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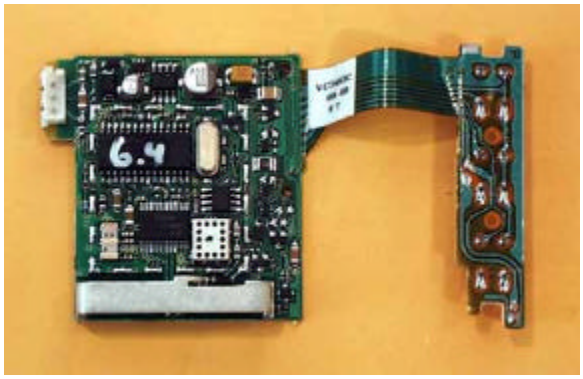
EXHIBIT E: REPORT OF MEASUREMENTS [2.1033(B6)]

Test Report for FCC ID: CB2GTXHL3

FCC Part 2.1031, Part 15 Subpart C(15.231)

Report #0100410F
Issued 4/24/01



TRANSMITTER MODEL CB2GTXHL3 OF HOMELINK® III SERIES

Prepared for: Mr. David Blaker
Johnson Controls Interiors, LLC
One Prince Center
Holland, MI 49423

Test Date(s): April 3,4, 2001

data recorded by

Ted Chaffee, NCE
Test Engineer, AHD

witnessed by

Craig Harder

This report prepared by:

Ted Chaffee, NCE
Technical Manager/Test Engineer, AHD

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Statements Concerning this Report

Test Traceability:
The calibration of all measuring and test equipment and the measured data using this equipment are traceable to the National Institute for Standards and Technology (NIST).

Limitations on results:
The test results contained in this report relate only to the Item(s) tested. Any electrical or mechanical modification made to the test item subsequent to the test date shall invalidate the data presented in this report. Any electrical or mechanical modification made to the test item subsequent to this test date shall require an evaluation to verify continued compliance.

Limitations on copying:
This report shall not be reproduced, except in full, without the written approval of AHD.

Limitations of the report:
This report shall not be used to claim product endorsement by NVLAP, FCC, or any agency of the US Government.

Statement of Test Results Uncertainty: Following the guidelines of NAMAS publication NIS81 and NIST Technical Note 1297, the Measurement Uncertainty at a 95% confidence level is determined to be: ±3.6 dB

Manufacturer/Applicant [2.1033(b1)]

The manufacturer and applicant:

JOHNSON CONTROLS INTERIORS, LLC.
One Prince Center
Holland, Michigan 49423

Measurement/Test Site Facility & Equipment

Test Site [2.948, 2.1033(b6)]

The AHD test facility is centered on 9 acres of rural property near Sister Lakes, Michigan. The mailing address is 92723 M-152, Dowagiac, Michigan 49047. This test facility is NVLAP accredited (LabCode 200129-0). It has been fully described in a report filed with the FCC and Industry Canada. The original report filed with the FCC is, dated November 5, 1996, was accepted by the FCC in a letter dated January 15, 1997 and reconfirmed July 14, 2000, (31040/SIT 1300F2). The original report filed with Industry Canada, dated August 11, 1998, was accepted via a letter dated September 1, 1998, (file:IC3161).

Measurement Equipment Used [2.947(d), 15.31(b)]

Equipment	Model	S/N	Last Cal Date	Calibration Interval
HP EMI Receiver system	HP 8546A			
RF Filter Section	HP-85460A	3448A00283	24-Aug-00	12 month
RF Receiver Section	HP-85462A	3625A00342	24-Aug-00	12 month
EMCO BiconiLog Antenna	3142	1077	28-Jul-00	12 months
(3-M) Type 129FF Ultra Flex LowLoss	RG58/U	9910-12	27-Jun-00	12 months
50ohm Coax	RG223/U	9802302	27-Jun-00	12 months
University of Mich Double Ridge Horn	0.2 - 5.0GHz	C	16-Mar-99	24 months
6 ft. Andrew DF4 Heliax		9912-02	13-Dec-99	12 months

Measurement Environment

The tests were performed with the equipment under test, and measurement equipment inside the all-weather enclosure. Ambient temperature was 22deg.C., the relative humidity 40%.

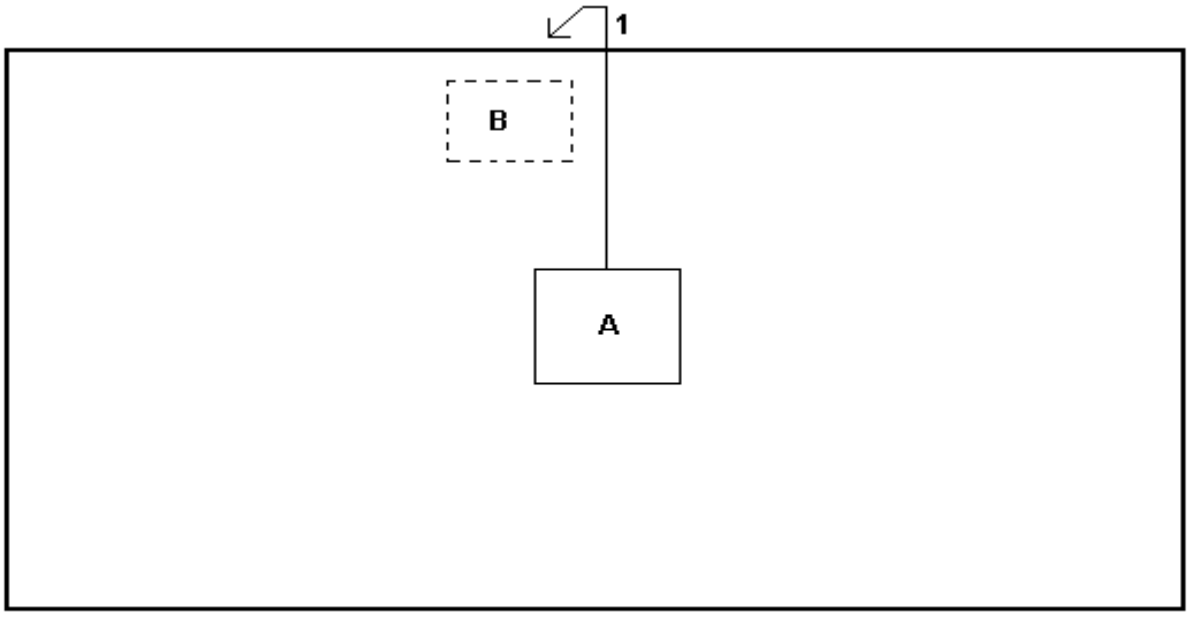
Tested Configuration /Setup: [2.1033(b8)]

Support Equipment & Cabling

Setup Diagram Legend	Description	Model	Serial No. / Part No.	EMC Consideration
A	[EUT] Universal Garage Door Opener	[JCI] CB2GTXHL3	--	FCC ID: CB2GTXHL3
B	12V DC Power Supply	[Trygon] DL40-1	7968152	Located on the turntable base below the EUT table.
1	Power Supply Cable Harness	--	--	1.5 meters, Unshielded, 8-lead lightly twisted cable harness.

Setup Diagram

Note: Setup photographs are located in Attached Electronic File, Exhibit L.



setup_1|

BASIC EUT SETUP
(Legend designation is above)

Summary of Results:

1. This test series evaluated the Equipment Under Test to FCC Part 15, SubPart C.
2. The system tested is compliant to the requirement of CFR 47, FCC Part 15, SubPart C for periodic operation in the allowed frequency bands above 70MHz, (Part 15.231).
3. The equipment under test was received on April 3, 2001 and this test series commenced on April 3, 2001.
4. The line conducted emission testing does not apply to this product. The device is powered from a 12 volt automobile source.
5. The frequencies selected for final evaluation include 288MHz, 310MHz, and 418MHz. This is in accordance with 47 CFR 15.31(m). The 310MHz was selected as a mid-range frequency because it is the predominant frequency used in controlling garage doors. Past correspondence with the FCC regarding the selection of frequencies and test setup suggest this judgment as appropriate.
6. Occupied Band Width of the transmitted signal, at the 20dB point, nearest the limit was measured to be 465KHz. This measurement occurred with the EUT transmitting at 288MHz with a pulse modulation of 80% duty cycle. This measurement is within the allowed 720KHz bandwidth. The greatest bandwidth measured was 615KHz with the EUT transmitting at 418MHz
7. The preliminary scan for spurious emissions conducted in a shielded room indicated low level spurious signals.
8. The digital spurious emissions, nearest the limit, occurred at 85.6MHz. The quasi-peak level was measured to be 15.4dBuV/m which is 24.6dB below the FCC Class B limit.
9. The field strength level of the fundamental was measured for 288MHz, 310MHz, and 418MHz. The evaluation showed the emission nearest the limit occurred while operating at 288MHz with 500Hz pulsed modulation at a 50% duty cycle. The EUT was positioned on the ‘side’ and the receive antenna oriented in the horizontal polarization. This signal was measured to be 1.4dB below the limit of 73.8dBuV/m (4898uV/m).
10. The evaluation of the field strength levels of the harmonics showed the emission nearest the limit occurred while operating at 288MHz with 500Hz pulsed modulation at 30% duty cycle. The EUT was positioned on the ‘end’; and the receive antenna oriented in the horizontal polarization. This signal, at 576MHz, was measured to be 9.1dB below the limit of 53.8dBuV/m (490uV/m).
11. The average value of the coarse tune pulses over a 100mSec time, nearest the limit, occurred at 418MHz. The average measurement was determined to be 3957uV/m which is 8.3dB below the limit of 10,333uV/m..
12. The average value of the fine tune pulses over a 100mSec time, nearest the limit, occurred at 418MHz. The average measurement was determined to be 1354uV/m which is 17.7dB below the limit of 10,333uV/m.

Changes made to achieve compliance

1. NONE

Standards Applied to Test: [2.1033(b6)]

ANSI C63.4 - 1992, Appendix I
CFR47 FCC Part 2, Part 15, SubPart C, 15.231 Intentional Radiator; SubPart B, Digital Device

Test Methodology: [2.1033(b6)]

The pictures in this report, showing test setups, indicate the agreed upon configuration of testing for this product-type.

For the testing, the EUT was installed into the Mirror Assembly as requisite in the OEM agreements with this applicant's customer. The assembly was placed at the center of the table 80cm above the ground plane pursuant to ANSI C63.4 for stand-alone equipment. The 12volt supply harness was routed to the edge of the long side of the table then down to the power supply located on the turntable base.

The line conducted emission testing was not performed on this product. In its final configuration the product is powered from an automobile 12 volt system only.

Radiated

The system was placed upon a 1 x 1.5 meter non-metallic table 80cm above the open field site ground plane in the prescribed setup per ANSI C63.4, Figure 9(c).

The table sits upon a remote controlled turntable. The receiving antenna, located at the appropriate standards distance of 3 or 10 meters from the table center, is also remote controlled.

The principle settings of the EMI Receiver for radiated testing include:

IF Bandwidth:	120KHz	for frequencies less than 1GHz.
	1 MHz	for frequencies greater than 1GHz.
Detector Function:	Peak Mode	
	The Average levels were determined mathematically based upon the duty cycle of the pulsed modulation of the transmitted signal.	

At frequencies up to 1000MHz a BiconiLog broadband antenna was used for measurements.

At frequencies above 1000MHz a double-ridge Horn broadband antenna was used for measurements.

During the evaluation the EUT was transmitting continuously.

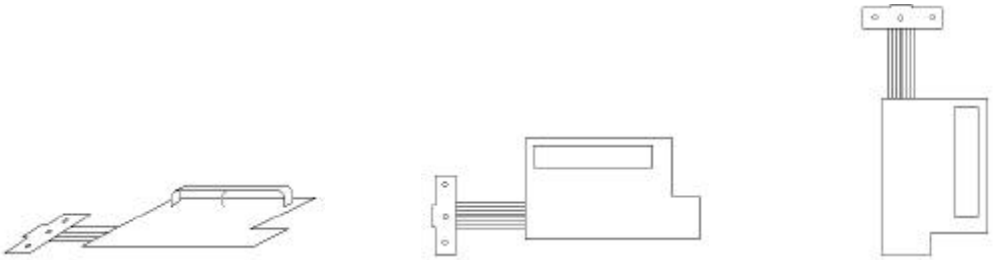
The turntable was rotated 360 degrees and the receiving antenna height varied from 1 to 4 meters to search out the highest emissions.

