FCC Test Report

Product Name	Bar Code Printer
Model No	Alpha-4L-W, PR40-W, GR40-W, 4400-W, TSC-40-W, CN-40W,
	BP-40W, Alpha-4L-D-W, PR40-D-W, GR40-D-W, 4400-D-W,
	TSC-40-D-W, CN-40LW, BP-40LW, Alpha-4L-W-R, PR40-W-R,
	GR40-W-R, 4400-W-R, TSC-40-W-R, Alpha-4L-D-W-R,
	PR40-D-W-R, GR40-D-W-R, 4400-D-W-R, TSC-40-D-W-R
FCC ID.	VTV0521302

Applicant	TSC Auto ID Technology Co., Ltd.
Address	9F., No. 95, Minquan Rd. Xindian Dist. New Taipei City 23141,
	Taiwan (R.O.C.)

Date of Receipt	Mar. 21, 2013
Issue Date	Jun. 28, 2013
Report No.	133393R-RFUSP28V01
Report Version	V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issue Date: Jun. 28, 2013 Report No.: 133393R-RFUSP28V01



Product Name	Bar Code Printer				
Applicant	TSC Auto ID Technology Co., Ltd.				
Address	9F., No. 95, Minquan Rd. Xindian Dist. New Taipei City 23141, Taiwan				
	(R.O.C.)				
Manufacturer	TSC Auto ID Technology Co., Ltd.				
Model No.	Alpha-4L-W, PR40-W, GR40-W, 4400-W, TSC-40-W, CN-40W,				
	BP-40W, Alpha-4L-D-W, PR40-D-W, GR40-D-W, 4400-D-W,				
	TSC-40-D-W, CN-40LW, BP-40LW, Alpha-4L-W-R, PR40-W-R,				
	GR40-W-R, 4400-W-R, TSC-40-W-R, Alpha-4L-D-W-R, PR40-D-W-R,				
	GR40-D-W-R, 4400-D-W-R, TSC-40-D-W-R				
FCC ID.	VTV0521302				
EUT Rated Voltage	DC 7.2V (Power by Battery), DC 12V(Power by Adapter)				
EUT Test Voltage	AC 120V/60Hz				
Trade Name	TSC				
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012				
	ANSI C63.4: 2003, ANSI C63.10: 2009				
Test Result	Complied				

The test results relate only to the samples tested.

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Documented By	:	(Senior Adm. Specialist / Rita Huang)
Tested By	:	plan chen
	-	(Engineer / Alan Chen)
Approved By	:	Hund
		(Manager / Vincent Lin)

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- Attachment 1: EUT Test Photographs
- Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Bar Code Printer
Trade Name	TSC
Model No.	Alpha-4L-W, PR40-W, GR40-W, 4400-W, TSC-40-W, CN-40W, BP-40W,
	Alpha-4L-D-W, PR40-D-W, GR40-D-W, 4400-D-W, TSC-40-D-W,
	CN-40LW, BP-40LW, Alpha-4L-W-R, PR40-W-R, GR40-W-R, 4400-W-R,
	TSC-40-W-R, Alpha-4L-D-W-R, PR40-D-W-R, GR40-D-W-R, 4400-D-W-R,
	TSC-40-D-W-R
FCC ID.	VTV0521302
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW
Number of Channels	802.11b/g/n-20MHz: 11
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 72.2Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	Printed on PCB, PIFA
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
USB Cable	Shielded, 1.0m, with one ferrite core bonded.
RS-232 to USB Cable	Shielded, 1.0m
Power Adapter (1)	MFR: L.T.E., M/N: LTE24W-S2
	Input: AC 100-240V, 1A, 50/60Hz
	Output: DC 12V===2A
	Cable in: Non-Shielded, 1.8m, with one ferrite core bonded.
Power Adapter (2)	MFR: L.T.E., M/N: LTE12W-S2
	Input: AC 100-240V, 1A, 50/60Hz
	Output: DC 12V==1A
	Cable in: Non-Shielded, 1.8m, with one ferrite core bonded.
Power Adapter (3)	MFR: Wearnes, M/N: WWS02412U
	Input: AC 100-240V, 0.8A, 50-60Hz
	Output: 12V==2A
	Cable in: Non-Shielded, 1.8m, with one ferrite core bonded.
Power Adapter (4)	MFR: Powertron Electronics Corp., M/N: PA1015-2DU
	Input: AC 100-240V, 50-60Hz, 0.4A
	Output: 12V==1.0A
	Cable in: Non-Shielded, 1.2m, with one ferrite core bonded.
Power Adapter (5)	MFR: CWT, M/N: SAG024F 4 US
	Input: AC 100-240V, 47-63Hz, 0.8A
	Output: 12V==2.0A
	Cable in: Non-Shielded, 1.45m, with one ferrite core bonded.
Power Adapter (6)	MFR: Atech OEM Inc., M/N: C11A-1215CD0-S0
Car Charge	Input: DC 12 ~ 24V
	Output: DC 12V==1.5A(MAX)
	Cable Out: Non-Shielded, 1.5m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain	Note
1	GainSpan	GS-AN042	Printed on PCB	2.26 dBi for 2.4 GHz	Internal Antenna
2	Mgear	Cxxx-xxx001-A	PIFA	1.30 dBi for 2.4 GHz	External Antenna
Not	Note: The antenna of EUT is conform to FCC 15.203.				

802.11b/g/n-20MHz Center Frequency of Each Channel:

U		Channel		Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

Note:

1. The EUT is a Bar Code Printer with a built-in 2.4GHz WLAN and Bluetooth transceiver, this report for WLAN.

2. The different of the twenty-four model is shown as below:

(In the same configuration conditions, the hardware is identical, the differences between the models is pre-reserved model name, available to suppliers to put their own trademark.):

Model No.	Configuration
Alpha-4L-W PR40-W GR40-W 4400-W TSC-40-W CN-40W BP-40W	USB +Bluetooth+ non-LCD display + 802.11b/g/n
Alpha-4L-D-W PR40-D-W GR40-D-W 4400-D-W TSC-40-D-W CN-40LW BP-40LW	USB +Bluetooth+ LCD display + 802.11b/g/n
Alpha-4L-W-R PR40-W-R GR40-W-R 4400-W-R TSC-40-W-R	USB +Bluetooth+ non-LCD display + 802.11b/g/n + USB to RS232 Cable
Alpha-4L-D-W-R PR40-D-W-R GR40-D-W-R 4400-D-W-R TSC-40-D-W-R	USB +Bluetooth+ LCD display + 802.11b/g/n + USB to RS232 Cable

3. Each model through the pretest, only the worst case (Alpha-4L-D-W-R: USB +Bluetooth+ LCD display + 802.11b/g/n + USB to RS232 Cable) is shown in the test report.

- 4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 5. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \$\\$02.11g is 6Mbps \$\\$02.11n(20M-BW) is 7.2Mbps and)
- 6. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
- 7. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
- 8. The test item conducted emission and 30MHz 1GHz radiated emission are tested at five adapter, the worst case are Adapter #1. The worst case are tested all test item.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

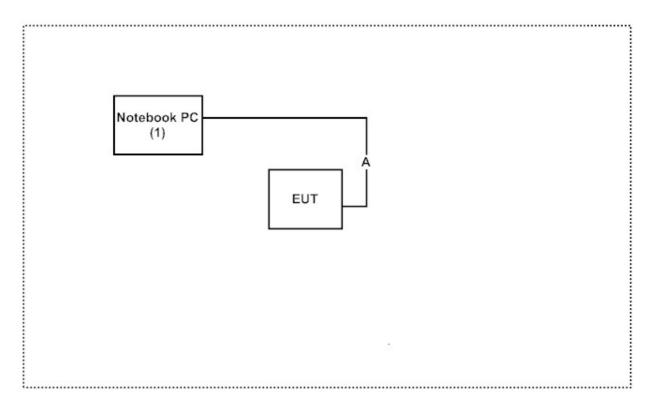
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PP18L	36119001664	Non-Shielded, 0.8m

Sign	al Cable Type	Signal cable Description		
А	RS-232 to USB Cable	Shielded, 1.0m		

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute software on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual	
Temperature (°C)	15-35	20-35	
Humidity (%RH)	25-75	50-65	
Barometric pressure (mbar)	860-1060	950-1000	

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

Site Description:	File on
	Federal Communications Commission
	FCC Engineering Laboratory
	7435 Oakland Mills Road
	Columbia, MD 21046
	Registration Number: 92195
	Accreditation on NVLAP
	NVLAP Lab Code: 200533-0
Site Name:	Quietek Corporation
Site Address:	No.5-22, Ruishukeng,
	Linkou Dist. New Taipei City 24451,
	Taiwan, R.O.C.
	TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

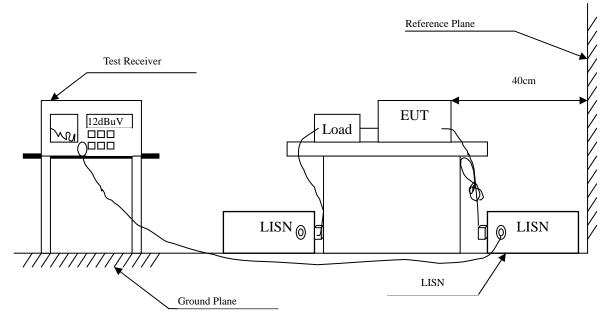
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
Х	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2012	
Х	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2013	Peripherals
Х	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2013	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	No.1 Shielded Room				

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit						
Frequency	Limits					
MHz	QP	AVG				
0.15 - 0.50	66-56	56-46				
0.50-5.0	56	46				
5.0 - 30	60	50				

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product	:	Bar Code Printer
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(1) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.150	9.790	27.910	37.700	-28.300	66.000
0.197	9.790	25.400	35.190	-29.467	64.657
0.244	9.790	19.160	28.950	-34.364	63.314
7.986	9.921	18.640	28.561	-31.439	60.000
15.994	10.100	28.980	39.080	-20.920	60.000
22.287	10.110	22.400	32.510	-27.490	60.000
Average					
0.150	9.790	22.790	32.580	-23.420	56.000
0.197	9.790	22.030	31.820	-22.837	54.657
0.244	9.790	15.000	24.790	-28.524	53.314
7.986	9.921	10.760	20.681	-29.319	50.000
15.994	10.100	25.780	35.880	-14.120	50.000
22.287	10.110	17.570	27.680	-22.320	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 2 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(1) (2437MHz) 					
Frequency	Correct	Reading M	leasurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV	dB	dBuV	
Line 2						
Quasi-Peak						
0.162	9.770	26.480	36.250	-29.407	65.657	
0.482	9.770	24.470	34.240	-22.274	56.514	
0.685	9.770	18.670	28.440	-27.560	56.000	
8.298	9.938	21.670	31.608	-28.392	60.000	
16.349	10.170	27.920	38.090	-21.910	60.000	
22.248	10.230	21.720	31.950	-28.050	60.000	
Average						
0.162	9.770	19.850	29.620	-26.037	55.657	
0.482	9.770	18.210	27.980	-18.534	46.514	
0.685	9.770	13.770	23.540	-22.460	46.000	
8.298	9.938	16.660	26.598	-23.402	50.000	
16.349	10.170	22.970	33.140	-16.860	50.000	
22.248	10.230	16.520	26.750	-23.250	50.000	

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	: Line 1	d Emission Test	n MCS0 7.2Mbps 20	M-BW) -Adapter	(2) (2437MHz)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.166	9.790	17.660	27.450	-38.093	65.543
0.580	9.790	11.750	21.540	-34.460	56.000
1.494	9.800	10.630	20.430	-35.570	56.000
5.138	9.840	13.180	23.020	-36.980	60.000
9.115	9.956	20.110	30.066	-29.934	60.000
16.732	10.100	27.720	37.820	-22.180	60.000
Average					
0.166	9.790	14.090	23.880	-31.663	55.543
0.580	9.790	6.880	16.670	-29.330	46.000
1.494	9.800	8.080	17.880	-28.120	46.000
5.138	9.840	9.160	19.000	-31.000	50.000
9.115	9.956	13.940	23.896	-26.104	50.000
16.732	10.100	22.320	32.420	-17.580	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.

- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product	:	: Bar Code Printer						
Test Item	:	Conducted Emission Test						
Power Line	:	Line 2						
Test Mode	:	Mode 3	: Transmit (802.11	n MCS0 7.2Mbps 20	M-BW) -Adapter	(2) (2437MHz)		
Frequency	Co	rrect	Reading	Measurement	Margin	Limit		
	Fa	ctor	Level	Level				
MHz	d	lB	dBuV	dBuV	dB	dBuV		
Line 2								

Line 2					
Quasi-Peak					
0.166	9.770	22.200	31.970	-33.573	65.543
0.248	9.770	18.540	28.310	-34.890	63.200
0.334	9.770	16.090	25.860	-34.883	60.743
0.580	9.770	19.130	28.900	-27.100	56.000
2.482	9.790	14.750	24.540	-31.460	56.000
18.400	10.200	25.150	35.350	-24.650	60.000
Average					
0.166	9.770	21.270	31.040	-24.503	55.543
0.248	9.770	17.200	26.970	-26.230	53.200
0.334	9.770	14.710	24.480	-26.263	50.743
0.580	9.770	17.270	27.040	-18.960	46.000
2.482	9.790	9.020	18.810	-27.190	46.000
18.400	10.200	18.620	28.820	-21.180	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 1 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(3)(2437MHz) 								
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV	dB	dBuV				
Line 1									
Quasi-Peak									
0.162	9.790	45.390	55.180	-10.477	65.657				
0.205	9.790	32.830	42.620	-21.809	64.429				
0.232	9.790	36.400	46.190	-17.467	63.657				
1.002	9.790	18.250	28.040	-27.960	56.000				
4.127	9.820	19.330	29.150	-26.850	56.000				
18.970	10.110	22.300	32.410	-27.590	60.000				
Average									
0.162	9.790	32.000	41.790	-13.867	55.657				
0.205	9.790	13.650	23.440	-30.989	54.429				
0.232	9.790	20.090	29.880	-23.777	53.657				
1.002	9.790	8.620	18.410	-27.590	46.000				
4.127	9.820	7.430	17.250	-28.750	46.000				
18.970	10.110	17.200	27.310	-22.690	50.000				

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 2 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(3) (2437MHz) 								
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV	dB	dBuV				
Line 2									
Quasi-Peak									
0.177	9.770	43.060	52.830	-12.399	65.229				
0.248	9.770	34.330	44.100	-19.100	63.200				
0.384	9.770	33.070	42.840	-16.474	59.314				
3.955	9.810	13.280	23.090	-32.910	56.000				
17.326	10.190	23.490	33.680	-26.320	60.000				
21.904	10.230	24.200	34.430	-25.570	60.000				
Average									
0.177	9.770	30.750	40.520	-14.709	55.229				
0.248	9.770	20.650	30.420	-22.780	53.200				
0.384	9.770	23.380	33.150	-16.164	49.314				
3.955	9.810	2.530	12.340	-33.660	46.000				
17.326	10.190	18.540	28.730	-21.270	50.000				
21.904	10.230	18.950	29.180	-20.820	50.000				

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 1 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(4)(2437MHz) 								
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV	dB	dBuV				
Line 1									
Quasi-Peak									
0.181	9.790	31.940	41.730	-23.384	65.114				
0.396	9.790	37.900	47.690	-11.281	58.971				
0.865	9.790	25.730	35.520	-20.480	56.000				
1.584	9.800	24.480	34.280	-21.720	56.000				
2.279	9.810	23.340	33.150	-22.850	56.000				
14.595	10.075	26.340	36.415	-23.585	60.000				
Average									
0.181	9.790	19.220	29.010	-26.104	55.114				
0.396	9.790	31.230	41.020	-7.951	48.971				
0.865	9.790	20.790	30.580	-15.420	46.000				
1.584	9.800	17.070	26.870	-19.130	46.000				
2.279	9.810	17.600	27.410	-18.590	46.000				
14.595	10.075	21.860	31.935	-18.065	50.000				

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	: Conducted : Line 2								
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV	dB	dBuV				
Line 2									
Quasi-Peak									
0.205	9.770	29.210	38.980	-25.449	64.429				
0.396	9.770	35.430	45.200	-13.771	58.971				
0.556	9.770	25.040	34.810	-21.190	56.000				
1.318	9.780	22.900	32.680	-23.320	56.000				
2.826	9.800	21.720	31.520	-24.480	56.000				
14.189	10.118	25.700	35.818	-24.182	60.000				
Average									
0.205	9.770	15.810	25.580	-28.849	54.429				
0.396	9.770	27.880	37.650	-11.321	48.971				
0.556	9.770	17.370	27.140	-18.860	46.000				
1.318	9.780	14.780	24.560	-21.440	46.000				
2.826	9.800	12.740	22.540	-23.460	46.000				
14.189	10.118	19.740	29.858	-20.142	50.000				

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 1 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(5)(2437MHz) 							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV	dB	dBuV			
Line 1								
Quasi-Peak								
0.189	9.790	37.020	46.810	-18.076	64.886			
0.267	9.790	28.610	38.400	-24.257	62.657			
0.474	9.790	32.390	42.180	-14.563	56.743			
1.009	9.790	32.130	41.920	-14.080	56.000			
2.341	9.810	29.690	39.500	-16.500	56.000			
23.095	10.110	20.500	30.610	-29.390	60.000			
Average								
0.189	9.790	28.550	38.340	-16.546	54.886			
0.267	9.790	13.500	23.290	-29.367	52.657			
0.474	9.790	19.450	29.240	-17.503	46.743			
1.009	9.790	17.070	26.860	-19.140	46.000			
2.341	9.810	19.060	28.870	-17.130	46.000			
23.095	10.110	11.290	21.400	-28.600	50.000			

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 Bar Code Printer Conducted Emission Test Line 2 Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(5) (2437MHz) 								
Frequency	Correct	Reading N	leasurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV	dB	dBuV				
Line 2									
Quasi-Peak									
0.189	9.770	39.640	49.410	-15.476	64.886				
0.338	9.770	26.110	35.880	-24.749	60.629				
0.470	9.770	28.090	37.860	-18.997	56.857				
1.002	9.780	30.570	40.350	-15.650	56.000				
3.498	9.803	27.180	36.983	-19.017	56.000				
8.834	9.950	27.770	37.720	-22.280	60.000				
Average									
0.189	9.770	28.950	38.720	-16.166	54.886				
0.338	9.770	9.660	19.430	-31.199	50.629				
0.470	9.770	14.570	24.340	-22.517	46.857				
1.002	9.780	14.150	23.930	-22.070	46.000				
3.498	9.803	13.390	23.193	-22.807	46.000				
8.834	9.950	17.490	27.440	-22.560	50.000				

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.			
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013			
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2013			
Note:							
1.	All equipments are calibrated with traceable calibrations. Each calibration is traceable to the						
	national or international standards.						

