

6c.1 BLUETOOTH MEASURED DATA – Pursuant 47 CFR 2.1041

Bluetooth conducted measurement setup and procedure was provided in Exhibit 7.

6c.1.1. Bluetooth Carrier Frequency Separation – Pursuant 47 CFR 15.247(a)(1)

The measurement shows a carrier frequency separation of 1.012 MHz, which is greater than the measured 20 dB bandwidth of 917.8 kHz.

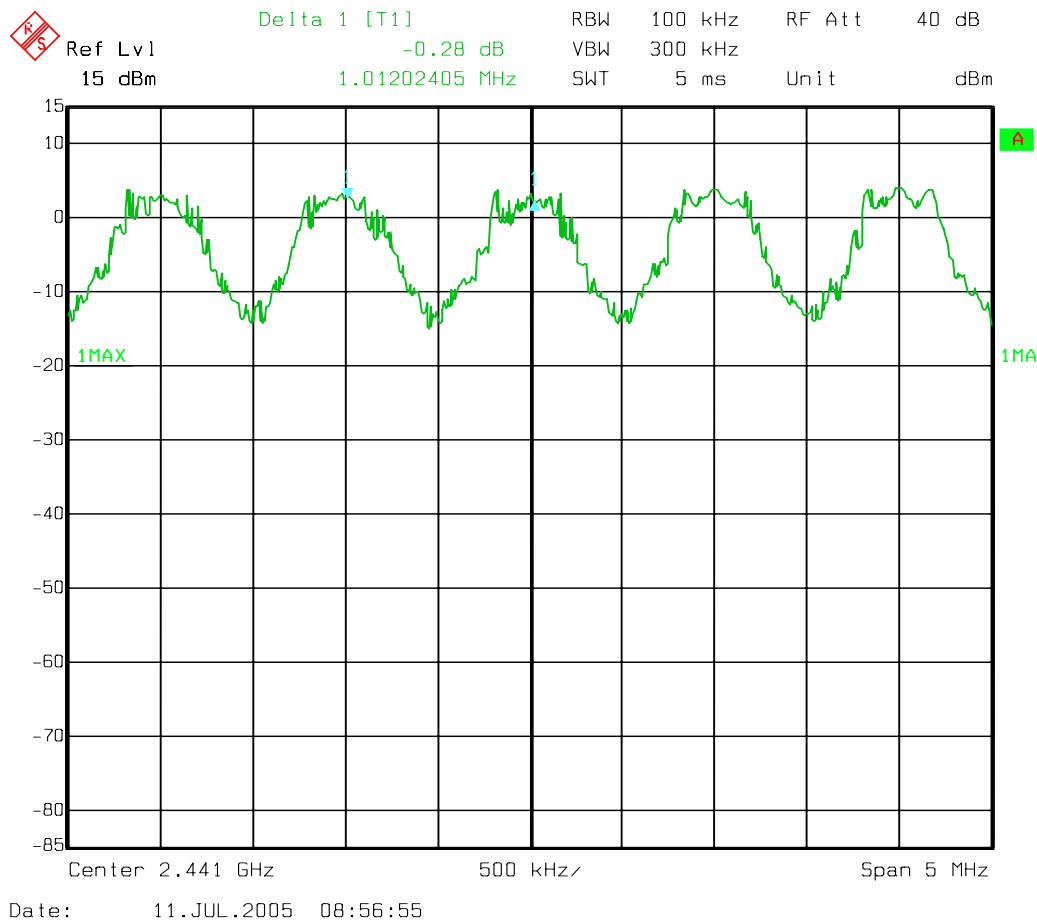


Figure 6c-1.1: Plot of Bluetooth carrier frequency separation

6c.1.2. Bluetooth number of hopping frequencies – Pursuant 47 CFR 15.247(a)(1)(iii)

The measurement shows 79 non-overlapping channels over a span of 79 MHz.

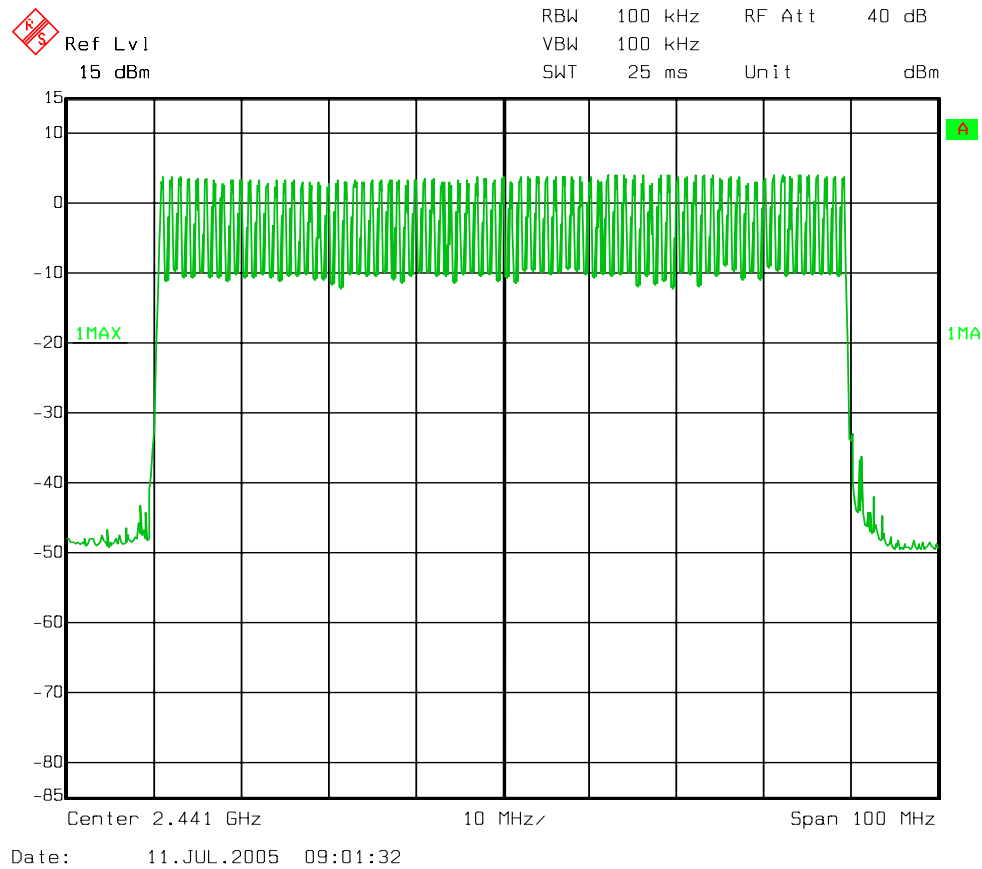


Figure 6c-1.2: Plot of number of Bluetooth hopping frequencies

6c.1.3. Time of Occupancy (Dwell Time) – Pursuant 47 CFR 15.247(a)(1)(iii)

The measurement shows the total dwell time in a 31.6 second period to be 136.339 ms.

