fax: 0086 21 50801070

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

#### 3.1. About EUT

Description	WCDMA/GPRS/GSM Mobile Handset
Model Name	F930
FCC ID	Q78-ZTEF930
Frequency Band	ISM 2400MHz~2483.5MHz
Type of Modulation	GFSK
Number of Channels	79
Power Supply	3.7V DC by Battery

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

EUT ID*	SN or IMEI	HW Version	SW Version
N02	359941030003190	wu2B	TEL_AU_P608D1V1.0.0B09
N04	359941030003240	wu2B	TEL_AU_P608D1V1.0.0B09

\*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	Type	SN
AE1	Battery	Li3710T42P3h483757 ZTE	/
AE2	Travel Charger	STC-A22O50I700USBA-Z RUIDE	/

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

## 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;	July 10,
FCC Part15	15.209 Radiated emission limits, general requirements;	2008
	15.247 Operation within the bands 902–928MHz,	Edition
	2400–2483.5 MHz, and 5725–5850 MHz.	
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003
FCC Public Notice DA 00-705	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems	March 2000

## 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

**Fully-anechoic chamber1** (6.8 meters×3.08 meters×3.53 meters) 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
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

**Fully-anechoic chamber2** (7.30 meters×4.00 meters×3.80 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 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
Peak Output Power - Conducted	15.247 (b)(1)	<b>P</b>
Frequency Band Edges	15.247 (d)	<b>P</b>
Conducted Emission	15.247 (d)	<b>P</b>
Radiated Emission	15.247, 15.205, 15.209	<b>P</b>
Time of Occupancy (Dwell Time)	15.247 (a) (1)(iii)	<b>P</b>
20dB Bandwidth	15.247 (a)(1)	<b>NA</b>
Carrier Frequency Separation	15.247 (a)(1)	<b>P</b>
Number of hopping channels	15.247 (a)(b)(iii)	<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 Public notice DA 00-705 and ANSI C63.4.

### 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	2011-06-17
2	Bluetooth Tester	CBT32	100649	Rohde & Schwarz	2011-02-03

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Test Receiver	ESI40	831564/002	Rohde & Schwarz	2011-02-11
2	EMI Antenna	VULB 9163	9163 301	Schwarzbeck	2011-04-29
3	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2010-12-24
4	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2011-03-01
5	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2011-03-01
6	Universal Radio Communication Tester	CMU200	105948	Rohde & Schwarz	2010-08-14

### Anechoic chamber

Fully anechoic chamber by Frankonia German.

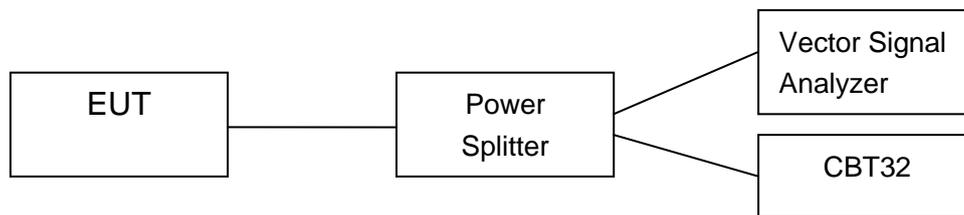
## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

#### A.1.1. Conducted Measurements

The measurement is made according to Public notice DA 00-705 and ANSI C63.4.

- 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. Vector Signal Analyzer



#### A.1.2. Radiated Emission Measurements

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. Peak Output Power - Conducted

#### Measurement Limit and Method:

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

The measurement is made according to Public notice DA 00-705 and ANSI C63.4.

#### Test Condition

Hopping Mode	RBW	VBW	Span	Sweptime
Hopping OFF	1MHz	1MHz	5MHz	2.5ms

#### Measurement Results:

Channel	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz	Conclusion
Peak Conducted Output Power (dBm)	5.60	5.75	5.61	P

**Conclusion: PASS**

### A.3. Frequency Band Edges - Conducted

**Measurement Limit:**

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

The measurement is made according to Public notice DA 00-705 and ANSI C63.4.

**Measurement Result:**

Channel	Hopping	Band Edge Power ( dBc)		Conclusion
0	Hopping OFF	Fig.1	-52.61	<b>P</b>
	Hopping ON	Fig.2	-51.75	<b>P</b>
78	Hopping OFF	Fig.3	-65.28	<b>P</b>
	Hopping ON	Fig.4	-63.23	<b>P</b>

See annex B for test graphs.

**Conclusion: PASS**

### A.4. 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 Public notice DA 00-705 and ANSI C63.4

**Measurement Results:**

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	Center Frequency	Fig.5	<b>P</b>
	30 MHz ~ 1 GHz	Fig.6	<b>P</b>
	1 GHz ~ 26 GHz	Fig.7	<b>P</b>
Ch 39 2441 MHz	Center Frequency	Fig.8	<b>P</b>
	30 MHz ~ 1 GHz	Fig.9	<b>P</b>
	1 GHz ~ 26 GHz	Fig.10	<b>P</b>
Ch 78 2480 MHz	Center Frequency	Fig.11	<b>P</b>
	30 MHz ~ 1 GHz	Fig.12	<b>P</b>
	1 GHz ~ 26 GHz	Fig.13	<b>P</b>

See annex B for test graphs.

**Conclusion: PASS**

### A.5. 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 Public notice DA 00-705 and ANSI C63.4

**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:**

Both the lowest channel and the highest channel band-edge measurements were performed. The result at the highest channel show the worst performance, so the report only includes the result performed at the highest channel.

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:

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

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	30 MHz ~ 1 GHz	Fig.14	<b>P</b>
	1 GHz ~ 4 GHz	Fig.15	<b>P</b>
	4 GHz ~ 18 GHz	Fig.16	<b>P</b>
Ch 39 2441 MHz	30 MHz ~ 1 GHz	Fig.17	<b>P</b>
	1 GHz ~ 4 GHz	Fig.18	<b>P</b>
	4 GHz ~ 18 GHz	Fig.19	<b>P</b>
Ch 78 2480 MHz	30 MHz ~ 1 GHz	Fig.20	<b>P</b>
	1 GHz ~ 4 GHz	Fig.21	<b>P</b>
	4 GHz ~ 18 GHz	Fig.22	<b>P</b>
Power	2.45GHz~2.5GHz	Fig.23	<b>P</b>

For all channels	18 GHz ~ 26 GHz	Fig.24	<b>P</b>
------------------	-----------------	--------	----------

Ch 0

Frequency(MHz)	Result(dBuV/m)	A <sub>Rpl</sub> (dB)	P <sub>Mea</sub> (dBuV/m)	Polarity
2398.798	75.63	8.7	66.93	HORIZONTAL
1929.86	67.93	5.6	62.33	HORIZONTAL
2406.814	67.4	8.8	58.6	HORIZONTAL
1933.868	55.12	5.5	49.62	HORIZONTAL
3735.471	50.62	14.4	36.22	HORIZONTAL
3699.399	50.53	14.2	36.33	HORIZONTAL

Ch 39

Frequency(MHz)	Result(dBuV/m)	A <sub>Rpl</sub> (dB)	P <sub>Mea</sub> (dBuV/m)	Polarity
2438.878	75.96	8.6	67.36	HORIZONTAL
1929.86	67.24	5.6	61.64	HORIZONTAL
1933.868	57.76	5.5	52.26	HORIZONTAL
1937.876	53.39	5.3	48.09	HORIZONTAL
3478.958	50.16	12.2	37.96	HORIZONTAL
3484.97	50.04	12.2	37.84	HORIZONTAL

Ch 78

Frequency(MHz)	Result(dBuV/m)	A <sub>Rpl</sub> (dB)	P <sub>Mea</sub> (dBuV/m)	Polarity
2478.958	91.88	9.1	82.78	HORIZONTAL
1929.86	65.64	5.6	60.04	HORIZONTAL
2442.886	63.5	8.6	54.9	VERTICAL
1933.868	56.49	5.5	50.99	HORIZONTAL
2438.878	54.56	8.6	45.96	VERTICAL
1937.876	53.9	5.3	48.6	HORIZONTAL

See annex B for test graphs.

**Conclusion: PASS**

### A.6. Time of Occupancy (Dwell Time)

**Measurement Limit:**

Standard	Limit (ms)
FCC 47 CFR Part 15.247(a) (1)(iii)	< 400

The measurement is made according to Public notice DA 00-705 and ANSI C63.4

**Measurement Result:**

Channel	Packet	Dwell Time (ms)	Conclusion	
39	DH1	Fig.25	116.21	<b>P</b>
		Fig.26		
39	DH3	Fig.27	199.27	<b>P</b>
		Fig.28		

	DH5	Fig.29	189.75	P
		Fig.30		

See annex B for test graphs.

Conclusion: PASS

### A.7. 20dB Bandwidth

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a)(1)	NA *

The measurement is made according to Public notice DA 00-705 and ANSI C63.4

\* Comment: This test case is not required according to the latest FCC 47 CFR Part 15.247. But the test results are necessary for “carrier frequency separation” test case, in Annex A.8.