2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product	:	Bar Code Printer
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No	Average PowerFrequencyFor different Data Rate (Mbps)				Peak Power	Required	Result	
Channel No	(MHz)	1	2	5.5	11	1	Limit	Kesun
			Measur	ement Lev				
01	2412	12.97				15.4	<30dBm	Pass
06	2437	12.87	12.85	12.54	12.53	15.56	<30dBm	Pass
11	2462	12.91				15.50	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product	:	Bar Code Printer
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

	Engguenau		F	or diffe		e Powei ata Rate		5)		Peak Power	Dequired	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Required Limit	Result
			Measurement Level (dBm)									
01	2412	12.70								21.09	<30dBm	Pass
06	2437	12.58	12.57	12.56	12.53	12.52	12.5	12.49	12.49	21.35	<30dBm	Pass
11	2462	12.45								21.22	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product	:	Bar Code Printer
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

	Energy and an		F		Average erent Da			5)		Peak Power	Descripted	
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
	Measurement Level (dBm)											
01	2412	11.52								20.81	<30dBm	Pass
06	2437	11.51	11.5	11.49	11.48	11.47	11.46	11.45	11.43	20.76	<30dBm	Pass
11	2462	11.68								20.66	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

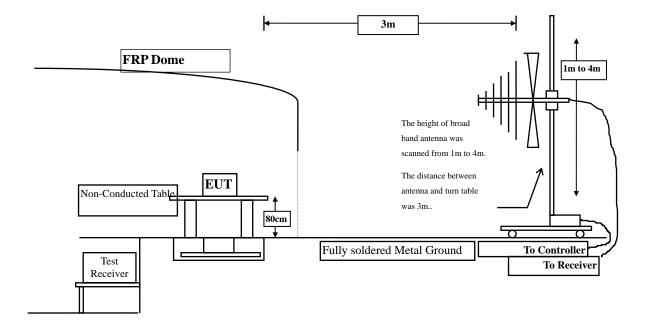
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

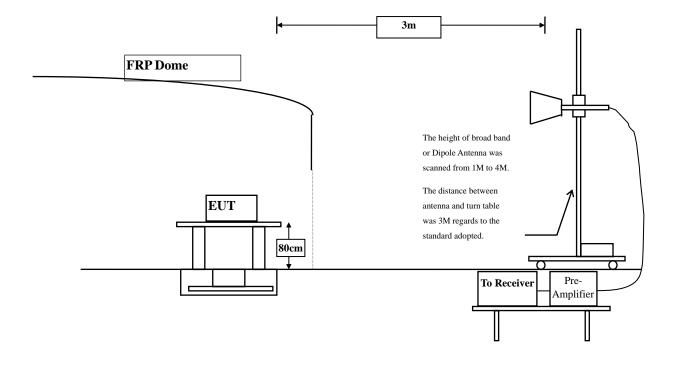
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits								
Frequency MHz	uV/m @3m	dBuV/m@3m						
30-88	100	40						
88-216	150	43.5						
216-960	200	46						
Above 960	500	54						

Remarks: E field strength $(dBuV/m) = 20 \log E$ field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement. The frequency range from 30MHz to 10th harminics is checked.

4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product	:	Bar Code Printer
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz) - Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	38.360	41.621	-32.379	74.000
7236.000	10.650	37.900	48.550	-25.450	74.000
9648.000	13.337	37.170	50.506	-23.494	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	6.421	38.600	45.021	-28.979	74.000
7236.000	11.495	37.280	48.775	-25.225	74.000
9648.000	13.807	37.420	51.226	-22.774	74.000

Average Detector:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Code	e Printer					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 1:	Transmit (802.11	b 1Mbps) (2437 MH	z) -Antenna Print	ed on PCB		
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	40.350	43.387	-30.613	74.000		
7311.000	11.795	36.490	48.284	-25.716	74.000		
9748.000	12.635	37.480	50.115	-23.885	74.000		
Average Detector:							
Vartical							
Vertical							
Peak Detector:							
4874.000	5.812	38.470	44.281	-29.719	74.000		
7311.000	12.630	36.380	49.009	-24.991	74.000		
9748.000	13.126	38.050	51.176	-22.824	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Bar Code Printer Harmonic Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) - Antenna Printed on PCB 						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.858	40.620	43.477	-30.523	74.000		
7386.000	12.127	36.550	48.678	-25.322	74.000		
9848.000	12.852	37.530	50.383	-23.617	74.000		
Average Detector: 							
Vertical							
Peak Detector:							
4924.000	5.521	39.520	45.040	-28.960	74.000		
7386.000	13.254	36.740	49.994	-24.006	74.000		
9848.000	13.367	37.450	50.817	-23.183	74.000		

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: No.3 OA	c Radiated Emiss TS	sion Data g 6Mbps) (2412MHz	z) -Antenna Printe	ed on PCB
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	41.660	44.921	-29.079	74.000
7236.000	10.650	37.470	48.120	-25.880	74.000
9648.000	13.337	37.530	50.866	-23.134	74.000
Average Detector: 					
Vertical					
Peak Detector:					
4824.000	6.421	40.570	46.991	-27.009	74.000
7236.000	11.495	37.440	48.935	-25.065	74.000
9648.000	13.807	37.380	51.186	-22.814	74.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Bar Code Printer Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) - Antenna Printed on PCB 						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	42.940	45.977	-28.023	74.000		
7311.000	11.795	36.510	48.304	-25.696	74.000		
9748.000	12.635	37.930	50.565	-23.435	74.000		
Average Detector:							
Peak Detector:							
4874.000	5.812	40.550	46.361	-27.639	74.000		
7311.000	12.630	36.810	49.439	-24.561	74.000		
9748.000	13.126	38.100	51.226	-22.774	74.000		

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: No.3 OA	ic Radiated Emiss	sion Data g 6Mbps) (2462 MH	z) -Antenna Print	ed on PCB
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	43.160	46.017	-27.983	74.000
7386.000	12.127	35.910	48.038	-25.962	74.000
9848.000	12.852	37.900	50.753	-23.247	74.000
Average Detector: 					
Vertical					
Peak Detector:					
4924.000	5.521	41.310	46.830	-27.170	74.000
7386.000	13.254	36.760	50.014	-23.986	74.000
9848.000	13.367	37.500	50.867	-23.133	74.000

Average Detector:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Code Printer						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode			n MCS0 7.2Mbps 20	M-BW)(2412MH	łz)		
	-Antenna	a Printed on PCB					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	3.261	41.960	45.221	-28.779	74.000		
7236.000	10.650	38.510	49.160	-24.840	74.000		
9648.000	13.337	37.040	50.376	-23.624	74.000		
Average Detector:							
Vertical							
Peak Detector:							
4824.000	6.421	40.350	46.771	-27.229	74.000		
7236.000	11.495	37.540	49.035	-24.965	74.000		
9648.000	13.807	38.150	51.956	-22.044	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product :	Bar Code Printer							
Test Item :	Harmonic Radiate	Harmonic Radiated Emission Data						
Test Site :	No.3 OATS							
Test Mode :	Mode 3: Transmit	(802.11n MCS0 7	7.2Mbps 20M-BW) (2	2437 MHz)				
	-Antenna Printed of	on PCB						
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detecto	or:							
4874.000	3.038	42.620	45.657	-28.343	74.000			
7311.000	11.795	36.740	48.534	-25.466	74.000			
9748.000	12.635	38.620	51.255	-22.745	74.000			
Average Detec	tor:							
Vertical								
Peak Detecto	or:							
4874.000	33.306	42.620	45.657	-28.343	74.000			
7311.000	39.698	36.740	48.534	-25.466	74.000			
9748.000	41.160	38.620	51.255	-22.745	74.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)
		-Antenna Printed on PCB

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	43.300	46.157	-27.843	74.000
7386.000	12.127	36.130	48.258	-25.742	74.000
9848.000	12.852	37.480	50.333	-23.667	74.000

Vertical

Peak Detector:	
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4924.000	5.521	41.680	47.200	-26.800	74.000
7386.000	13.254	37.310	50.564	-23.436	74.000
9848.000	13.367	37.600	50.967	-23.033	74.000

Average Detector:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	st Item : Harmonic Radiated Emission Data st Site : No.3 OATS					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level	C		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4824.000	3.261	41.890	45.151	-28.849	74.000	
7236.000	10.650	37.170	47.820	-26.180	74.000	
9648.000	13.337	36.600	49.936	-24.064	74.000	
Average Detector: 						
Vertical						
Peak Detector:						
4824.000	6.421	40.130	46.551	-27.449	74.000	
7236.000	11.495	36.680	48.175	-25.825	74.000	
9648.000	13.807	36.960	50.766	-23.234	74.000	

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Code Printer					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	lb 1Mbps) (2437 MH	z) -Antenna PIFA	L	
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4874.000	3.038	41.590	44.627	-29.373	74.000	
7311.000	11.795	36.890	48.684	-25.316	74.000	
9748.000	12.635	36.150	48.785	-25.215	74.000	
Average Detector:						
Vertical						
Peak Detector:						
4874.000	5.812	40.190	46.001	-27.999	74.000	
7311.000	12.630	36.480	49.109	-24.891	74.000	
9748.000	13.126	36.780	49.906	-24.094	74.000	

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: No.3 OA	c Radiated Emiss TS	sion Data b 1Mbps) (2462 MH	z) -Antenna PIFA	ι.
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	40.650	43.507	-30.493	74.000
7386.000	12.127	36.180	48.308	-25.692	74.000
9848.000	12.852	36.480	49.333	-24.667	74.000
Average Detector: 					
Vertical					
Peak Detector:					
4924.000	5.521	41.590	47.110	-26.890	74.000
7386.000	13.254	36.480	49.734	-24.266	74.000
9846.000	13.343	37.040	50.384	-23.616	74.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: No.3 OA	c Radiated Emiss TS	sion Data g 6Mbps) (2412MHz	z) -Antenna PIFA	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	40.870	44.131	-29.869	74.000
7236.000	10.650	36.890	47.540	-26.460	74.000
9648.000	13.337	37.480	50.816	-23.184	74.000
Average Detector: 					
Vertical					
Peak Detector:					
4824.000	6.421	40.590	47.011	-26.989	74.000
7236.000	11.495	37.150	48.645	-25.355	74.000
9648.000	13.807	37.140	50.946	-23.054	74.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Code Printer					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 2:	Transmit (802.11	g 6Mbps) (2437 MH	z) -Antenna PIFA	L .	
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4874.000	3.038	41.590	44.627	-29.373	74.000	
7311.000	11.795	36.490	48.284	-25.716	74.000	
9748.000	12.635	36.840	49.475	-24.525	74.000	
Average Detector:						
Peak Detector:						
4874.000	5.812	41.590	47.401	-26.599	74.000	
7311.000	12.630	37.180	49.809	-24.191	74.000	
9748.000	13.126	37.480	50.606	-23.394	74.000	

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: No.3 OA	c Radiated Emiss TS	sion Data g 6Mbps) (2462 MH	z) -Antenna PIFA	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	43.530	46.387	-27.613	74.000
7386.000	12.127	36.150	48.278	-25.722	74.000
9848.000	12.852	36.590	49.443	-24.557	74.000
Average Detector: 					
Vertical					
Peak Detector:					
4924.000	5.521	41.590	47.110	-26.890	74.000
7386.000	13.254	37.260	50.514	-23.486	74.000
9848.000	13.367	36.890	50.257	-23.743	74.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Code Printer						
Test Item	: Harmonic Radiated Emission Data						
Test Site	Test Site : No.3 OATS Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz) -Antenna PIFA						
Test Mode							
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	3.261	42.590	45.851	-28.149	74.000		
7236.000	10.650	38.150	48.800	-25.200	74.000		
9648.000	13.337	37.140	50.476	-23.524	74.000		
Average Detector:							
Vertical							
Peak Detector:							
4824.000	6.421	41.590	48.011	-25.989	74.000		
7236.000	11.495	37.560	49.055	-24.945	74.000		
9648.000	13.807	36.150	49.956	-24.044	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product:Test Item:Test Site:Test Mode:	Harmonic Radiated No.3 OATS		7.2Mbps 20M-BW) (2	2437 MHz)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizonta	l				
Peak Detecto	or:				
4874.000	3.038	42.140	45.177	-28.823	74.000
7311.000	11.795	36.150	47.944	-26.056	74.000
9748.000	12.635	36.140	48.775	-25.225	74.000
Average Detec	tor:				
Vertical					
Peak Detecto	or:				
4874.000	5.812	41.180	46.991	-27.009	74.000
7311.000	12.630	36.180	48.809	-25.191	74.000
9748.000	13.126	37.870	50.996	-23.004	74.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)
		-Antenna PIFA

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
4924.000	2.858	43.450	46.307	-27.693	74.000
7386.000	12.127	36.180	48.308	-25.692	74.000
9848.000	12.852	37.140	49.993	-24.007	74.000
Average Detector:					

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Vertical

4924.000	5.521	41.260	46.780	-27.220	74.000
7386.000	13.254	37.590	50.844	-23.156	74.000
9848.000	13.367	36.890	50.257	-23.743	74.000

Average Detector:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: General : No.3 O : Mode 1		b 1Mbps) -Adapter(1	.) (2437 MHz)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
107.600	-7.597	43.995	36.398	-7.102	43.500
299.660	-4.751	36.373	31.622	-14.378	46.000
466.500	3.156	35.861	39.017	-6.983	46.000
602.300	3.794	32.582	36.376	-9.624	46.000
697.360	3.231	34.962	38.193	-7.807	46.000
930.160	7.530	30.645	38.175	-7.825	46.000
Vertical					
132.820	-3.932	38.740	34.808	-8.692	43.500
299.660	-4.061	36.373	32.312	-13.688	46.000
495.600	-1.237	36.991	35.754	-10.246	46.000
660.500	-1.111	36.337	35.226	-10.774	46.000
827.340	2.711	30.459	33.170	-12.830	46.000
967.020	3.889	25.839	29.728	-24.272	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Adapter(1) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
132.820	-7.442	38.740	31.298	-12.202	43.500
299.660	-4.751	36.373	31.622	-14.378	46.000
398.600	0.879	38.202	39.081	-6.919	46.000
468.440	3.544	35.443	38.987	-7.013	46.000
689.600	3.642	35.886	39.528	-6.472	46.000
881.660	6.789	29.286	36.075	-9.925	46.000
Vertical					
132.820	-3.932	38.740	34.808	-8.692	43.500
299.660	-4.061	36.373	32.312	-13.688	46.000
493.660	-1.656	38.400	36.745	-9.255	46.000
660.500	-1.111	36.337	35.226	-10.774	46.000
825.400	3.016	31.903	34.919	-11.081	46.000
949.560	3.156	33.641	36.797	-9.203	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Adapter(1) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
132.820	-7.442	38.740	31.298	-12.202	43.500
299.660	-4.751	36.373	31.622	-14.378	46.000
443.220	-0.031	35.227	35.196	-10.804	46.000
598.420	3.524	33.118	36.642	-9.358	46.000
790.480	6.363	31.298	37.661	-8.339	46.000
928.220	7.230	29.390	36.620	-9.380	46.000
Vertical					
148.340	-5.406	36.882	31.476	-12.024	43.500
365.620	0.282	29.982	30.264	-15.736	46.000
528.580	1.164	29.905	31.069	-14.931	46.000
674.080	0.003	34.801	34.804	-11.196	46.000
806.000	3.686	28.937	32.623	-13.377	46.000
920.460	3.272	27.840	31.112	-14.888	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) -Adapter(2) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
111.480	-7.489	39.003	31.515	-11.985	43.500
299.660	-4.751	33.429	28.678	-17.322	46.000
400.540	0.942	32.067	33.009	-12.991	46.000
530.520	3.062	32.787	35.849	-10.151	46.000
716.760	3.809	34.682	38.491	-7.509	46.000
949.560	7.036	30.357	37.393	-8.607	46.000
Vertical					
59.100	-11.291	47.281	35.990	-4.010	40.000
198.780	-5.708	42.525	36.817	-6.683	43.500
396.660	-2.039	42.244	40.205	-5.795	46.000
598.420	1.114	32.340	33.454	-12.546	46.000
800.180	2.637	37.601	40.238	-5.762	46.000
949.560	3.156	34.179	37.335	-8.665	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Adapter(2) (2437 MHz)
		-Antenna Printed on PCB