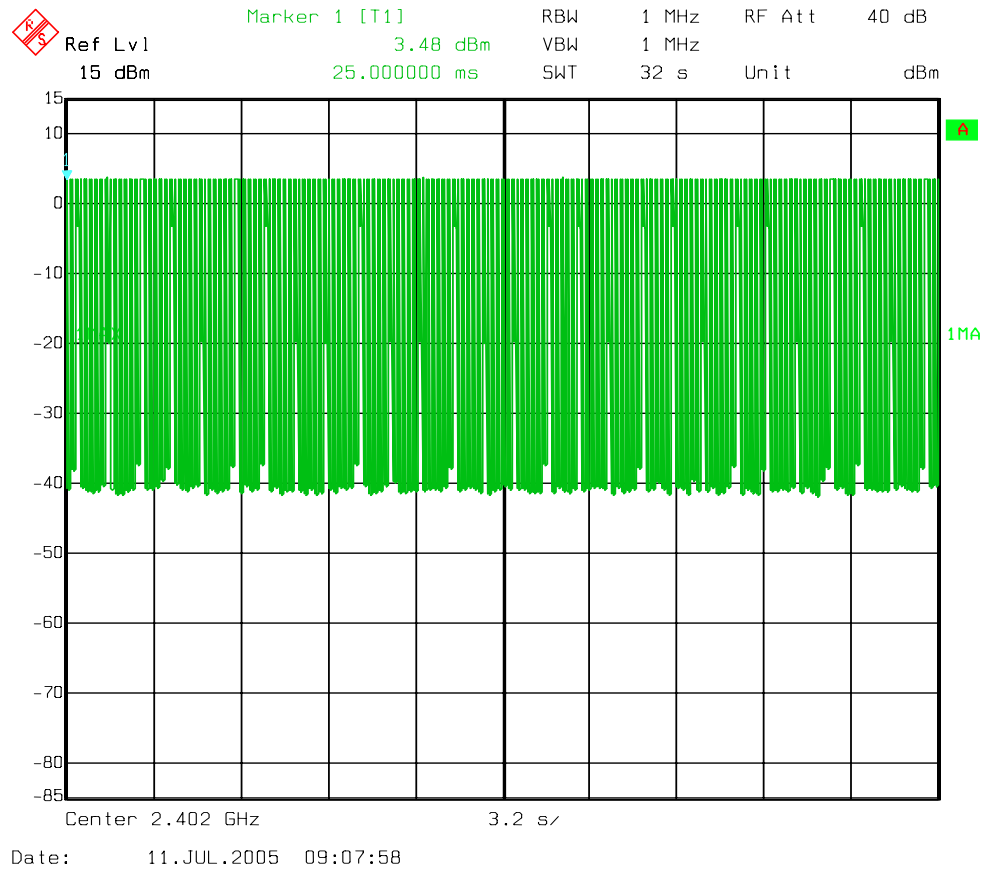
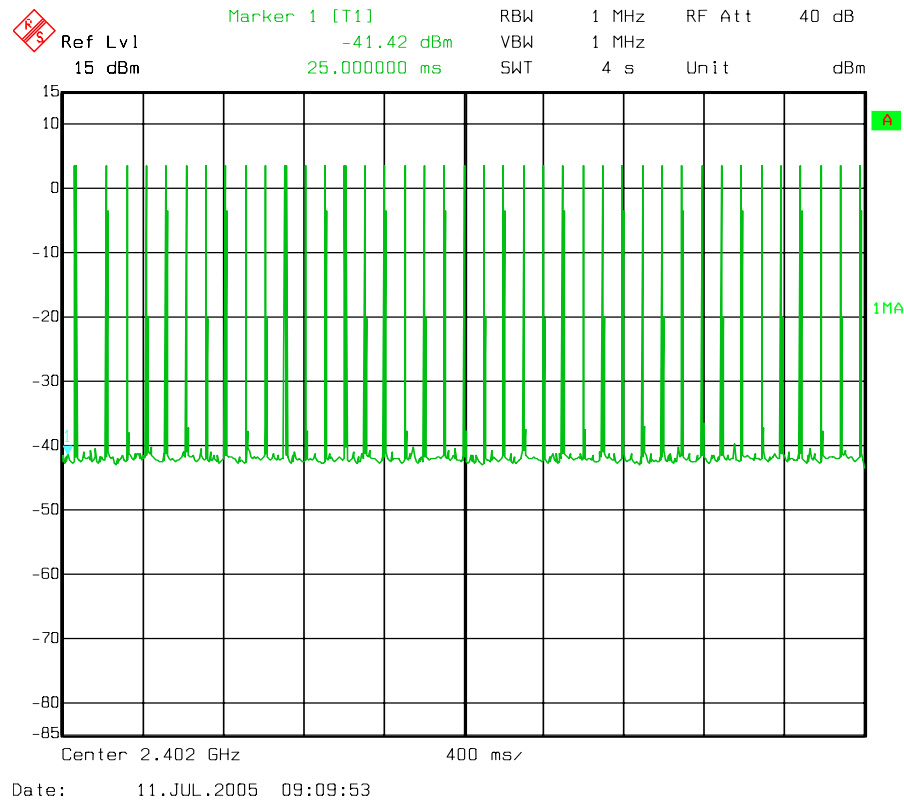
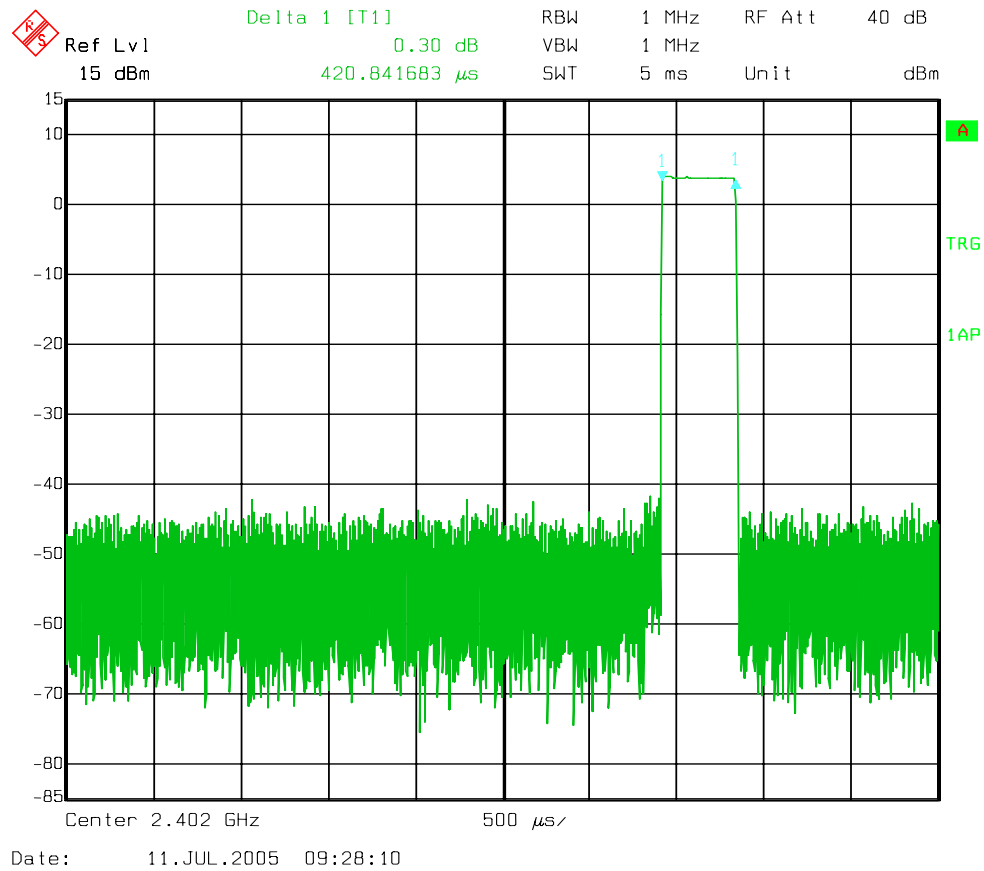