Preliminary tests were done at 288MHz, 310MHz, 340MHz, 365MHz, 390MHz, and 418MHz. The final measurements were made at a low band frequency (288MHz), a mid band frequency (310MHz), and a high band frequency (418MHz) pursuant to the requirements of 47CFR 15.31(m). At each frequency the EUT was placed in three orthogonal positions. At each position a 500Hz pulse modulation was adjusted to a 30%, 50%, and 80% duty cycle. At each duty cycle, measurements were taken with the receive antenna in vertical and horizontal positions.

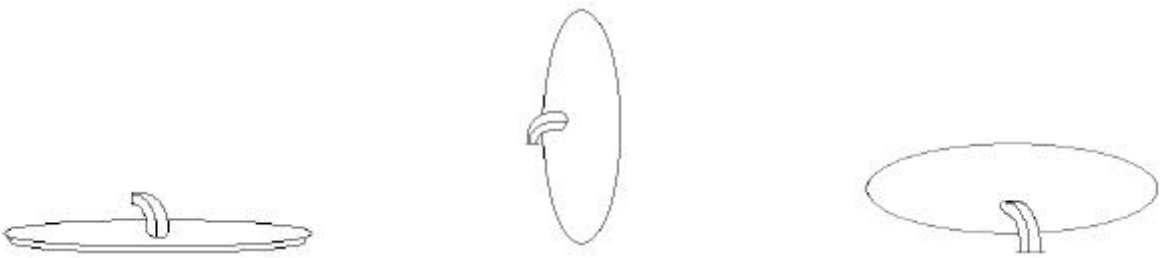
The unit was evaluated up to the tenth harmonic of the fundamental as an intentional radiator, and up to 1000MHz as a digital device.

The orthogonal positions of EUT are:

Flat Side End



Note the respective mirror housing positions.



FORMULAS AND SAMPLE CALCULATIONS:

THE HP8546A EMI Receiver has stored in memory the antenna and coax correction factors used in this test. The resultant Field Strength (FS) in dBuV/m presented by the HP8546A is the summation in decibels (dB) of the Received Level (RF), the Antenna Correction Factor (AF), and the Cable Loss Factor (CF).

Formula 1: FS(dBuV/m) = RF(dBuV) + AF(dB/m) +CF(dB)

The resultant Field Strength measurement is recorded using the peak hold detector of the HP8546A.

This recorded peak level is further corrected, by calculation, to an average level by a factor determined by the duty cycle of the pulsed modulation. The duty cycle factor is determined as outlined in Appendix I4 of the standard ANSI C63.4:1992.

Formula 2: Average Level(uV/m) = [Peak Level(uV/m)] x [duty cycle factor].

Formula 2a: Average Level(dBuV/m) = Peak Level)dBuV/m) + duty cycle factor(dB).

The duty cycle factor to apply is determined for the duty cycles of 30%, 50% and 80% as follows.

For 30% (0.30): duty cycle factor(dB) = 20*Log(0.3) = -10.46
For 50% (0.50): duty cycle factor(dB) = 20*Log(0.5) = -6.02
For 80% (0.80): duty cycle factor(dB) = 20*Log(0.8) = -1.94

As an example:

A measured peak level of 50% duty cycle pulse modulated signal is 500uV/m.
Calculated to dBuV/m is 20*Log(500) = 53.98dBuV/m Peak level.
Applying the duty cycle factor: Avg. Level(dBuV/m) = 53.98 - 6.02dB = 47.96dBuV/m.

Calculation of FCC limits Part 15.231

For the frequency range 260MHz - 470MHz, the limit is a linear interpolation between 3750uV/m and 12500uV/m where the limit at 260MHz is 3750uV/m and the limit at 470MHz is 12500uV/m.

A formula to calculate the limit is established with a ratio linearly equating the frequency range to the limit range.

$(F_0 - F_L) / (F_H - F_L) = (L_0 - L_L) / (L_H - L_L)$

where F_0 and L_0 represent the frequency in question and its limit
where F_L and L_L represent the lower frequency (260MHz) and its limit (3750uV/m).
Where F_H and L_H represent the higher frequency (470MHz) and its limit (12500uV/m).

The calculations for the frequencies included in the application are:

288MHz (288 - 260) / (470 - 260) = (L_0 - 3750) / (12500 - 3750)
(28 / 210) * (8750) = L_0 - 3750
L_0 = 1166.7 + 3750
L_0 = 4916.7 uV/m is LIMIT at 288MHz

310MHz (310 - 260) / (470 - 260) = (L_0 - 3750) / (12500 - 3750)
(50 / 210) * (8750) = L_0 - 3750
L_0 = 2083.3 + 3750
L_0 = 5833.3 uV/m is LIMIT at 310MHz

418MHz (418 - 260) / (470 - 260) = (L_0 - 3750) / (12500 - 3750)
(158 / 210) * (8750) = L_0 - 3750
L_0 = 6583.3 + 3750
L_0 = 10333.3 uV/m is LIMIT at 418MHz

The limit in dB terms is calculated as the result of 20 times the log of the uV/m limit.

288MHz dB limit is 20 * LOG(4916.7 uV/m) = 73.8 dBuV/m

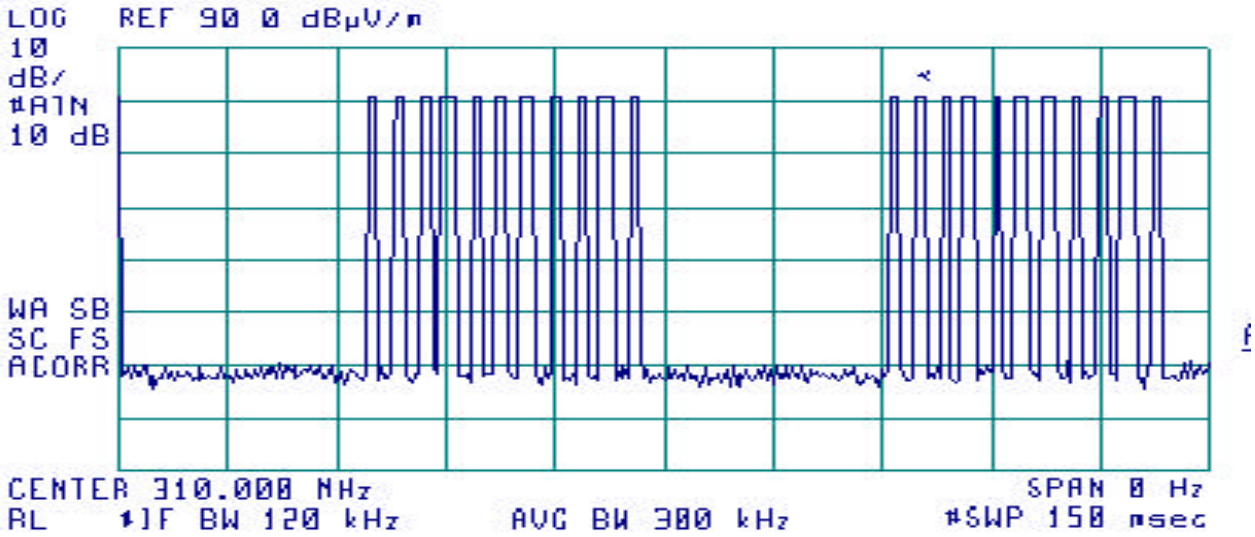
310MHz dB limit is 20 * LOG(5833.3 uV/m) = 75.3 dBuV/m

418MHz dB limit is 20 * LOG(10333.3 uV/m) = 80.3 dBuV/m

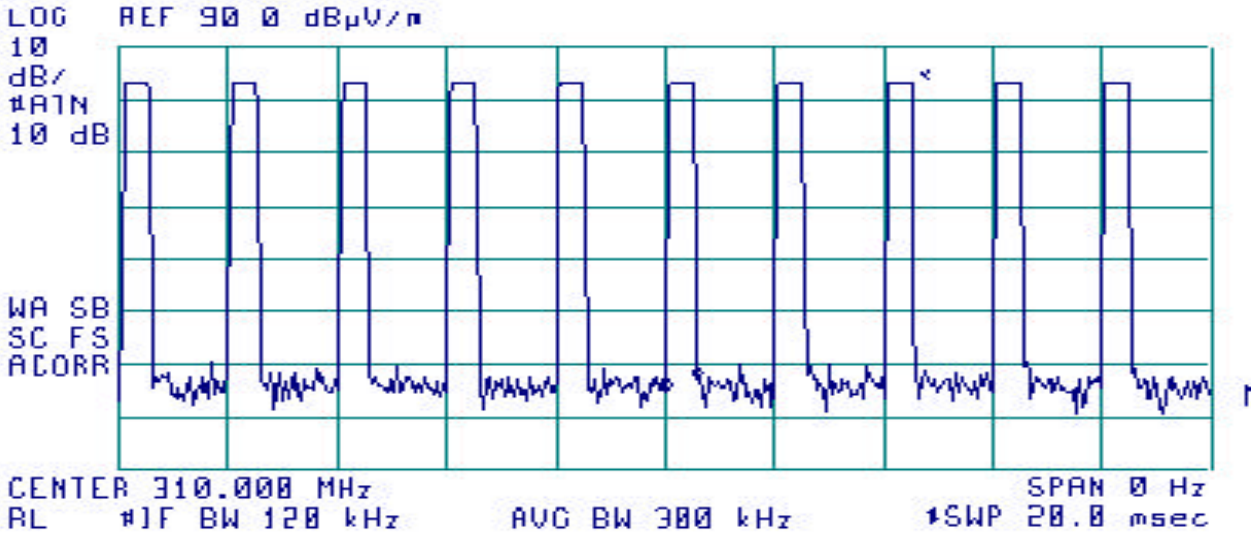
Test Data [2.1033(b6)]

Modulation Characteristics

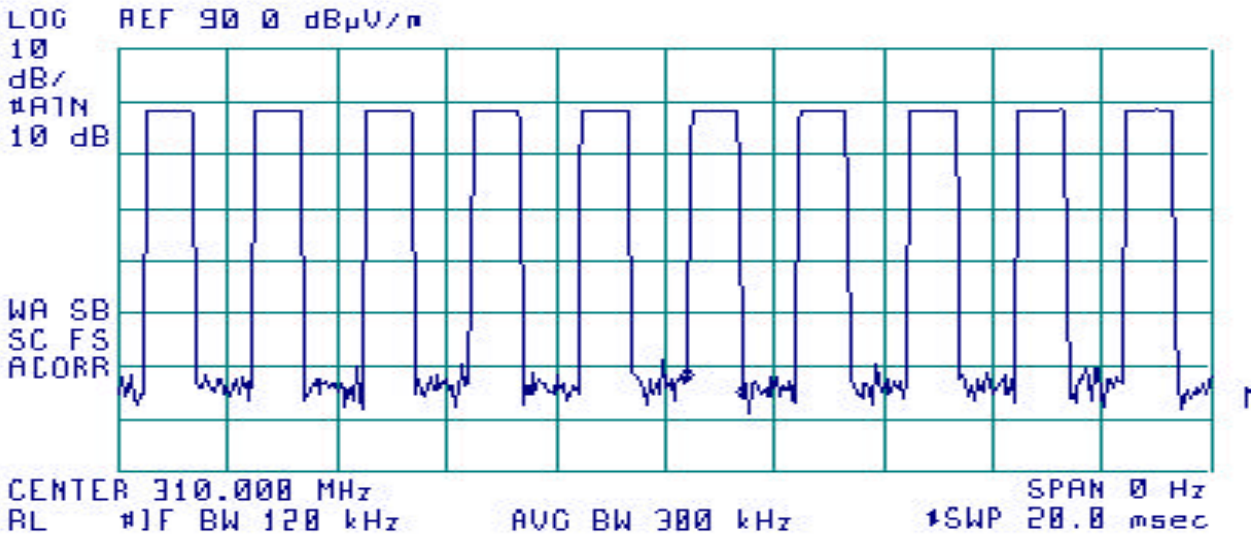
Typical encoding at 310MHz: Consisting of pulses of differing duty cycles.