Frequency Corre		Correct	Reading	Measurement	Margin	Limit
		Factor	Level	Level		
	MHz	dB	dBuV	dBuV/m	dB	dBuV/m
	Horizontal					
	59.100	-11.901	47.281	35.380	-4.620	40.000
	154.160	-8.002	42.524	34.522	-8.978	43.500
	381.140	1.386	34.581	35.967	-10.033	46.000
	598.420	3.524	34.012	37.536	-8.464	46.000
	767.200	5.099	35.460	40.560	-5.440	46.000
	930.160	7.530	33.178	40.708	-5.292	46.000
	Vertical					
	84.320	-4.204	34.730	30.526	-9.474	40.000
	177.440	-1.248	42.387	41.139	-2.361	43.500
	396.660	-2.039	42.244	40.205	-5.795	46.000
	598.420	1.114	34.012	35.126	-10.874	46.000
	800.180	2.637	37.601	40.238	-5.762	46.000
	949.560	3.156	34.179	37.335	-8.665	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(2) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
154.160	-8.002	42.524	34.522	-8.978	43.500
266.680	-5.510	37.759	32.249	-13.751	46.000
381.140	1.386	34.581	35.967	-10.033	46.000
598.420	3.524	34.012	37.536	-8.464	46.000
738.100	3.332	33.974	37.306	-8.694	46.000
899.120	5.717	32.853	38.570	-7.430	46.000
Vertical					
154.160	-5.272	42.524	37.252	-6.248	43.500
297.720	-4.356	36.075	31.719	-14.281	46.000
396.660	-2.039	42.244	40.205	-5.795	46.000
598.420	1.114	34.012	35.126	-10.874	46.000
800.180	2.637	37.601	40.238	-5.762	46.000
963.140	3.581	32.562	36.143	-17.857	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Bar Code Printer General Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) -Adapter(3) (2437 MHz) -Antenna Printed on PCB 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
132.820	-7.442	38.829	31.387	-12.113	43.500
297.720	-4.756	35.519	30.763	-15.237	46.000
493.660	1.474	37.433	38.908	-7.092	46.000
635.280	1.798	34.208	36.006	-9.994	46.000
796.300	6.389	31.688	38.077	-7.923	46.000
967.020	7.299	32.353	39.652	-14.348	54.000
Vertical					
132.820	-3.932	38.829	34.897	-8.603	43.500
299.660	-4.061	36.659	32.598	-13.402	46.000
497.540	-0.713	37.241	36.528	-9.472	46.000
685.720	2.254	36.649	38.903	-7.097	46.000
848.680	0.299	34.123	34.422	-11.578	46.000

961.200

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

29.697

-24.303

54.000

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

26.387

4. Measurement Level = Reading Level + Correct Factor.

3.310

- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Bar Code Printer General Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) -Adapter(3) (2437 MHz) -Antenna Printed on PCB 				
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
198.780	-9.958	39.228	29.270	-14.230	43.500
437.400	0.819	34.575	35.394	-10.606	46.000
598.420	3.524	34.746	38.270	-7.730	46.000
738.100	3.332	34.863	38.195	-7.805	46.000
881.660	6.789	30.918	37.707	-8.293	46.000
982.540	7.679	28.695	36.374	-17.626	54.000
Vertical					
132.820	-3.932	38.829	34.897	-8.603	43.500
299.660	-4.061	36.659	32.598	-13.402	46.000
199 180	0.100	37 665	37 165	8 535	46.000

277.000	-4.001	50.057	52.570	-13.402	40.000
499.480	-0.199	37.665	37.465	-8.535	46.000
677.960	0.840	35.141	35.981	-10.019	46.000
840.920	2.284	31.101	33.385	-12.615	46.000
967.020	3.889	32.353	36.242	-17.758	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(3) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
117.300	-7.350	40.808	33.458	-10.042	43.500
299.660	-4.751	36.997	32.246	-13.754	46.000
493.660	1.474	37.433	38.908	-7.092	46.000
666.320	1.879	35.700	37.579	-8.421	46.000
825.400	7.346	31.177	38.523	-7.477	46.000
974.780	7.039	29.921	36.960	-17.040	54.000
Vertical					
78.500	-5.604	36.455	30.851	-9.149	40.000
239.520	-6.138	33.141	27.003	-18.997	46.000
472.320	-3.508	34.845	31.337	-14.663	46.000
648.860	-3.146	35.372	32.226	-13.774	46.000
790.480	2.693	30.776	33.469	-12.531	46.000
903.000	1.418	29.544	30.962	-15.038	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)-Adapter(4) (2437 MHz)
		-Antenna Printed on PCB

Factor Level Level	
MHz dB dBuV dBuV/m dB dBuV/m	
Horizontal	
148.340 -7.806 37.606 29.800 -13.700 43.500	
299.660 -4.751 36.061 31.310 -14.690 46.000	
460.680 4.030 35.270 39.300 -6.700 46.000	
652.7401.89935.48137.380-8.62046.000	
825.400 7.346 31.177 38.523 -7.477 46.000	
949.560 7.036 33.892 40.928 -5.072 46.000	
Vertical	
132.820-3.93238.82934.897-8.60343.500	
299.660 -4.061 36.318 32.257 -13.743 46.000	
499.480 -0.199 37.665 37.465 -8.535 46.000	
689.600 2.302 37.216 39.518 -6.482 46.000	
848.680 0.299 34.123 34.422 -11.578 46.000	
949.560 3.156 33.892 37.048 -8.952 46.000	

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Bar Code Printer General Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) -Adapter(4) (2437 MHz) -Antenna Printed on PCB 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
132.820	-7.442	38.829	31.387	-12.113	43.500
299.660	-4.751	36.318	31.567	-14.433	46.000
431.580	0.757	39.762	40.519	-5.481	46.000
598.420	3.524	33.283	36.807	-9.193	46.000
755.560	5.039	35.349	40.388	-5.612	46.000
928.220	7.230	32.854	40.084	-5.916	46.000
Vertical					
132.820	-3.932	38.829	34.897	-8.603	43.500
299.660	-4.061	36.318	32.257	-13.743	46.000
499.480	-0.199	37.665	37.465	-8.535	46.000
693.480	1.748	38.216	39.964	-6.036	46.000
848.680	0.299	34.123	34.422	-11.578	46.000

967.020

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

30.723

-23.277

54.000

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

26.834

4. Measurement Level = Reading Level + Correct Factor.

3.889

- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(4) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
148.340	-7.806	37.606	29.800	-13.700	43.500
299.660	-4.751	36.318	31.567	-14.433	46.000
431.580	0.757	39.762	40.519	-5.481	46.000
598.420	3.524	33.283	36.807	-9.193	46.000
718.700	3.818	37.849	41.667	-4.333	46.000
926.280	6.832	32.457	39.289	-6.711	46.000
Vertical					
132.820	-3.932	38.829	34.897	-8.603	43.500
299.660	-4.061	36.329	32.268	-13.732	46.000
460.680	-1.930	35.270	33.340	-12.660	46.000
660.500	-1.111	35.328	34.217	-11.783	46.000
840.920	2.284	31.101	33.385	-12.615	46.000
967.020	3.889	26.914	30.803	-23.197	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) -Adapter(5) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
260.860	-5.032	46.618	41.586	-4.414	46.000
390.840	-1.849	44.785	42.936	-3.064	46.000
456.800	-0.067	39.853	39.786	-6.214	46.000
716.760	3.537	34.659	38.196	-7.804	46.000
782.720	4.325	34.105	38.430	-7.570	46.000
912.700	6.132	36.779	42.911	-3.089	46.000
Vertical					
64.920	-5.683	39.759	34.076	-5.924	40.000
194.900	-9.322	41.129	31.807	-11.693	43.500
390.840	-3.099	43.587	40.488	-5.512	46.000
520.820	-0.298	34.996	34.698	-11.302	46.000
782.720	3.035	29.769	32.804	-13.196	46.000
912.700	1.762	34.532	36.294	-9.706	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Adapter(5) (2437 MHz) -Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
260.860	-5.032	46.163	41.131	-4.869	46.000
390.840	-1.849	45.142	43.293	-2.707	46.000
456.800	-0.067	40.099	40.032	-5.968	46.000
586.780	3.436	35.676	39.112	-6.888	46.000
652.740	2.166	37.366	39.532	-6.468	46.000
912.700	6.132	36.319	42.451	-3.549	46.000
Vertical					
64.920	-5.683	40.688	35.005	-4.995	40.000
194.900	-9.322	41.787	32.465	-11.035	43.500
390.840	-3.099	40.907	37.808	-8.192	46.000
456.800	-4.697	39.205	34.508	-11.492	46.000
782.720	3.035	29.599	32.634	-13.366	46.000
912.700	1.762	34.569	36.331	-9.669	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(5) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
260.860	-5.032	45.234	40.202	-5.798	46.000
390.840	-1.849	44.620	42.771	-3.229	46.000
456.800	-0.067	38.228	38.161	-7.839	46.000
586.780	3.436	35.102	38.538	-7.462	46.000
782.720	4.325	33.915	38.240	-7.760	46.000
912.700	6.132	34.828	40.960	-5.040	46.000
Vertical					
64.920	-5.683	40.262	34.579	-5.421	40.000
194.900	-9.322	39.213	29.891	-13.609	43.500
390.840	-3.099	40.047	36.948	-9.052	46.000
520.820	-0.298	32.229	31.931	-14.069	46.000
782.720	3.035	29.975	33.010	-12.990	46.000
912.700	1.762	33.025	34.787	-11.213	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)-Adapter(6) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
194.900	-11.012	47.415	36.403	-7.097	43.500
282.200	-5.211	37.794	32.583	-13.417	46.000
472.320	0.637	34.162	34.799	-11.201	46.000
625.580	1.770	37.736	39.506	-6.494	46.000
802.120	5.091	36.061	41.152	-4.848	46.000
912.700	6.132	34.010	40.142	-5.858	46.000
Vertical					
107.600	-0.318	36.273	35.955	-7.545	43.500
224.000	-8.699	41.584	32.885	-13.115	46.000
472.320	-4.613	40.868	36.255	-9.745	46.000
662.440	-2.026	34.534	32.508	-13.492	46.000
817.640	3.272	34.699	37.971	-8.029	46.000
912.700	1.762	34.476	36.238	-9.762	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Adapter(6) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
198.780	-10.661	30.841	20.180	-23.320	43.500
297.720	-3.633	30.711	27.079	-18.921	46.000
398.600	-2.268	32.266	29.998	-16.002	46.000
596.480	4.017	28.659	32.676	-13.324	46.000
796.300	5.161	27.606	32.767	-13.233	46.000
897.180	5.182	28.268	33.450	-12.550	46.000
Vertical					
198.780	-8.221	33.490	25.269	-18.231	43.500
297.720	-7.143	31.684	24.542	-21.458	46.000
365.620	-2.179	27.903	25.724	-20.276	46.000
460.680	-3.221	25.460	22.239	-23.761	46.000
596.480	-3.113	33.050	29.937	-16.063	46.000
749.740	2.510	28.755	31.265	-14.735	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Bar Code Printer
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) -Adapter(6) (2437 MHz)
		-Antenna Printed on PCB

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
198.780	-10.661	29.952	19.291	-24.209	43.500
297.720	-3.633	28.755	25.123	-20.877	46.000
497.540	-0.273	36.676	36.403	-9.597	46.000
598.420	3.991	28.726	32.717	-13.283	46.000
697.360	3.171	29.906	33.077	-12.923	46.000
897.180	5.182	27.832	33.014	-12.986	46.000
Vertical					
198.780	-8.221	32.181	23.960	-19.540	43.500
249.220	-7.634	31.082	23.448	-22.552	46.000
344.280	-3.171	29.950	26.780	-19.220	46.000
596.480	-3.113	32.251	29.138	-16.862	46.000
749.740	2.510	29.642	32.152	-13.848	46.000
844.800	3.181	25.210	28.391	-17.609	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Coo	de Printer			
Test Item	: General	Radiated Emissio	n Data		
Test Site	: No.3 O	ATS			
Test Mode	: Mode 1	: Transmit (802.11	b 1Mbps)- Adapter(1) - (2437 MHz)	
	-Antenr	na PIFA			
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
97.900	-7.650	24.725	17.074	-26.426	43.500
268.620	-4.942	24.930	19.988	-26.012	46.000
447.100	-2.726	30.038	27.312	-18.688	46.000
542.160	3.011	27.341	30.352	-15.648	46.000
699.300	2.875	35.388	38.263	-7.737	46.000
934.040	6.612	24.875	31.487	-14.513	46.000
Vertical					
103.720	-0.151	23.558	23.406	-20.094	43.500
256.980	-7.573	26.765	19.192	-26.808	46.000
346.220	-3.093	28.050	24.957	-21.043	46.000
542.160	-0.269	28.859	28.590	-17.410	46.000
755.560	3.281	23.282	26.563	-19.437	46.000
968.960	8.191	22.658	30.849	-23.151	54.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Cod	le Printer							
Test Item	: General	: General Radiated Emission Data							
Test Site	: No.3 OATS								
Test Mode	: Mode 2	: Transmit (802.11	g 6Mbps) - Adapter(1) -(2437 MHz)					
	-Antenn	a PIFA							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
105.660	-6.673	23.023	16.350	-27.150	43.500				
348.160	-2.268	26.104	23.836	-22.164	46.000				
542.160	3.011	29.312	32.323	-13.677	46.000				
697.360	3.171	27.498	30.669	-15.331	46.000				
840.920	5.191	25.422	30.613	-15.387	46.000				
939.860	6.400	23.263	29.663	-16.337	46.000				
Vertical									
111.480	-0.954	23.813	22.859	-20.641	43.500				
348.160	-3.458	28.034	24.576	-21.424	46.000				
547.980	-2.088	28.364	26.276	-19.724	46.000				
687.660	2.444	22.866	25.310	-20.690	46.000				
827.340	3.162	23.709	26.871	-19.129	46.000				
968.960	8.191	22.309	30.500	-23.500	54.000				

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Bar Cod	e Printer			
Test Item	: General	Radiated Emissio	n Data		
Test Site	: No.3 OA	ATS			
Test Mode	: Mode 3: -Antenn		n MCS0 7.2Mbps 20	M-BW) - Adapte	r(1) -(2437 MHz)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
256.980	-5.073	24.291	19.218	-26.782	46.000
443.220	-2.738	30.584	27.846	-18.154	46.000
542.160	3.011	29.514	32.525	-13.475	46.000
695.420	3.438	24.796	28.234	-17.766	46.000
879.720	6.115	22.466	28.581	-17.419	46.000
968.960	6.981	23.285	30.266	-23.734	54.000
Vertical					
111.480	-0.954	23.527	22.573	-20.927	43.500
346.220	-3.093	30.901	27.808	-18.192	46.000
524.700	-0.379	24.573	24.194	-21.806	46.000
639.160	-3.538	28.586	25.048	-20.952	46.000
784.660	3.012	23.259	26.271	-19.729	46.000
968.960	8.191	24.050	32.241	-21.759	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. **RF** antenna conducted test

5.1. Test Equipment

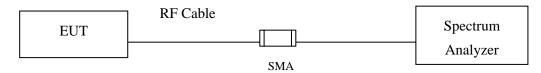
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A/MY48030495	Apr., 2013

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty Conducted is defined as ± 1.27 dB

5.6. Test Result of RF antenna conducted test

Product	:	Bar Code Printer
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz)

Interference Frequency Avg Type: Log-Pwr Tride: [1 2 3 4 5] Frequency PN0: Fast (FGain:Low Trig: Free Run (FGain:Low Trig: Free Run #Atten: 30 dB Mkr1 836.022 MHz -55.11 dBm Auto Tune 0 dB/div Ref 20.00 dBm -55.11 dBm -55.11 dBm Center Freq 515.00000 MHz Center Freq 515.00000 MHz 0 dB/div Ref 20.00 dBm -18.04 dBm -18.04 dBm -18.04 dBm Start Freq 30.00000 MHz Start Freq 30.00000 MHz Start Freq 30.00000 MHz -18.04 dBm Start Freq 30.00000 MHz Start Freq 30.00000 MHz Start Freq 30.00000 MHz Start Freq 30.000000 GHz Stop Freq 1.00000000 GHz Stop Freq 1.0000000 GHz Stop Freq 1.00000000 GHz -11	Agilent Spectrum Analyzer					
Bitter 1164 010000000 min Trig: Free Run Trig: Free Run Trig: Free Run Trig: Free Run Auto Tune 0 db/div Ref 20.00 dBm -55.11 dBm -55.11 dBm -55.11 dBm -616.00000 MHz -616.00000 MHz Center Freq 0 db/div Ref 20.00 dBm -616.00000 MHz -616.00000 MHz -616.00000 MHz Center Freq 0 db/div -616.00000 MHz -616.00000 MHz -616.00000 MHz -616.00000 MHz -616.000000 MHz -616.000000 MHz 0 db/div -616.00000 MHz -611.00000000 GHz -616.000000 GHz -616.000000 GHz -610.0000000 GHz -610.0000000 GHz -610.0000 GHz -610.0000000 GHz -610.00000000 GHz -610.0000000 GHz -610.0000000 GHz -610.0000000 GHz -610.0000000 GHz -610.0000000 GHz -610.0000000 GHz -610.00000000 GHz -610.0000000 GHz <td></td> <td></td> <td>SENSE:INT</td> <td></td> <td>10:26:03 AM Jun 24, 2013 TRACE 1 2 2 4 5 6</td> <td>Frequency</td>			SENSE:INT		10:26:03 AM Jun 24, 2013 TRACE 1 2 2 4 5 6	Frequency
OdB/div Ref 20.00 dBm 55.11 dBm 00 55.11 dBm 55.11 dBm 010	Center Freq 515.	PNO: Fast 😱			TYPE MWWWWW	• • • •
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50.0 1	-30.0					
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XI Y FUNCTION FUNCTION VIOL Auto Main 1 1 1 6 <td>-60.0</td> <td></td> <td></td> <td></td> <td></td> <td></td>	-60.0					
Res BW 100 kHz #VBW 300 kHz Sweep 93.3 ms (40001 pts) 97.000 MHz 97.0000 MHz 1 N 1 f 836.022 MHz -55.11 dBm Auto Mar 3 1 1 FUNCTION WIDTH FUNCTION WIDTH FUNCTION WALUE Auto Mar 3 1 1 Function Function Function walue Auto Mar 4 1 1 Function Function Function Function Auto Mar 6 1 1 1 Function Function Function Function Function Auto Mar 6 1 1 1 Function Func Function Functio	-70.0					
Initial Decision and the second sec	Start 30.0 MHz #Res BW 100 kHz	#VBW	300 kHz	Sweep 9		
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0	8					
	10 11					
	12 MSG					