Figure 6c-1.3.1: Plot of dwell time over 32 second period

**Figure 6c-1.3.2: Plot of dwell time over 4 second period**

**Figure 6c-1.3.3: Plot of dwell time over 5 ms period**

6c.1.4. 20 dB Bandwidth – Pursuant 47 CFR 15.247(a)(1)(ii)

The 20 dB bandwidth of the emission is 917.8 kHz.

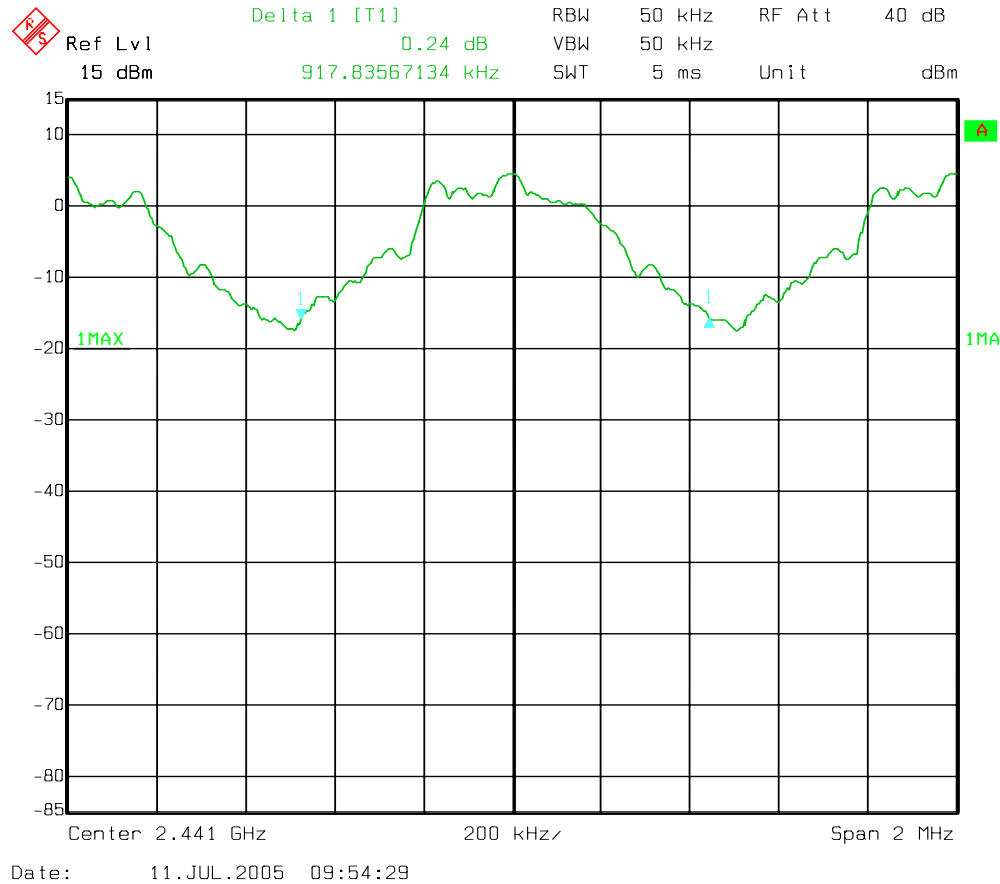


Figure 6c-1.4.1: Plot of 20 – dB bandwidth

6c.1.5. Peak Bluetooth Output Power – Pursuant 47 CFR 15.247(b)(1)

The peak output power is 1.52 dBm, which is equivalent to 1.42 mW.