Measurement Results:

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.31	766.02	NA
39	Fig.32	766.02	NA
78	Fig.33	807.69	NA

See annex B for test graphs.

Conclusion: NA

### A.8. Carrier Frequency Separation

Measurement Limit:

Standard	Limit(kHz)
FCC 47 CFR Part 15.247(a)(1)	over 25 kHz or (2/3) * 20dB bandwidth

The measurement is made according to Public notice DA 00-705 and ANSI C63.4

\* Comment: This limit should be over 25 kHz or (2/3) \* 20dB bandwidth, whichever is greater.

Measurement Result:

Channel	Carrier frequency separation (kHz)	Conclusion
39	Fig.34	1014.42

See annex B for test graphs.

Conclusion: PASS

### A.9. Number of Hopping Channels

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a) (1)(iii)	At least 15 non-overlapping channels

The measurement is made according to Public notice DA 00-705 and ANSI C63.4

**Measurement Result:**

Channel	Number of hopping channels	Conclusion
0~39	Fig.35	79 <b>P</b>
40~78	Fig.36	

See annex B for test graphs.

Conclusion: PASS

**A.10. 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)	Result (dB $\mu$ V)	Conclusion
		With Charger	
0.15 to 0.5	66 to 56	Fig.37	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)	Result (dB $\mu$ V)	Conclusion
		With Charger 1	
0.15 to 0.5	56 to 46	Fig.37	P
0.5 to 5	46		
5 to 30	50		

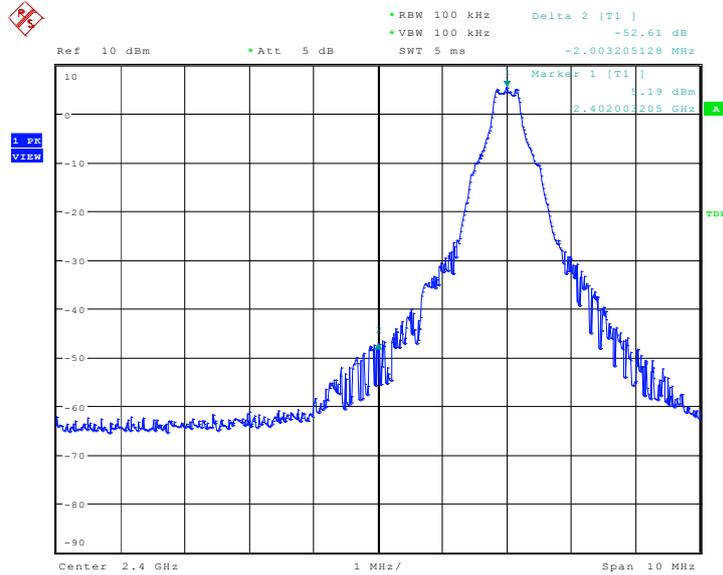
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to Public notice DA 00-705 and ANSI C63.4

See annex B for test graphs.

