FCC ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

INTENTIONAL RADIATOR

of

Wireless Remote Communicate With Personal Emergency Response System

FCC ID Number	: QNPEV-AMAC
Trade Name	: Evolution
Model Number	: EV-AMAC
Agency Series	: N/A
Report Number	: C40324402-RP
Date	: April 26, 2004

Prepared for：

Secure Wireless, Inc.

1185 Park Center Dr Suite A/B Vista, CA 92083

Prepared by：

Compliance Certification Services Inc.
Hsintien Lab.
No. 165, Chung Sheng Road, Hsin Tien City,
Taipei, Taiwan, R. O. C.
TEL: (02)2217-0894
FAX: (02)2217-1029

TABLE OF CONTENTS

1. VERIFICATION OF COMPLIANCE 3
2. PRODUCT DESCRIPTION.....4
3. TEST FACILITY.....4
4. MEASUREMENT STANDARDS 4
5. TEST METHODLOGY 4
6. MEASUREMENT EQUIPMENT USED 5
7. POWERLINE RFI LIMIT 5
8. RADIATED EMISSION LIMITS 6
9. SYSTEM TEST CONFIGURATION 6
10. TEST PROCEDURE.....7
11. EQUIPMENT MODIFICATIONS.....8
12. TEST RESULT 9
12.1. MAXIMUM MODULATION PERCENTAGE (M%) 9
12.2. THE EMISSIONS BANDWIDTH.....9

APPENDIX 1 PHOTOGRAPHS OF EUT 10
APPENDIX 2 TEST DATA 14

1. VERIFICATION OF COMPLIANCE

COMPANY NAME : Secure Wireless, Inc.
1185 Park Center Dr Suite A/B Vista, CA 92083

CONTACT PERSON : Michael Lamb / Jeff Christensen

TELEPHONE NO. : 866-966-9473

EUT DESCRIPTION : Wireless Remote Communicate With Personal Emergency Response System

MODEL NAME/NUMBER : EV-AMAC

FCC ID : QNPEV-AMAC

DATE TESTED : March 25, 2004

REPORT NUMBER : C40324402-RP

TYPE OF EQUIPMENT	SECURITY EQUIPMENT (INTENTIONAL RADIATOR)
EQUIPMENT TYPE	303.875 MHz Wireless Remote Communicate With Personal Emergency Response System
MEASUREMENT PROCEDURE	ANSI 63.4 / 2001
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the FCC CFR 47, PART 15. The results of testing in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties. **Warning**: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services Inc. will constitute fraud and shall nullify the document.

Vince Chiang / Section Manager
Compliance Certification Services Inc.

2. PRODUCT DESCRIPTION

Fundamental Frequency	**303.875 MHz**
Power Source	**6V Battery**
Transmitting Time	**Periodic ≤ 5 seconds**
Associated Receiver	**Model: 800 / Brand: Pers (FCC DoC)**

3. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at No. 165 & No. 199, Chung Sheng Road, Hsin Tien City, Taipei, Taiwan R.O.C. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

4. MEASUREMENT STANDARDS

The site is constructed and calibrated in conformance with the requirements of ANSI C63.4/2001.

5. TEST METHODOLOGY

For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 KHz, up to at least the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. (CFR 47 Section 15.33)

6. MEASUREMENT EQUIPMENT USED

Manufacturer	Model Number	Description	Cal Due Date
ADVANTEST	R3261A	SPECTRUM ANALYZER	04/11/04
R&S	ESVS30	MEASURE RECEIVER	09/30/04
SCHWARZBECK	VULB 9160	ANTENNA	05/09/04
BELDEN	9913	CABLE	01/01/05
H.P.	8447D B	PRE-AMPLIFIER	05/03/04
CCS	N/A	Site NSA	10/30/04
EMCO	3115	ANTENNA (1-18GHz)	02/02/05
HP	8449B	AMPLIFIER (1-26.5GHz)	02/15/05
JYEBAO	LL143	CABLE (1-18GHz)	02/15/05
JYEBAO	LL142	CABLE (1-18GHz)	02/15/05
HP	8566B	EMC ANALYZER (100Hz-22GHz)	06/25/04

7. POWERLINE RFI LIMIT

CONNECTED TO AC POWER LINE	SECTION 15.207
CARRIER CURRENT SYSTEM IN THE FREQUENCY RANGE OF 450 KHz TO 30 MHz	SECTION 15.205 AND SECTION 15.209, 15.221, 15.223, 15.225 OR 15.227, AS APPROPRIATE.
BATTERY POWER	NO REQUIRED.

8. RADIATED EMISSION LIMITS

GENERAL REQUIREMENTS	SECTION 15.209
RESTRICTED BANDS OF OPERATION	SECTION 15.205
PERIODIC OPERATION IN THE BAND 40.66 -40.70 MHz AND ABOVE 70 MHz.	SECTION 15.231
RECEIVER MODE	SECTION 15.109

9. SYSTEM TEST CONFIGURATION

Use a block of foam and combined it with EUT wrapping rubber band around it. This way it can test X.Y, and Z axis. To activate continuous transmission, place a small plastic block between rubber band and EUT push button.