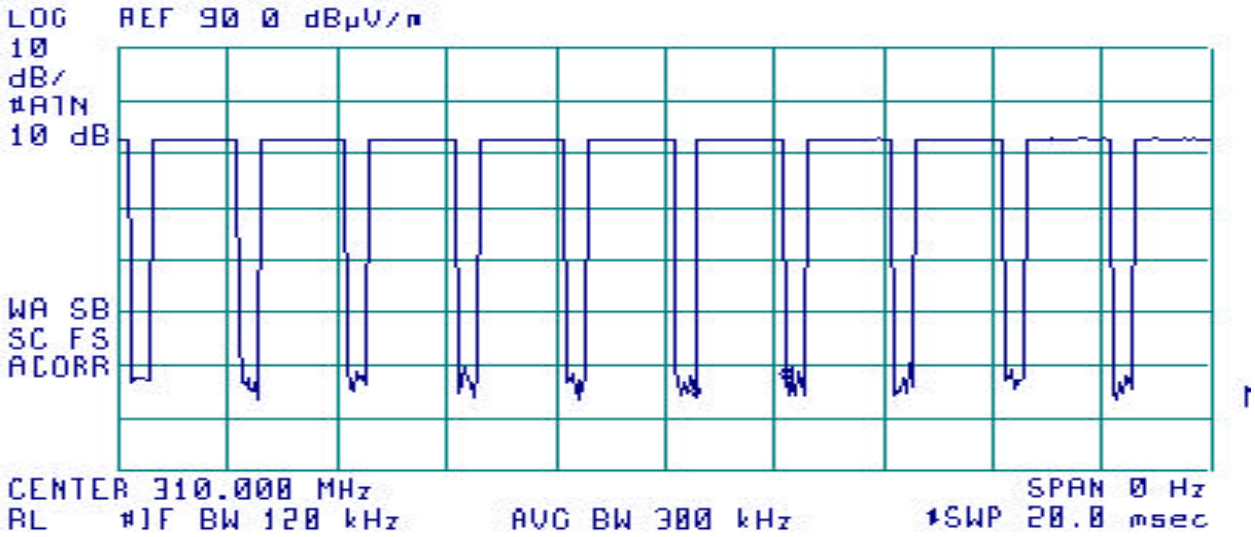
310MHz, 500Hz Modulation, 30% duty cycle



310MHz, 500Hz Modulation, 50% duty cycle



310MHz, 500Hz Modulation, 80% duty cycle



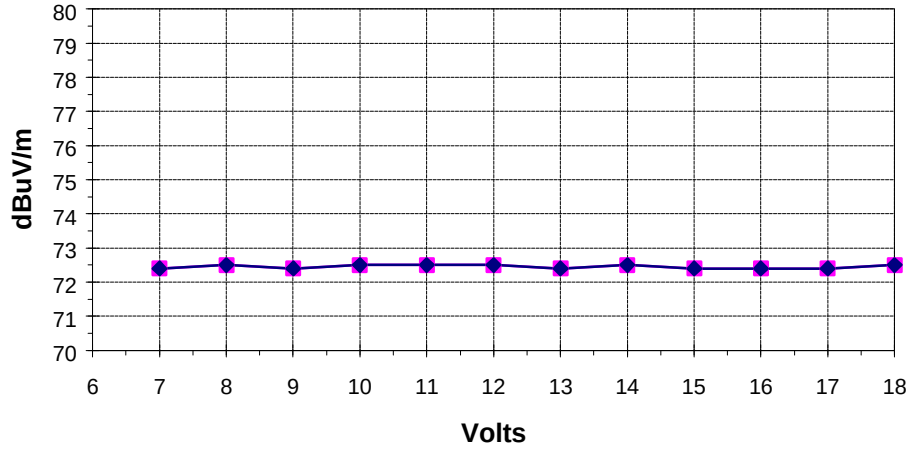
Relative Emission Level vs. Supply Voltage [15.31(e)]

The relative emission level as the supply voltage varied is presented in the charts below.

TX OUTPUT vs. Voltage LEVEL DUT= CB2GTXHL3, 310MHz, 80%duty cycle	
Volt In	TX OutPut Pk dBuV/m
6	no-op
7	72.4
8	72.5
9	72.4
10	72.5
11	72.5
12	72.5
13	72.4
14	72.5
15	72.4
16	72.4
17	72.4
18	72.5

OUTPUT FIELD STRENGTH vs INPUT VOLTAGE

[Tuned to 310MHz; Modulated at 500Hz, 80% Duty Cycle]



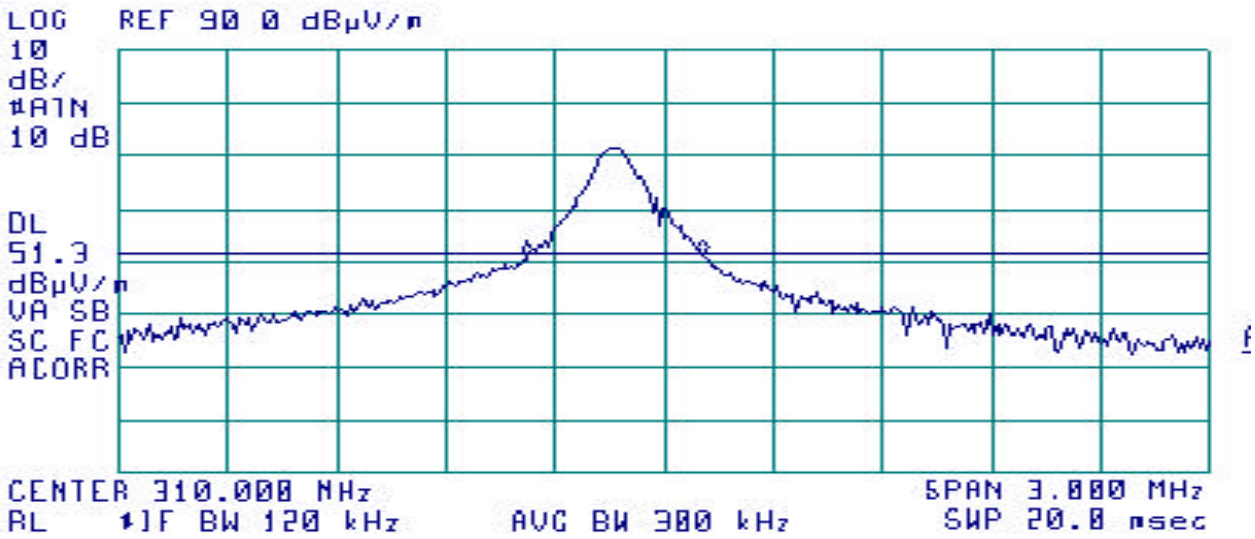
Occupied Bandwidth [15.231(c)]

The maximum allowed 20dB bandwidth is determined pursuant to 15.23(c). For fundamental signals between 70MHz and 900MHz the bandwidth allowed is 0.25% of the fundamental.

Formula 2: Allowed bandwidth = [Fundamental] x [.0025]

Fundamental (MHz)	Duty Cycle	Measured 20dB Bandwidth	LIMIT Fundamental * .0025
288	30%	450 KHz	720 KHz
"	50%	450 KHz	720 KHz
"	80%	465 KHz	720 KHz
310	30%	510 KHz	775 KHz
"	50%	465 KHz	775 KHz
"	80%	480 KHz	775 KHz
418	30%	615 KHz	1045 KHz
"	50%	555 KHz	1045 KHz
"	80%	570 KHz	1045 KHz

This chart shows a typical measured bandwidth signal.



Restricted Bands: [15.205]

The following frequency bands are restricted. Only spurious emissions are permitted at levels limited by 15.209:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.25
0.490-0.510	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	2655-2900	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	Above 38.6
13.36-13.41			

LIMIT @ 3meter: [15.209(a)]

30-88MHz	100uV/m	40dBuV/m
88-216MHz	150uV/m	43.5dBuV/m
216-960MHz	200uV/m	46dBuV/m
above 960MHz	500uV/m	54dBuV/m

Verification of no capability to tune within the Restricted Bands.

The unit is designed capable of tuning from 288MHz to 420MHz except that the Homelink® III firmware prevents the possibility of tuning to the restricted regions of 322-335.4MHz, 399.9-410Mhz, and the region 304-307MHz.

An exercise which attempted to train the units into these restricted bands demonstrated how well the firmware functioned. The unit could not be trained any closer than 1MHz to the restricted bands of 15.205 and no closer than 500KHz outside the band 304-307MHz.

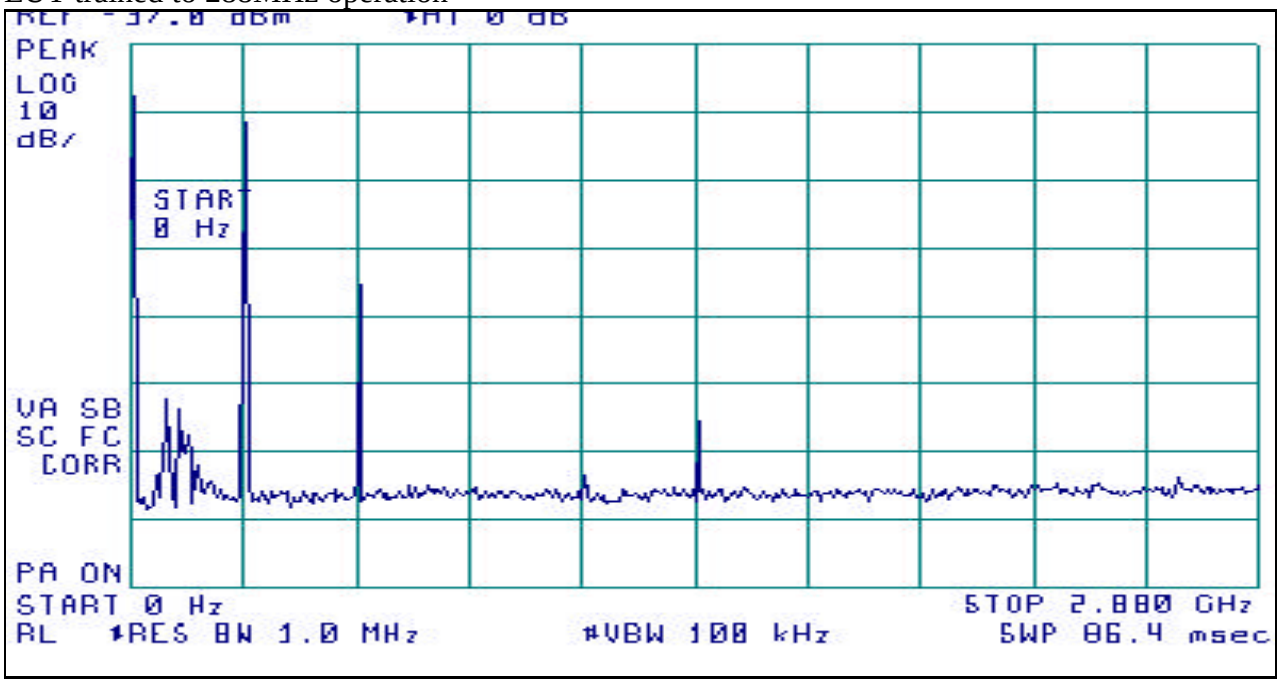
The spurious emissions observed in the restricted bands did not exceed the allowed limits for the restricted bands.

Radiated Field Strength Measurements: [15.231(b), 15.205]

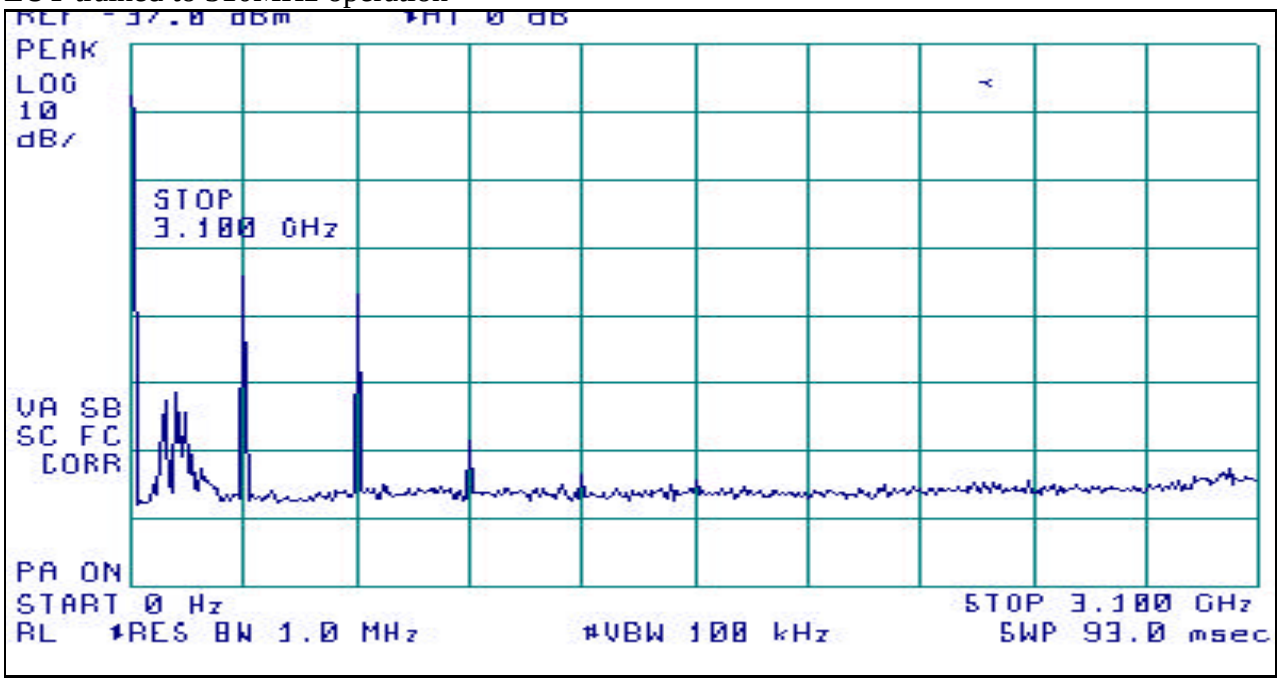
A scan of the CB2GTXHL3 was made in a shielded room to study the emission profile of the EUT. These scans indicate there are low level spurious emissions from the unit other than the fundamental and its associated harmonics. These signals were measured at the 3-meter open area test site.