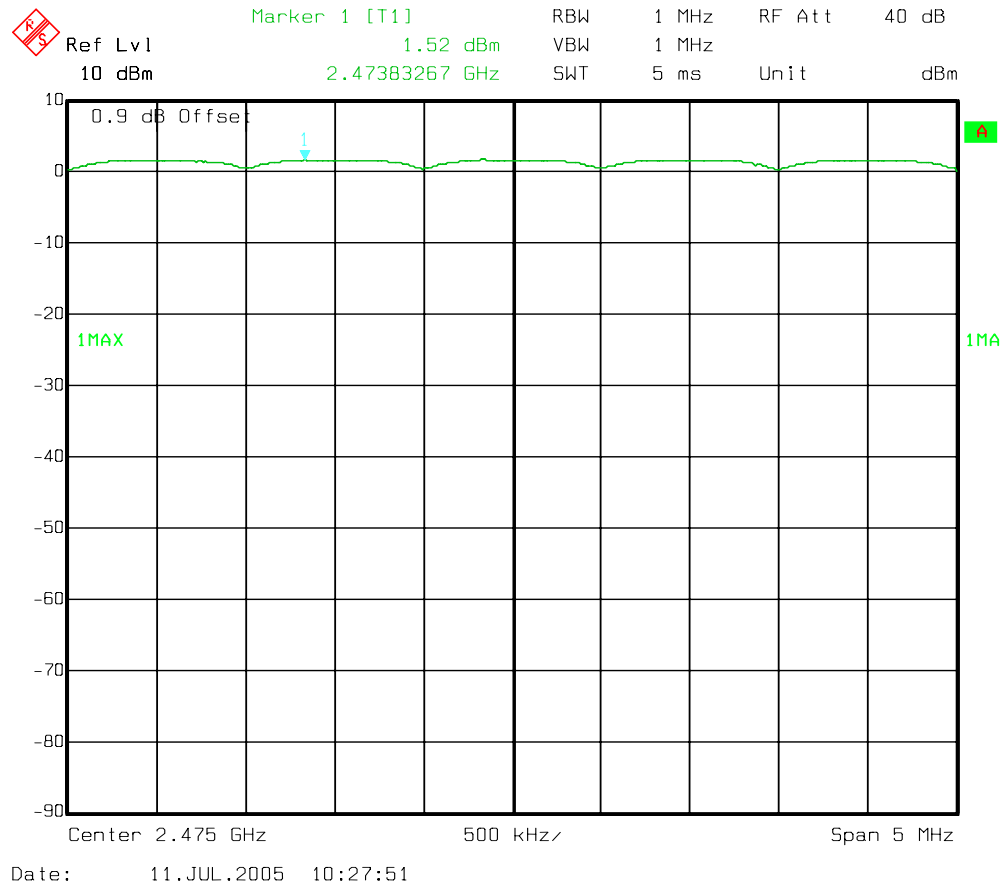


Figure 6c-1.5.1: Plot of peak output power

6c.1.6. Band-Edge Compliance of RF Conducted Emissions – Pursuant 47 CFR 15.247(c)

The measurement shows 44.06 dB at the lower band edge and 46.5 dB at the upper band edge with the hopping function disabled. The measurement shows 47.98 dB at the lower band edge and 47.63 dB at the upper band edge with the hopping function enabled.

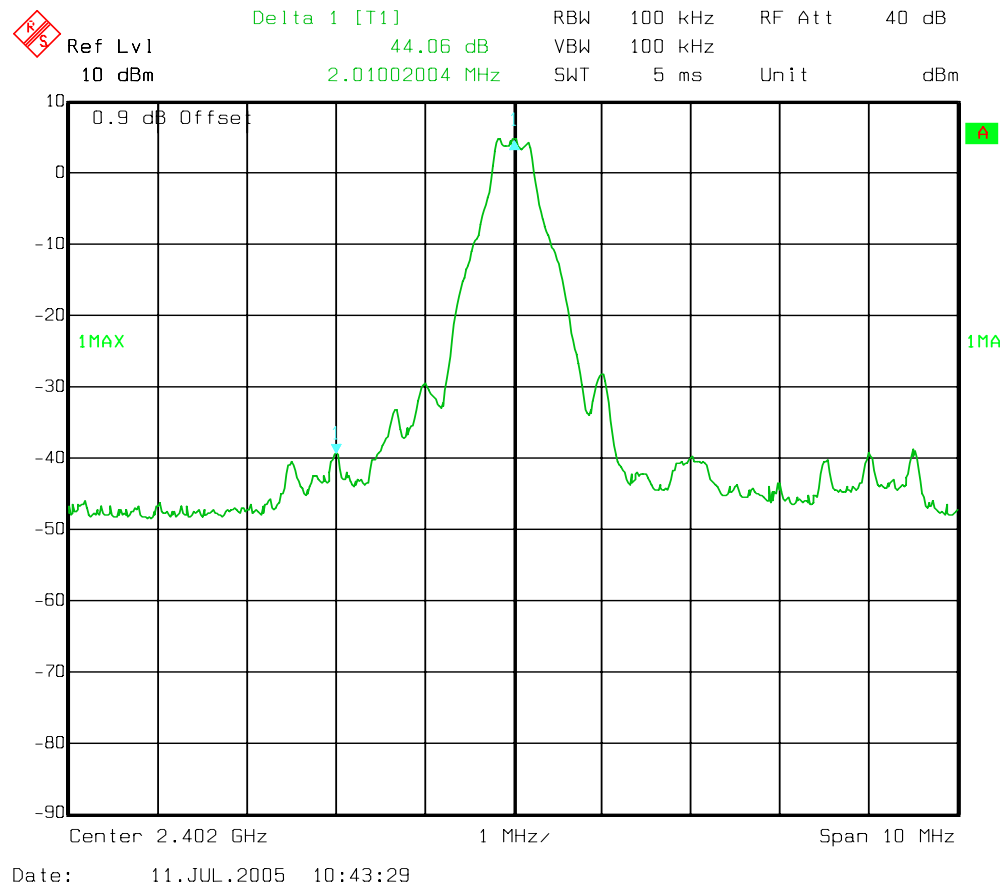


Figure 6c-1.6.1: Plot of lower band-edge conducted emissions with hopping disabled