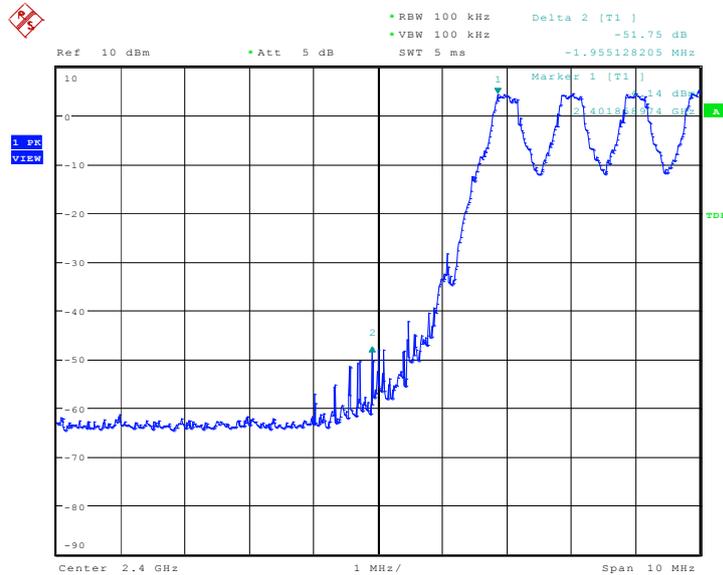
Conclusion: PASS

## ANNEX B: TEST FIGURE LIST



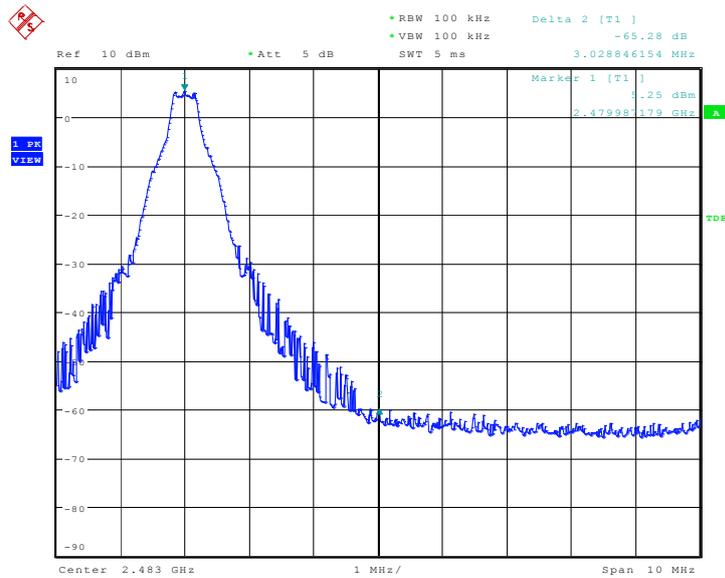
Date: 27.MAY.2010 01:42:26

**Fig. 1 Frequency Band Edges: Channel 0, Hopping Off**



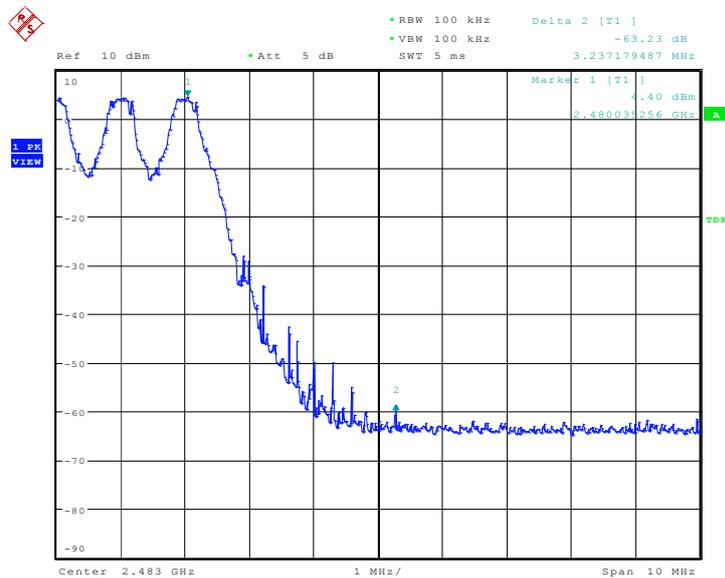
Date: 27.MAY.2010 01:44:45

**Fig. 2 Frequency Band Edges: Channel 0, Hopping On**



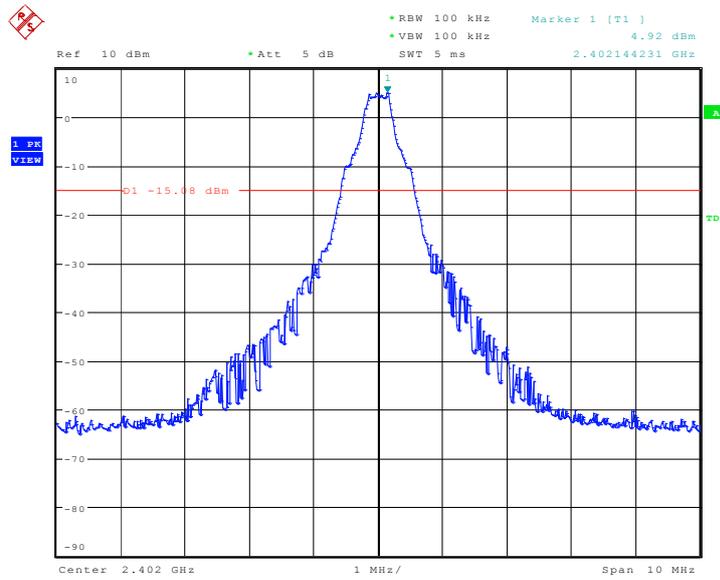
Date: 27.MAY.2010 01:42:43

**Fig. 3 Frequency Band Edges: Channel 78, Hopping Off**



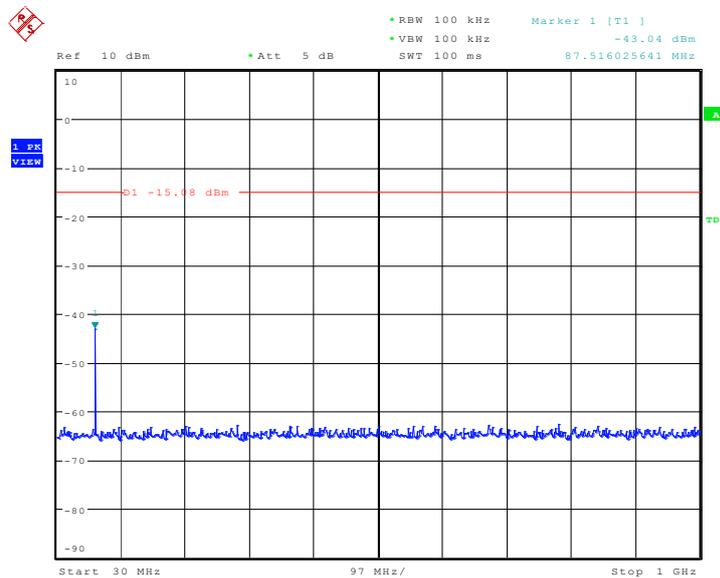
Date: 27.MAY.2010 01:46:47

**Fig. 4 Frequency Band Edges: Channel 78, Hopping On**



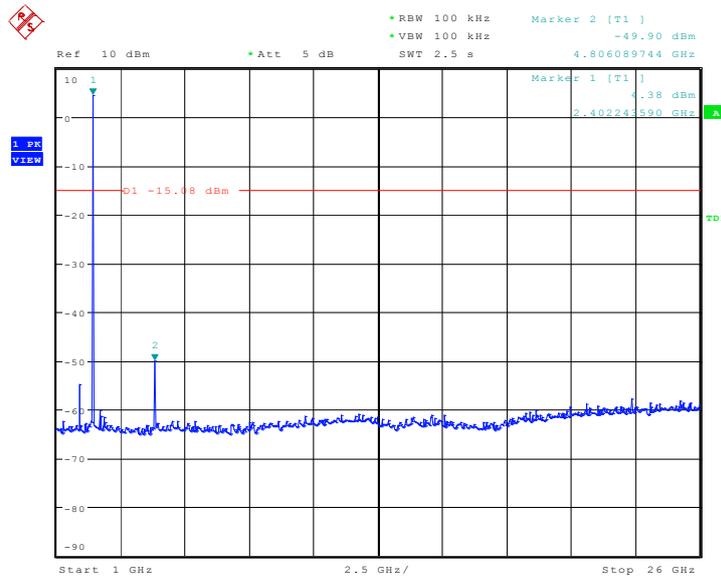
Date: 27.MAY.2010 01:47:06

**Fig. 5 Conducted spurious emission: Channel 0,2402MHz**



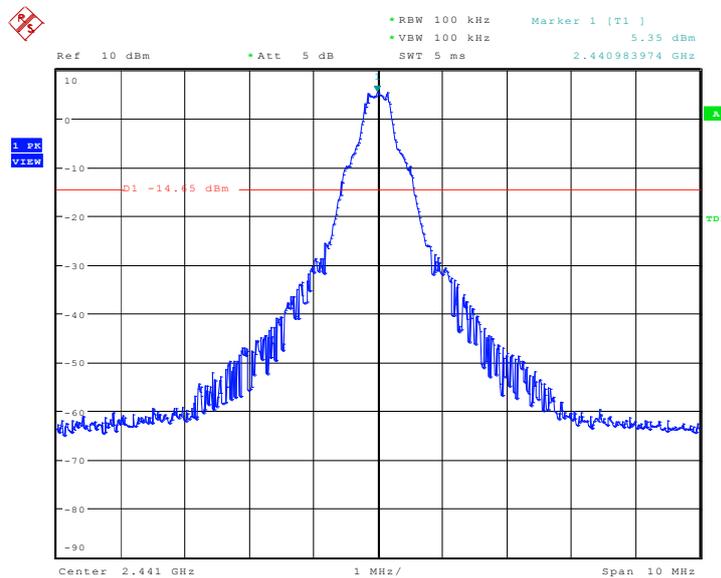
Date: 27.MAY.2010 01:47:22

**Fig. 6 Conducted spurious emission: Channel 0, 30MHz - 1GHz**



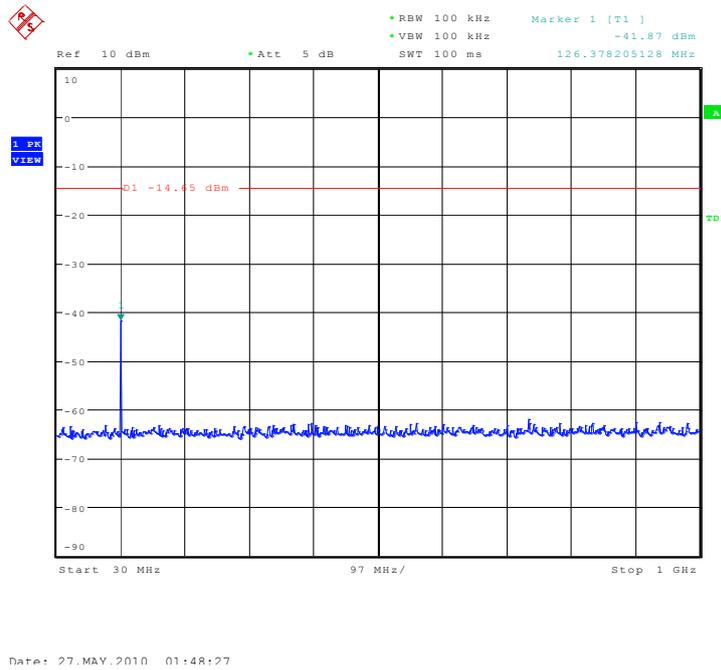
Date: 27.MAY.2010 01:47:54

**Fig. 7 Conducted spurious emission: Channel 0,1GHz - 26GHz**

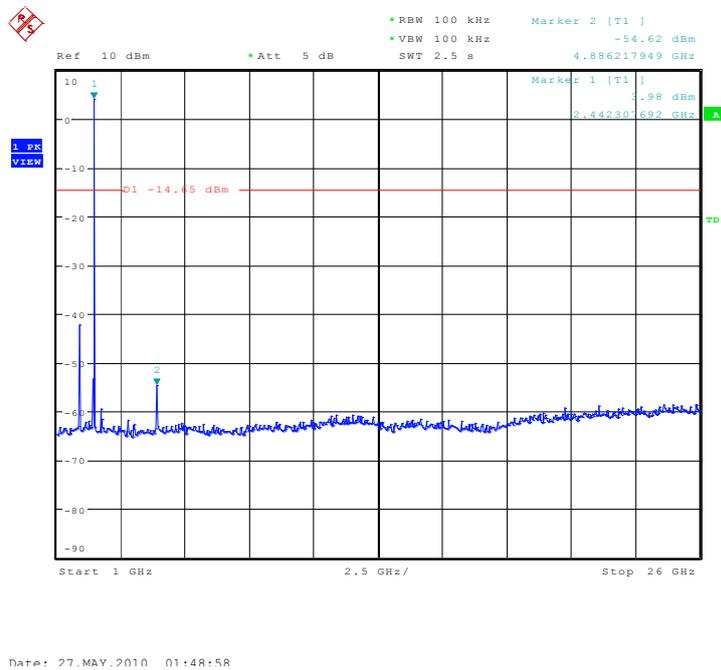


Date: 27.MAY.2010 01:48:10

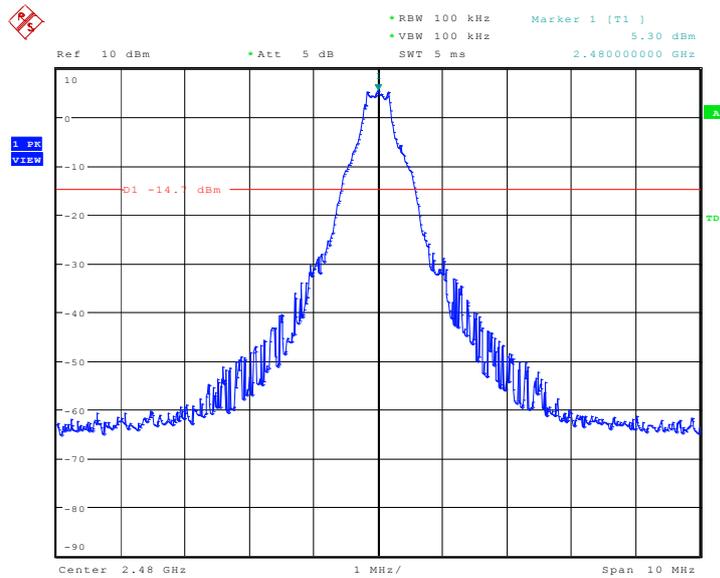
**Fig. 8 Conducted spurious emission: Channel 39, 2441MHz**