The first series of charts show the spectrum pattern of the EUT emissions. The levels indicated are not calibrated levels. Following the charts is a table of the measured levels at the 3-meter OATS.

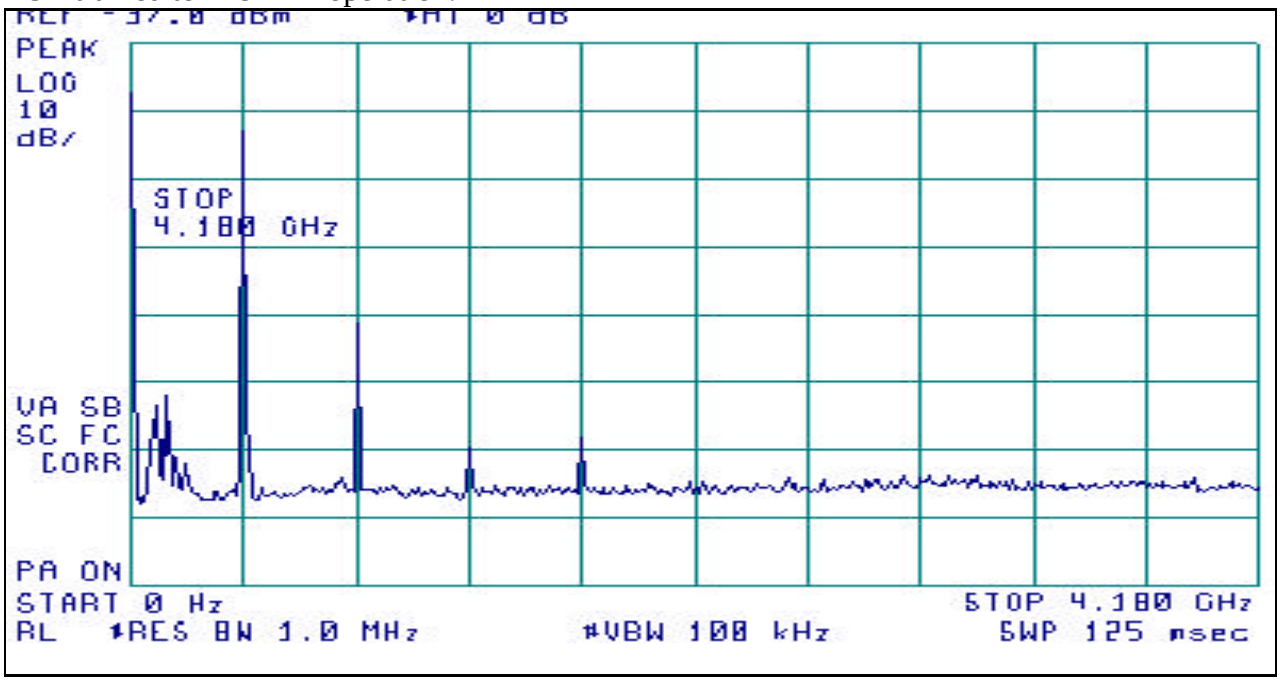
EUT trained to 288MHz operation



EUT trained to 310MHz operation

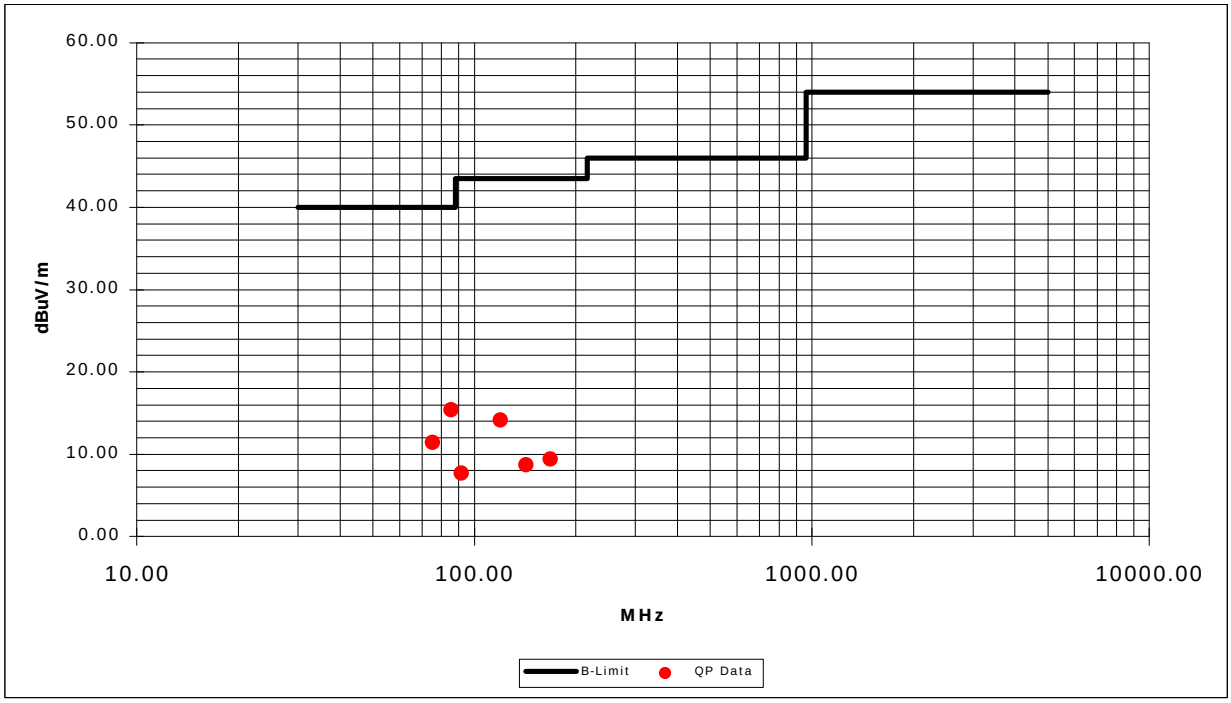


EUT trained to 418MHz operation.



Radiated Field Strength Measurements

Graph of Quasi-Peak Measurements



Tabulated Quasi-Peak Measurements.

Frequency MHz	Quasi Peak Measurement dBuV/m	FCC Class B Limit dBuV/m	Margin dB		Included Cable + Antenna Factors dB/m
75.20	11.40	40.00	-28.60		7.57
85.60	15.40	40.00	-24.60		7.67
91.60	7.70	43.50	-35.80		8.30
119.70	14.10	43.50	-29.40		8.54
142.20	8.70	43.50	-34.80		8.70
168.00	9.40	43.50	-34.10		9.53

The frequencies for measurements were determined by the suspect list generated from the shielded room prescan.

Field Strength Measurements of Fundamental : [15.231(b)]

MEASUREMENT PROCEDURE:

1. The EUT was trained to one of the three test frequencies.
2. The EUT was trained to one of the three test duty cycles.
3. The EUT was setup to one of the three orthogonal positions.
4. Steps 1-3 were repeated to cover all positions, duty cycles, and frequencies.

DUT Tuned to transmit at 288MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level dBuV/m	FCC Limit dBuV/m	Margin dB	Cable +Ant. Factor dB+dB/m
288	side	H	82.1	30%	-10.46	71.6	73.8	**2.2**	14.29
"	"	"	78.4	50%	-6.02	72.4	73.8	**1.4**	"
"	"	"	72.3	80%	-1.94	70.4	73.8	**3.4**	"

DUT Tuned to transmit at 310MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level dBuV/m	FCC Limit dBuV/m	Margin dB	Cable +Ant. Factor dB+dB/m
310	side	H	83.2	30%	-10.46	72.7	75.3	**2.6**	14.94
"	"	"	79.0	50%	-6.02	73.0	75.3	**2.3**	"
"	"	"	73.9	80%	-1.94	72.0	75.3	**3.3**	"

DUT Tuned to transmit at 418MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level dBuV/m	FCC Limit dBuV/m	Margin dB	Cable +Ant. Factor dB+dB/m
418	end	V	87.9	30%	-10.46	77.4	80.3	**2.9**	17.44
"	"	"	83.4	50%	-6.02	77.4	80.3	**2.9**	"
"	"	"	78.4	80%	-1.94	76.5	80.3	**3.8**	"

Field Strength Measurements of Harmonics: [15.231(b), 15.205]

DUT Tuned to transmit at 288MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level dBuV/m	FCC Limit dBuV/m	Margin DB	Cable +Ant. Factor dB+dB/m
576	end	H	55.2	30%	-10.46	44.7	53.8	**9.1**	21.0
"	side	V	45.8	50%	-6.02	39.8	53.8	**14.0**	"
"	end	H	36.5	80%	-1.94	34.6	53.8	**19.2**	"
864	side	V	36.4	30%	-10.46	25.9	53.8	**27.9**	24.8
"	"	"	38.2	50%	-6.02	32.2	53.8	**21.6**	"
"	"	"	27 Noise Floor	80%	-1.94	<25.1	53.8	**>28.7**	"
1152	side	V	39.3	30%	-10.46	28.8	54.0	**25.2**	26.2
"	"	"	37.3	50%	-6.02	31.3	54.0	**22.7**	"
"	"	"	36.6	80%	-1.94	34.7	54.0	**19.3**	"
1440	side	V	48.2	30%	-10.46	37.7	54.0	**16.3**	27.1
"	"	"	45.2	50%	-6.02	39.2	54.0	**14.8**	"
"	"	"	42.7	80%	-1.94	40.8	54.0	**13.2**	"
1728	side	V	44.1	30%	-10.46	33.6	54.0	**20.4**	30.2
"	flat	"	42.4	50%	-6.02	36.4	54.0	**17.6**	"
"	side	"	40.8	80%	-1.94	38.9	54.0	**15.1**	"
2016	flat	V	44.1	30%	-10.46	33.6	54.0	**20.4**	33.0
"	end	"	42.7	50%	-6.02	36.7	54.0	**17.3**	"
"	"	"	42 Noise Floor	80%	-1.94	<40.1	54.0	**>13.9**	"
2304	side	V	42 Noise Floor	30%	-10.46	<31.5	54.0	**>22.5**	32.1
"	"	"	42 Noise Floor	50%	-6.02	<36.0	54.0	**>18.0**	"
"	"	"	42 Noise Floor	80%	-1.94	<40.1	54.0	**>13.9**	"
2592	flat	V	42 Noise Floor	30%	-10.46	<31.5	54.0	**>22.5**	32.2
"	side	"	41 Noise Floor	50%	-6.02	<35.0	54.0	**>19.0**	"
"	flat	"	41 Noise Floor	80%	-1.94	<39.1	54.0	**>14.9**	"
2880	end	V	42 Noise Floor	30%	-10.46	<31.5	54.0	**>22.5**	33.5
"	"	"	42 Noise Floor	50%	-6.02	<36.0	54.0	**>18.0**	"
"	side	"	42 Noise Floor	80%	-1.94	<40.1	54.0	**>13.9**	"