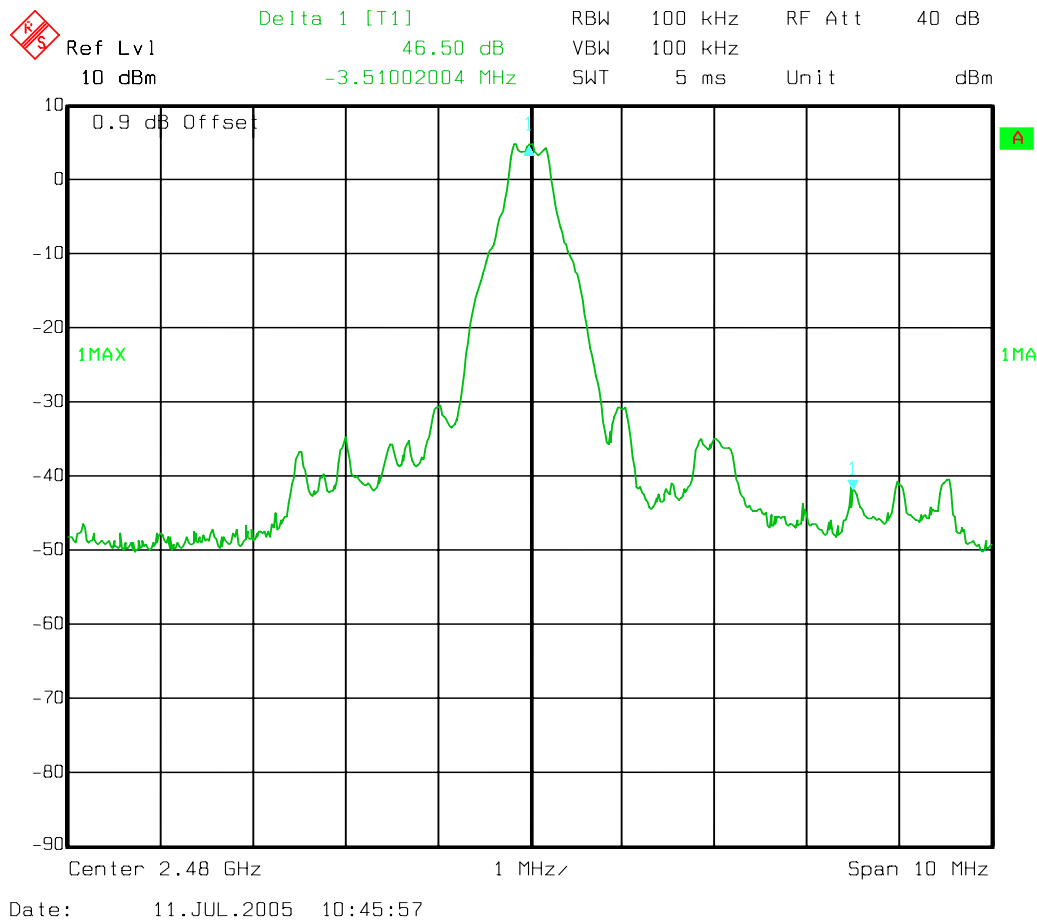


Figure 6c-1.6.2: Plot of upper band-edge conducted emissions with hopping disabled

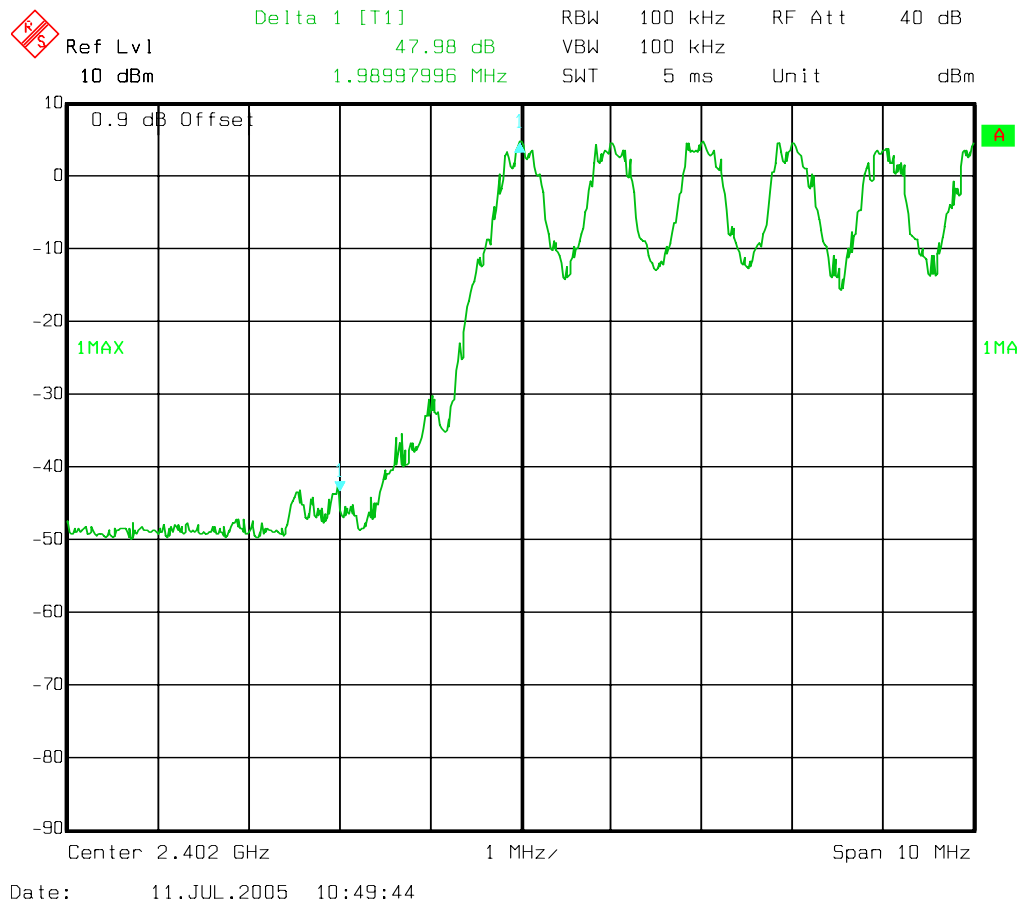
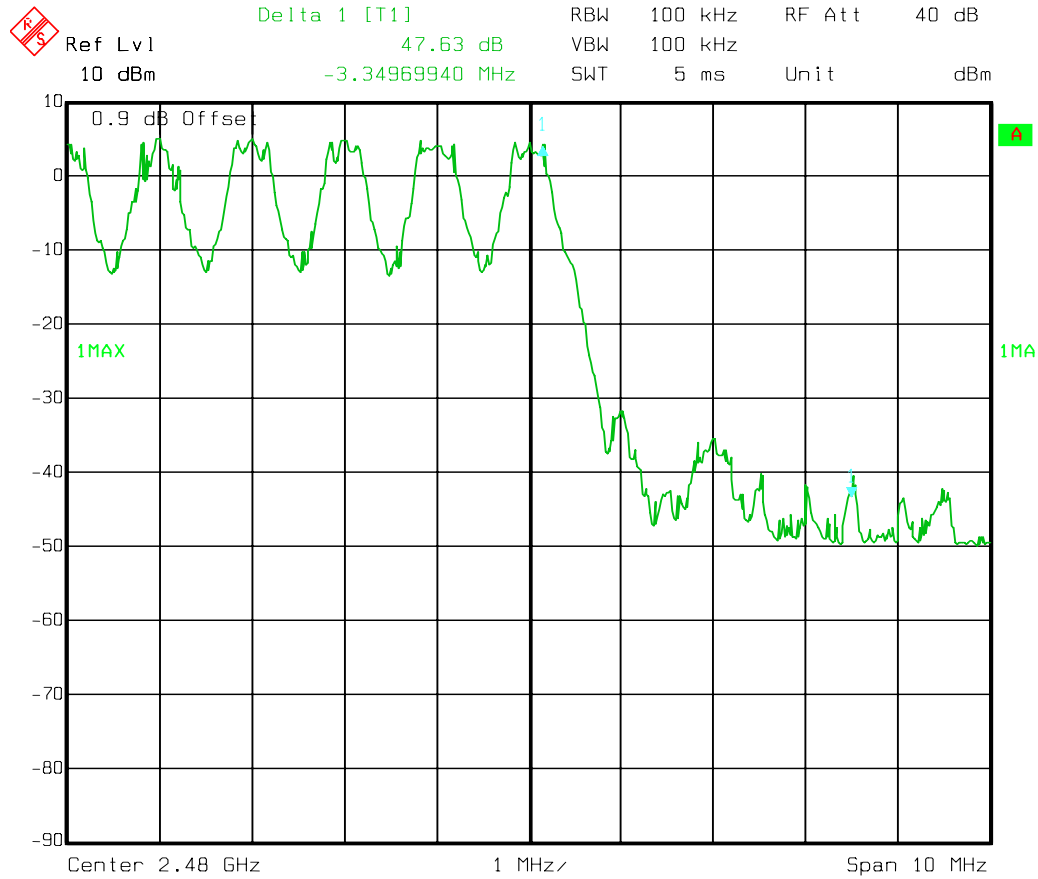