**Fig. 9 Conducted spurious emission: Channel 39, 30MHz - 1GHz**

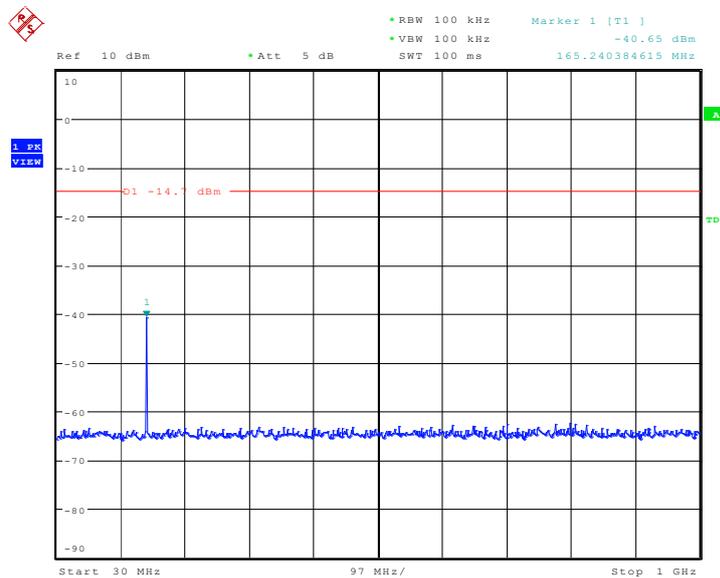


**Fig. 10 Conducted spurious emission: Channel 39, 1GHz – 26GHz**



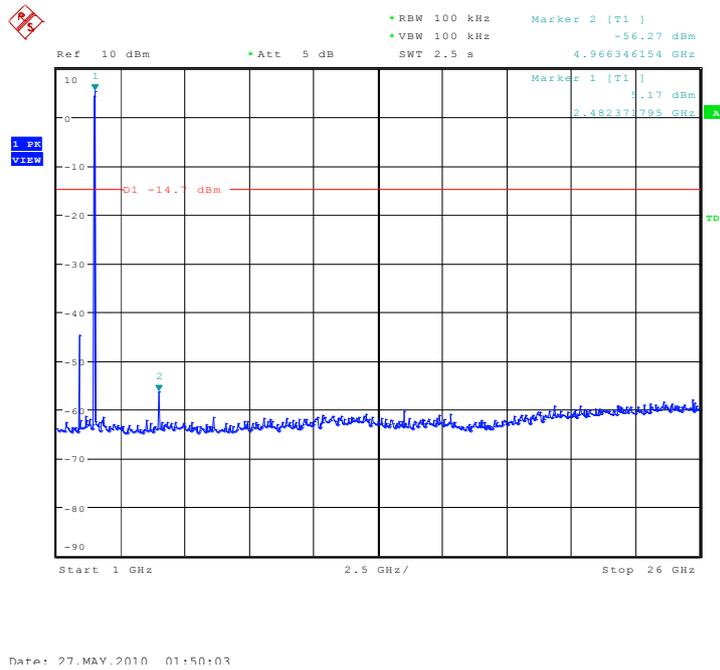
Date: 27.MAY.2010 01:49:15

**Fig. 11 Conducted spurious emission: Channel 78, 2480MHz**

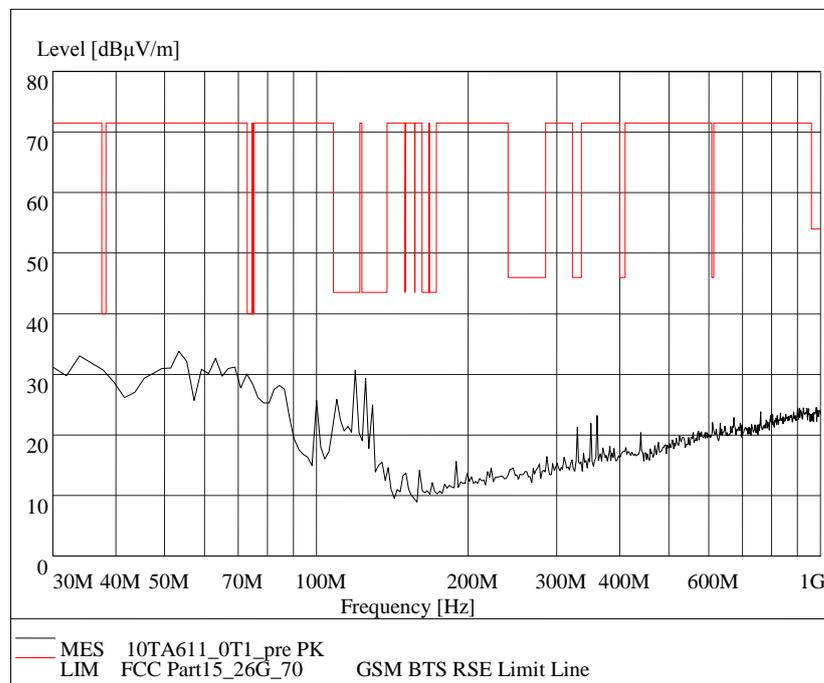


Date: 27.MAY.2010 01:49:31

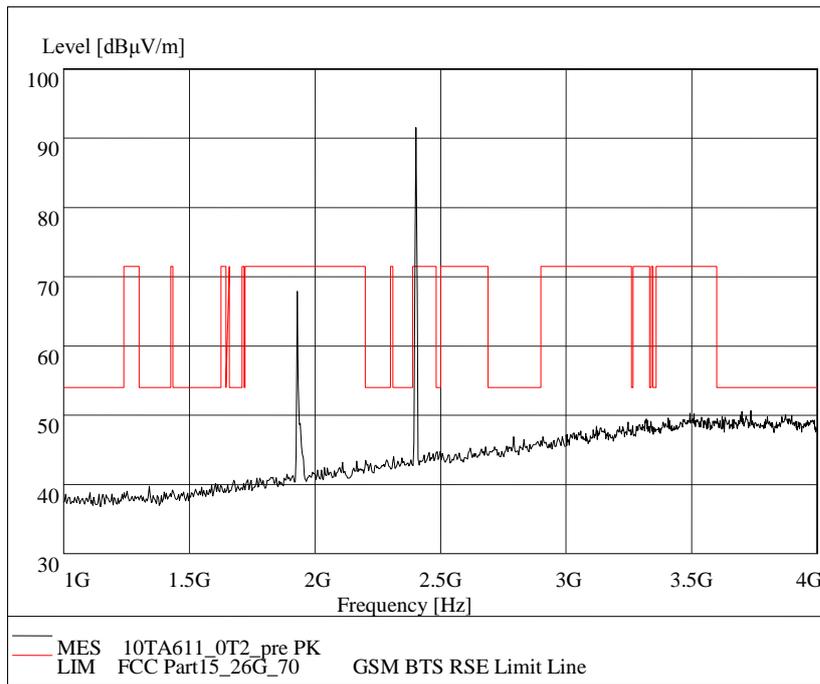
**Fig. 12 Conducted spurious emission: Channel 78, 30MHz - 1GHz**



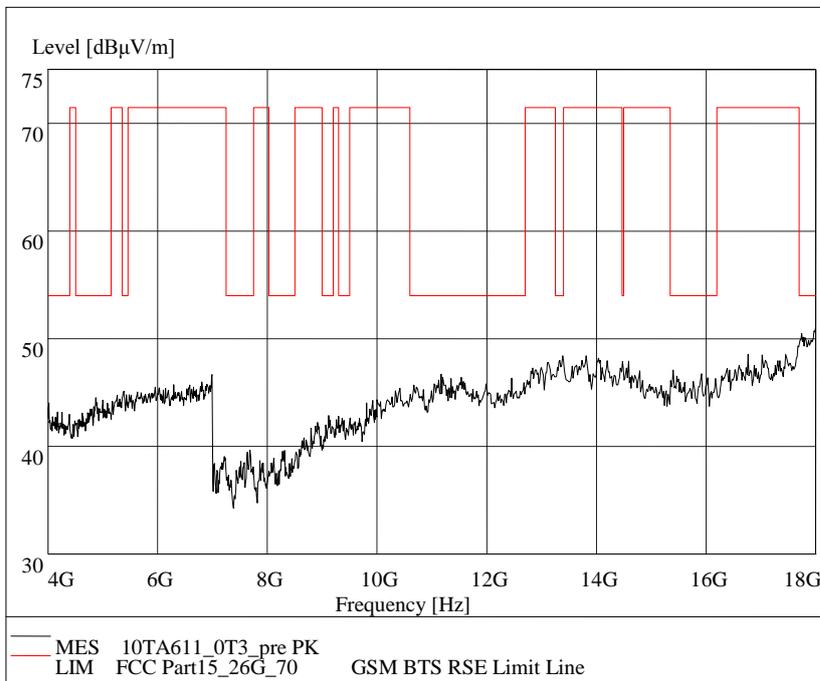
**Fig. 13 Conducted spurious emission: Channel 78, 1GHz - 26GHz**