Radiated Open Site Test Set-up

10. TEST PROCEDURE

Radiated Emissions, 15.231(4)(b)

Test Set-up for frequency range 30 – 1000 MHz

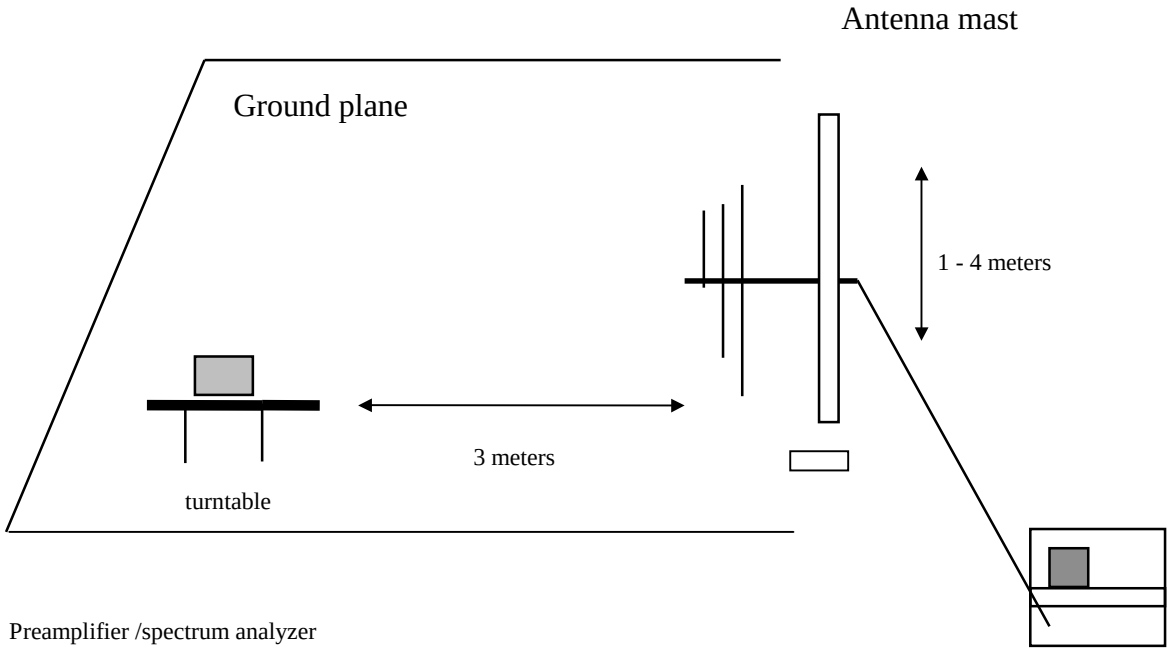


Fig. 1

1. The EUT was placed on a wooden table on the outdoor ground plane. The search antenna was placed 3-meters from the EUT.

2. The turntable was slowly rotated to locate the direction of maximum emission at each emission falling in the restricted bands of 15.205. The EUT was moved throughout the XY, XZ, and YZ planes to maximize emissions received by the search antenna.

3. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. The maximum readings so obtained are recorded in the data listed below.

Test set-up for measurements above 1GHz

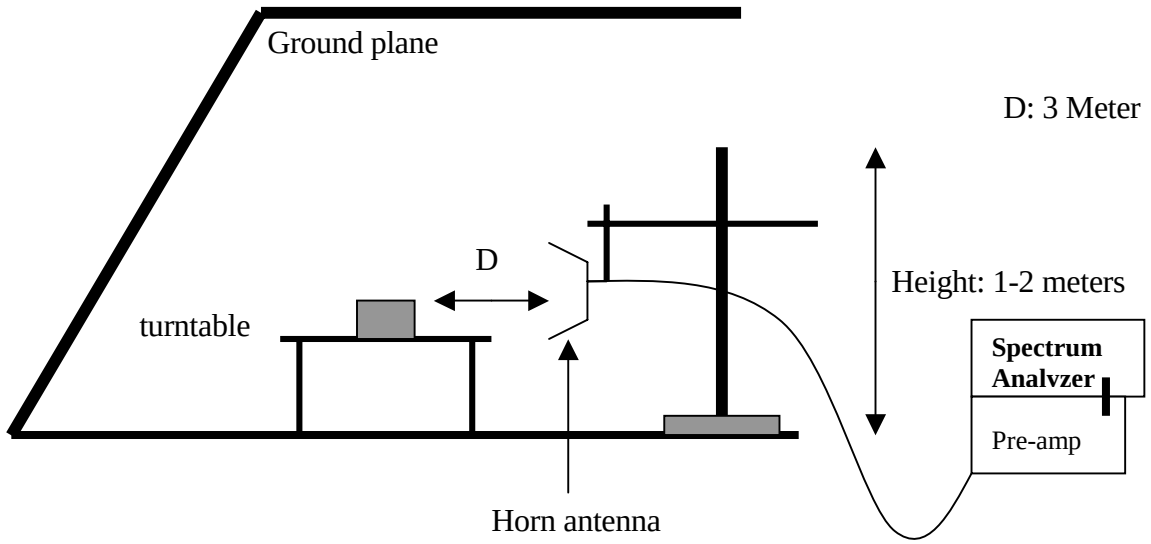


Fig. 2

1. The EUT was placed on a wooden table on the outdoor ground plane. The search antenna was placed 1-meters from the EUT. The EUT antenna was mounted vertically as per normal installation.