Figure 6c-1.6.3: Plot of lower band-edge conducted emissions with hopping enabled



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**Figure 6c-1.6.4: Plot of upper band-edge
conducted emissions with hopping enabled**

6c.1.7. Spurious RF Conducted Emissions – Pursuant 47 CFR 15.247(c)

The emissions are below 30 dBc at the second harmonic of the transmit frequency and far lower at all other frequencies.

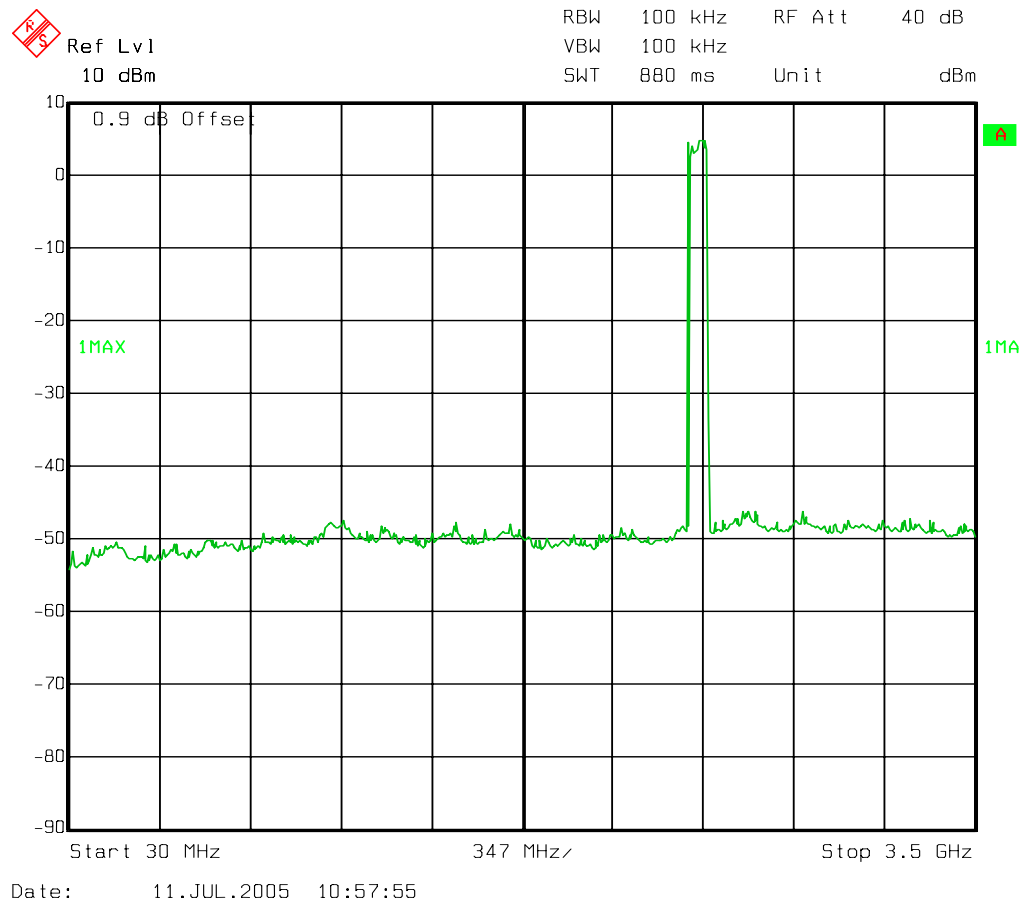
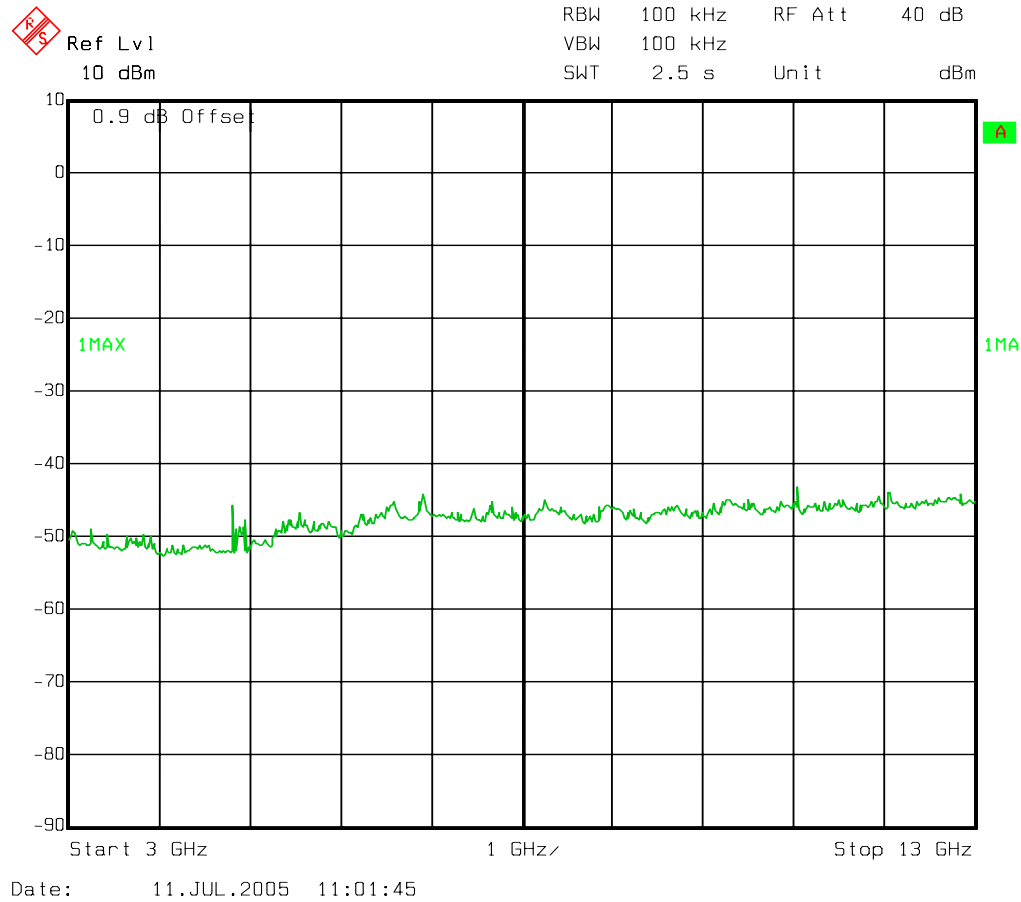
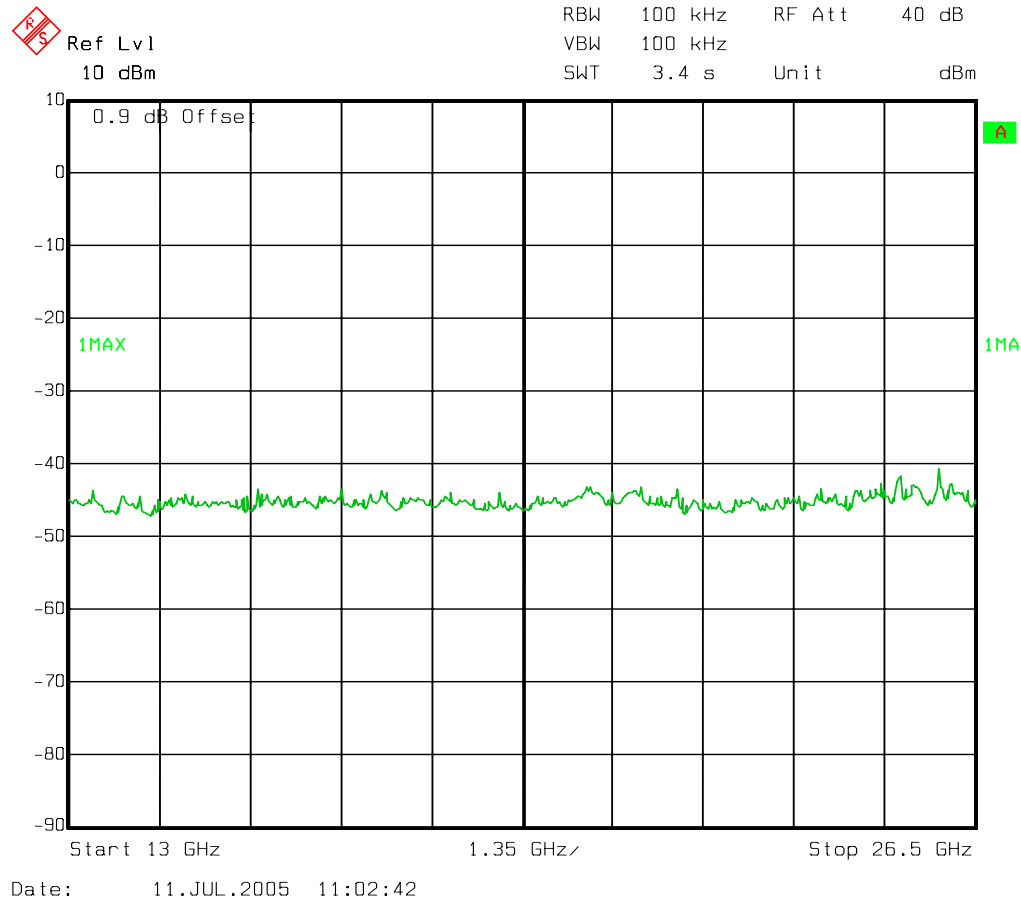