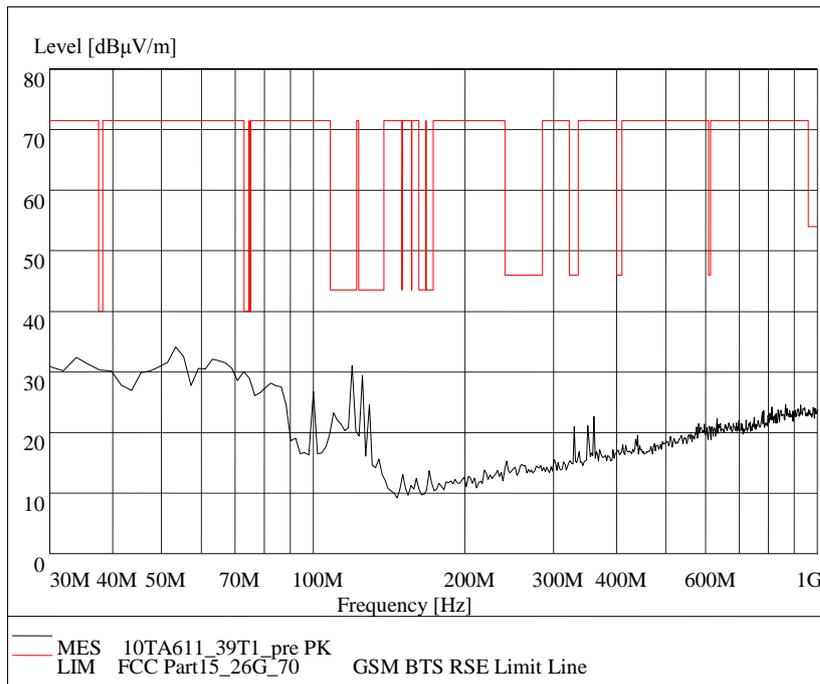
**Fig. 14 Radiated emission: Channel 0, 30 MHz - 1 GHz**



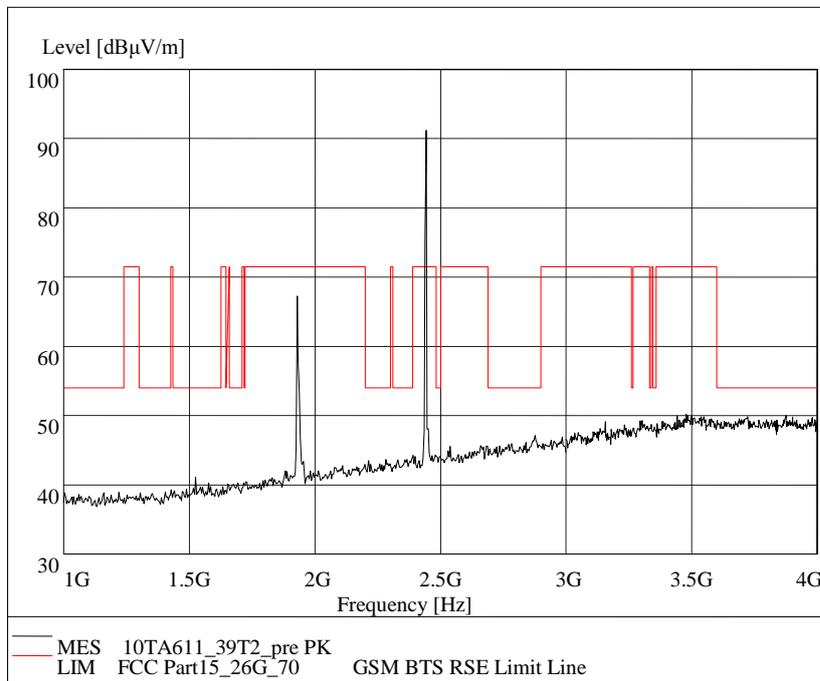
**Fig. 15 Radiated emission: Channel 0, 1 GHz - 4 GHz**



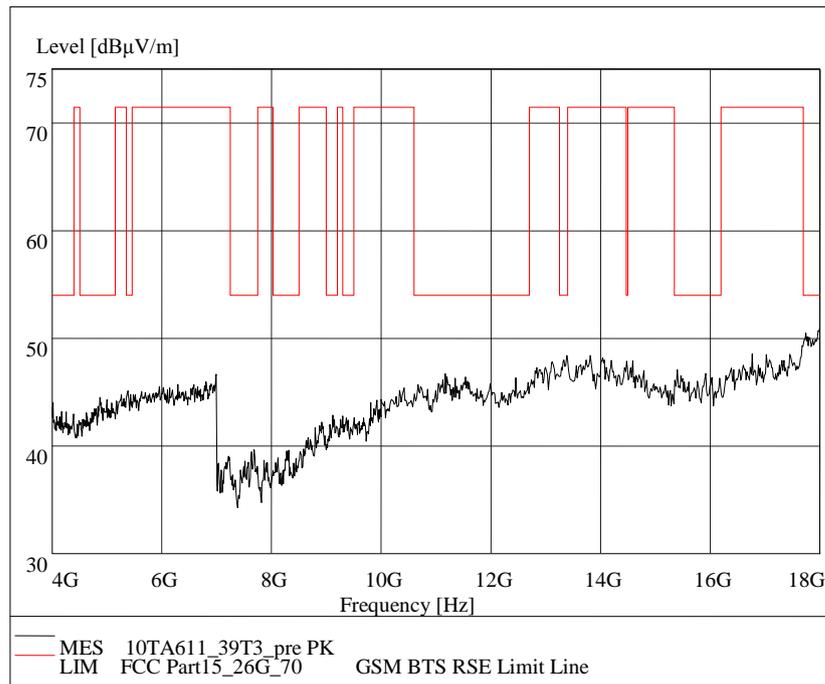
**Fig. 16 Radiated emission: Channel 0, 4 GHz - 18 GHz**



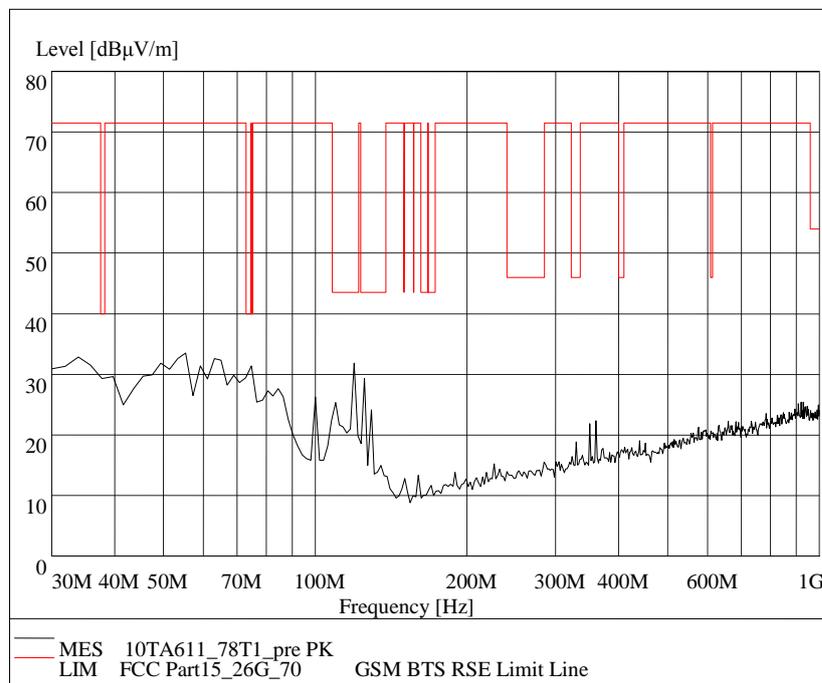
**Fig. 17 Radiated emission: Channel 39, 30 MHz - 1 GHz**



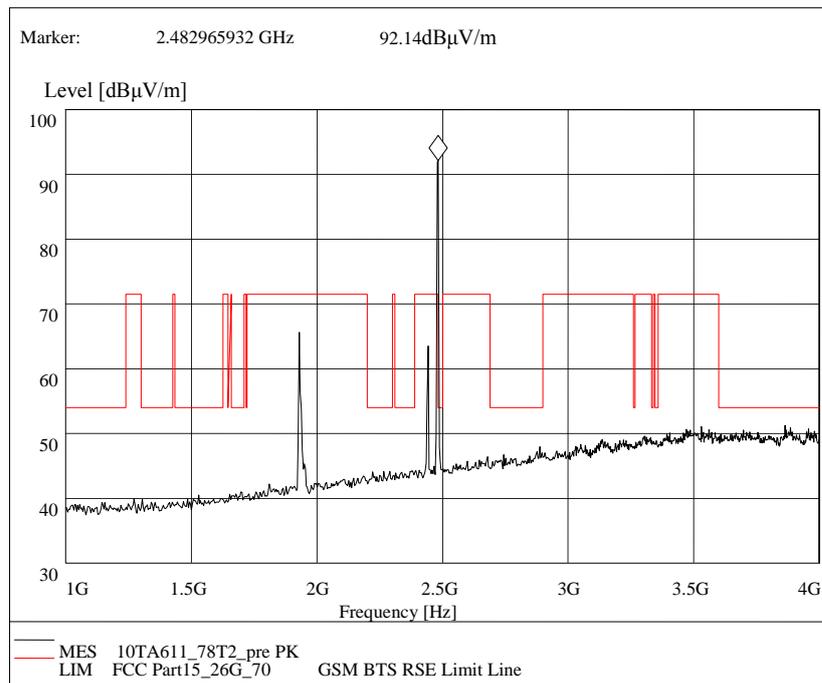
**Fig. 18 Radiated emission: Channel 39, 1 GHz - 4 GHz**