2. The turntable was slowly rotated to locate the direction of maximum emission at each emission falling in the restricted bands of 15.205. The EUT was moved throughout the XY, XZ, and YZ planes to maximize emissions received by the search antenna.

3. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. The maximum readings so obtained are recorded in the data listed below.

11. Equipment Modifications

To achieve compliance to FCC Section 15.231 technical limits, the following change(s) were made during compliance testing:

NONE

12. TEST RESULT

Powerline RFI Class B	Eut	Radiated Emission Limits	Eut
SECTION 15.207		SECTION 15.209	X
SECTION 15.205, 15.209, 15.221, 15.223, x 15.225 OR 15.227		SECTION 15.205	X
BATTERY POWER	X	SECTION 15.231 (b)	X
		SECTION 15.231 (e)	
		SECTION 15.109	X

12.1 Maximum Modulation Percentage (M%)

CALCULATION:

Average Reading = Peak Reading (dBuV/m)+ 20log (Duty Cycle)

In order to determine possible Maximum Modulation percentage, alternations are made to the EUT. We measured:

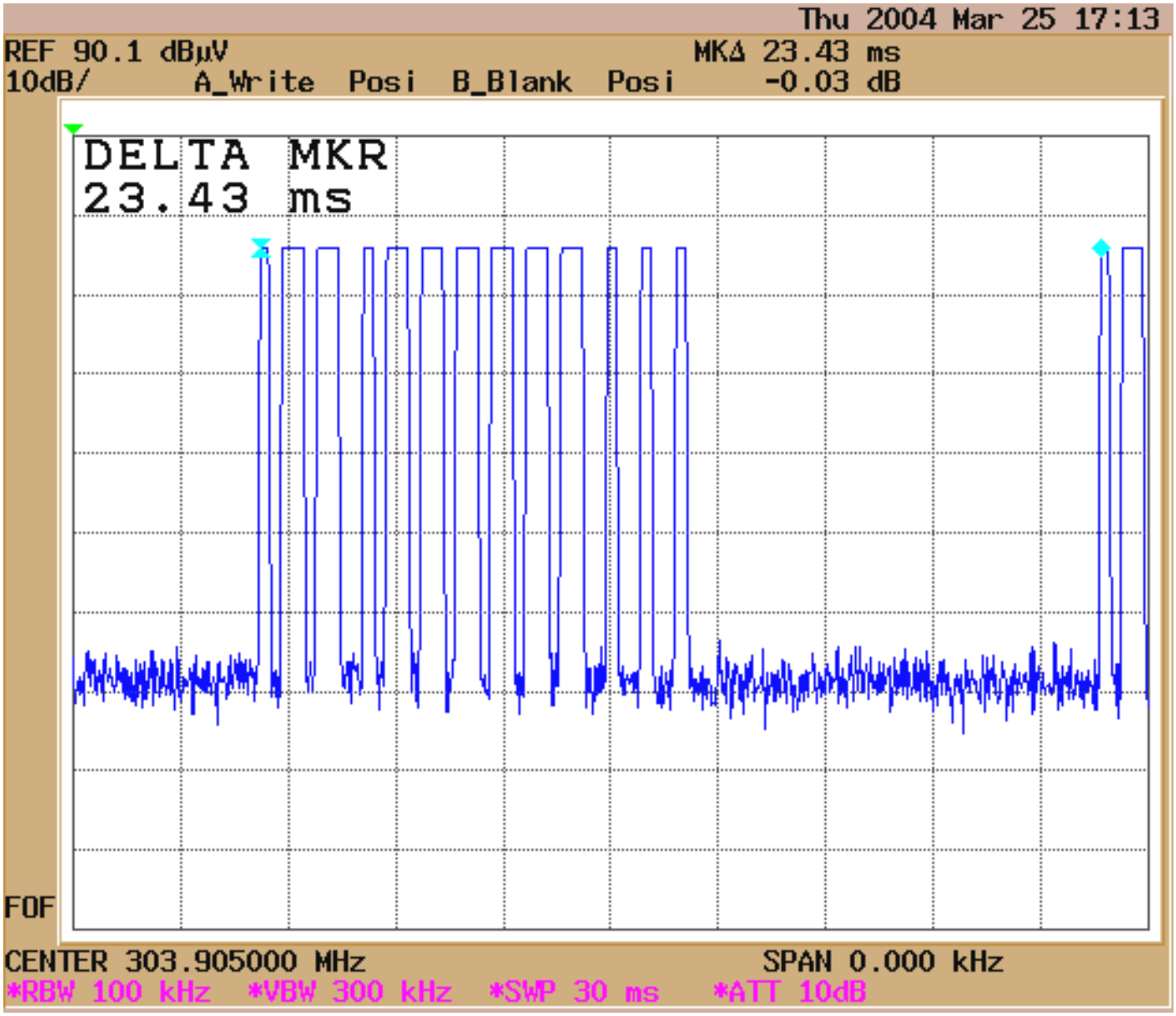
WHERE 1 Period = 23.43 mS
Long pulse = 0.54 mS
Short pulse = 0.24 mS
No of Long pulse = 8
No of Short pulse = 5