Agilent Spect										
(XI RL Center F	RF req 3.00	50 Ω AC)00000000 GH		7	GE:INT		ALIGNAUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWWW	Frequency
	D -6.00	IF	NO: Fast 🕞 Gain:Low	#Atten: 30			Mł	r1 2.41	I 5 GHz 17 dBm	Auto Tune
10 dB/div Log 10.0 0.00	Ref 20	.00 dBm	● ¹					1.		Center Freq 3.00000000 GHz
-20.0 -30.0 -40.0									-18.04 dBm	Start Freq 1.000000000 GHz
-50.0 -60.0 -70.0 Start 1.00					a je je na tra na stala na st Na stala na s				.000 GHz	Stop Freq 5.00000000 GHz
#Res BW	100 kHz	× 2.411		V 300 kHz Y 1.17 dB		CTION FUN	Sweep :	384 ms (4	0001 pts)	CF Step 400.000000 MHz <u>Auto</u> Man
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8 9 10 11 12 MSG							STATUS	60		

AC SENSE:INT ALIGN AUTO	10:27:15 AM Jun 24, 2013	Frequency
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Mi Bm	kr1 5.807 6 GHz -51.41 dBm	Auto Tui
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		7.000000000 G
	-18.04 dBm	
		Start Fr
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1		
		Stop Fr
		9.00000000 G
	Stop 9.000 GHz	CF St
	384 ms (40001 pts)	400.000000 M
#VBW 300 kHz Sweep	384 ms (40001 pts)	CF Sto 400.000000 M <u>Auto</u> M
X Y FUNCTION FUNCTION WIDTH	384 ms (40001 pts)	400.000000 M <u>Auto</u> M
X Y FUNCTION FUNCTION WIDTH	384 ms (40001 pts)	400.000000 M <u>Auto</u> M Freq Offs
X Y FUNCTION FUNCTION WIDTH	384 ms (40001 pts)	400.000000 M <u>Auto</u> M Freq Offs
X Y FUNCTION FUNCTION WIDTH	384 ms (40001 pts)	400.000000 M
X Y FUNCTION FUNCTION WIDTH	384 ms (40001 pts)	400.000000 M <u>Auto</u> M Freq Offs

	um Analyzer - Swep								
Center Fr	RF 50 Ω eq 11.00000	AC 0000 GHz		NSE:INT		ALIGNAUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6	Frequency
		PNO: Fas IFGain:Lo					DE		Auto Tune
10 dB/div	Ref 20.00 dE	ßm				Mkr		3 0 GHz 39 dBm	
Log 10.0									Center Freq
0.00									11.000000000 GHz
-10.0								-18.04 dBm	
-30.0									Start Freq
-40.0								1-	9.000000000 GHz
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4 5									Freq Offset 0 Hz
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10									
12				1					
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Center Freq 15.000			Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
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og 10.0 0.00					Center Fr 15.00000000 G
20.0				-18.04 dBm	Start Fr
0.0				↓ 1	13.000000000 G
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art 13.000 GHz Res BW 100 kHz	#VB	W 300 kHz	•	Stop 17.000 GHz 384 ms (40001 pts)	CF St 400.000000 M
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	trum Analyzer									
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-50.0	in a strange bland and a strange bland a strang				in til provinsing og som en som e Som en som en					Stop Freq
-70.0										21.000000000 GHz
	/ 100 kHz		#VB\	N 300 kHz				384 ms (4	.000 GHz 0001 pts)	CF Step 400.000000 MHz
MKR MODE	TRC SCL	× 20.972	9 GHz	¥ -44.97 dB	FUND	CTION FU!	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man
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7 8 9 10 11 12										
MSG					-		STATUS	5		

gilent Spectrum Analyzer - Sv G RL RF 50 s					F
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					Stop Fr 25.00000000 G
tart 21.000 GHz Res BW 100 kHz	#VBW 30		· · · · · · · · · · · · · · · · · · ·	Stop 25.000 GHz 84 ms (40001 pts)	CF St 400.000000 M
KR MODE TRC SCL 1 N 1 f 2	× 23.664 6 GHz -4	Y FUNCTION 1.66 dBm	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> N
3 4 5 6					Freq Offs 0
7 8 9 0					
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Channel 06 (2437MHz)

					Analyzer - Swe		
ALIGN AUTO 10:33:01 AM Jun 24, 2013 Avg Type: Log-Pwr TRACE 1 2 3 4 5 6		SENSE:INT			RF 50Ω 515.000		RL ente
TYPE MWWWWW DET P N N N N N		ig: Free Run tten: 30 dB	IO: Fast 😱 ain:Low	PI			
Mkr1 929.093 MHz -54.31 dBm	Ν				ef 20.00 c	div F) dB/d
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ALIONAUTO 10:33:36 AM Jun 24, 2013 Free Avg Type: Log-Pwr TRACE [1,2,3,4,5,6] Free TYPE MMWWWWW DEI P NN NN N A Mkr1 2.435 5 GHz 1.61 dBm A 1.61 dBm 1.0000 3.0000 3.0000 1.17.74 dBm 5.0000 5.0000 5.0000 Sweep 384 ms (40001 pts) 400.0 400.0	ALIGNAU Avg Type: Log-P	ig: Free Run tten: 30 dB	#VBW		ef 20.00 c	div F div F 1.000 (BW 10	1 ilent Sr RL ente od B/d og 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
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ALIGNAUTO 10:33:36 AM Jun 24, 2013 Free Avg Type: Log-Pwr TRACE [1,2,3,4,5,6] Free TYPE MMWWWWW DEI P NN NN A Mkr1 2.435 5 GHz 1.61 dBm A 1.61 dBm 1.0000 3.0000 3.0000 1.77.74 dBm 5.0000 5.0000 5.0000 Sweep 384 ms (40001 pts) 400.0 400.0	ALIGNAU Avg Type: Log-P	ig: Free Run tten: 30 dB	#VBW		ef 20.00 c	div F div F 1.000 (BW 10	1 1 2 3 3 3 3 3 3 3 3 3 3 4 3 4 5 5 6 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ALIGNAUTO 10:33:36 AM Jun 24, 2013 Free Avg Type: Log-Pwr TRACE [1,2,3,4,5,6] Free TYPE MMWWWWW DEI P NN NN A Mkr1 2.435 5 GHz 1.61 dBm A 1.61 dBm 1.0000 3.0000 3.0000 1.77.74 dBm 5.0000 5.0000 5.0000 Sweep 384 ms (40001 pts) 400.0 400.0	ALIGNAU Avg Type: Log-P	ig: Free Run tten: 30 dB	#VBW		ef 20.00 c	div F div F 1.000 (BW 10	1 3 3 3 3 3 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5
ALIGNAUTO 10:33:36 AM Jun 24, 2013 Free Avg Type: Log-Pwr TRACE [1,2,3,4,5,6] Free TYPE MMWWWWW DEI P NN NN A Mkr1 2.435 5 GHz 1.61 dBm A 1.61 dBm 1.0000 3.0000 3.0000 1.77.74 dBm 5.0000 5.0000 5.0000 Sweep 384 ms (40001 pts) 400.0 400.0	ALIGNAU Avg Type: Log-P	ig: Free Run tten: 30 dB	#VBW		ef 20.00 c	div F div F 1.000 (BW 10	1 1 2 3 3 3 3 3 3 3 3 3 3 4 3 4 5 5 6 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1



<mark>Agilen</mark> L <mark>XI</mark> RI		ctru	<mark>m An</mark> RF	alyzer - Sw 50 ດ					SEN	SE:INT		ALIGNAUTO		M Jun 24, 2013	-
Cen	ter	Fre	ed j	7.0000	00000	PN	0: Fast		Trig: Free		Avg Typ	e: Log-Pwr	TY	E 123456 M PE M P N N N N N	Frequency
						IFGa	ain:Low	-	#Atten: 30	dB		Mk	(r1 5.76	9 4 GHz 31 dBm	Auto Tune
10 di Log	B/div	'	Rei	f 20.00	dBm								-51.		
10.0 0.00															Center Freq 7.00000000 GHz
-10.0															7.00000000 GH2
-20.0	_		-		+	-		+						-17.74 dBm	Start Freq
-30.0					+										5.000000000 GHz
-40.0 -50.0															
-60.0	a an an a'	a faat be weelde	a dina p a dina p	Hilligen (Classic) Beau agus fains (M		Sector And	na je dovela je stava na konstanti ob		and a set of a set of a set of a	Condition and pre-					Stop Freq
-70.0			_		-			-							9.000000000 GHz
Star #Re:							#VE	sw 3	800 kHz			Sweep (Stop 9 384 ms (4	.000 GHz 0001 pts)	CF Step 400.000000 MHz
MKR	MODE N	TRC	SCL		×	769 4	CLIE		Y -51.31 d⊟		CTION FU	NCTION WIDTH	FUNCTIC	IN VALUE	<u>Auto</u> Man
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4															Freq Offset 0 Hz
6 7															
8															
10 11															
12 MSG												STATUS			
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	Spec	trun		ılyzer - S														
Cento	er	Fre	RF q '		ດ)00				nst 🕞	Tria	SEN: Free:	BE:INT	Avg		alignauto : Log-Pwr	TF	7 AM Jun 24, 2013 RACE 1 2 3 4 5 6 TYPE M WWWWWW	Frequency
10 dB/	div		Ref	20.00	dE	3m		NU: Fi Gain:L			en: 30				Mkr	1 12.3	04 9 GHz .97 dBm	Auto Tune
Log 10.0 - 0.00 -																		Center Freq 11.00000000 GHz
-20.0 = -30.0 = -40.0 =																1	-17.74 dBm	Start Freq 9.000000000 GHz
-50.0 - -60.0							a di kun			i dheeliga ga	a la con	lana dara metatika na producti mana producti		e in constant			a bina dari perlembang di sebagai perlembang di sebagai perlembang di sebagai perlembang di sebagai perlembang Sebagai perlembang di sebagai perlembang di sebagai perlembang di sebagai perlembang di sebagai perlembang di s	Stop Freq 13.00000000 GHz
Start #Res	в٧	V 1	00	kHz		×		#	¢VB₩	/ 300 Y			ICTION		Sweep :	384 ms	13.000 GHz (40001 pts) TION VALUE	CF Step 400.000000 MHz <u>Auto</u> Man
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					IF	Gain:Lov	v	#Atten: <							Auto Tune
					_							IVIK	r1 15.24 _/17	5 4 GHz 25 dBm	
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-60.0	a di Bata ang ka	day and	and an a state	and a state	and the second se			a de caracter a prese	1						Stop Freq
-70.0	a second second	a surface of the													17.00000000 GHz
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	t 13.0													7.000 GHz	CF Step
#Re:	s BW '	100 I	kHz			#V	BW	300 kHz	2			Sweep	384 ms (4	10001 pts)	400.000000 MHz
MKR	MODE TR				×			Y		FUNC	TION FL	INCTION WIDTH	FUNCTI	ON VALUE	<u>Auto</u> Man
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3															Freq Offset
4		+													0 Hz
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	t Spectrur									1.92						
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	t 17.00 s BW 1					#V	/BW	300 kH	z			ş	Sweep		1.000 GHz 40001 pts)	
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		ectru		alyzer -														
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10 d	B/div	v	Rei	f 20.0	0 d	Bm									IVIKI		19 dBm	
Log 10.0																		Center Freq
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-70.0																		25.00000000 GHz
Sta	L rt 21	1.00)0 G	Hz												Stop 2	5.000 GHz	CE Oton
#Re								#\	VBW	300 kH	lz					384 ms (4	0001 pts)	CF Step 400.000000 MHz
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7																		
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11 12														_				
MSG															STATUS			[]



	M Jun 24, 2013	10:39:45 A	ALIGN AUTO		INT	SENSE:			AC	50 Ω	RF		RL
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Auto Tu	35 MHz 94 dBm		Mkr						Bm	20.00 c	Ref	div	dB/c
Center Fr											_		
515.000000 M													0 0
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1.0000000000													
CF St 97.000000 M	0000 GHz 0001 pts)	Stop 1.0 3.3 ms (4	Sweep 9			0 kHz	/BW 30	#V				30.0 I BW 1	
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Freq Offs													
0													
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Channel 11 (2462MHz)

enter Freq 3.0000	PNO: Fast		sense:INT		ALIGNAUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M MMMMM T P N N N N N	Frequency
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dB/div Ref 20.00	dBm					1.4	45 dBm	
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			and the second second second		period and an entering the definition			5.000000000
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rt 1.000 GHz			1			Stop 5	.000 GHz	
		(B)M 30	0 kHz		Sweep 3	384 ms (4	(2001 pts)	CF S 400.000000
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es BW 100 kHz		Dag 20						
es BW 100 kHz	#V × 2.460 5 GHz			FUNCTION FUN		FUNCTIO		
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Agile IXI R	nt Spectru L	m Analyz RF	er - Swep 50 Ω			9	ENSE:INT		ALIGN AUTO	10:40:55/	M Jun 24, 2013	
	1		1	0000 GH	z			Avg Ty	pe: Log-Pwr	TRA	CE 1 2 3 4 5 6 PE M WWWWW ET P N N N N N	Frequency
				PI IEG	10: Fast Sain:Lov	Trig: Fr / #Atten:				D		
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Log			<u> u</u>	5111								
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	rt 5.000								-		.000 GHz	CF Step
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MKR	MODE TRC			×	ļ	Y		FUNCTION	UNCTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
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l,Xi R	L	RF	50 Ω	AC			ENSE:INT	Aug Tu	ALIGNAUTO	10:41:31/	M Jun 24, 2013	Frequency
l,Xi R	L	RF	50 Ω	AC 00000 G	Hz			Avg Ty		10:41:31/ TRA	E 1 2 3 4 5 6	Frequency
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l,Xi R	L	RF	50 Ω	AC 00000 G Pt	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00		Frequency Auto Tune
UX R Cer	nter Fre	RF eq 11.	50 Ω	AC 00000 G Pt IFG	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00	CE 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	
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(x) R Cer 10 d Log 10.0	B/div	RF eq 11.	50 Ω .00000	AC 00000 G Pt IFG	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00		Auto Tune
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10 d Log 10.0 -10.0 -20.0	B/div	RF eq 11.	50 Ω .00000	AC 00000 G Pt IFG	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00	[∞] 1 2 3 4 5 6 ^m ^m ^m ^m ^m ^m ^m ^m	Auto Tune Center Freq
X R Cer 10 d Log 10.0 -10.0 -20.0 -30.0	B/div	RF eq 11.	50 Ω .00000	AC 00000 G Pt IFG	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00	[∞] 1 2 3 4 5 6 ^m ^m ^m ^m ^m ^m ^m ^m	Auto Tune Center Freq 11.00000000 GHz
(X) R Cer 10.d 10.c 10.0 -10.0 -20.0 -30.0 -40.0	B/div	RF eq 11.	50 Ω .00000	AC 00000 G Pt IFG	10: Fast	Trig: Fr	ee Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:41:31 TRAV TY D 112.00	[∞] 1 2 3 4 5 6 ^m ^m ^m ^m ^m ^m ^m ^m	Auto Tune Center Freq 11.00000000 GHz Start Freq
X R Cer 10 d Log 10.0 -10.0 -20.0 -30.0 -40.0 -50.0	B/div	RF eq 11.	0.00 dE	AC 00000 G Pt IFG	40: Fast Gain:Low	Trig: Fr #Atten:	ee Run		ALIGNAUTO pe: Log-Pwr Mki	10:41:31 TRAV TY D 112.00	[∞] 1 2 3 4 5 6 ^m ^m ^m ^m ^m ^m ^m ^m	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz
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2011 Cer Cer 10 d Log 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0	B/div	RF 21	0.00 dE	AC 00000 G Pr IFC 3m	40: Fast Gain:Low	Trig: Fr #Atten:	ee Run 30 dB		ALIGNAUTO pe: Log-Pwr Mki	10:41:314 TRAI TV D 11 12.000 -52.	28 dBm	Auto Tune Center Freq 11.000000000 GHz Start Freq 9.000000000 GHz Stop Freq 13.00000000 GHz
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Image: Constraint of the second sec	B/div B/div	Ref 2/ Ref 2/	50 Ω .00000	AC DODOO G	IO: Fast ain:Low	Trig: Fr #Atten:	ee Run 30 dB		ALIGNAUTO pe: Log-Pwr Mki	10:41:314 TRAI TV D 11 12:000 -52.	6 4 GHz 28 dBm -18.03 dBm -18.03 dBm -18.03 dBm -18.03 dBm -18.03 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
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IO dd Cer 10 dd Log 10.0 10.0 10.0 10.0 10.0 10.0 10.0 -70.0 Star 11 12 3 4 5 6 7 9 10 11	B/div B/div	Ref 2/ Ref 2/	50 Ω .00000	AC DODOO G	IO: Fast ain:Low	Trig: Fr #Atten:	ee Run 30 dB		ALIGNAUTO pe: Log-Pwr Mki	10:41:31/4 TRAI TY D 112:000 -52: 	6 4 GHz 28 dBm -18.03 dBm -18.03 dBm -18.03 dBm -18.03 dBm -18.03 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset



Agilen		trum																				
Cen		Fre	RF a 1		50 Ω)00	AC 000	00 C	SHz		7		VSE:IN		Avg		ALIGNAUTO : Log-Pwr		10:42:07 TRA	CE 1 2	3456	Frequency	
			-				F	NO: F Gain:	ast 🔾	⊖ Tri; #At	g:Free ten:30	e Rur) dB	ו				_	1	DET P N	NNNN		ine
10 dE Log	3/div	1	Ref	20.0)0 d	Bm										MK	(r1	16.81 -47		GHz dBm		
10.0																					Center F	req
0.00			_														_				15.00000000 0	- 1
-10.0																			-1	8.03 dBm		_
-20.0 -30.0																					Start F	- 1
-40.0																				▲ 1-	13.000000000	ЗНz
-50.0					المعارك	land a la		L.,,	n ingep iele		المراجعة و		ليل واي ليانون معاد المحالي		d tay the			-topologistic				_
-60.0		1				diporti.	Acres Desired				- and the										Stop F 17.000000000 0	1
-70.0																					11.0000000000	
Star #Res									#VBV	V 300	kHz					Sweep		Stop 1: 4 ms (4				
MKR N			SCL f			X	6.815	E CI		47	81 dE	2	FUNC	CTION	FUN	CTION WIDTI	H	FUNCTI	ON VALL	JE	Auto N	Man
2		-	-				0.010	o Gr	12	-41	.01 00	5111									5 0ff	
4			_						-												Freq Off) Hz
6 7		_	_						-													
8 9		-																				
10 11		-							-			-										
12																						
MSG																STAT	US					

Agilent Spectrum Analyzer - Sv					I.
RL RF 503 Center Freq 19.000		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	10:42:42 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
10 dB/div Ref 20.00	IFGain:Low	#Atten: 30 dB	Mkr	DET ^{P NNNNN} 1 20.956 0 GHz -44.86 dBm	Auto Tune
10.0 0.00					Center Free 19.000000000 GH
-10.0				-18.03 dBm	Start Free 17.000000000 GH
-40.0 -50.0 -60.0 -70.0					Stop Fre 21.000000000 GH
Start 17.000 GHz #Res BW 100 kHz	#VBV	V 300 kHz	Sweep 3	Stop 21.000 GHz 384 ms (40001 pts) cunction value	CF Ste 400.000000 M⊢ Auto Ma
N 1 f 2 - - 3 - - 4 - - 5 - 6	20.956 0 GHz	-44.86 dBm			Freq Offse
7 8 9 9 10 11					
12			STATUS		



		ctrun		lyzer -													
Cer		Fre	RF q 2	3.00	ינ 000	AC				1	SENSE	Avg T		align auto : Log-Pwr	TRA	AM Jun 24, 2013 ACE 1 2 3 4 5 6 YPE MWWWWW	Frequency
							IFC	NO: Fas Gain:Lo	st w	#Atten				Mkr		6 2 GHz	Auto Tuno
10 d Log	B/div	,	Ref	20.0	0 dE	3m						1		IVINI		.34 dBm	
10.0					_						+						Center Freq
0.00																	23.000000000 GHz
-20.0	-		_		-						+					-18.03 dBm	Start Freq
-30.0 -40.0											+		1				21.000000000 GHz
-40.0	10.00	h y hang					an a		an a						- the transmission of the		
-60.0			-		-						+						Stop Freq 25.00000000 GHz
-70.0																	
	rt 21 es BV							#	VBW	300 ki	łz			Sweep 🗧		5.000 GHz 40001 pts)	CF Step 400.000000 MHz
MKR 1	MODE N	TRC 1	SCL f			× 23	.666 :	2 GHz		¥ -42.34	dBm	CTION	FUN	CTION WIDTH	FUNCT	ION VALUE	<u>Auto</u> Man
2 3																	Freq Offset
4 5 6												 					0 Hz
7			_														
9 10																	
11 12																	
MSG														STATU	5		

Product	:	Bar Code Printer
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel 01 (2412MHz)

	m Analyzer - Swe									
XIRL Center Fr	RF 50Ω eq 515.000			SENS	SE:INT	Ava Tv	ALIGNAUTO	TRAC	M Jun 24, 2013	Frequency
Center Fr	eq 515.000	PNO:	ast 🖵	Trig: Free				TYP		
		IFGain	Low	#Atten: 30	dB					Auto Tune
							MK		81 MHz	Auto Turk
10 dB/div Log	Ref 20.00 d	Bm				-	-	-04.7	80 dBm	
10.0										Center Fre
0.00										515.000000 MH
-10.0										315.00000 WH
									-20.17 dBm	
-20.0										Start Fre
-30.0										30.000000 MH
-40.0							-	.1		
-50.0	_							●'		
-60.0		en den stelen stelen se den stelen.		la proposition de la composition angles de la composition		United and the second sec	 A second rolds (build state to provide the second rolds) 		a failisissa a substi a substitute a filongene	Stop Fre
-70.0							_			1.000000000 GH
Start 30.0 #Res BW 1			#\/D\M	300 kHz			Cureen 0	Stop 1.0	0000 GHz 0001 pts)	CF Ste
			#VDVV							97.000000 MH Auto Ma
MKR MODE TRO	f	× 879.381 Mi		-54.80 dB		CTION FL	JNCTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Ma
2		079.301 Wi	12	-04.00 UD						
3 4			_							Freq Offse
5										0 H
6			_							
8										
9										
11										
12						[
ISG							STATUS	3		

RL	m Analyzer - Swe RF 50 Ω eq 3.00000	AC 0000 GH:	0: Fast G	Trig: Free I	Run	Avg T	ALIGN AUTO Ype: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Frequency
0.40744	Dof 20.00 a		ain:Low	#Atten: 30	dB		Mł	(r1 2.408	3 3 GHz 62 dBm	Auto Tur
0 dB/div og 10.0	Ref 20.00 d	BM	1					-1.		Center Fre 3.000000000 Gi
									-20.17 dBm	Start Fr
								faillet the faile and the second		1.000000000 G
0.0			and the second se			(and the second		Stop 5	.000 GHz	5.000000000 G
Res BW 1	00 kHz	× 2.408 3		V 300 kHz Y -1.62 dBi	FUNCTION	DN I	Sweep :		0001 pts)	CF St 400.000000 M <u>Auto</u> N
2 3 4 5 5		2.400 0		-1.02 401						Freq Off 0
7 8 9 0 1 2										
G							STATUS	5		

q 7.00000	PN	Z			Aug Typ	e: Log-Pwr	TRAC	E123456	Frequency
	IFG	lO: Fast 🖵 ain:Low	Trig: Freel #Atten: 30		Ovg i yp	e: Log-Pwr	TYP	E MWWWWW F P NNNNN	
Ref 20.00 c	₫Bm					Mk		36 GHz 36 dBm	Auto Tu
									Center Fr 7.000000000 G
								-20.17 dBm	Start Fr 5.000000000 G
energi dina pangang pergenangan kiden 19 Man dina ang pengangan pantaan		1		Maddalayna tagar		in change in a second from the second se			Stop Fr 9.000000000 G
00 kHz	· · · · ·	#VBW	/ 300 kHz	EUIN			84 ms (4	0001 pts)	CF St 400.000000 M Auto M
f		GHz	-51.36 dBr						Freq Offs 0
	GHz 00 kHz	GHz SCL X	GHz 00 kHz scu	GHz 00 kHz #VBW 300 kHz	GHz 00 kHz #VBW 300 kHz	GHz 00 kHz #VBW 300 kHz SCL × Y FUNCTION FU	GHz 00 kHz SCU X Y FUNCTION FU	GHz #VBW 300 kHz Stop 9 SCL × Y FUNCTION FUNCTION FUNCTION	GHz #VBW 300 kHz Stop 9.000 GHz Stop 2000 VHz #VBW 300 kHz Stop 9.000 GHz



	Spectru		ılyzer - Sw											
Cent	er Fr	RF eq 1	50 Ω 1.000	AC			SEN	Bun	Avg		LIGNAUTO	TRA	AM Jun 24, 2013 CE 1 2 3 4 5 6 (PE MWWWWW	Frequency
10 dB	/div	Ref	20.00		PNO: Fast IFGain:Lov		Atten: 30				Mkr	1 12.51	6 6 GHz 10 dBm	Auto Tune
Log - 10.0 - 0.00 -														Center Freq 11.000000000 GHz
-10.0 -20.0 - -30.0 - -40.0 -													-20.17 dBm	Start Freq 9.000000000 GHz
-50.0 - -60.0 -										Manarat			n, stalje dogo je Nava jega je na dogo na selektrone se se	Stop Frec 13.00000000 GHz
Start #Res	BW '	100		×	#V	'BW 30)0 kHz	F	UNCTION		Sweep :	384 ms (3.000 GHz 40001 pts) 0N VALUE	CF Step 400.000000 MH; <u>Auto</u> Mar
1 2 3 4 5 6 7	N 1	f		12.51	6 6 GHz	*	52.10 dE	3m						Freq Offse 0 H;
9 10 11 12														
MSG											STATUS	5		

Agilent Spectrum Analyzer - Sw					
xx RL RF 50Ω Center Freq 15.0000		SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr	10:49:18 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N	Frequency
10 dB/div Ref 20.00			Mkr	1 16.958 3 GHz -47.76 dBm	Auto Tune
10.0 0.00 -10.0					Center Freq 15.000000000 GHz
-20.0				-20.17 dBn	Start Freq 13.00000000 GHz
-60.0	en 1993 for den næren en norske forske for				Stop Freq 17.000000000 GHz
Start 13.000 GHz #Res BW 100 kHz MKR MODE TRE SCU	#VBV	V 300 kHz Y ■ ®	Sweep 3	Stop 17.000 GHz 884 ms (40001 pts) FUNCTION VALUE	CF Step 400.000000 MHz <u>Auto</u> Man
1 1 1 2 3 - - 3 - - - - 4 - - - - - 5 -	10.506 3 GHZ				Freq Offset 0 Hz
8 9 10 11 12					
MSG			STATUS		<u>(</u>



	ctrum Analyze									
Center	Freq 19.0	50Ω AC 0000000000		7	BE:INT		ALIGNAUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWWW	Frequency
10 dB/div	Ref 20		PNO: Fast G Gain:Low	#Atten: 30			Mkr	^₀ 1 20.93	7 1 GHz 42 dBm	Auto Tune
10.0 0.00										Center Freq 19.000000000 GHz
-20.0									-20.17 dBm	Start Freq 17.000000000 GHz
-50.0 -60.0 -70.0				The second s						Stop Freq 21.000000000 GHz
	.000 GHz N 100 kHz	<u>.</u>	#VB\	V 300 kHz	FUN	CTION FUN			.000 GHz 0001 pts) NVALUE	CF Step 400.000000 MHz <u>Auto</u> Man
1 N 2 3 4 5 6 7	1 f	20.937	1 GHz	-44.42 dB						Freq Offset 0 Hz
8 9 10 11 12										
MSG							STATUS	3		

RL	RI	n <mark>alyzer - Sv</mark> = 50 s			S	ENSE:INT		ALIGN AUTO	10:50:29 A	M Jun 24, 2013	-
enter	Freq	23.000		GHz PNO: Fast Gain:Low	➡ Trig: Fre #Atten: 3		Ауд Туре	e: Log-Pwr	TYP	E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	Frequency
0 dB/div	v Re	f 20.00	dBm					Mkr		5 2 GHz 39 dBm	Auto Tun
og 10.0											Center Fre
.00											23.00000000 G
0.0 0.0										-20.17 dBm	
0.0							1				Start Fr 21.00000000 G
0.0 0.0 	مرابعاته عاليه	a attanta atta	hteles de traces de	of the life produces of		na antonomiant de		·	linn Merri Bedre berrij	and a state of the state of the state	
0.0	and sector of the		idin diamata anti-								Stop Fr
0.0											25.00000000 G
	1.000 Q W 100		•	#VB	W 300 kH	z	•	Sweep 3		.000 GHz 0001 pts)	CF St 400.000000 M
KR MODE	TRC SC		× 23.675	2 GHz	Y -42.39 c		NCTION FUI	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> M
2											Freq Offs
4 5 5											0
5 7 8											
9 0				1							
9											



Channel 06 (2437MHz)

RL	RF	50 Ω	AC		SE	INSE:INT		ALIGNAUTO	10:53:36 A	M Jun 24, 2013	_
enter	Freq 5	15.0000	000 MHz		Trig: Fre	e Dun	Avg Typ	e: Log-Pwr	TRAC	CE 1 2 3 4 5 6 PE M WWWWW	Frequency
			Ph IFG	10: Fast C Gain:Low	#Atten: 3				D	ET P N N N N N	
								Mkr	1 831 9	96 MHz	Auto Tur
0 dB/div	Dof	20.00 dE	≥m					141131		01 dBm	
og r	Rei	20.00 06	5111								
10.0							_				Center Fr
											515.000000 M
0.0											010.000000
										-19.75 dBm	
0.0											Start Fr
0.0											30.000000 M
0.0							_				
0.0									_ ≜ 1		
n n 1996 a	ويد ول وروي	and all an analysis	والمتحدث والمتحد	alia mangal An	والمعالية والمعالية المعالية	a Anna da an	والمبالدينا فتوردا ليربع والبريان		ومعرفة ومردقا والع	Internet internet of	Stop Fr
and the second				a daalaa adda baddagaa bh	and the spectrum built						1.000000000 G
0.0											
tart 30	.0 MHz								Stop 1.0	0000 GHz	
	N 100 k	Hz		#VB	W 300 kHz	2		Sweep 9			CF St 97.000000 M
	TRC SCL		×		Y		JNCTION FU	NCTION WIDTH	FUNCTIO	<u> </u>	Auto N
1 N	1 f		831.996	5 MHz	-55.01 d		UNCTION TO	NCTION WIDTH	FONCTIO	JN VALUE	
2											
3											Freq Offs
5											0
6 7											
8											
9											
0											

KIRL	RF 50 Ω A		SENSE:II	T	ALIGN AUTO	10:54:12 AM Jun 24, 20	13
Senter Fre	eq 3.0000000	00 GHz PNO: Fast IFGain:Low	Trig: Free Ru #Atten: 30 dB		e: Log-Pwr	TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N	
	Ref 20.00 dBr		WAtten, oo ub		Mk	r1 2.441 2 GH -3.06 dBr	
-og 10.0 0.00 -10.0							Center Fre 3.000000000 G⊢
20.0 30.0 40.0						-19.75 df	Start Fre 1.000000000 GH
50.0 60.0 70.0	and the production of the state						Stop Fre 5.000000000 GH
tart 1.000 Res BW 1	00 kHz	×	W 300 kHz	FUNCTION FU	Sweep 3	Stop 5.000 GH 884 ms (40001 pt FUNCTION VALUE	
1 N 1 2 3 4 5 6	f	2.441 2 GHz	-3.06 dBm				Freq Offs
7 8 9 10 11							



			alyzer - S														
Cen		RF req	50 7.000	Ω AC	0 GH	lz		1	NSE:I		Avg	LIGNAUTO	10:54	TRACE	Jun 24, 2013 1 2 3 4 5 6 MWWWWW	Frequency	y
10 di		Bot	f 20.00	dBm	IFO	NO: Fast Gain:Lov		#Atten: 3				 M		DET	^{P NNNNN} 0 GHz 6 dBm	Auto T	une
10 at Log 10.0 0.00			1 20.00													Center I 7.000000000	- 1
-20.0 -30.0 -40.0															-19.75 dBm	Start F 5.000000000	- 1
-50.0 -60.0 -70.0		14 a 200 (1944 a 1947 a 1	Mathum, est atholistic de d		a Halang Segara ya Ang astrikanska Jaguan							televen se		ita en 1934 par		Stop F 9.00000000	- 1
#Re	t 5.00 s BW	100	kHz			#V	/BW	300 kHz	2	FUNC	TION	Sweep	384 m		000 GHz 001 pts) value	CF \$ 400.000000 <u>Auto</u>	Step MHz Man
1 2 3 4 5 6	N 1	f			5.834 (0 GHz		-51.46 d	Bm							Freq Of	f fset 0 Hz
7 8 9 10 11 12																	
MSG												STATU	IS				

	RF 50 Ω AC		SENSE:INT	ALIGNAUTO	10:55:22 AM Jun 24, 2013	
enter Freq	11.0000000	00 GHz PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWW DET PNNNNN	
dB/div R	ef 20.00 dBm			Mkr	12.467 3 GHz -51.86 dBm	
0						Center Fr
o						11.000000000 G
0					-19.75 dBm	
0						Start Fr
D					1	9.000000000 G
	n a ca lacht - i facil a d	Best on most starting the metalog	المتحصير المقريب المراجع وتراجع المراجع المتحري	la com esta compara de la c		Stop F
) <mark>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</mark>		a ang shi ang san da tao tao.				13.000000000
					04+++ 40,000, OU	
es BW 100		#VB۱	W 300 kHz	Sweep 3	Stop 13.000 GHz 84 ms (40001 pts)	
			-51.86 dBm	JNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> N
N 1 f		2.467 3 GHz				Erea Off
N 1 f		2.467 3 GHz				
N 1 f		2.467 3 GHz				
N 1 f		2.467 3 GHz				Freq Off 0
MODE TRE S		2.467 3 GHz				