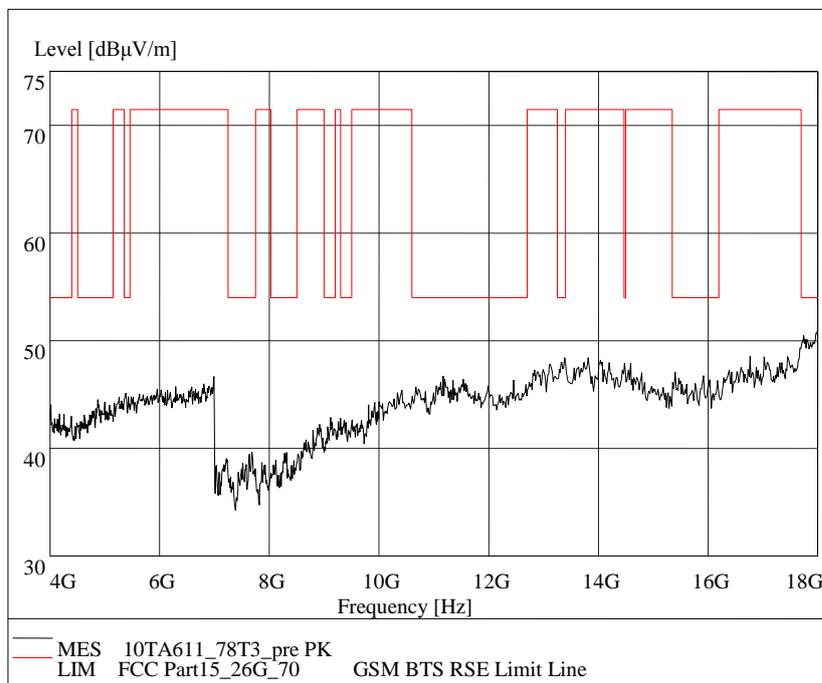
**Fig. 19 Radiated emission: Channel 39, 4 GHz - 18 GHz**



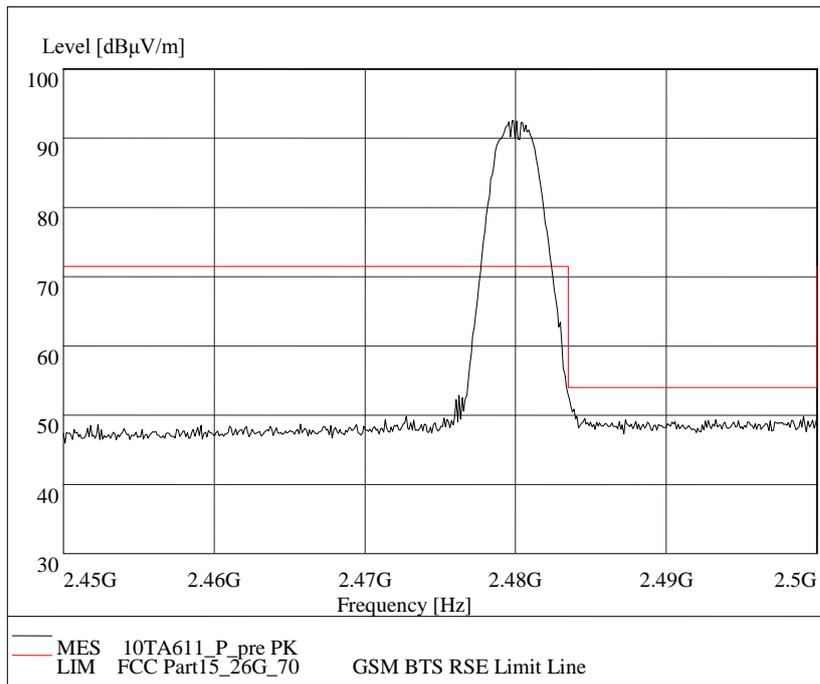
**Fig. 20 Radiated emission: Channel 78, 30 MHz - 1 GHz**



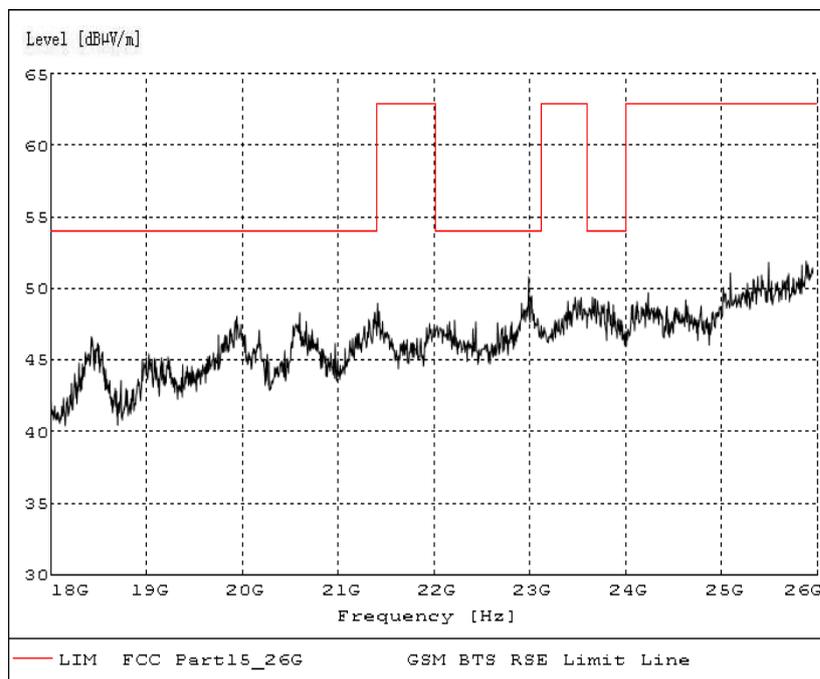
**Fig. 21 Radiated emission: Channel 78, 1 GHz - 4 GHz**



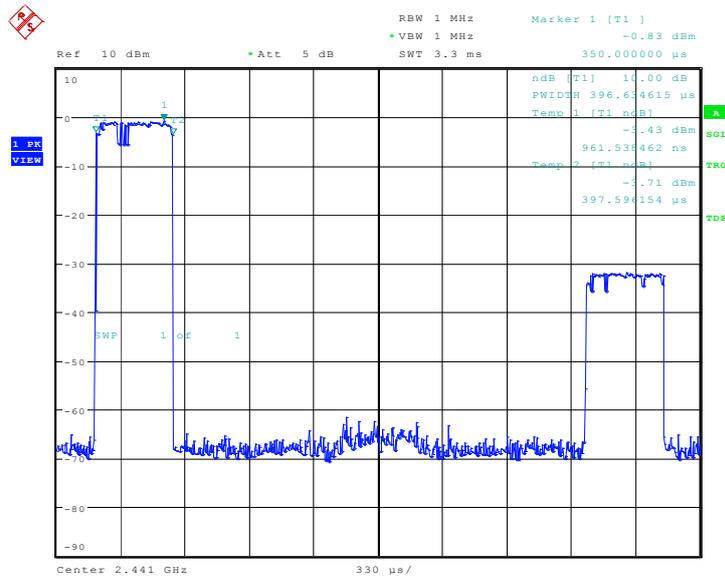
**Fig. 22 Radiated emission: Channel 78, 4 GHz - 18 GHz**