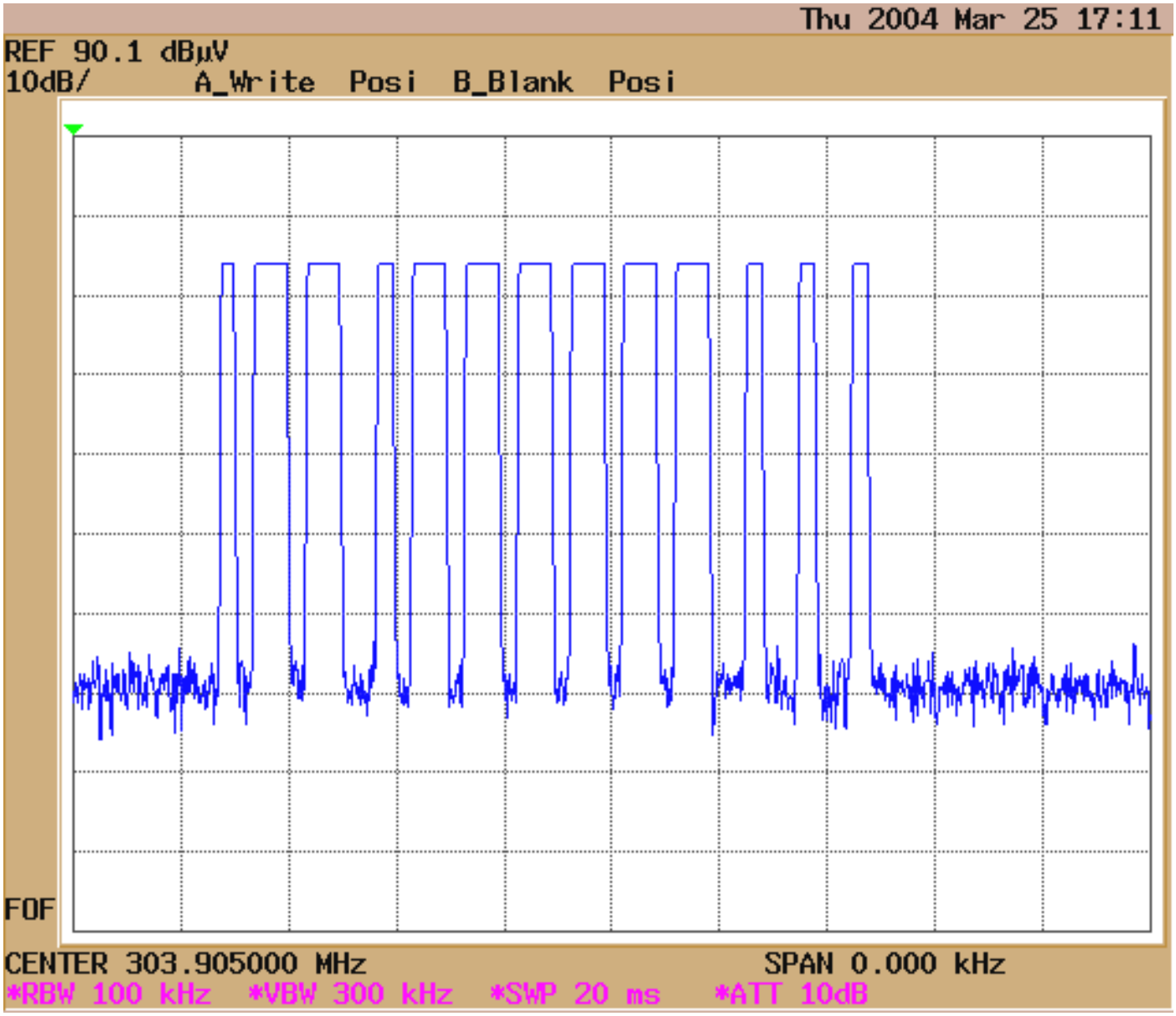
Duty Cycle = (N1L1+N2L2+…+Nn-1Ln-1+NnLn)/100 or T
Duty Cycle = [(8x0.54)+(5x0.24)]/23.43 = 0.2356 = 23.56 % or –12.557dB