DUT Tuned to transmit at 310MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level DBuV/m	FCC Limit dBuV/m	Margin DB	Cable +Ant. Factor dB+dB/m
620	side	V	53.4	30%	-10.46	42.9	55.3	**12.4**	21.7
"	"	"	47.0	50%	-6.02	41.0	55.3	**14.3**	"
"	"	"	39.6	80%	-1.94	37.7	55.3	**17.6**	"
930	side	V	42 w. ambient	30%	-10.46	<31.5	55.3	>**23.8**	25.3
"	"	"	30.6	50%	-6.02	24.6	55.3	**30.7**	"
"	"	"	27.4	80%	-1.94	25.5	55.3	**29.8**	"
1240	side	V	41.5	30%	-10.46	31.0	54.0	**23.0**	26.5
"	"	"	38.2	50%	-6.02	32.2	54.0	**21.8**	"
"	"	"	36.7	80%	-1.94	34.8	54.0	**19.2**	"
1550	side	V	48.0	30%	-10.46	37.5	54.0	**16.5**	28.0
"	"	"	45.2	50%	-6.02	39.2	54.0	**14.8**	"
"	"	"	43.9	80%	-1.94	42.0	54.0	**12.0**	"
1860	flat	V	41.5	30%	-10.46	31.0	55.3	**24.3**	31.6
"	"	"	41.6	50%	-6.02	35.6	55.3	**19.7**	"
"	"	"	41.0	80%	-1.94	39.1	55.3	**16.2**	"
2170	side	V	43.4	30%	-10.46	32.9	55.3	**22.4**	32.4
"	"	"	42.6	50%	-6.02	36.6	55.3	**18.7**	"
"	"	"	43.2	80%	-1.94	41.3	55.3	**14.0**	"
2480	flat	V	42 Noise Floor	30%	-10.46	<31.5	55.3	>**23.8**	31.8
"	side	"	42 Noise Floor	50%	-6.02	<36.0	55.3	>**19.3**	"
"	"	"	41 Noise Floor	80%	-1.94	<39.1	55.3	>**16.2**	"
2790	flat	V	42 Noise Floor	30%	-10.46	<31.5	54.0	>**22.5**	33.1
"	"	"	43 Noise Floor	50%	-6.02	<37.0	54.0	>**17.0**	"
"	"	"	42 Noise Floor	80%	-1.94	<40.1	54.0	>**13.9**	"
3100	end	V	43 Noise Floor	30%	-10.46	<32.5	54.0	>**21.5**	34.2
"	"	"	44 Noise Floor	50%	-6.02	<38.0	54.0	>**16.0**	"
"	side	"	43 Noise Floor	80%	-1.94	<41.1	54.0	>**12.9**	"

DUT Tuned to transmit at 418MHz

Freq. MHz	DUT position	Ant. Pol.	Corrected Data Peak Detector dBuV/m	Duty Cycle %	Duty Cycle Factor dB	Calculated Average Level dBuV/m	FCC Limit dBuV/m	Margin DB	Cable +Ant. Factor dB+dB/m
836	side	V	60.6	30%	-10.46	50.1	60.3	**10.2**	24.6
"	"	"	52.7	50%	-6.02	46.7	60.3	**13.6**	"
"	end	H	45.6	80%	-1.94	43.7	60.3	**16.6**	"
1254	side	V	49.4	30%	-10.46	38.9	54.0	**15.1**	26.5
"	"	"	43.5	50%	-6.02	37.5	54.0	**16.5**	"
"	end	"	36.6	80%	-1.94	34.7	54.0	**19.3**	"
1672	side	V	54.6	30%	-10.46	44.1	54.0	**9.9**	29.5
"	"	"	49.4	50%	-6.02	43.4	54.0	**10.6**	"
"	"	"	43.7	80%	-1.94	41.8	54.0	**12.2**	"
2090	side	V	49.5	30%	-10.46	39.0	60.3	**21.3**	32.7
"	"	"	44.4	50%	-6.02	38.4	60.3	**21.9**	"
"	end	"	43.7	80%	-1.94	24.3	60.3	**36.0**	"
2508	side	V	42.4	30%	-10.46	31.9	60.3	**28.4**	31.8
"	flat	"	42 Noise Floor	50%	-6.02	<36.0	60.3	>**24.3**	"
"	side	"	41 Noise Floor	80%	-1.94	<39.1	60.3	>**21.2**	"
2926	end	V	43 Noise Floor	30%	-10.46	<32.5	60.3	>**27.8**	33.7
"	side	"	42 Noise Floor	50%	-6.02	<36.0	60.3	>**24.3**	"
"	flat	"	43 Noise Floor	80%	-1.94	<41.1	60.3	>**19.2**	"
3344	end	V	44 Noise Floor	30%	-10.46	<33.5	60.3	>**26.8**	34.8
"	side	"	42 Noise Floor	50%	-6.02	<36.0	60.3	>**24.3**	"
"	"	"	43 Noise Floor	80%	-1.94	<41.1	60.3	>**19.2**	"
3762	flat	V	44 Noise Floor	30%	-10.46	<33.5	54.0	>**20.5**	35.8
"	"	"	45 Noise Floor	50%	-6.02	<39.0	54.0	>**15.0**	"
"	end	"	45 Noise Floor	80%	-1.94	<43.1	54.0	>**10.9**	"
4180	end	V	45 Noise Floor	30%	-10.46	<34.5	54.0	>**19.5**	36.1
"	flat	"	44 Noise Floor	50%	-6.02	<38.0	54.0	>**16.0**	"
"	end	"	45 Noise Floor	80%	-1.94	<43.1	54.0	>**10.9**	"

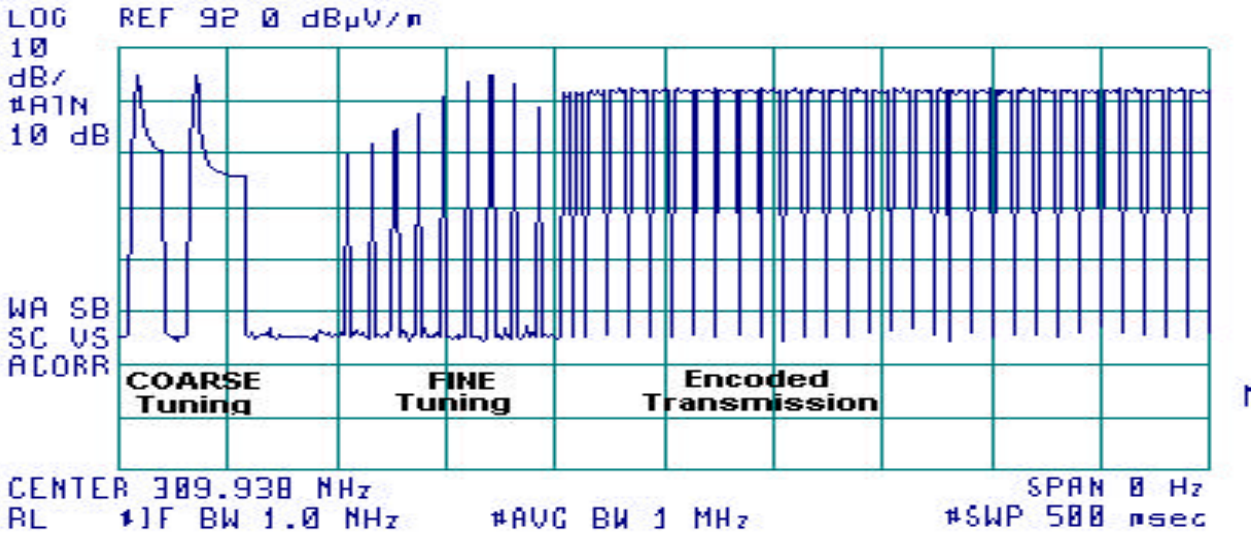
Calculation of Field Strength of Tuning Pulses: [15.231(b)], 15.31(c)]

The tuning pulses are generated each time the CB2GTXHL3 is activated.

The tuning pulse sequence is: During the first 100mSec of activation two pulses of a 'coarse' tune. During the second 100mSec of activation are nine pulses of a 'fine' tune. At approximately 200mSec after activation the encoded transmission begins.

The signal levels of the tuning pulses were maximized by maximizing the signal levels of the pulse modulated transmission. The antenna height and turntable azimuth for maximum emission levels were adjusted while measuring the field strength of the pulse modulated transmissions.

A typical tuning pulse sequence is presented in this figure below.



To determine level of the tuning pulses for comparison to the limits, the following procedure was used.

MEASUREMENT PROCEDURE:

1. The EUT was trained to each of the three test frequencies at 30% duty cycle of the 500Hz modulating pulse.
2. The HP8456A EMI Receiver was adjusted to a fundamental frequency and set at 0Hz span, with 1MHz IF Bandwidth.
3. The trigger level was adjusted to capture the pulses of interest.
4. The EUT was activated and a single trace recorded on the Receiver in order to capture the tuning pulses.
5. The captured trace was digitally stored. The stored data points (400 data points for a full screen trace) were then used in calculations to determine the levels of the pulses.

CALCULATION OF THE FIELD STRENGTH OF THE TUNING PULSES.[15.35(c)]

Pursuant to 47 CFR 15.35(c), the field strength is determined by averaging over ONE complete pulse train up to 100mSec, including blanking intervals.

1. First was determined the number of data points captured which represented 100mSec span of time. There are 400 data points stored for one complete trace. The scan rate of the HP8546A receiver was set to capture the tuning pulses.

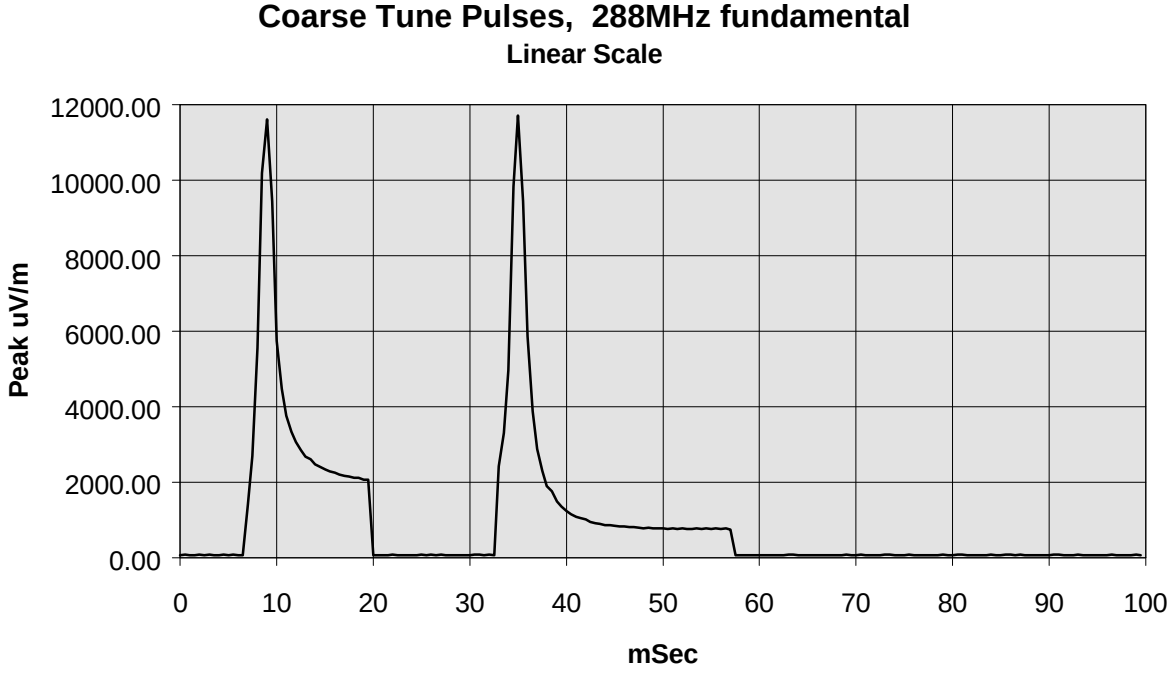
   Therefore: Number of data points per 100mSec
   = 100mSec * (400pts/scan) / (No. of mSec/scan).
   Example: If the scan rate is set at 200mSec, then the number of data points per 100mSec is 100mSec * (400pts / 200mSec) = 200 pts.