**Fig. 23 Radiated emission (Power): 2.45GHz - 2.5GHz**

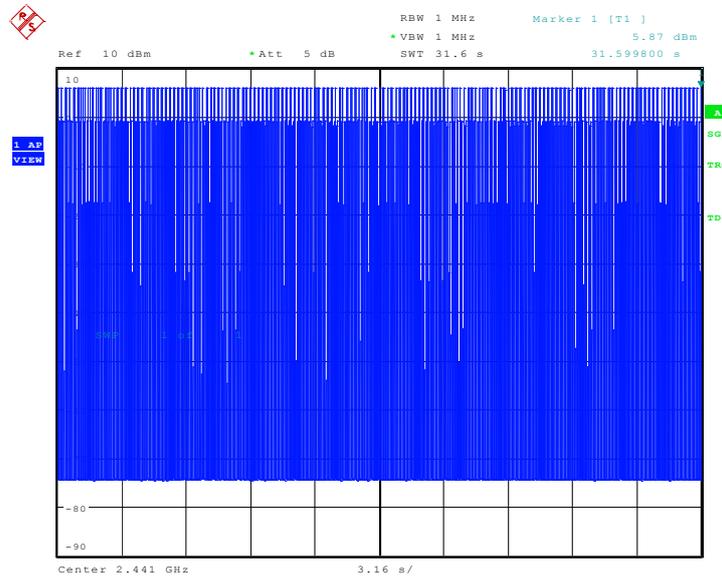


**Fig. 24 Radiated emission: 18 GHz - 26 GHz**



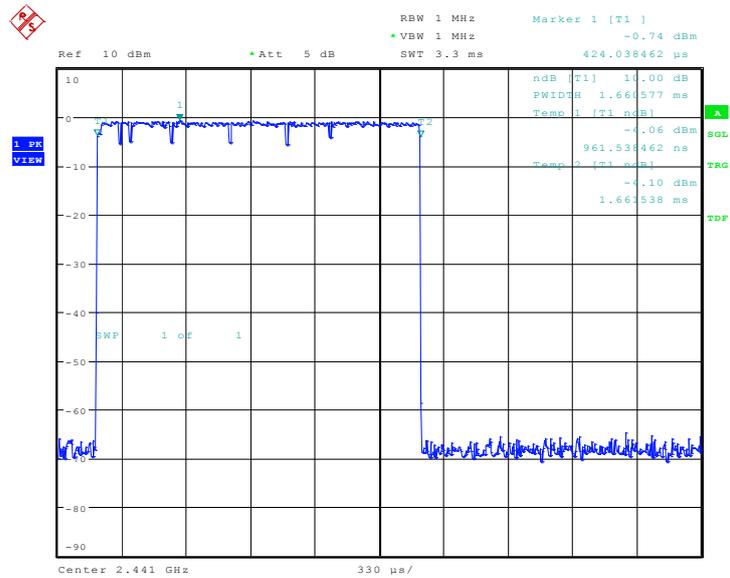
Date: 27.MAY.2010 01:51:28

**Fig. 25 Time of occupancy (Dwell Time): Channel 39, Packet DH1**



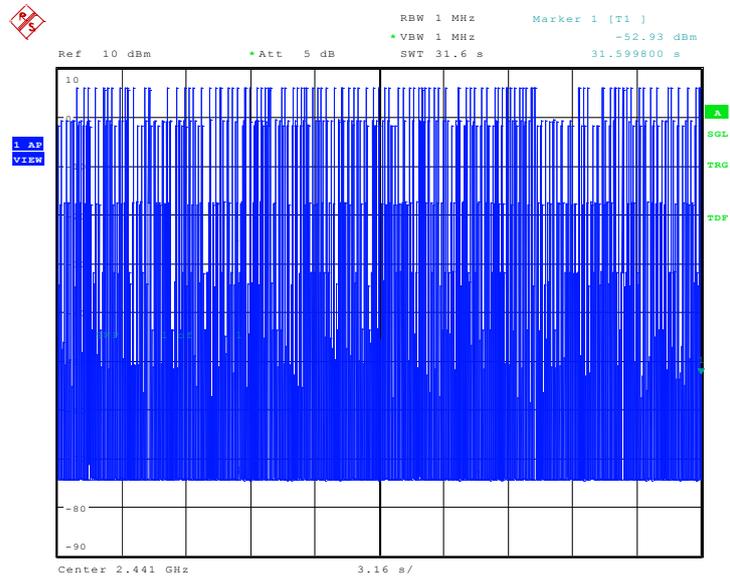
Date: 27.MAY.2010 01:51:16

**Fig. 26 Number of Transmissions Measurement: Channel 39, Packet DH1**



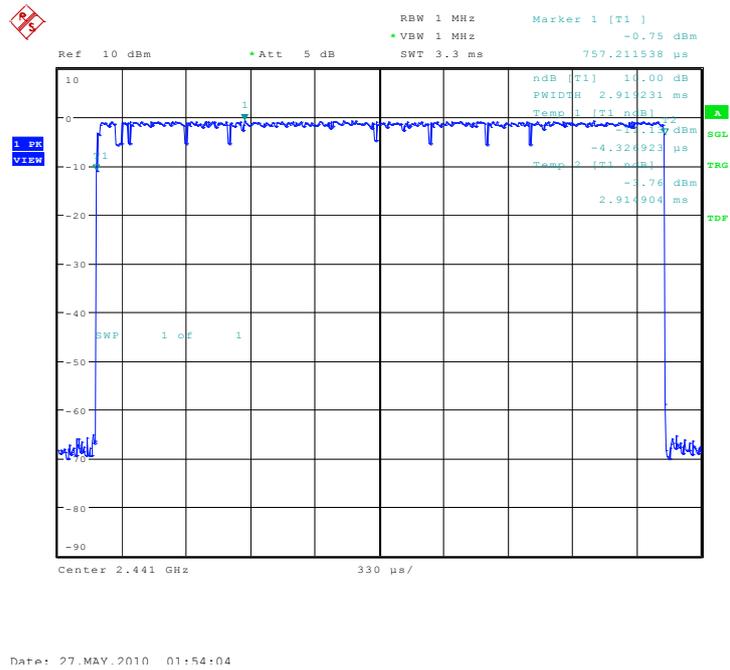
Date: 27.MAY.2010 01:52:47

**Fig. 27 Time of occupancy (Dwell Time): Channel 39, Packet DH3**

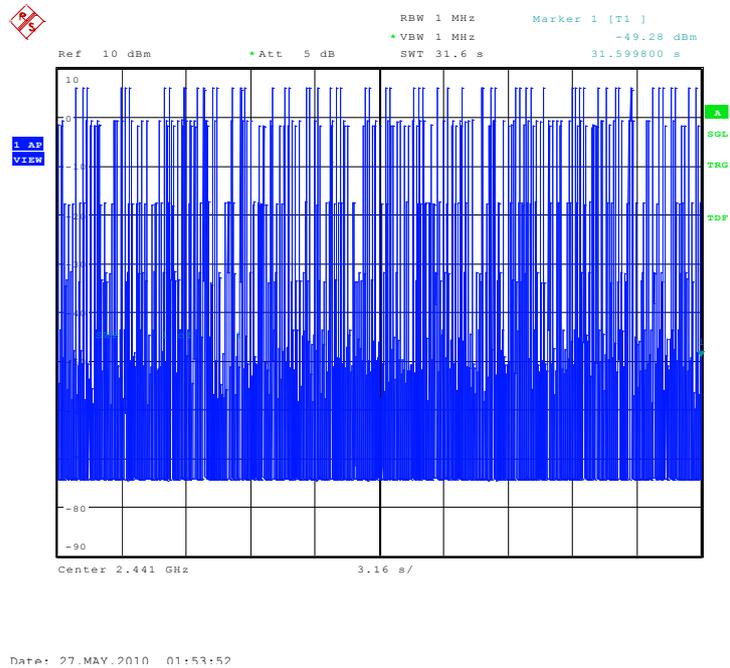


Date: 27.MAY.2010 01:52:35

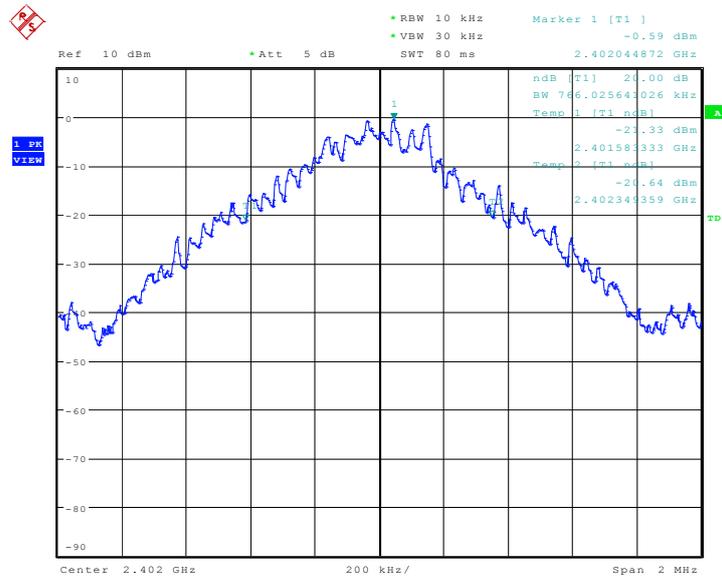
**Fig. 28 Number of Transmissions Measurement: Channel 39, Packet DH3**