Figure 6c-1.7.1: Plot of spurious conducted emissions 30 MHz – 3.5 GHz

**Figure 6c-1.7.2: Plot of spurious conducted emissions 3 GHz – 13 GHz**

**Figure 6c-1.7.3: Plot of spurious conducted emissions 13 GHz – 26.5 GHz**

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FCC TEST REPORT**FCC Part 15, Subparts B AND C
Part 15.247, band 2400-2483.5 MHz**

STANDARD/PROCEDURE(S): DA 00-705, ANSI C63.4 - 2003

APPLICANT: MOTOROLA, INC. FL
8000 WEST SUNRISE BLVD, MD: 1309
FT. LAUDERDALE FL 33322-9947 USA
MR. ALEXANDER OON
Alexander.Oon@motorola.com

MODEL NUMBER: i870

DESCRIPTION OF
PRODUCT: BLUETOOTH TRANSMITTER INTEGRATED IN iDEN
PHONE

FCC IDs: AZ489FT5846

DATE SAMPLE
RECEIVED FOR TESTING: 7/14/2005

DATE TESTED: 7/22 - 7/26/05

TEST RESULTS: ☒ PASS ☐ FAIL

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1 COMPLIANCE STATEMENT:

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards. No modifications were made to the equipment during testing in order to demonstrate compliance with these standards.

I attest that the necessary measurements were made, under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669.

Authorized Signatory Name: BRUNO CLAVIER

Signature: <ON FILE>

Function: CHIEF ENGINEER

Date: 7/27/2005

Test engineer name: NAM NGUYEN

Signature: <ON FILE>

Date: 7/27/2005

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2 EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/03	1/12/06
Biconnical Antenna	Eaton	94455-1	1057	CAL 3/18/03	3/18/05
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 4/13/05	4/13/07
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
Double-Ridged Horn Antenna	Electro-Metrics	RGA-180	2319	CAL 12/29/04	12/29/06
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 5/8/03	5/8/05

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3 TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

POWER OUTPUT: The RF power output was measured at the antenna feed point using a peak power meter.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth (RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1GHz with an appropriate sweep speed. The VEW above 1.0GHz was = 3.0MHz for Peak measurement and 10Hz for linear Average measurement. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 76°F with a humidity of 55%.