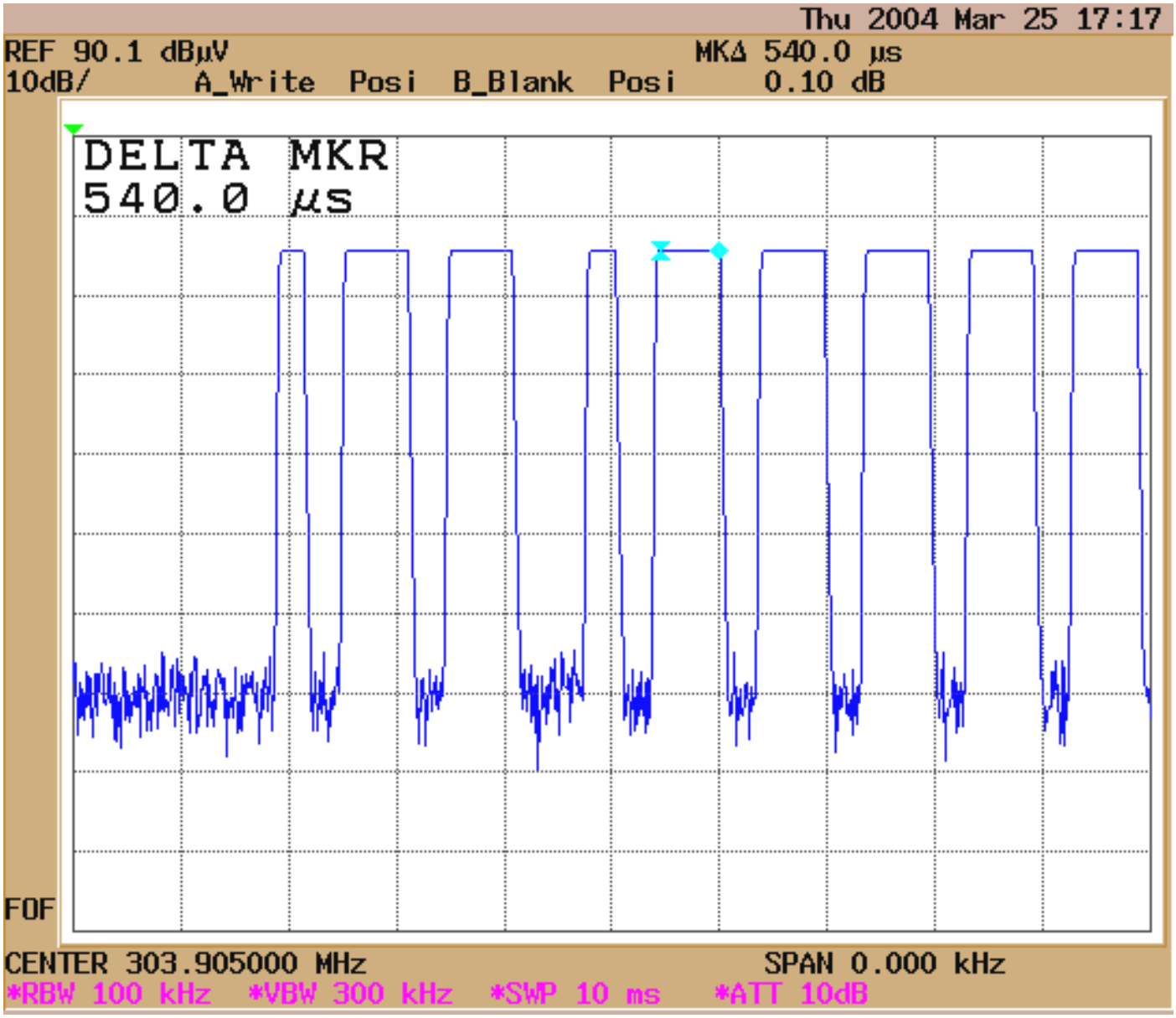
12.2 The Emissions Bandwidth

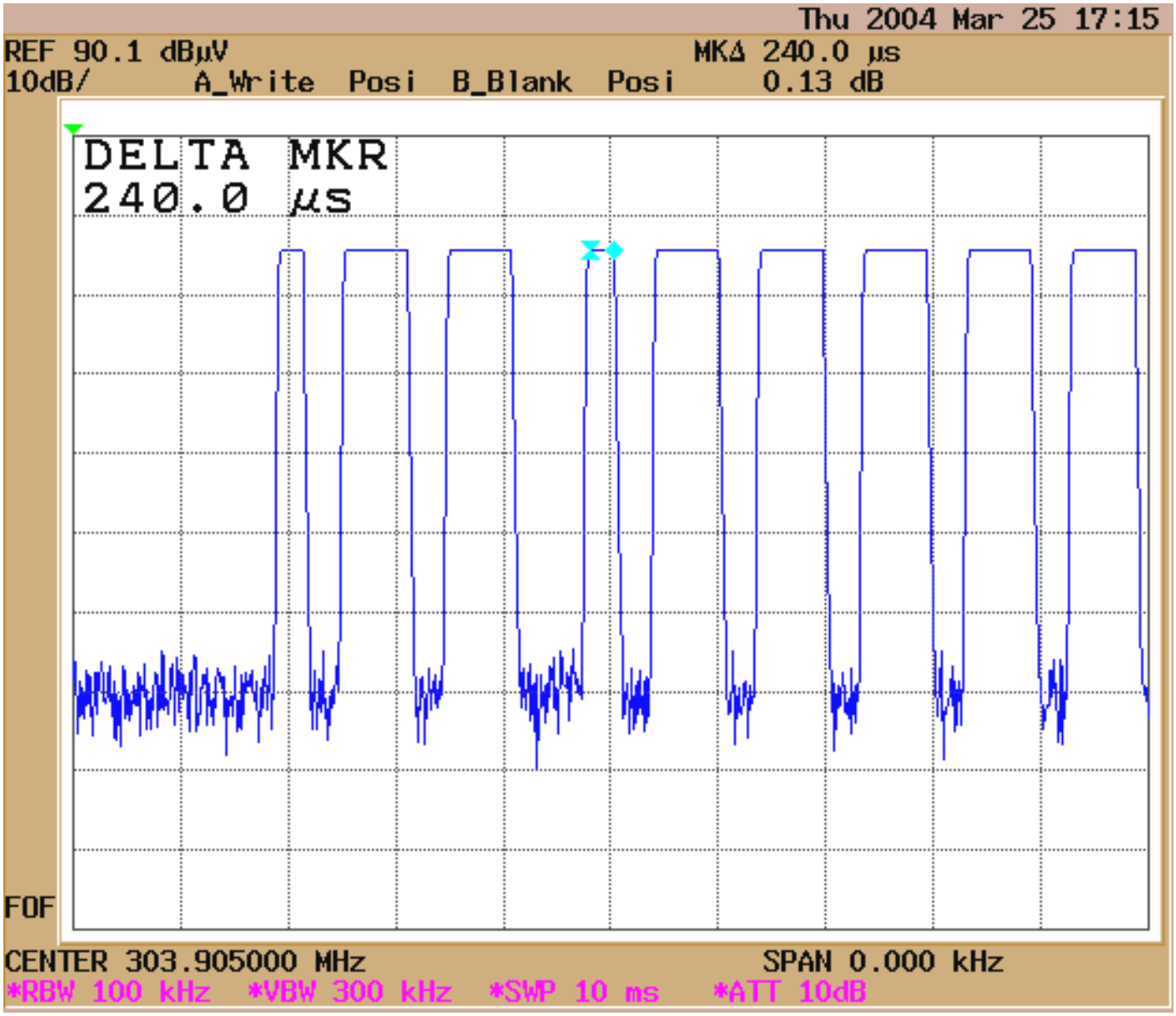
The bandwidth of the emissions were investigated per 15.231(c)