**Fig. 29 Time of occupancy (Dwell Time): Channel 39, Packet DH5**

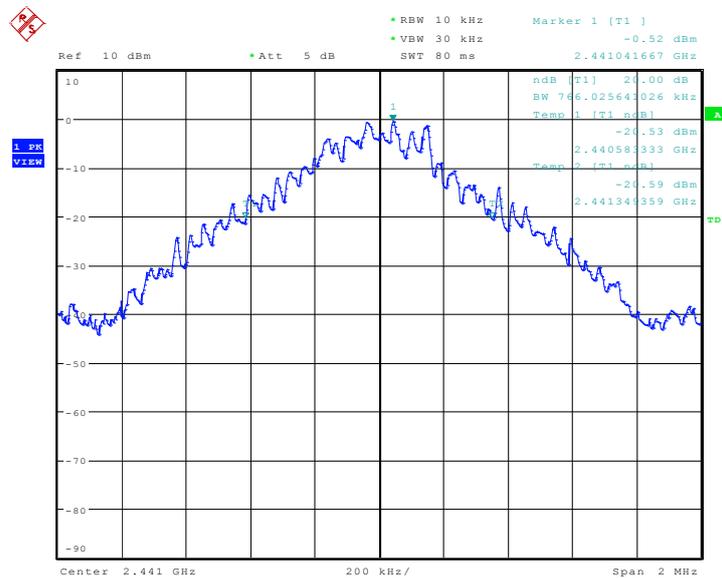


**Fig. 30 Number of Transmissions Measurement:Channel 39,Packet DH5**



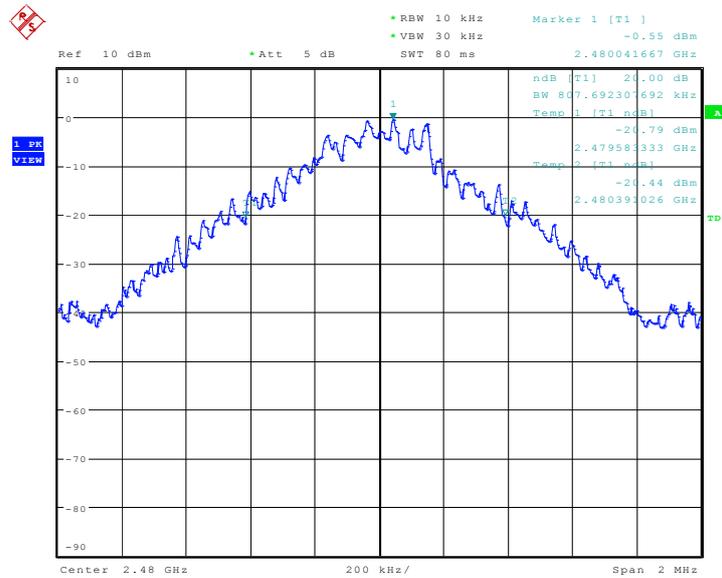
Date: 27.MAY.2010 01:54:37

**Fig. 31 20dB Bandwidth: Channel 0**



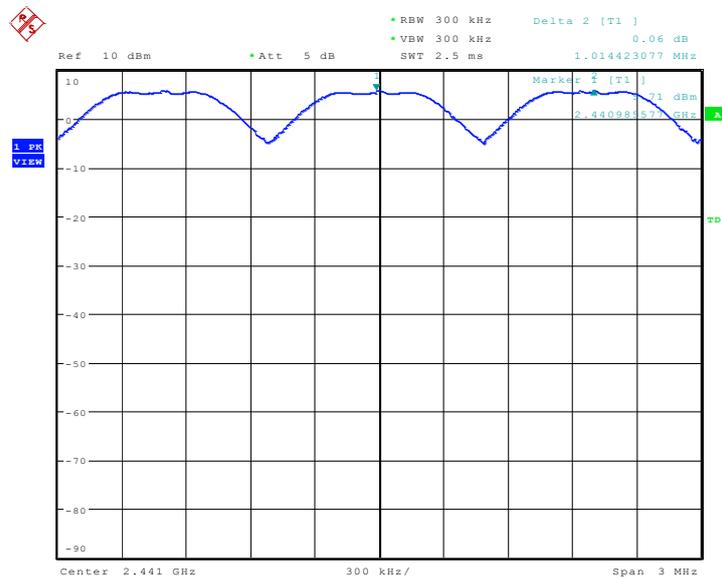
Date: 27.MAY.2010 01:55:09

**Fig. 32 20dB Bandwidth: Channel 39**



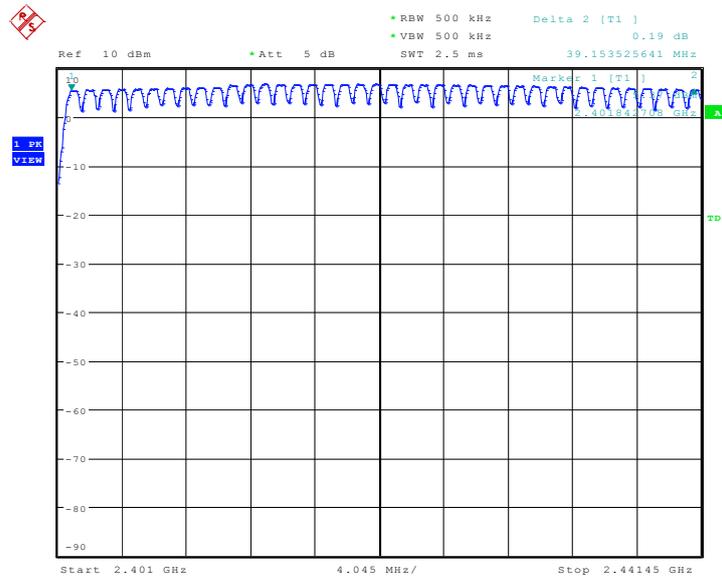
Date: 27.MAY.2010 01:55:40

Fig. 33 20dB Bandwidth: Channel 78



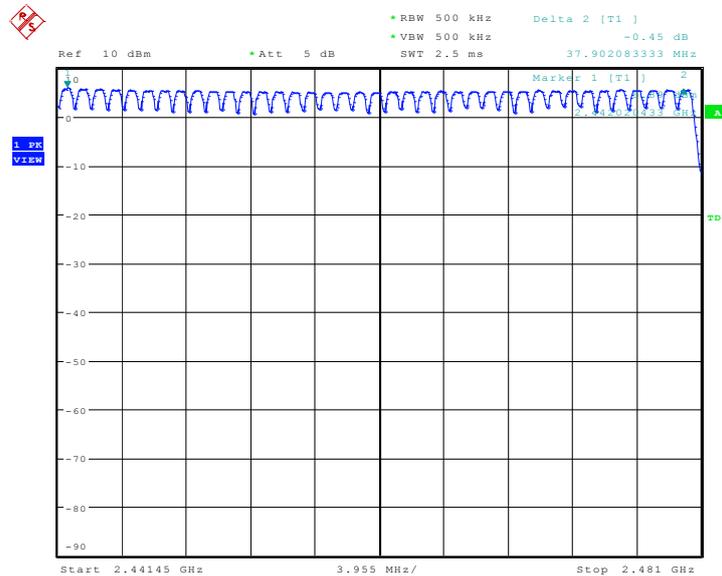
Date: 27.MAY.2010 01:57:44

Fig. 34 Carrier frequency separation measurement: Channel 39



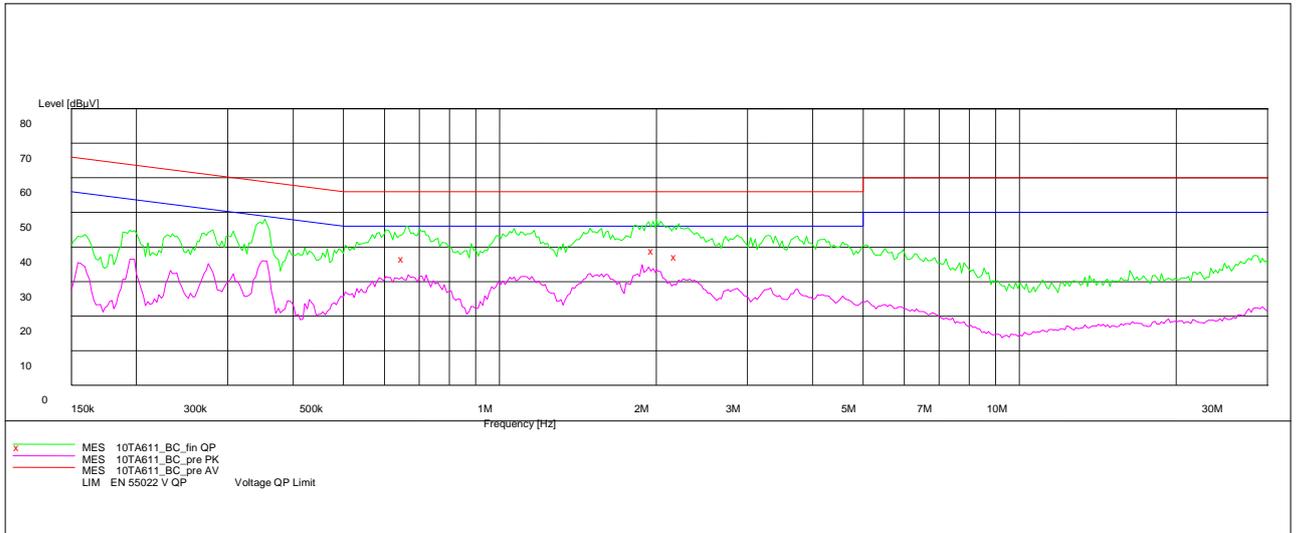
Date: 27.MAY.2010 01:59:48

**Fig. 35 Number of hopping frequencies: Channel 0 - 39**



Date: 27.MAY.2010 02:01:50

**Fig. 36 Number of hopping frequencies: Channel 40 - 78**



**Fig. 37 AC Powerline Conducted Emission with charger**

MEASUREMENT RESULT: "10TA611\_BC\_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB	dB	
0.660657	41.00	10.1	56	15.0	L1	GND
2.000000	43.20	10.1	56	12.8	L1	GND
2.209244	41.40	10.1	56	14.6	L1	FLO

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