Agilent	Spectrum	Analyz	er - Swei	pt SA								
LXI RL		RF	50 Ω	AC	<u> </u>	SEN	ISE:INT	Ανα Τγ	ALIGNAUTO pe: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6	Frequency
Cent	erre	q 15.	0000	00000 G	NO: Fast Sain:Low	Trig: Free #Atten: 30			pe. Log i ni	TYP		
				IFC	Same	#Attent of			Mkr	1 16.71 [.]		Auto Tune
10 dB	/div I	Ref 20	0.00 d	Bm							86 dBm	
Log 10.0												Center Freq
0.00								_	_			15.00000000 GHz
-10.0		_						-				
-20.0											-19.75 dBm	Start Freq
-30.0 -		_									_ 1	13.00000000 GHz
-40.0 - -50.0 -							and a dealer	a militar tatas stada		and a second second	. ot. Intelline de sur	
-60.0	en fahrende	and address	and the state of t				Construction of the second				en hafalan in fan heledigen.	Stop Freq
-70.0												17.00000000 GHz
Start	13.000		,							Stop 17	.000 GHz	
	BW 10				#V	BW 300 kHz			Sweep 🗧	384 ms (4		CF Step 400.000000 MHz
	IODE TRC			×	ļ	Y		NCTION F	UNCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man
1 2 3	N 1	f		16.7117	7 GHz	-46.86 dE	lm					
4												Freq Offset 0 Hz
5 6												0 H2
7												
9 10												
11 12												
MSG									STATUS			
									STATUS	5		
Agilant	Spectrum	Analyz	or - Swoi	ot SA					514103	5		
LXI RL		RF	50 Ω	AC		SEN	ISE:INT		ALIGNAUTO	10:56:34 A	M Jun 24, 2013	Frequency
LXI RL		RF	50 Ω	AC 00000 G Pt	10: Fast	Trig: Free	Run	Avg Ty		10:56:34 A	E122456	Frequency
LXI RL		RF	50 Ω	AC 00000 G Pt	Hz 10: Fast Gain:Low	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYP D	E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	Frequency Auto Tune
Cent	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	
LOG C	er Fre	RF q 19.	50 Ω	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(Auto Tune
UXI RL Centi 10 dB/	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(Auto Tune Center Freq
10 dB 10.0	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(Auto Tune
10 dB Log 10.0 -	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(Auto Tune Center Freq 19.00000000 GHz
00 RL Cent 10 dB 10 d 10 d 10 d - 0.00 - - - 0.00 - - - 0.00 - - - - - - - - 	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(E 123456 EMWWWWW TPNNNN D 1 GHz 55 dBm	Auto Tune Center Freq
00 RL Cent 10 dB 10.0 - -10.0 - -20.0 - -30.0 - -40.0 -	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(E 123456 EMWWWWW TPNNNN D 1 GHz 55 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq
00 RL Cent 10 dB 10 d 10 d 10 d - 0.00 - - - 0.00 - - - 0.00 - - - - - - - - 	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(E 123456 EMWWWWW TPNNNN D 1 GHz 55 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq
10 dB Log 10.0 - -10.0 - -20.0 - -30.0 - -40.0 - -50.0	er Fre	RF q 19.	50 Ω .0000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 A TRAC TYI DI 1 20.95(E 123456 EMWWWWW TPNNNN D 1 GHz 55 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz
10 dB Log 10.0 - -10.0 - -20.0 - -30.0 - -40.0 - -50.0 - -70.0 -	er Fre	Ref 20	50 Ω 00000	AC 00000 G Pt IFG	10: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	10:56:34 # TRAC TYPE D 1 20.956 -44.1	-19.75 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz
10 dB Log 10.0 - -0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -50.0 - -60.0 - -70.0 - Start	er Fre	Ref 21 Ref 21	50 Ω 00000	AC 00000 G Pt IFG	NO: Fast	Trig: Free	Run	Avg Ty	ALIGNAUTO pe: Log-Pwr Mkr	10:56:34 # TRAC TYPE D 1 20.956 -44.1	-19.75 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.000000000 GHz Stop Freq 21.00000000 GHz
M RL Cent Cent 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - -50.0 - -70.0 - Start #Res	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYN TV 1 20.956 -44.1 	.0000 GHz 0001 pts)	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz
XI R L Cent Cent 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -60.0 - -50.0 - -60.0 - -70.0 - Start # # -	er Fre /div F	Ref 20 Ref 20	50 Ω 00000	AC 00000 G Pt IFG	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Start Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz CF Step 400.000000 MHz Auto
XI RL Cent Cent 10 dB, G 10,0 - 10,0 - -0,00 - -10,0 - -20,0 - -30,0 - -40,0 - -50,0 - -60,0 - -70,0 - Start - 2 - 3 -	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
XI RL Cent Cent 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - -70.0 - Start - MX8 M 1 1 2 - 4 - 6 -	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Start Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz CF Step 400.000000 MHz Auto
X RL Cent Cent 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - -60.0 - -70.0 - Start - 33.0 - -70.0 - -30.0 - -60.0 - -70.0 - -31.0 - -32.0 - -4.0 - -70.0 - -20.0 - -31.0 - -32.0 - -4.0 - -70.0 - -33.0 - -4.0 - -5.0 - -7.0 - -3.3 - -3.3 - -7.0 - -7.0 - </td <td>: 17.000 BW 10</td> <td>Ref 20 Ref 20</td> <td>50 Ω 00000</td> <td>AC 00000 G PP IFG Bm</td> <td>#VU: Fast Gain:Low</td> <td>Trig: Free #Atten: 30</td> <td></td> <td></td> <td>ALIGNAUTO pe: Log-Pwr Mkr</td> <td>10:56:344 TRAC TYP 0 1 20.95(-44.)</td> <td>.0000 GHz 0001 pts)</td> <td>Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset</td>	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
XI RL Cent Cent 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - -70.0 - Start #Res XX8 XX8 XX8 X -20.0 - -30.0 - -30.0 - -50.0 - -70.0 - -33.0 - -30.0 - -30.0 - -30.0 - -70.0 - Start - -33.0 - -33.0 - -33.0 - -33.0 - -34.0 - -35.0 - -33.0 - -33.0 - -33.0 - -44.0	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
XX RL Cent Cent 10 dB, Cont 10,0 - 10,0 - -0.00 - -10,0 - -20,0 - -30,0 - -40,0 - -50,0 - -60,0 - -70,0 - Start - 1 - 2 - 3 - 5 - 6 - 7 - 8 9	: 17.000 BW 10	Ref 20 Ref 20	50 Ω 00000	AC 00000 G PP IFG Bm	#VU: Fast Gain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	10:56:344 TRAC TYP 0 1 20.95(-44.)	.0000 GHz 0001 pts)	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset



Agilent Spe										
Center	Freq 2	50 Ω 23.0000	AC	iHz NO: Fast (Avg Typ	ALIGNAUTO e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6	Frequency
10 dB/div	Ref	⁷ 20.00 d	IF	NU: Fast (Gain:Low	#Atten: 3		Mk	r1 23.66	7 3 GHz 53 dBm	Auto Tune
Log 10.0										Center Freq 23.00000000 GHz
-20.0						1			-19.75 dBm	Start Freq 21.00000000 GHz
-50.0										Stop Freq 25.00000000 GHz
Start 21 #Res B\	N 100	kHz	×	#VB	W 300 kHz	NCTION FU	Sweep	384 ms (4	<u> </u>	CF Step 400.000000 MHz Auto Man
1 N 2 3 4 5 6 7			23.667	3 GHz	-41.53 df					Freq Offset 0 Hz
8 9 10 11 12 MSG							STATU	s		



MSG

000000 MHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 1 TYPE MWWWW DET P N N N N	Frequency
		Mk	r1 812.548 MHz -55.28 dBm	
				Center Free 515.000000 MH
			-19.73 dBn	Start Free 30.000000 MH
elistate e la les barges d'al traduct a composité et per	and the contract of the second s	pengan ngana pangana pangan panga Pangan pangan	♦ .	Stop Free 1.000000000 GH
Х	Y FL			CF Stej 97.000000 MH <u>Auto</u> Ma
812.548 MHz	-55.28 dBm			Freq Offse
	IFGain:Low	000000 MHz Trig: Free Run PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	OOOOOO MHz Avg Type: Log-Pwr PN0: Fast Trig: Free Run #Atten: 30 dB Mk .00 dBm	OOOOOO MHz Trig: Free Run Avg Type: Log-Pwr TRACE [1 2 3 4 5] TRACE [1 2 3 4 5] PN0: Fast Trig: Free Run #Atten: 30 dB Mkr1 812.548 MHz -55.28 dBm .00 dBm -55.28 dBm -55.28 dBm -19.73 dBm .00 dBm -19.73 dBm -19.73 dBm .01 dBm -19.73 dBm -19.73 dBm .01 dBm -19.73 dBm -19.73 dBm .01 dBm -19.73 dBm -19.73 dBm .02 dBm -19.73 dBm -19.73 dBm .03 dBm -19.73 dBm -19.73 dBm .04 dBm -19.73 dBm -19.73 dBm .05 dBm -19.73 dBm -19.73 dBm .04 dBm -19.73 dBm -19.73 dBm .05 dBm -19.73 dBm

STATUS

Channel 11 (2462MHz)

X/RL	RF 50 \$	Vept SA		SEN	SE:INT		ALIGNAUTO	11:00:51 A	M Jun 24, 2013	
Center Fi	req 3.0000	00000 GH	lz	Trig: Free	Run	Avg Typ	e: Log-Pwr		E123456 EMW////////	Frequency
		PI IFC	NO: Fast G Gain:Low	#Atten: 30				DE		Auto Tun
10 dB/div	Ref 20.00	dBm					MK		16 GHz 06 dBm	
- og 10.0			1							Center Fre
0.00			• •							3.000000000 GH
10.0			-						-19.73 dBm	
20.0										Start Fre
40.0										1.000000000 GH
50.0			and the state of the	the orthog long data	. دانا دومناطور بيوم	dan santa na kilikana.	and the second second	nailanta lunara a	and the summer state	ot
60.0 (1999)	en e						1		an a san an a	Stop Fre 5.00000000 GH
70.0										
tart 1.00 Res BW			#VB۱	N 300 kHz			Sweep 3		.000 GHz 0001 pts)	CF Ste 400.000000 MH
ikr mode tr 1 n 1		× 2.454 (CU-	Y -2.06 dB		CTION FU	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Ma
2 3		2.404		-2.00 UB						Ere a Offe
4 5										Freq Offs 0 H
6										
8										
10 11										
12										
G							STATUS			



Anilant Cons	steves Analysis	Summet SA								
Agnent Spec	ctrum Analyzer	- Swept SA 50 Ω AC		SEN	SE:INT		ALIGN AUTO	11:01:27 A	M Jun 24, 2013	
Center	1 1	0000000 GI	NO: Fast	Trig: Free	Run		e: Log-Pwr	TRAC	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	Frequency
		IF.	Gain:Low	#Atten: 30	ab		Mk		7 6 GHz	Auto Tune
10 dB/div	Ref 20.0	00 dBm						-51.4	50 dBm	
Log										
10.0										Center Freq
0.00										7.000000000 GHz
-10.0									10.70 - 10-	
-20.0									-19.73 dBm	Start Freq
-30.0										5.000000000 GHz
-40.0		<u> </u>								
-50.0	and the balance of the second second									
-60.0	and and the state of the state	an state and the state of the s	a characteristic de la compañía de l	liki - Konga sana ang dagi	1997 - 1997 -	ين و معن أن الكلام المناسر و م والمراجع من المناطقة المناسبة و		al at heatheans		Stop Freq
-70.0										9.00000000 GHz
Start 5.0							_		.000 GHz	CF Step
#Res BV	V 100 kHz		#VB	W 300 kHz			Sweep (384 ms (4	0001 pts)	400.000000 MHz
MKR MODE	TRC SCL	×		Y	FUNC	TION FUN	ICTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man
1 N 2	1 f	5.827	6 GHz	-51.50 dB	m					
3										Freq Offset
4 5										0 Hz
6										
7 8										
9										
10 11										
12										
MSG							STATUS			<u>[]</u>
	trum Analyzer									
LXI RL	RF	50 Ω AC		SEN	SE:INT		ALIGN AUTO	11:02:03 A	M Jun 24, 2013	Frequency
LXI RL	RF	50 Ω AC 0000000 G		Trig: Free	Run			11:02:03 A	E123456	Frequency
LXI RL	RF	50 Ω AC 000000000 G P	SHZ NO: Fast (Gain:Low		Run		ALIGN AUTO :: Log-Pwr	11:02:03 A TRAC TYP D	E 1 2 3 4 5 6 PE MWWWWW T P NNNNN	
LXI RL	RF	50 Ω AC 000000000 G P	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464		
Center	RF Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464	E 1 2 3 4 5 6 PE MWWWWW T P NNNNN	
10 dB/div	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464		Auto Tune
10 dB/div	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464		Auto Tune Center Freq
(X RL Center 10 dB/div Log 10.0	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464		Auto Tune
10 dB/div	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464	E 123456 EMWWWWW TP NNNNN 18 GHz 26 dBm	Auto Tune Center Freq
(X) RL Center 10 dB/div Log 10.0	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464		Auto Tune Center Freq 11.00000000 GHz
10 dB/div Log 10.0 -10.0	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast	Trig: Free	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464	E 123456 EMWWWWW TP NNNNN 18 GHz 26 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq
10 dB/div Center 10.0 10.0 -10.0 -20.0	_{RF} Freq 11.0	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run		ALIGN AUTO :: Log-Pwr	11:02:03A TRAC TYI DI 1 10.464	E 123456 EMWWWWW TP NNNNN 18 GHz 26 dBm	Auto Tune Center Freq 11.00000000 GHz
IX RL Center I Log I 10.0 I .000 I .10.0 I .10.0 I .10.0 I .10.0 I .10.0 I .10.0 I	Ref 20.0	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr	11:02:03 <i>A</i> TRAC TYJ D 1 10.466 -52.:	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq
Image: Number line Number line 10 dB/div 10 dB/div -10 d0 10 dB/div -30 d0 10 dB/div -40 d0 10 dB/div	Ref 20.	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr	11:02:03A TRAC TYI DI 1 10.464	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq
M RL Center I 10 dB/div 10.0 I 0.00 I -10.0 I -20.0 I -30.0 I -60.0 I	Ref 20.0	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr	11:02:03 <i>A</i> TRAC TYJ D 1 10.466 -52.:	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz
M RL Center I 10 dB/div	Ref 20.	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr	11:02:03 <i>A</i> TRAC TYJ D 1 10.466 -52.:	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq
M RL Center 10 dB/div 10.0 10.0 -000	Ref 20.	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGN AUTO E: Log-Pwr Mkr	11:02:03A Tryi D 1 10.464 -52.:	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz
M RL Center 10 dB/div 10.0 10.0 -000	Ref 20.0	50 Ω AC 000000000 G P IF	NO: Fast (Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGN AUTO E: Log-Pwr Mkr	11:02:03A TRAA TY D 1 10.466 -52.:	-19.73 dBm	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq
10 dB/div 10 dB/div 10.0 0.00 -10.0 -20.0 -30.0 -60.0 -70.0 Start 9.0 #Res BV	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGN AUTO E: Log-Pwr Mkr	11:02:03A Tryi D 1 10.464 -52.:	.0000 GHz 0001 pts)	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz
10 dB/div -00 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 50.0 -70.0 Start 9.0 #Res BV 1	Ref 20.	50 Q AC 000000000 P IF 00 dBm	NO: Fast (Gain:Low /	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz
M RL Center Center 10 dB/div 10.0 Conter 10.0 Conter 10.0 Conter 10.0 Conter 10.0 Conter 20.0 Conter -10.0 Conter -20.0 Conter -30.0 Conter -60.0 Conter -60.0 Conter -70.0 Conter Start 9.0 Conter 1 N 2 Conter 3 Conter	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Start Freq 9.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.000000 MHz Auto
M RL Center Center 10 dB/div 10.0 Conter 10.0 Conter 10.0 Conter 10.0 Conter 10.0 Conter 20.0 Conter -10.0 Conter -20.0 Conter -30.0 Conter -60.0 Conter -60.0 Conter -70.0 Conter Start 9.0 Conter 1 N 2 Conter 3 Conter	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
10 dB/div 10 dB/div 10.0 0.00 -10.0 -20.0 -30.0 -60.0 -70.0 Start 9.0 -33 -3 -3 -3 -3 -3 -3 -4	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Start Freq 9.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.000000 MHz Auto
M RL Center Center 10 Center 100 Center 200 Center 300 Center 400 Center 500 Center 60 Center 700 Center	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune
Image: Content of the second	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset
M RL Center Center 10 Genter 10.0 - 0.00 - -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - Start 9.0 - Start 9.0 - 3 - 4 - 5 - 6 - 7 - 8 - 9 -	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune
M RL Center Center 10 dB/div 10 - 0 0 -10.0 - -20.0 - -30.0 - -40.0 - -60.0 - -70.0 - Start 9.0 - M33 M003 - 4 - 5 - 7 - 9 - 10 -	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 Try D 1 10.464 -52.: 	.0000 GHz 0001 pts)	Auto Tune
M RL Center Center 10 dB/div Center 10.0 Center 10.0 Center 10.0 Center -0.00 Center	Ref 20.	50 Ω AC 000000000 C P F 00 dBm 	NO: Fast (Gain:Low /	→ Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mkr 	11:02:034 TRAA TYU DI 1 10.466 -52.1 	.0000 GHz 0001 pts)	Auto Tune Center Freq 11.00000000 GHz Start Freq 9.00000000 GHz Stop Freq 13.00000000 GHz CF Step 400.00000 MHz Auto Man Freq Offset