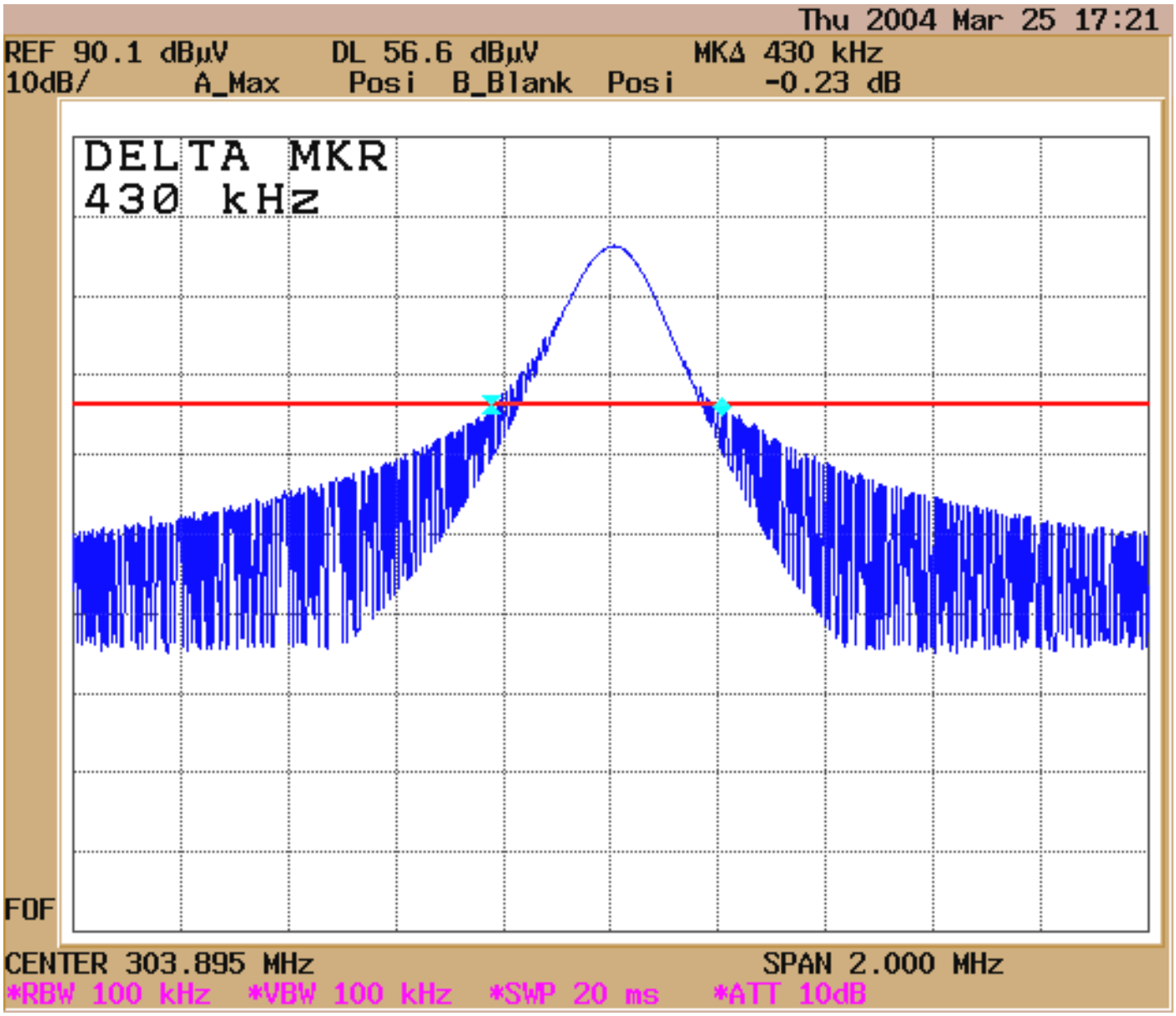
Center Frequency	Measured	Limits
303.875 MHz	**430.0 kHz < (refer to plot)**	**303.875MHzX0.25%=759.69 kHz**