4 PEAK POWER OUTPUT

The Peak power output was measured at a low, mid, and high channel. The maximum measured power was:

$P_{out} = 5\text{dBm}$

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5 FIELD STRENGTH OF SPURIOUS EMISSIONS:

FCC rules part: 15.247(c), 15.205, and 15.209

REQUIREMENTS:

Emission Frequency (MHz)	Field Strength		At Distance (m)	Detector Type
	(μ V/m)	(dB μ V/m)		
0.009 - 0.490	2400/f (kHz)	67.6 / kHz	300	AV (9-90 kHz, 110-490 kHz) QP (others)
0.490 - 1.705	24000/f (kHz)	87.6 / kHz	30	QP
1.705 - 30.0	30	29.5	30	QP
30 - 88	100	40	3	QP
88 - 216	150	43.5	3	QP
216 - 960	200	46	3	QP
> 960	500	54	3	AV (> 1GHz)

Emissions that fall in the restricted bands, as listed in part 15.205, must be less than 54dB μ V/m above 1GHz based on an average detector. The provisions of part 15.35 apply: The Peak limit is 20dB above the average limit. Emissions that fall outside the restricted band must be attenuated by at least 20dB below the fundamental emission based on a 100kHz RBW.

TEST DATA:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,402.00	58.2	V	1.86	32.40	92.46	34.91
2,402.00	64.2	H	1.86	32.40	98.46	28.91
2,441.00	58.4	V	1.88	32.48	92.76	34.61
2,441.00	65.0	H	1.88	32.48	99.36	28.01
2,480.00	59.4	V	1.89	32.56	93.85	33.52
2,480.00	66.1	H	1.89	32.56	100.55	26.82

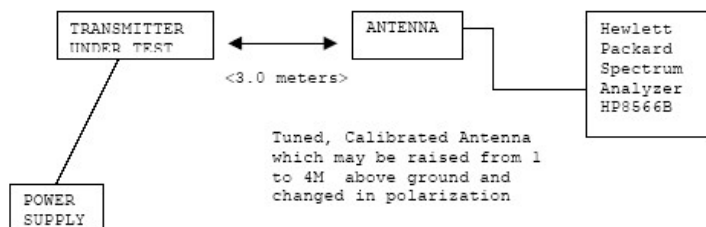
NOTES: The spectrum was investigated for harmonics and spurious emissions up to the 10th harmonic. All the emissions were measured at more than 20dB below the limits.

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5.1 METHOD OF MEASURING RADIATED SPURIOUS EMISSIONS

Equipment placed 80cm above ground on a turntable.

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-2003. Measurements were made at the open field test site of TIMCO ENGINEERING INC. located at 849 N.W. State Road 45, Newberry, FL 32669.

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5.2 RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

REQUIREMENTS: Emissions that fall in the restricted bands (15.205). These emissions must be less than or equal to 500 uV/m (54 dBuV/m). Part 15.35(b) applies in the restricted bands.

TEST PROCEDURE: An in band field strength measurement of the fundamental Emission using the RBW and detector function required by C63.4-2003 and FCC Rules. The procedure was repeated with an average detector and a plot made. The calculated field strength in the adjacent restricted band is presented below.

Fundamental Frequency (MHz)	Field Strength Level of Fundamental (dBuV/m)	Peak or Avg	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) *	Calculated Max. Out of Band Emission Level (dBuV/m) **	Limit (dBuV/m)	Margin (dB)
2402.00	98.46	Peak	2386.01	61.7	36.76	74	27.24
2480.00	100.55	Peak	2484.00	45.1	55.45	74	18.55
2480.00	57.55	Avg	2484.00	45.1	12.45	54	41.55

* According to step 2 of Marker-Delta Method DA 00-705 (following plots included).

** According to step 3 of Marker-Delta Method:
 Calculated Emission Level = Field Strength Level - Delta Marker Level

The EUT was also modified by the enabling frequency hopping function. This is not showing any degradation of the above spurious emissions data.

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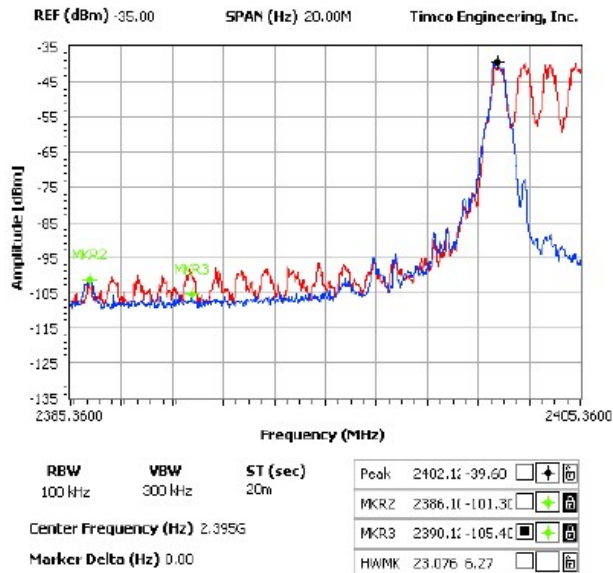
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NOTES:

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MAKER DELTA = 61.7 dB - THE RED LINE IS IN HOPPING MODE



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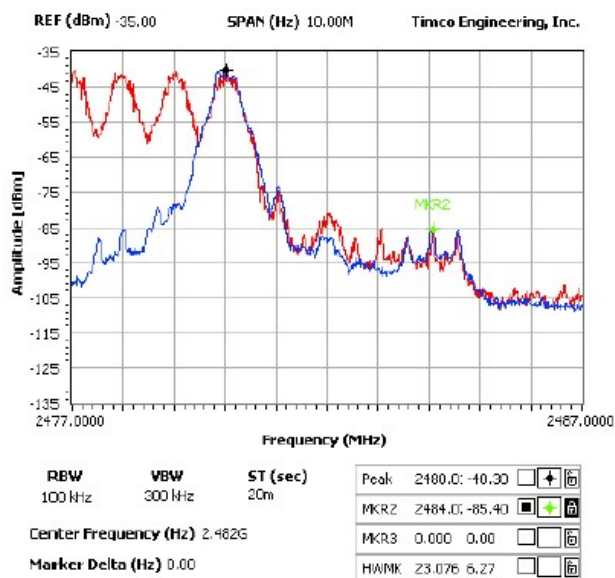
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MAKER DELTA = 45.1 dB - THE RED LINE IS IN HOPING MODE.



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