Agilent Sp	ectrum A	nalyzer - Swe	ept SA								
LXI RL	R	F 50 Ω	AC		SE	VSE:INT	0	ALIGNAUTO pe: Log-Pwr		M Jun 24, 2013	Frequency
Center	r Freq	15.0000	100000 G	NO: Fast	Trig: Free		Avgiy	pe: Log-Pwr	TY	CE 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	
			IFO	Gain:Low	#Atten: 30	JqB		Miles			Auto Tune
10 dB/di	iv Re	ef 20.00 c	IBm					IVINI		9 7 GHz 79 dBm	
Log	17 IX	.1 20.00 0									
10.0											Center Freq
0.00											15.00000000 GHz
-20.0										-19.73 dBm	
-30.0											Start Freq
-40.0							_			 1	13.00000000 GHz
-50.0		A la souted	nenisiaeraeri menineri erre	- dentralase -		الدوادين فرور والمرادين			- Andrew States		
-60.0		and the second se		and a second	and a second first statistical		d serviced by the		and a second second		Stop Freq 17.00000000 GHz
-70.0											17.00000000 GH2
Start 1						1		1		.000 GHz	CF Step
#Res B				#V	BW 300 kHz			-	<u>``</u>	0001 pts)	400.000000 MHz
	e tre so 1 f		× 16.709 ⁻	7 6 4 7	Y -47.79 dE		NCTION FL	UNCTION WIDTH	FUNCTIC	IN VALUE	<u>Auto</u> Man
2 3			10.705		-41.15 0	2111					F
4											Freq Offset 0 Hz
5 6											
7 8											
9 10											
11 12											
MSG											
 • • • • 								STATUS	5		
								STATUS	5		- 202
	ectrum A	<mark>nalyzer - Sw</mark> e F 50 Ω			SEI	VSE:INT		STATUS		M Jun 24, 2013	
<mark>Agilent Spe [XI</mark> R L	R	F 50 Ω	AC 00000 G	iHz			Avg Tyş		11:03:14 <i>A</i> TRA(E123456	Frequency
<mark>Agilent Spe [XI</mark> R L	R	F 50 Ω	AC 1000000 G PI	iHz NO: Fast Gain:Low	Trig: Free	e Run	Ауд Тур	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI D	CE 123456 PE MWWWWW ET P NNNNN	
Agilent Sp (X) RL Center	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903		Frequency Auto Tune
<mark>Agilent Spe [XI</mark> R L	r Freq	F 50 Ω	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	CE 123456 PE MWWWWW ET P NNNNN	
Agilent Spr X RL Center 10 dB/di Log	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Typ	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903		Auto Tune Center Freq
Agilent Spr Of RL Center 10 dB/di Log 10.0	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Typ	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903		Auto Tune
Agilent Spr X R L Center 10 dB/di Log 10.0 -10.0	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903		Auto Tune Center Freq
Agilent Sp 27 RL Center 10 dB/di Log 10.0 -10.0 -20.0	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq
Agilent Spr X R L Center 10 dB/di Log 10.0 -10.0	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.00000000 GHz
Agilent Spr W RL Center 10.0 dB/di Log 10.0	r Freq	F 50 Ω 19.0000	AC 1000000 G Pi IF(NO: Fast	Trig: Free	e Run	Avg Ty	ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq
Agilent Spi 22 RL Center 10 dB/di 10.0 -10.0 -20.0 -30.0 -40.0	r Freq	F 50 Ω 19.0000	AC PO0000 G PO IBM	NO: Fast	Trig: Free #Atten: 30	e Run		ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.000000000 GHz Stop Freq
Agilent Spi (X) RL Center 10.0 10.0 -10.0 -20.0 -30.0 -40.0 -50.0	r Freq	F 50 Ω 19.0000	AC PO0000 G PO IBM	NO: Fast	Trig: Free #Atten: 30	e Run		ALIGNAUTO pe: Log-Pwr	11:03:14 A TRAC TYI DI 1 20.903	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz
Agilent Spi (X) RL Center 10 dB/di 10.0 -10.0 -20.0 -30.0 -40.0 -50.0	iv Re	F 50 £ 19.0000	AC PO0000 G PO IBM	NO: Fast	Trig: Free #Atten: 30	e Run	Avg Tyr	ALIGNAUTO pe: Log-Pwr	11:03:144 TRAI TY D 1 20.900 -43.	[≇] 123456 [№] MWWWWW et P NNNNN 3 4 GHz 89 dBm	Auto Tune Center Freq 19.000000000 GHz Start Freq 17.000000000 GHz Stop Freq 21.000000000 GHz
Agilent Spi OX RL Center 10 dB/di 10.0 .00 .00 .10.0 .20.0 .30.0 .40.0 .50.0 .50.0 .50.0	iv Re	F 50 Q 19.0000 of 20.00 c	AC PO0000 G PO IBM	NO: Fast Sain:Low	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAITY TY 1 20.900 -43.	E 1 2 3 4 5 6 7 E MWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz CF Step 400.000000 MHz
Agilent Spi OX RL Center 10 dB/di 10.0 .00 .00 .00 .00 .00 .00 .00 .00 .0	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAA TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.000000000 GHz 21.000000000 GHz CF Step
Agilent Spi (27 RL Center 10 dB/di Log 10.0 -0.00 -10.0 -20.0 -30.0 -40.0 -30.0 -40.0 -50.	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 31			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Start Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz CF Step 400.000000 MHz Auto
Agilent Spi (22) RL Center 10.0 10.0 -0.00 -10.0 -20.0 -30.0 -30.0 -40.0 -30.0 -40.0 -30.0 -40.0 -50.0 -40.0 -50.0	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset
Agilent Spi (27 RL Center 10 dB/di Log 10.0 -0.0 -10.0 -20.0 -30.0	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Start Freq 19.00000000 GHz Start Freq 17.00000000 GHz Stop Freq 21.00000000 GHz CF Step 400.000000 MHz Auto
Agilent Spi (X) RL Center Image: Conter 10 dB/di Log Image: Conter 10.0 Image: Conter 10.0 Image: Conter 10.0 Image: Conter 10.0 Image: Conter -20.0 Image: Conter -30.0 Image: Conter -40.0 Image: Conter -60.0 Image: Conter -70.0 Image: Conter Start 1; Image: Conter Image: Conter Image: Conter -70.0 Image: Conter <t< td=""><td>r Freq iv Re 7.000 (3W 100</td><td>F 50 2 19.0000 of 20.00 c</td><td></td><td>#VI</td><td>Trig: Free #Atten: 30</td><td></td><td></td><td>ALIGNAUTO pe: Log-Pwr Mkr</td><td>11:03:144 TRAN TY D 1 20.90: -43.</td><td>E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.</td><td>Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset</td></t<>	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset
Agilent Spi 20 RL Center 10 dB/di 29 10.0 .000 .10.0 .20.0 .30.0 .40.0 .30.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.0 .40.0 .50.50.0 .50.	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset
Agilent Spi (22) RL Center 10.0 10.0 10.0 -20.0 -30.0 -30.0 -30.0 -30.0 -40.0 -30.0 -30.0 -40.0 -30.0 -30.0 -40.0 -30.0	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAN TY D 1 20.90: -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset
Agilent Spi (27 RL Center 10 dB/di Log 10.0 -0.0 -10.0 -20.0 -30.0	r Freq iv Re 7.000 (3W 100	F 50 2 19.0000 of 20.00 c		#VI	Trig: Free #Atten: 30			ALIGNAUTO pe: Log-Pwr Mkr	11:03:144 TRAI TRAI TY DI 1 20.900 -43.	E 1 2 3 4 5 6 A E M 2 3 4 5 6 A E M NNNN 3 4 GHz 89 dBm -19.73 dBm -19.75 dBm -19.	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.00000000 GHz CF Step 400.000000 MHz Auto Man Freq Offset



	Analyzer - Swept SA				
	RF 50 Ω AC	GHz	ALIGNAUTO Type: Log-Pwr	11:03:49 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
		PNO: Fast 🎧 Trig: Fre IFGain:Low #Atten: 3	Mkr	^{Det P NNNNN} 1 23.628 4 GHz -42.03 dBm	Auto Tune
Log 10.0 0.00					Center Freq 23.00000000 GHz
-20.0 -30.0 -40.0			1	-19.73 dBm	Start Freq 21.00000000 GHz
-50.0 -60.0 -70.0					Stop Freq 25.00000000 GHz
Start 21.000 #Res BW 10	0 kHz	#VBW 300 kH	· · · ·	Stop 25.000 GHz 384 ms (40001 pts)	CF Step 400.000000 MHz Auto Man
MKB MOD3 TER F 1 N 1 1 2 3 3 4 4 5 6 6 6 7 7 7 8 9 9 10 11 1 11 1 12 12 MS6		8 4 GHz 42.03 c	STATUS		Freq Offset 0 Hz

Product	:	Bar Code Printer
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel 01 (2412MHz)

Agilent Spectrum Analyzer - Sw					
RL RF 50 G Center Freq 515.00	2 AC 0000 MHz	SENSE:INT	ALIGN AUT	r TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00	PNO: Fast G IFGain:Low dBm	┘ Trig: Free Run #Atten: 30 dB	M	TYPE MWWWWW DET P NNNNN FX1 971.361 MHz -54.78 dBm	Auto Tune
10.0 0.00 -10.0					Center Free 515.000000 MH:
-20.0				20.39 dBm	Start Free 30.000000 MH
-50.0 -60.0 -70.0	e y Alter and a start and a end of a start and a start and a start and a start	ile de mar de la construcción de la construcción de la construcción de la construcción de la constru La construcción de la construcción d			Stop Fre 1.000000000 GH
Start 30.0 MHz #Res BW 100 kHz MKR MODE TRC SCL	#VB\ ×	N 300 kHz	Sweep	Stop 1.0000 GHz 93.3 ms (40001 pts)	CF Ste 97.000000 MH <u>Auto</u> Ma
1 N 1 f 2 - - - - 3 - - - - - 4 -	971.361 MHz	-54.78 dBm			Freq Offse 0 H
8 9 10 11 12					
MSG			STA	TUS	

Page : 95 of 156



	Analyzer - Swe								
Center Fre	RF 50 Ω q 3.00000			7	BE:INT	ALIGNAUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWWW	Frequency
10 dB/div	Ref 20.00 d	IFG	IO: Fast 🕞 ain:Low	#Atten: 30		 Mk	r1 2.410	0 8 GHz 75 dBm	Auto Tune
10.0 0.00			1						Center Freq 3.000000000 GHz
-20.0 -30.0 -40.0								-20.99 dBm	Start Freq 1.000000000 GHz
-50.0 -60.0 -70.0 Start 1.000	CH2				les les autor à directeurs		Stop 5	.000 GHz	Stop Freq 5.000000000 GHz
#Res BW 1	00 kHz	× 2.410 8		<mark>/ 300 kHz</mark> Y -1.75 dB		Sweep 3		0001 pts)	CF Step 400.000000 MHz <u>Auto</u> Man
2 3 4 5 6 7									Freq Offset 0 Hz
8 9 10 11 12									

R L RF			SENSE:INT	ALIGNAUTO		
enter Freq		NO East Tri	g: Free Run tten: 30 dB	Avg Type: Log-Pwi	TRACE 1 2 TYPE MW DET P N	NNNN
dB/div Re	f 20.00 dBm			N	1kr1 6.533 4 (-51.64 c	
og 0.0						Center Fr
.00						7.00000000 G
D.0 D.0					-20	1.99 dBm
0.0						5.000000000 G
0.0		į				
D.O.	na a gant i gan antina sa talan na antina da Maragaina taga. Artina na gant tarin katan Maragaina da katan da katan da katan ga		heading to be be be a second of		and a she a subtained a she had	StopFr
0.0						9.000000000 G
art 5.000 GI Res BW 100		#VBW 300) kHz	Sweep	Stop 9.000 384 ms (40001	
Kr mode trc scl 1 N 1 f			FUN	FUNCTION FUNCTION WIDT	H FUNCTION VALU	E Auto N
2 3						
4 5 5						0
7 7 3						
9 D 1						
					+	
2						



	IF	NO: Fast 🖵 Trig	SENSE:INT : Free Run en: 30 dB		ALIGNAUTO : Log-Pwr	TRAC TYP	M Jun 24, 2013 E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Frequency				
Log	IF					DE						
	Mkr1 12.927 0 GHz											
0.00								Center Freq 11.000000000 GHz				
-20.0							-20.99 dBm	Start Freq 9.000000000 GHz				
-50.0 -60.0 -70.0						a fyr y fallan stera dif y gwynydd arwyn ar ywraeg fallan a fallan y		Stop Fred 13.00000000 GHz				
Start 9.000 #Res BW 10	0 kHz	#VBW 300			Sweep 3			CF Step 400.000000 MH2 <u>Auto</u> Mar				
1 N 1 2 3 4 5 6 7	f 12.927	0 GHz -52.	28 dBm					Freq Offse 0 H:				
8 9 10 11 12 MSG					STATUS							

RL	RF		AC			ENSE:INT		ALIGN AUTO		M Jun 24, 2013	Frequency
enter	Freq 15	.00000		Hz 10: Fast ⊂ Gain:Low	Trig: Fi #Atten:	ee Run 30 dB	Avg Typ	oe: Log-Pwr	TYP	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	
) dB/div	Ref 2	20.00 dE	Bm					Mkr		38 GHz 07 dBm	Auto Tur
											Center Fr
.00 <u> </u>											15.00000000 G
).0						_	_			-20.99 dBm	Start Fr
).0).0						1					13.000000000 G
).0		and the second	- Harry - Harrison				المحالية والمحاصرة				
0.0 0.0								1			Stop Fr 17.00000000 G
	.000 GH V 100 ki			#VB	N 300 kH			Sweep 3		.000 GHz 0001 pts)	CF St
R MODE	TRC SCL	-	×		Y	FL	NCTION FL	JNCTION WIDTH	FUNCTIO		400.000000 M <u>Auto</u> N
	1 f		15.076 8	3 GHZ	-47.07	dBm					Freq Offs
1 5 5											. 0
7											
9 0 1											
2											
G								STATUS			



Agilent Spe												
Center	Freq 1	50 Ω 9.0000	AC 000000 G	Hz NO: Fast C			Avg Typ	ALIGNAUTO e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWWW	Frequency	
10 dB/div	IFGain:Low #Atten: 30 dB Mkr1 20.939 4 GHz IB/div Ref 20.00 dBm -44.87 dBm											
Log 10.0 0.00											Center Freq 19.000000000 GHz	
-20.0 -30.0 -40.0										-20.99 dBm	Start Freq 17.000000000 GHz	
-50.0 -60.0 -70.0		in the state of the	ing to any first particular constraints								Stop Freq 21.000000000 GHz	
Start 17 #Res Bl	W 100 k		×		W 300 kHz		ICTION FUI		384 ms (4	.000 GHz 0001 pts) NVALUE	CF Step 400.000000 MHz <u>Auto</u> Man	
1 N 2 3 4 5 6	1 f		20.939	4 GHz	-44.87 dE	3m					Freq Offset 0 Hz	
7 8 9 10 11 12												
MSG								STATU	s		ι <u>.</u>	

		OΩ AC		SENSE	SINT	ALIGN AU	JTO 11:12:33	AM Jun 24, 2013	_
enter	Freq 23.00	PI	HZ NO: Fast 😱 Gain:Low	Trig: Free R #Atten: 30 d	lun	g Type: Log-F	Υ	CE 1 2 3 4 5 6 /PE M WWWWW DET P N N N N N	Frequency
0 dB/di	iv Ref 20.0	0 dBm				N	/lkr1 23.67 -42	2 6 GHz 12 dBm	Auto Tur
10.0 —									Center Fre
0.00									23.00000000 G
0.0								-20.99 dBm	Start Fr
0.0						↓1			21.00000000 G
0.0 🐜									0 4 -
0.0									Stop Fr 25.000000000 G
tart 2	1.000 GHz						Stop 2	5.000 GHz	CF St
			//2 (D) 4	200 64-		Swee	ep 384 mis (4	10001 pts)	
	W 100 kHz		#VBW		CUNCTION		• •		400.000000 14
KR MODE	SW 100 kHz 1 rrc sci 1 f	× 23.672 (Y -42.12 dBm	FUNCTION		• •	ON VALUE	400.000000 14
Kr Mode 1 N 2 3 4	E TRC SCL			Y			• •		Auto M
KR MOD 1 N 2 3 4 5 6	E TRC SCL			Y			• •		Auto M
KR MOD 2 3 4 5 6 7 8 9	E TRC SCL			Y			• •		400.000000 14
KR MODE 2 3 4 5 6 7 8	E TRC SCL			Y			• •		Auto M Freq Offs



Channel 06 (2437MHz)

Agilent Spectrum Analyzei XI RL RF					Γ
Center Freq 515	50 Ω AC .000000 MHz PN0: Fast C	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	11:16:00 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
	IFGain:Low	#Atten: 30 dB	Mkr	^{Det Р NNNNN} 1 972.719 MHz -54.82 dBm	Auto Tune
10.0 0.00 -10.0					Center Fre 515.000000 MH
20.0				-20.67 dBm	Start Fre 30.000000 MH
50.0 60.0 70.0					Stop Fre 1.000000000 G⊦
Start 30.0 MHz #Res BW 100 kHz #KB MODE TRO SCL	#VB	№ 300 kHz	Sweep 9	Stop 1.0000 GHz 3.3 ms (40001 pts) FUNCTION VALUE	CF Ste 97.000000 MH Auto Ma
MARY MODE THC SL 1 N 1 f 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 9 - - - 10 - - - 12 - - -	972.719 MHz	-54.82 dBm			Freq Offse
G			STATUS		