Thu 2004 Mar 25 17:13
REF 90.1 dBµV
MKΔ 23.43 ms
10dB/ A_Write Posi B_Blank Posi -0.03 dB
DELTA MKR
23.43 ms
FOF
CENTER 303.905000 MHz
SPAN 0.000 kHz
*RBW 100 kHz *VBW 300 kHz *SWP 30 ms *ATT 10dB


Thu 2004 Mar 25 17:11
REF 90.1 dBµV
10dB/
A_Write Posi
B_Blank Posi
FOF
CENTER 303.905000 MHz
SPAN 0.000 kHz
*RBW 100 kHz
*VBW 300 kHz
*SWP 20 ms
*ATT 10dB


Thu 2004 Mar 25 17:17
REF 90.1 dBµV
MKΔ 540.0 µs
10dB/ A_Write Posi B_Blank Posi 0.10 dB
DELTA MKR
540.0 µs
FOF
CENTER 303.905000 MHz
SPAN 0.000 kHz
*RBW 100 kHz *VBW 300 kHz *SWP 10 ms *ATT 10dB


Thu 2004 Mar 25 17:15
REF 90.1 dBµV
MKΔ 240.0 µs
10dB/ A_Write Posi B_Blank Posi 0.13 dB
DELTA MKR
240.0 µs
FOF
CENTER 303.905000 MHz
SPAN 0.000 kHz
*RBW 100 kHz *VBW 300 kHz *SWP 10 ms *ATT 10dB


Thu 2004 Mar 25 17:21
REF 90.1 dBµV
DL 56.6 dBµV
MKΔ 430 kHz
10dB/
A_Max
Posi
B_Blank
Posi
-0.23 dB
DELTA MKR
430 kHz
FOF
CENTER 303.895 MHz
SPAN 2.000 MHz
*RBW 100 kHz
*VBW 100 kHz
*SWP 20 ms
*ATT 10dB

Compliance Certification Services Inc.

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP
No. 165, Chung Sheng Road,
Hsin Tien City, Taipei, Taiwan, R.O.C.
TEL: 02-2217-0894 FAX: 02-2217-1029

Project #:	C40324402
Report #:	C40324402-RP
Date:	2004/03/25
Test Engr:	JIMMY CHEN

Company:	Secure Wireless, Inc.
EUT Description:	EV-AMAC (303.875MHz / Car Alarm Transmitter)
Test Configuration :	EUT ONLY
Type of Test:	FCC 15.231(b)
Mode of Operation:	Normal Mode