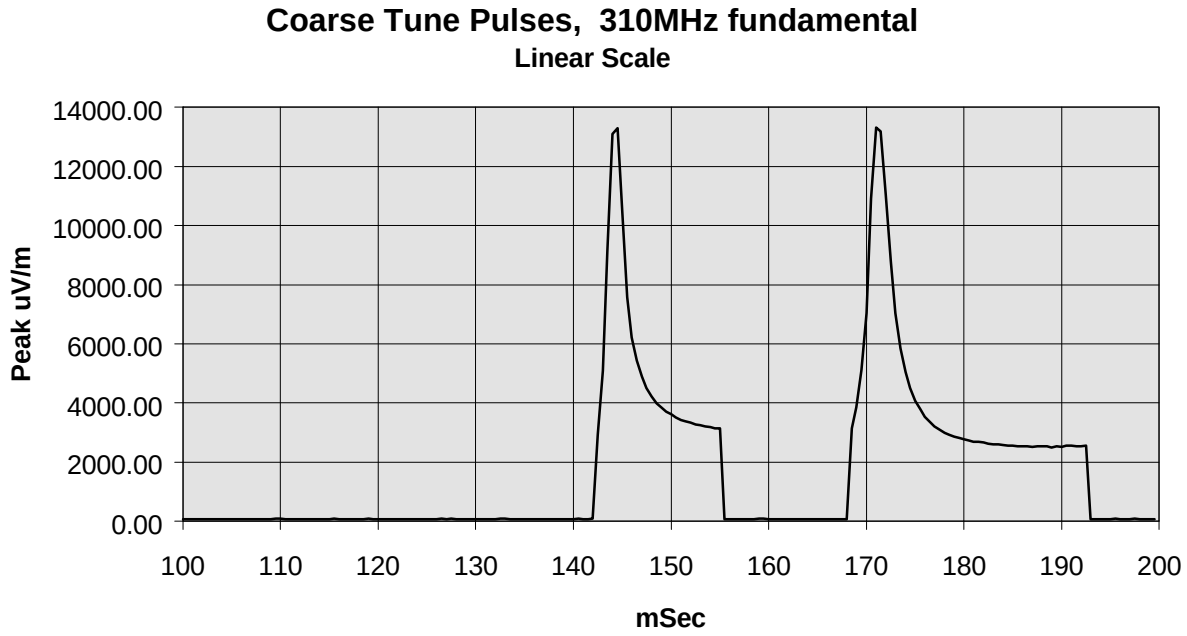
2. The AVERAGE field strength level (uV/m) within the 100mSec is then determined by dividing SUM of the levels (uV/m) of all data points by the number of data points.

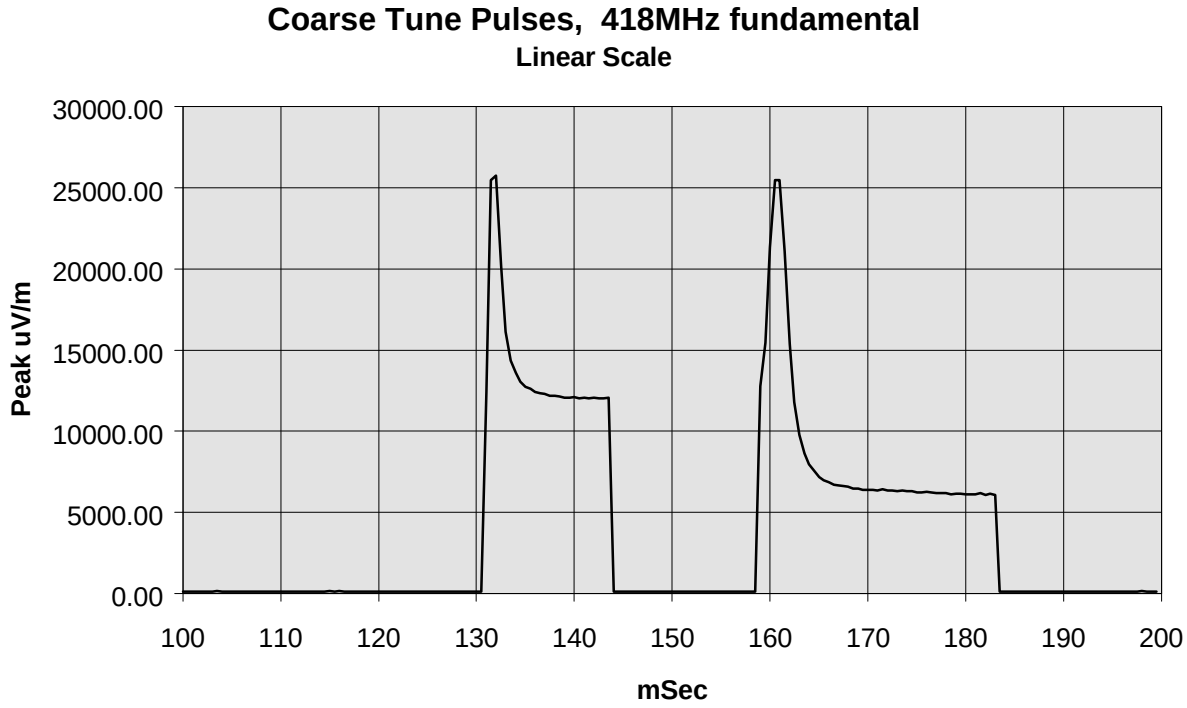
   Formula 3: Average Field Intensity

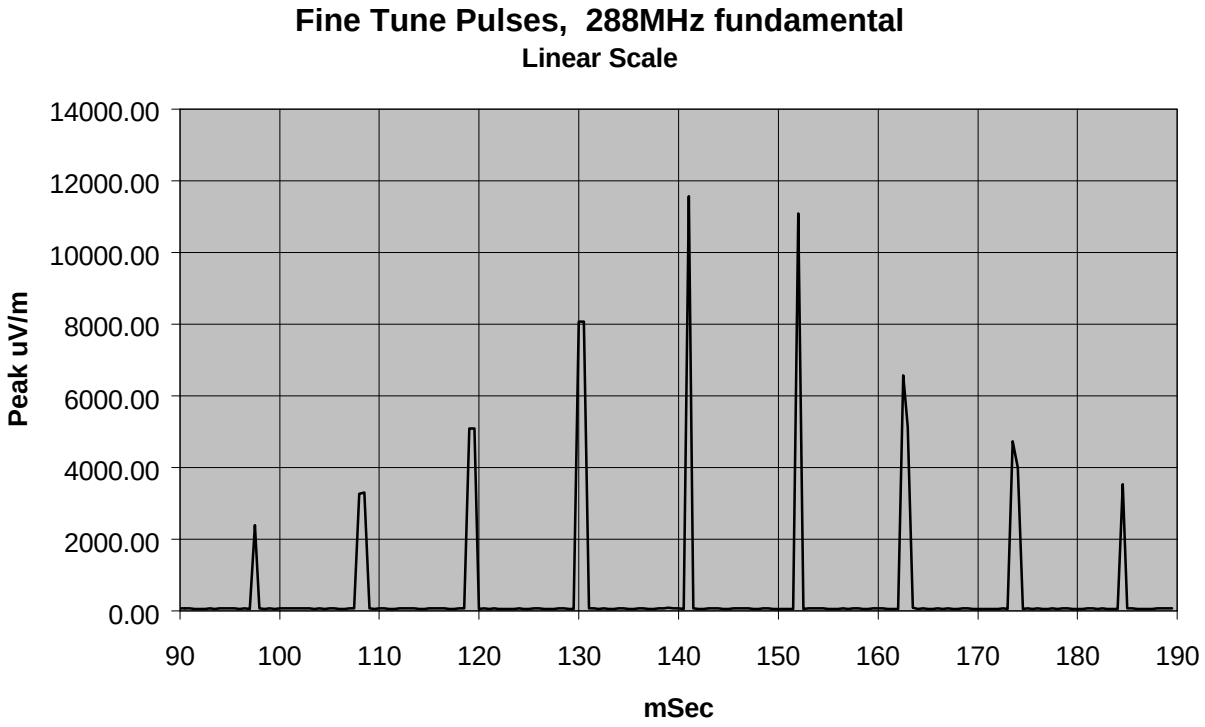
$$\text{Avg. F.I.} = \frac{\sum_{n=1}^{\text{no. of data pts}} (\text{Level}_n)\text{uV/m}}{\text{(number of data points)}}$$

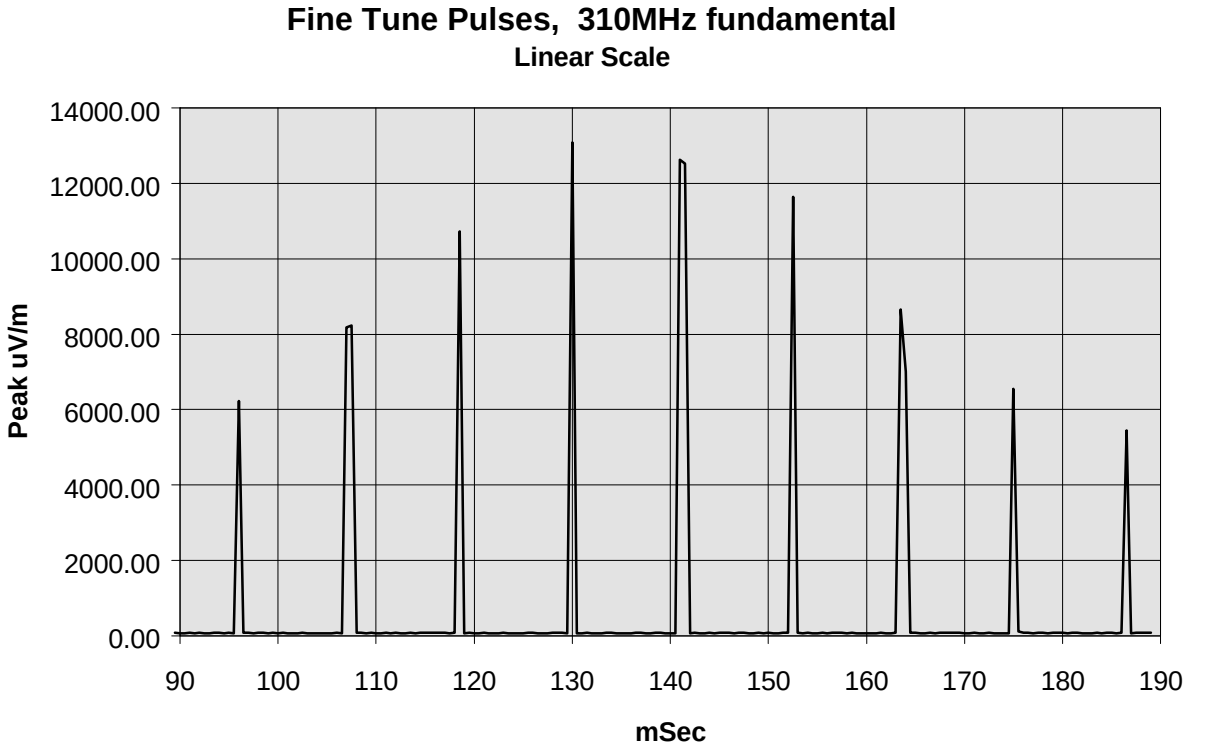
The charts that follow are the reproduction of the coarse tune pulse traces using number of data points representing 100mSec sweep time from the screen display of the HP8546A EMI receiver.

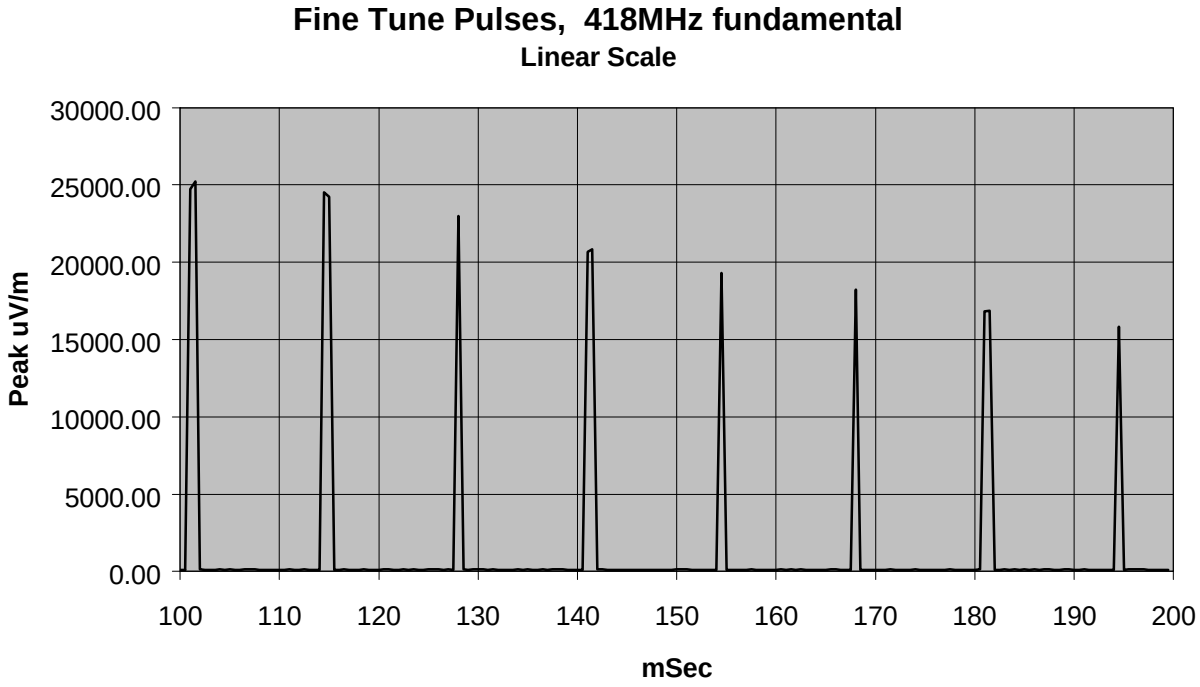



Coarse Tune Pulses, 310MHz fundamental
Linear Scale
14000.00
12000.00
10000.00
8000.00
6000.00
4000.00
2000.00
0.00
Peak uV/m
100
110
120
130
140
150
160
170
180
190
200
mSec


Coarse Tune Pulses, 418MHz fundamental
Linear Scale
30000.00
25000.00
20000.00
15000.00
10000.00
5000.00
0.00
Peak uV/m
100
110
120
130
140
150
160
170
180
190
200
mSec


Fine Tune Pulses, 288MHz fundamental
Linear Scale
14000.00
12000.00
10000.00
8000.00
6000.00
4000.00
2000.00
0.00
Peak uV/m
90
100
110
120
130
140
150
160
170
180
190
mSec


Fine Tune Pulses, 310MHz fundamental
Linear Scale
14000.00
12000.00
10000.00
8000.00
6000.00
4000.00
2000.00
0.00
Peak uV/m
90
100
110
120
130
140
150
160
170
180
190
mSec



The raw data used in calculating the average field intensity of the tuning pulses are presented in the Appendix of this test report.

COARSE TUNE PULSES, Calculated average over 100mSec

TX Freq. (MHz)	SUM of the levels of all data points in 100mSec span (uV/m)	Number of Data points in 100mSec span N	Average SUM/N (uV/m)	LIMIT (uV/m)	MARGIN (dB)
288	197,225	200	986	4917	**14.0**
310	342,634	200	1,713	5833	**10.6**
418	791,438	200	3,957	10333	**8.3**

FINE TUNE PULSES, Calculated average over 100mSec

TX Freq. (MHz)	SUM of the levels of all data points in 100mSec span (uV/m)	Number of Data points in 100mSec span N	Average SUM/N (uV/m)	LIMIT (uV/m)	MARGIN (dB)
288	94,573	200	473	4917	**20.3**
310	124,639	200	623	5833	**19.4**
418	270,742	200	1354	10333	**17.7**

APPENDIX: Tune Pulses - Data Details

COARSE TUNE Pulse; Fundamental Frequency = 288MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	0	65.46	25	74.05	50	770.02	75	72.03
2	0.5	73.79	25.5	64.42	50.5	767.36	75.5	79.43
3	1	62.66	26	79.43	51	771.79	76	59.70
4	1.5	62.66	26.5	71.45	51.5	759.45	76.5	64.57
5	2	72.28	27	74.22	52	771.79	77	63.39
6	2.5	65.99	27.5	67.38	52.5	763.84	77.5	71.45
7	3	79.25	28	64.19	53	753.36	78	64.94
8	3.5	67.76	28.5	69.02	53.5	773.57	78.5	69.58
9	4	69.42	29	69.42	54	757.70	79	74.99
10	4.5	75.51	29.5	71.12	54.5	778.04	79.5	68.08
11	5	62.66	30	57.88	55	761.20	80	65.77
12	5.5	77.98	30.5	74.99	55.5	778.04	80.5	75.51
13	6	66.53	31	72.86	56	765.60	81	85.11
14	6.5	71.45	31.5	69.18	56.5	771.79	81.5	66.99
15	7	1396.37	32	73.79	57	739.61	82	62.66
16	7.5	2691.53	32.5	67.53	57.5	64.42	82.5	66.99
17	8	5552.65	33	2418.24	58	63.39	83	66.30
18	8.5	10185.91	33.5	3311.31	58.5	71.86	83.5	64.94
19	9	11614.49	34	4960.21	59	63.17	84	72.86
20	9.5	9440.61	34.5	9828.79	59.5	62.37	84.5	62.88
21	10	5747.78	35	11708.47	60	65.61	85	66.68
22	10.5	4471.98	35.5	9440.61	60.5	63.53	85.5	77.09
23	11	3762.70	36	5868.13	61	61.38	86	74.22
24	11.5	3330.43	36.5	3877.04	61.5	67.38	86.5	70.15
25	12	3069.02	37	2887.35	62	67.92	87	76.74
26	12.5	2841.19	37.5	2304.09	62.5	69.98	87.5	64.05
27	13	2679.17	38	1887.99	63	72.44	88	59.09
28	13.5	2600.16	38.5	1755.90	63.5	82.04	88.5	58.14
29	14	2466.04	39	1487.65	64	62.52	89	63.17
30	14.5	2398.83	39.5	1356.75	64.5	64.42	89.5	65.99
31	15	2336.15	40	1231.69	65	61.87	90	62.52
32	15.5	2288.23	40.5	1152.13	65.5	71.45	90.5	84.04
33	16	2243.88	41	1085.18	66	57.54	91	76.30
34	16.5	2197.86	41.5	1049.54	66.5	67.53	91.5	68.87
35	17	2165.21	42	1005.77	67	71.70	92	66.99
36	17.5	2157.74	42.5	940.81	67.5	67.92	92.5	62.88
37	18	2123.24	43	913.06	68	62.37	93	76.12
38	18.5	2113.49	43.5	890.23	68.5	64.57	93.5	66.30
39	19	2067.76	44	861.99	69	75.86	94	64.94
40	19.5	2067.76	44.5	861.99	69.5	70.55	94.5	67.22
41	20	68.47	45	844.31	70	66.68	95	66.99
42	20.5	66.53	45.5	833.68	70.5	73.45	95.5	70.55
43	21	70.55	46	820.35	71	69.74	96	65.24
44	21.5	65.77	46.5	801.68	71.5	66.68	96.5	73.20
45	22	74.22	47	814.70	72	66.68	97	70.15
46	22.5	69.98	47.5	792.50	72.5	64.42	97.5	66.99
47	23	69.18	48	784.33	73	80.54	98	66.99
48	23.5	66.30	48.5	798.91	73.5	82.70	98.5	71.70
49	24	65.46	49	776.25	74	66.53	99	76.30
50	24.5	68.47	49.5	779.83	74.5	66.99	99.5	65.24

COARSE TUNE Pulse; Fundamental Frequency = 310MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	100	65.61	125	77.80	150	3618.26	175	4083.19
2	100.5	71.53	125.5	77.00	150.5	3519.65	175.5	3797.52
3	101	64.57	126	67.61	151	3427.68	176	3535.90
4	101.5	68.31	126.5	81.38	151.5	3380.65	176.5	3353.51
5	102	69.42	127	72.28	152	3345.80	177	3217.36
6	102.5	72.44	127.5	84.04	152.5	3269.64	177.5	3108.14
7	103	70.39	128	64.57	153	3250.87	178	2999.16
8	103.5	77.62	128.5	69.10	153.5	3198.90	178.5	2917.43
9	104	77.36	129	72.44	154	3191.54	179	2857.59
10	104.5	72.11	129.5	78.25	154.5	3147.75	179.5	2818.38
11	105	71.70	130	75.16	155	3140.51	180	2766.94
12	105.5	70.39	130.5	68.16	155.5	70.55	180.5	2722.70
13	106	74.30	131	61.24	156	72.28	181	2688.44
14	106.5	70.23	131.5	71.37	156.5	63.90	181.5	2688.44
15	107	73.96	132	74.13	157	66.91	182	2657.66
16	107.5	77.98	132.5	85.51	157.5	73.37	182.5	2624.22
17	108	70.23	133	81.38	158	76.12	183	2603.15
18	108.5	74.30	133.5	71.94	158.5	75.51	183.5	2594.18
19	109	70.23	134	69.42	159	82.32	184	2582.26
20	109.5	93.43	134.5	77.00	159.5	85.11	184.5	2567.44
21	110	86.90	135	68.31	160	75.77	185	2561.53
22	110.5	70.79	135.5	75.34	160.5	69.42	185.5	2540.97
23	111	72.78	136	68.87	161	64.57	186	2540.97
24	111.5	63.90	136.5	76.38	161.5	65.61	186.5	2532.21
25	112	74.13	137	75.95	162	74.73	187	2520.58
26	112.5	68.87	137.5	67.45	162.5	70.55	187.5	2546.83
27	113	63.75	138	65.61	163	72.78	188	2526.39
28	113.5	69.42	138.5	68.16	163.5	72.11	188.5	2526.39
29	114	78.43	139	65.61	164	64.27	189	2491.72
30	114.5	70.55	139.5	62.88	164.5	65.61	189.5	2526.39
31	115	65.31	140	66.53	165	74.13	190	2506.11
32	115.5	83.66	140.5	85.80	165.5	70.79	190.5	2561.53
33	116	73.11	141	70.23	166	80.17	191	2561.53
34	116.5	70.39	141.5	71.37	166.5	65.61	191.5	2532.21
35	117	62.09	142	82.04	167	79.25	192	2526.39
36	117.5	64.94	142.5	2934.27	167.5	79.25	192.5	2552.70
37	118	64.27	143	5081.59	168	68.31	193	67.07
38	118.5	66.91	143.5	9130.61	168.5	3133.29	193.5	72.28
39	119	82.70	144	13091.82	169	3859.22	194	76.56
40	119.5	66.68	144.5	13289.24	169.5	5110.93	194.5	68.16
41	120	69.42	145	10592.54	170	7046.93	195	73.54
42	120.5	67.76	145.5	7577.05	170.5	10901.84	195.5	82.99
43	121	80.82	146	6215.84	171	13319.87	196	80.17
44	121.5	79.25	146.5	5438.76	171.5	13182.57	196.5	74.30
45	122	65.09	147	4897.79	172	11040.79	197	73.54
46	122.5	76.56	147.5	4497.80	172.5	8770.01	197.5	81.19
47	123	73.71	148	4231.56	173	7030.72	198	79.89
48	123.5	68.71	148.5	3994.85	173.5	5841.17	198.5	65.09
49	124	66.53	149	3850.35	174	5040.81	199	77.62
50	124.5	73.11	149.5	3715.35	174.5	4513.36	199.5	75.16

COARSE TUNE Pulse; Fundamental Frequency = 418MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	100	109.02	125	108.52	150	98.40	175	6237.35
2	100.5	114.95	125.5	103.99	150.5	107.89	175.5	6237.35
3	101	118.03	126	99.77	151	103.28	176	6251.73
4	101.5	103.99	126.5	102.45	151.5	102.45	176.5	6237.35
5	102	110.54	127	107.40	152	121.76	177	6201.55
6	102.5	104.23	127.5	112.85	152.5	95.83	177.5	6201.55
7	103	101.04	128	102.21	153	96.38	178	6201.55
8	103.5	130.02	128.5	113.76	153.5	98.17	178.5	6123.50
9	104	106.17	129	112.46	154	118.44	179	6151.77
10	104.5	105.68	129.5	106.17	154.5	107.65	179.5	6137.62
11	105	114.02	130	101.86	155	101.86	180	6123.50
12	105.5	107.89	130.5	98.40	155.5	101.39	180.5	6123.50
13	106	122.46	131	12387.97	156	92.58	181	6102.39
14	106.5	106.54	131.5	25468.30	156.5	107.89	181.5	6173.05
15	107	100.58	132	25763.21	157	100.58	182	6053.41
16	107.5	101.62	132.5	20206.91	157.5	106.54	182.5	6137.62
17	108	106.78	133	16143.59	158	100.00	183	6074.35
18	108.5	101.04	133.5	14338.38	158.5	105.08	183.5	124.45
19	109	118.99	134	13598.78	159	12764.39	184	109.90
20	109.5	100.58	134.5	13031.67	159.5	15452.54	184.5	94.30
21	110	98.40	135	12735.03	160	21330.45	185	109.40
22	110.5	102.45	135.5	12632.81	160.5	25468.30	185.5	108.52
23	111	110.54	136	12430.83	161	25468.30	186	111.69
24	111.5	104.83	136.5	12331.05	161.5	21086.28	186.5	124.45
25	112	107.65	137	12288.53	162	15381.55	187	98.40
26	112.5	96.38	137.5	12161.86	162.5	11789.63	187.5	105.68
27	113	117.49	138	12175.87	163	9772.37	188	106.78
28	113.5	104.83	138.5	12133.89	163.5	8619.86	188.5	103.28
29	114	111.17	139	12078.14	164	7961.59	189	113.11
30	114.5	108.52	139.5	12078.14	164.5	7559.62	189.5	107.65
31	115	135.36	140	12105.98	165	7186.21	190	113.37
32	115.5	112.20	140.5	12036.49	165.5	6958.25	190.5	109.02
33	116	132.59	141	12078.14	166	6846.99	191	115.21
34	116.5	99.77	141.5	12008.81	166.5	6683.44	191.5	101.39
35	117	110.79	142	12078.14	167	6637.43	192	115.21
36	117.5	112.46	142.5	12036.49	167.5	6614.55	192.5	111.69
37	118	110.28	143	12008.81	168	6561.45	193	119.67
38	118.5	107.03	143.5	12078.14	168.5	6456.54	193.5	103.04
39	119	113.37	144	101.62	169	6441.69	194	93.33
40	119.5	110.28	144.5	109.65	169.5	6389.99	194.5	104.47
41	120	111.43	145	107.03	170	6375.29	195	104.47
42	120.5	96.61	145.5	94.84	170.5	6389.99	195.5	101.62
43	121	93.00	146	95.06	171	6338.70	196	105.93
44	121.5	118.44	146.5	101.04	171.5	6404.72	196.5	103.51
45	122	107.89	147	109.90	172	6338.70	197	106.17
46	122.5	124.45	147.5	115.61	172.5	6324.12	197.5	103.51
47	123	96.83	148	100.81	173	6287.82	198	132.13
48	123.5	120.50	148.5	98.97	173.5	6324.12	198.5	113.76
49	124	114.68	149	121.48	174	6287.82	199	108.27
50	124.5	108.27	149.5	103.51	174.5	6287.82	199.5	101.04