D-Site

M% = ((t1+t2+t3+…)/T) * 100% = **23.56 %**

Av Reading = Pk Reading + 20*log(M%)
20*log(M%) = **-12.557**

	Freq.	Pk Rdg	Av Rdg	AF	Closs	Pre-amp	Level	Limit	Margin	Pol	Az	Height
	(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	FCC_B	(dB)	(H/V)	(Deg)	(Meter)
	Button #1:											
X	303.91	56.30	43.74	14.29	2.71	26.83	33.91	74.93	-41.02	3mV	180	1.00
	607.84	33.10	20.54	20.43	3.99	26.80	18.16	54.93	-36.77	3mV	270	1.00
	911.72	33.40	20.84	24.34	5.01	27.03	23.16	54.93	-31.77	3mV	0	1.00
Y	303.91	64.20	51.64	14.29	2.71	26.83	41.81	74.93	-33.12	3mV	90	1.20
	607.80	38.10	25.54	20.43	3.99	26.80	23.16	54.93	-31.77	3mV	90	1.10
	911.70	32.00	19.44	24.34	5.01	27.03	21.76	54.93	-33.17	3mV	180	1.20
Z	303.91	64.80	52.24	14.29	2.71	26.83	42.41	74.93	-32.52	3mV	0	1.20
	607.80	40.70	28.14	20.43	3.99	26.80	25.76	54.93	-29.17	3mV	90	1.10
	911.70	35.10	22.54	24.34	5.01	27.03	24.86	54.93	-30.07	3mV	270	1.00
X	303.91	68.90	56.34	14.29	2.71	26.83	46.51	74.93	-28.42	3mH	270	1.10
	607.80	38.80	26.24	20.43	3.99	26.80	23.86	54.93	-31.07	3mH	180	1.20
	911.69	30.20	17.64	24.34	5.01	27.03	19.96	54.93	-34.97	3mH	0	1.00
Y	303.91	61.00	48.44	14.29	2.71	26.83	38.61	74.93	-36.32	3mH	90	1.10
	607.82	40.40	27.84	20.43	3.99	26.80	25.46	54.93	-29.47	3mH	270	1.20
	911.70	28.50	15.94	24.34	5.01	27.03	18.26	54.93	-36.67	3mH	180	1.00
Z	303.90	62.30	49.74	14.29	2.71	26.83	39.91	74.93	-35.02	3mH	0	1.00
	607.80	41.20	28.64	20.43	3.99	26.80	26.26	54.93	-28.67	3mH	180	1.40
	911.70	25.30	12.74	24.34	5.01	27.03	15.06	54.93	-39.87	3mH	0	1.00

Peak: RBW= 120KHz
VBW= 300KHz
A(Average): Pk Reading - 12.557dB

Total Data #18

Compliance Certification Services Inc.

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

No. 165, Chung Sheng Road,
Hsin Tien City, Taipei, Taiwan, R.O.C.
TEL: 02-2217-0894 FAX: 02-2217-1029

Project #:	C40324402
Report #:	C40324402-RP
Date:	2004/03/25
Test Engr:	JIMMY CHEN

Company:	Secure Wireless, Inc.
EUT Description:	EV-AMAC (303.875MHz / Car Alarm Transmitter)
Test Configuration :	EUT ONLY
Type of Test:	FCC 15.231(b)/FCC 15.209
Mode of Operation:	Normal Mode

D-Site

Freq. (MHz)	Pk Rdg (dBuV)	Av Rdg (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
1215	**51.00**	**38.44**	**24.27**	**4.30**	**37.70**	**29.31**	**54.00**	**-24.69**	**3mV**	**90**	**1.1**	**A**
1519	**48.31**	**35.75**	**24.75**	**4.83**	**37.34**	**27.99**	**54.00**	**-26.01**	**3mV**	**180**	**1.1**	**A**
1823	**46.47**	**33.91**	**26.05**	**5.33**	**37.21**	**28.08**	**54.93**	**-26.85**	**3mV**	**270**	**1.0**	**A**
2127	**45.37**	**32.81**	**27.30**	**5.83**	**37.16**	**28.78**	**54.93**	**-26.15**	**3mV**	**0**	**1.3**	**A**
2430	**44.18**	**31.62**	**28.47**	**6.33**	**37.21**	**29.21**	**54.93**	**-25.72**	**3mV**	**270**	**1.1**	**A**
1215	**53.21**	**40.65**	**24.27**	**4.30**	**37.70**	**31.52**	**54.00**	**-22.48**	**3mH**	**90**	**1.1**	**A**
1519	**48.32**	**35.76**	**24.75**	**4.83**	**37.34**	**28.00**	**54.00**	**-26.00**	**3mH**	**270**	**1.3**	**A**
1823	**45.74**	**33.18**	**26.05**	**5.33**	**37.21**	**27.35**	**54.93**	**-27.58**	**3mH**	**180**	**1.0**	**A**
2127	**45.41**	**32.85**	**27.30**	**5.83**	**37.16**	**28.82**	**54.93**	**-26.11**	**3mH**	**90**	**1.3**	**A**
2430	**45.34**	**32.78**	**28.47**	**6.33**	**37.21**	**30.37**	**54.93**	**-24.56**	**3mH**	**0**	**1.3**	**A**

* No other emission were found within 20dB under the limits upto 4.5 GHz.

Total data #10
V.2d

P(Peak): RBW=VBW=1MHz
A(Average): Pk Reading -12.557dB