FINE TUNE Pulses; Fundamental Frequency = 288MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	90	69.18	115	69.98	140	67.53	165	56.95
2	90.5	77.98	115.5	72.44	140.5	63.68	165.5	65.99
3	91	69.02	116	73.03	141	11574.44	166	69.58
4	91.5	62.02	116.5	69.98	141.5	76.47	166.5	58.48
5	92	60.05	117	65.77	142	65.24	167	71.70
6	92.5	58.34	117.5	65.09	142.5	66.15	167.5	63.02
7	93	70.71	118	69.42	143	72.03	168	59.09
8	93.5	63.53	118.5	73.20	143.5	71.45	168.5	69.42
9	94	73.45	119	5093.31	144	74.82	169	68.87
10	94.5	77.36	119.5	5081.59	144.5	61.66	169.5	60.67
11	95	67.53	120	58.95	145	60.19	170	66.53
12	95.5	68.31	120.5	75.16	145.5	84.24	170.5	58.82
13	96	66.30	121	63.02	146	69.58	171	62.88
14	96.5	74.22	121.5	68.08	146.5	68.31	171.5	59.70
15	97	57.88	122	66.30	147	75.51	172	66.15
16	97.5	2387.81	122.5	62.16	147.5	59.29	172.5	66.99
17	98	79.89	123	66.30	148	64.57	173	58.82
18	98.5	63.39	123.5	66.83	148.5	68.47	173.5	4742.42
19	99	72.61	124	73.20	149	68.08	174	3994.85
20	99.5	60.19	124.5	65.99	149.5	64.05	174.5	65.24
21	100	67.22	125	61.87	150	66.68	175	70.31
22	100.5	69.42	125.5	72.03	150.5	66.83	175.5	61.52
23	101	67.76	126	74.64	151	64.19	176	69.42
24	101.5	76.12	126.5	64.42	151.5	60.39	176.5	66.68
25	102	67.53	127	65.61	152	11091.75	177	66.53
26	102.5	68.63	127.5	61.87	152.5	65.99	177.5	70.88
27	103	74.39	128	68.08	153	71.86	178	60.05
28	103.5	61.02	128.5	76.30	153.5	69.74	178.5	72.44
29	104	80.72	129	65.09	154	70.71	179	79.43
30	104.5	62.88	129.5	64.42	154.5	74.39	179.5	63.17
31	105	67.76	130	8072.35	155	61.16	180	60.67
32	105.5	67.92	130.5	8072.35	155.5	64.19	180.5	58.95
33	106	62.66	131	73.20	156	60.67	181	72.86
34	106.5	63.02	131.5	69.98	156.5	73.45	181.5	67.92
35	107	69.18	132	61.16	157	66.15	182	66.83
36	107.5	69.02	132.5	72.28	157.5	74.39	182.5	75.16
37	108	3277.18	133	65.77	158	70.71	183	66.68
38	108.5	3311.31	133.5	63.90	158.5	66.68	183.5	64.57
39	109	70.71	134	71.86	159	59.91	184	62.37
40	109.5	63.17	134.5	70.71	159.5	68.31	184.5	3535.90
41	110	67.76	135	64.19	160	73.45	185	71.45
42	110.5	67.38	135.5	64.19	160.5	69.98	185.5	71.86
43	111	63.02	136	67.53	161	64.57	186	66.68
44	111.5	65.24	136.5	77.71	161.5	61.38	186.5	64.71
45	112	74.05	137	64.19	162	64.57	187	63.17
46	112.5	74.05	137.5	65.09	162.5	6569.01	187.5	56.75
47	113	67.92	138	74.64	163	5152.29	188	72.44
48	113.5	71.29	138.5	82.22	163.5	90.89	188.5	69.42
49	114	65.61	139	84.92	164	60.88	189	71.45
50	114.5	66.53	139.5	73.79	164.5	70.55	189.5	78.80

FINE TUNE Pulses; Fundamental Frequency = 310MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	89.5	81.00	114.5	77.36	139.5	66.68	164.5	75.77
2	90	69.10	115	82.70	140	71.12	165	72.78
3	90.5	69.66	115.5	74.56	140.5	70.23	165.5	64.42
4	91	73.54	116	80.17	141	12632.81	166	66.91
5	91.5	69.42	116.5	79.07	141.5	12531.41	166.5	79.07
6	92	77.80	117	84.63	142	71.37	167	60.39
7	92.5	69.82	117.5	72.11	142.5	74.90	167.5	75.51
8	93	63.39	118	75.34	143	69.42	168	73.11
9	93.5	86.20	118.5	10727.54	143.5	67.76	168.5	76.12
10	94	75.34	119	68.55	144	76.74	169	73.71
11	94.5	69.42	119.5	74.13	144.5	67.45	169.5	73.71
12	95	86.00	120	64.79	145	82.51	170	63.10
13	95.5	69.42	120.5	69.26	145.5	80.17	170.5	67.61
14	96	6230.17	121	87.20	146	73.11	171	76.38
15	96.5	73.11	121.5	67.61	146.5	68.55	171.5	71.37
16	97	74.73	122	68.00	147	79.52	172	68.87
17	97.5	66.53	122.5	67.61	147.5	77.18	172.5	83.85
18	98	81.85	123	76.38	148	69.26	173	69.98
19	98.5	82.70	123.5	68.31	148.5	63.90	173.5	68.71
20	99	71.12	124	68.87	149	75.16	174	70.55
21	99.5	84.43	124.5	68.00	149.5	67.61	174.5	66.68
22	100	68.16	125	71.37	150	78.25	175	6553.90
23	100.5	77.62	125.5	75.51	150.5	70.79	175.5	119.12
24	101	65.09	126	78.89	151	68.55	176	84.63
25	101.5	64.42	126.5	66.15	151.5	80.17	176.5	72.28
26	102	65.61	127	71.53	152	89.02	177	68.16
27	102.5	72.95	127.5	72.11	152.5	11641.26	177.5	73.71
28	103	71.37	128	75.16	153	77.18	178	73.54
29	103.5	61.09	128.5	73.71	153.5	71.53	178.5	64.42
30	104	68.55	129	78.43	154	74.30	179	77.00
31	104.5	64.57	129.5	69.10	154.5	71.37	179.5	74.56
32	105	65.46	130	13091.82	155	69.98	180	79.71
33	105.5	65.09	130.5	67.22	155.5	75.51	180.5	67.45
34	106	75.51	131	72.11	156	69.98	181	79.25
35	106.5	70.96	131.5	72.78	156.5	72.28	181.5	82.51
36	107	8184.65	132	69.26	157	76.12	182	71.37
37	107.5	8231.90	132.5	64.94	157.5	80.17	182.5	69.66
38	108	78.61	133	68.00	158	71.53	183	68.87
39	108.5	75.51	133.5	87.20	158.5	73.37	183.5	75.34
40	109	70.96	134	73.96	159	69.98	184	67.22
41	109.5	78.25	134.5	66.53	159.5	68.00	184.5	78.25
42	110	68.31	135	69.98	160	65.31	185	75.34
43	110.5	66.68	135.5	70.79	160.5	70.96	185.5	64.79
44	111	73.54	136	63.24	161	69.66	186	77.00
45	111.5	69.26	136.5	74.90	161.5	75.51	186.5	5451.30
46	112	75.95	137	74.73	162	70.79	187	69.66
47	112.5	63.61	137.5	71.12	162.5	70.79	187.5	74.13
48	113	68.00	138	68.87	163	76.56	188	73.11
49	113.5	77.98	138.5	81.66	163.5	8649.68	188.5	75.77
50	114	69.82	139	74.30	164	7014.55	189	77.00

FINE TUNE Pulses; Fundamental Frequency = 418MHz

	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m	mSec	Level uV/m
1	100	106.78	125	126.04	150	114.29	175	93.54
2	100.5	102.21	125.5	116.55	150.5	116.82	175.5	95.83
3	101	24717.24	126	120.50	151	118.71	176	101.39
4	101.5	25205.77	126.5	112.46	151.5	103.04	176.5	100.81
5	102	129.12	127	128.53	152	111.43	177	97.05
6	102.5	105.32	127.5	109.40	152.5	111.69	177.5	127.79
7	103	109.02	128	22987.94	153	103.28	178	113.11
8	103.5	91.10	128.5	117.76	153.5	97.61	178.5	106.78
9	104	119.67	129	111.69	154	107.65	179	113.11
10	104.5	110.28	129.5	125.03	154.5	19297.45	179.5	111.17
11	105	114.29	130	121.20	155	94.30	180	107.65
12	105.5	102.68	130.5	124.45	155.5	101.04	180.5	114.68
13	106	110.79	131	97.84	156	106.17	181	16807.38
14	106.5	115.88	131.5	114.68	156.5	110.79	181.5	16846.12
15	107	123.03	132	110.54	157	113.37	182	96.61
16	107.5	115.61	132.5	111.17	157.5	118.99	182.5	107.40
17	108	104.23	133	104.23	158	96.05	183	133.97
18	108.5	104.23	133.5	110.79	158.5	100.81	183.5	109.65
19	109	109.02	134	114.68	159	113.11	184	130.47
20	109.5	109.02	134.5	96.83	159.5	111.43	184.5	103.28
21	110	104.23	135	128.82	160	104.23	185	114.68
22	110.5	104.23	135.5	95.83	160.5	119.95	185.5	97.39
23	111	124.45	136	105.08	161	99.43	186	119.95
24	111.5	97.05	136.5	127.79	161.5	126.04	186.5	92.26
25	112	107.40	137	103.04	162	100.81	187	116.55
26	112.5	116.82	137.5	114.95	162.5	114.29	187.5	114.95
27	113	98.63	138	114.02	163	95.28	188	111.94
28	113.5	103.04	138.5	116.55	163.5	109.90	188.5	99.20
29	114	104.83	139	103.28	164	103.51	189	115.21
30	114.5	24518.84	139.5	108.52	164.5	110.28	189.5	115.61
31	115	24238.18	140	97.05	165	111.43	190	110.28
32	115.5	105.68	140.5	91.52	165.5	122.04	190.5	109.40
33	116	101.62	141	20653.80	166	120.50	191	115.88
34	116.5	116.55	141.5	20820.92	166.5	108.77	191.5	108.77
35	117	107.40	142	114.68	167	112.46	192	96.38
36	117.5	106.17	142.5	116.14	167.5	106.54	192.5	101.86
37	118	98.17	143	103.51	168	18238.96	193	105.08
38	118.5	125.46	143.5	113.11	168.5	105.08	193.5	97.39
39	119	107.03	144	106.78	169	106.17	194	98.97
40	119.5	101.62	144.5	97.84	169.5	104.83	194.5	15830.70
41	120	109.02	145	109.65	170	107.03	195	104.47
42	120.5	117.76	145.5	96.38	170.5	103.28	195.5	114.68
43	121	116.14	146	100.00	171	107.40	196	117.76
44	121.5	101.39	146.5	111.94	171.5	126.47	196.5	118.71
45	122	111.94	147	111.17	172	105.68	197	117.76
46	122.5	123.03	147.5	109.90	172.5	112.46	197.5	110.79
47	123	106.17	148	103.99	173	106.78	198	100.81
48	123.5	123.74	148.5	111.94	173.5	100.23	198.5	109.40
49	124	113.76	149	107.65	174	118.71	199	99.77
50	124.5	109.90	149.5	105.08	174.5	111.94	199.5	100.58