	RF 50 \$	Ω AC		SENS	E:INT		ALIGN AUTO	11:16:36 A	M Jun 24, 2013	[
Center	Freq 3.0000	00000 GH	z	Trig: Free F		Avg Type	: Log-Pwr	TRAC	E123456 EM WWWWW	Frequency
			NO: Fast 🕞 Gain:Low	#Atten: 30 d				DE	PNNNNN	
10 dB/div	Ref 20.00	dBm					Mk		15 GHz 27 dBm	Auto Tun
10.0										0
0.00			1							Center Fre 3.000000000 GH
-10.0										3.00000000 GP
-20.0									-20.67 dBm	
-30.0										Start Fre
-40.0										1.000000000 GH
-50.0										
	الاستحصاص ومتريب وسأعاد ويتبررون	line and denote the	and the ball	واللاقي والمحاطية	all a second defined in the	and the letter of the second	State of the state of the state	loss of easily and a		Stop Fre
-70.0			a second s			61 Y 6 8				5.00000000 GH
Start 1.0	00 GHz							Stop 5	.000 GHz	
#Res BV	V 100 kHz		#VBV	V 300 kHz			Sweep 🗧	384 ms (4	0001 pts)	400.000000 MH
MKR MODE	V 100 kHz	×		Y		DN FUN	Sweep (384 ms (4 FUNCTIO	0001 pts)	400.000000 MH
MKR MODE 1 N 2	V 100 kHz	× 2.444 5				DN FUN		384 ms (4	0001 pts)	400.000000 MH
MKR MODE 1 N 2 3	V 100 kHz			Y		DN FUN		384 ms (4	0001 pts)	400.000000 MH <u>Auto</u> Ma Freq Offs
MKR MODE 1 N 2 3 4 5	V 100 kHz			Y		DN FUN		384 ms (4	0001 pts)	400.000000 MH <u>Auto</u> Ma Freq Offs
MKR MODE 1 N 2 3 4 5 6 7	V 100 kHz			Y		DN FUN		384 ms (4	0001 pts)	CF Ste 400.00000 MH <u>Auto</u> Ma Freq Offs 0 H
MKR MODE 1 N 2 3 4 5 6	V 100 kHz			Y				384 ms (4	0001 pts)	400.000000 MH <u>Auto</u> Ma Freq Offs
MKR MODE 1 N 2 3 4 5 6 7 8 9 10	V 100 kHz			Y		DN FUN		384 ms (4	0001 pts)	400.000000 MH <u>Auto</u> Ma Freq Offs
MKR MODE 1 N 2 3 4 5 6 7 8 9	V 100 kHz			Y		DN FUN		384 ms (4	0001 pts)	400.000000 MH <u>Auto</u> Ma Freq Offs



	nt Spectrum Analyzer - Swept SA											
(XI RL Center F	_{RF} req 7.	50 Ω AC 0000000000 GH		7	BE:INT		alignauto : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWW	Frequency		
			NO: Fast ⊊ Gain:Low	#Atten: 30			Mk	r1 5.950	D 2 GHz	Auto Tune		
10 dB/div Log	Ref 2	20.00 dBm						-51.3	33 dBm			
10.0 0.00										Center Freq 7.00000000 GHz		
-10.0									-20.67 dBm			
-30.0		1								Start Freq 5.000000000 GHz		
-50.0 -60.0	a a la companya de la La companya de la comp				مر المربع المالية من محروف محرج المالية					Stop Freq		
-70.0										9.000000000 GHz		
Start 5.00 #Res BW		łz	#VBV	V 300 kHz			Sweep 🗧	Stop 9 384 ms (4	.000 GHz 0001 pts)	CF Step 400.000000 MHz		
MKR MODE T	RC SCL	× 5.950	2 GHz	Y -51.33 dBi		TION FUN	ICTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man		
2 3 4 5 6										Freq Offset 0 Hz		
8 9 10												
11 12												
MSG							STATUS	5				

)Ω AC	SEN	SE:INT	ALIGNAUTO	11:17:46 AM Jun 2 TRACE 1 2 3	
enter Freq 11.00	UUUUUUU GHZ PNO: Fast IFGain:Low		Run	∕g Type: Log-Pwr	TYPE MW DET P N I	NNNN
dB/div Ref 20.00) dBm			Mki	1 11.927 4 0 -51.76 d	
9						Center Fr
						11.00000000 G
0						
0					-20	<u>.67 dBm</u> Start Fr
0						9.000000000
0				1		
	hade expression frontes for groups of	one to be to be public of	سيوس مبالا فتحصيصانه	a san an a	the second second bins and the second second	Stop Fi
						13.000000000
art 9.000 GHz	#V	BW 300 kHz		Sweep	Stop 13.000 384 ms (40001	
es BW 100 KHZ	*•					
Mode TRC SCL	× 11.927 4 GHz	Y -51.76 dB	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	
MODE TRC SCL	×	⊻ -51.76 dB		FUNCTION WIDTH	FUNCTION VALUE	
MODE TRC SCL N 1 f	×	Y -51.76 dB		FUNCTION WIDTH	FUNCTION VALUE	Auto N Freq Off
	×	Y -51.76 dB		FUNCTION WIDTH	FUNCTION VALUE	Auto N Freq Off
NODE TRC SCL	×	⊻ -51.76 dB		FUNCTION WIDTH	FUNCTION VALUE	
MODE TRC SCL	×	Y -51.76 dB		FUNCTION WIDTH	FUNCTION VALUE	Auto N Freq Off

	trum Analyzer - Sw									
Center F	RF 50Ω	AC 000000 G	Hz		SE:INT		ALIGNAUTO e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00	PN IFG	IO: Fast ⊊ Jain:Low	J Trig: Free #Atten: 30			Mkr	[□]	D 3 GHz 19 dBm	Auto Tune
										Center Freq 15.000000000 GHz
-20.0 -30.0 -40.0									-20.67 dBm	Start Freq 13.000000000 GHz
-50.0 -60.0			i i nor gʻigʻigʻigʻin toʻli (te							Stop Freq 17.000000000 GHz
Start 13.0 #Res BW	100 kHz	X	#VBV	V 300 kHz	FUN	CTION FUI	Sweep (.000 GHz 0001 pts)	CF Step 400.000000 MHz <u>Auto</u> Man
		16.770 3	3 GHz	-47.19 dB						Freq Offset 0 Hz
9 10 11 12 MSG							STATUS	5		

RL			50 Ω	AC			SEI	VSE:INT			IGNAUTO		AM Jun 24, 2013	F
enter	Frec	19.0	0000		GHz PNO: Fast FGain:Lov		Trig: Free #Atten: 30		Avg	Type:	_og-Pwr	TY	CE 123456 PE MWWWWW ET P N N N N N	Frequency
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Channel 11 (2462MHz)

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art 1.000 (1	1			.000 GHz	CF St
tes BW 10)0 kHz		#VBW	300 kHz		Sweep 3	84 ms (4	0001 pts)	400.000000 N
		×		Y	FUNCTION	UNCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> N
R MODE TRC			CHA	1 15 dBm					
n Mode Tric : N 1	f	2.468 3	GHz	-1.15 dBm					
N 1			GHz	-1.15 dBm					
MODE TRC N 1 2 - 3 - 4 - 5 -			GHz	-1.15 dBm					
R MODE TRC			GHz	-1.15 dBm					
MODE TRC N 1 2 - 3 - 4 - 5 - 6 - 7 - 8 -			GHz	-1.15 dBm					
R MODE TRC I 2 - <td></td> <td></td> <td>GHz</td> <td>-1.15 dBm</td> <td></td> <td></td> <td></td> <td></td> <td>Freq Offs 0</td>			GHz	-1.15 dBm					Freq Offs 0



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w RL Cente			2 AC 00000 GH	lz	7		Avg Typ	ALIGNAUTO e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWWW	Frequency
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tes B₩	/ 100 kHz		#VBW	V 300 kHz		Sweep	384 ms (4	0001 pts)	400.000000 N
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3									
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2									



Agilent	Spectrum	Analyzer - S	went SA								
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0.00											15.00000000 GHz
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-40.0 —										 -♦ ¹	
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-70.0 —											17.0000000000000
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		<mark>Analyzer - S</mark> RF 50			SEN	SE:INT		ALIGNAUTO	11:49:594	M Jun 24, 2013	
<mark>Agilent S</mark> L XI RL		RF 50	Ω AC 000000 G				Avg Typ		11:49:594	M Jun 24, 2013 E 1 2 3 4 5 6 FE MWWWWW	Frequency
<mark>Agilent S</mark> L XI RL		RF 50	Ω AC 0000000 G PI	iHz NO: Fast Gain:Low	Trig: Free	Run	Avg Typ	ALIGN AUTO De: Log-Pwr	11:49:59 A TRAC TYI D	CE 123456 PE MWWWWW ET P NNNNN	
<mark>Agilent S</mark> L XI RL		RF 50	Ω AC 0000000 G PI	NO: Fast	Trig: Free	Run	Avg Typ	ALIGN AUTO De: Log-Pwr	11:49:59 A TRAC TYI DI 1 20.94		Frequency Auto Tune
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Agilent S (X) RL Cente 10 dB/ Log 10.0 - -10.0 - -20.0 -	er Fred	rf 50 19.000	Ω AC 0000000 G PI IFC	NO: Fast	Trig: Free	Run	Avg Typ	ALIGN AUTO De: Log-Pwr	11:49:59 A TRAC TYI DI 1 20.94	E 123456 ET P NNNN D 7 GHz 47 dBm	Auto Tune Center Freq 19.00000000 GHz
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Aglient S (X) RL Cente 10 dB/ Log 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -50.0 -70.0 Start	er Fred	RF 19.000 2 19.0000 2 1	Ω AC 0000000 G PI IFC	NO: Fast Gain:Low	Trig: Free	Run	Avg Typ	ALIGNAUTO De: Log-Pwr Mkı	11:49:594 TRAITY TY 120.944 -44.	E 123456 ET P NNNN D 7 GHz 47 dBm	Auto Tune Center Freq 19.00000000 GHz Start Freq 17.000000000 GHz Stop Freq 21.00000000 GHz
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		nalyzer - Swe									
(x/ RL Cente	r Freq		00000 G	Hz			Avg Typ	alignauto e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWW	Frequency
10 dB/d	iv Re	ef 20.00 d	IF	NO: Fast C Gain:Low	#Atten: 30			Mkı	[.] 1 23.56	B 8 GHz 45 dBm	Auto Tune
Log 10.0											Center Freq 23.00000000 GHz
-20.0 -30.0 -40.0						and any local states	1		in a shark an at to a	-20.67 dBm	Start Freq 21.00000000 GHz
-50.0 ++++ -60.0 -70.0											Stop Freq 25.00000000 GHz
Start 2 #Res E	SW 100	kHz		#VB	W 300 kHz				384 ms (4	.000 GHz 0001 pts)	CF Step 400.000000 MHz Auto Man
MXR MOD 1 N 2 3 4 5 6 7 8 9 10 11			× 23.568	8 GHz	42.45 dE			NCTION WIDTH			Freq Offset 0 Hz
11 12 MSG								STATU	s		

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

RF Radiated Measurement:

The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

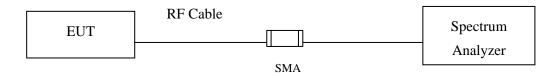
Note:

1. All instruments are calibrated every one year.

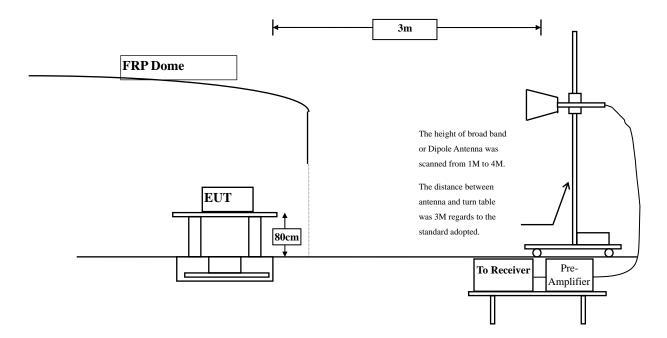
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

6.5. Uncertainty

- \pm 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

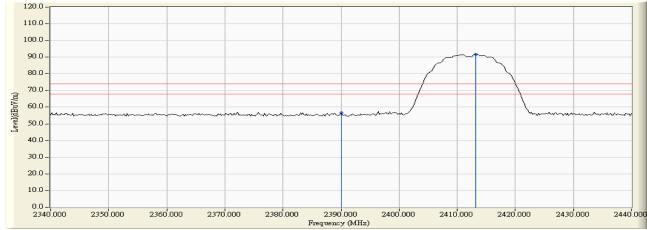
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna Printed on PCB

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesult
01 (Peak)	2390.000	31.509	25.054	56.563	74.000	54.000	Pass
01 (Peak)	2413.200	31.647	59.919	91.566			
01 (Average)	2390.000	31.509	12.074	43.583	74.000	54.000	Pass
01 (Average)	2411.200	31.632	56.175	87.807			

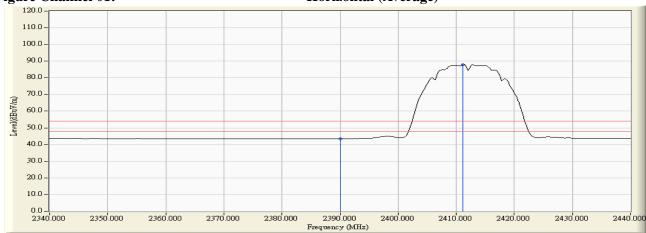


Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

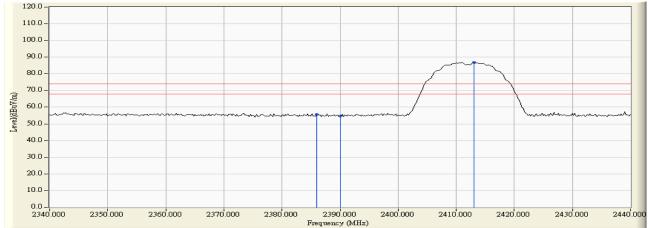


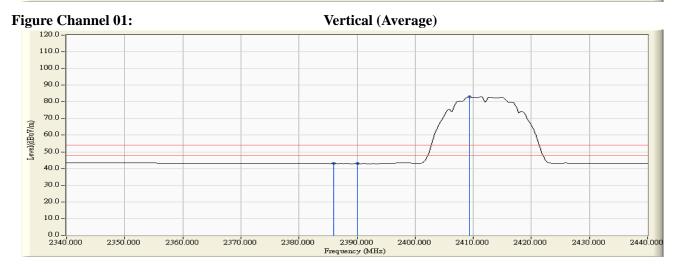
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna Printed on PCB

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2386.000	30.934	24.870	55.804	74.000	54.000	Pass
01 (Peak)	2390.000	30.915	23.622	54.537	74.000	54.000	Pass
01 (Peak)	2413.000	30.956	55.795	86.751			
01 (Average)	2386.000	30.934	12.017	42.951	74.000	54.000	Pass
01 (Average)	2390.000	30.915	12.036	42.951	74.000	54.000	Pass
01 (Average)	2409.400	30.939	52.075	83.013			

Figure Channel 01:

Vertical (Peak)





- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna Printed on PCB

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.900	32.011	59.935	91.946			
11 (Peak)	2483.500	32.182	23.093	55.275	74.000	54.000	Pass
11 (Peak)	2486.700	32.207	24.813	57.019	74.000	54.000	Pass
11 (Average)	2461.300	32.014	56.341	88.355			
11 (Average)	2483.500	32.182	12.052	44.234	74.000	54.000	Pass
11 (Average)	2486.700	32.207	12.083	44.289	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)

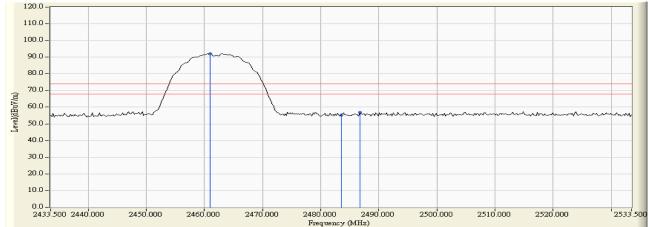
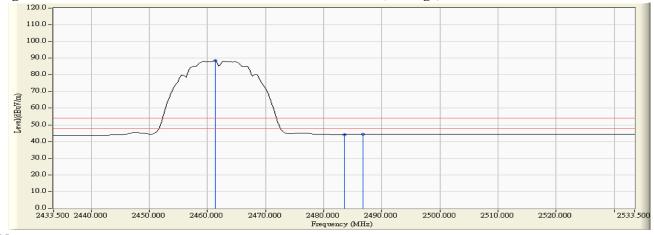


Figure Channel 11:

Horizontal (Average)



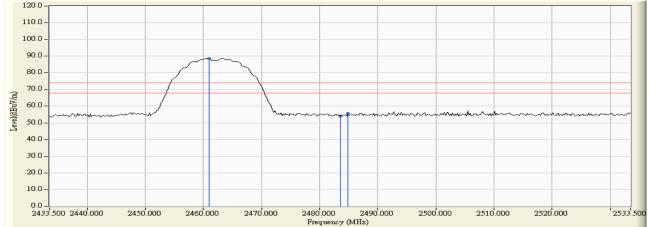
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

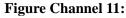
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna Printed on PCB

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.900	31.283	57.284	88.567			
11 (Peak)	2483.500	31.435	22.654	54.089	74.000	54.000	Pass
11 (Peak)	2484.900	31.445	24.356	55.801	74.000	54.000	Pass
11 (Average)	2461.300	31.286	53.569	84.855			
11 (Average)	2483.500	31.435	12.000	43.435	74.000	54.000	Pass
11 (Average)	2484.900	31.445	11.991	43.436	74.000	54.000	Pass

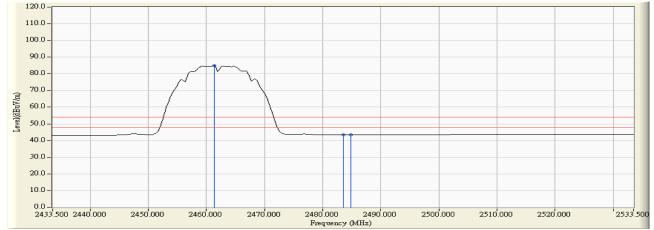
Figure Channel 11:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



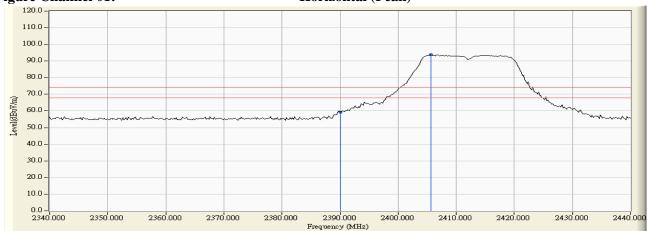
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna Printed on PCB

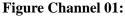
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	27.844	59.353	74.000	54.000	Pass
01 (Peak)	2405.600	31.596	62.196	93.792			
01 (Average)	2390.000	31.509	13.447	44.956	74.000	54.000	Pass
01 (Average)	2406.800	31.604	52.047	83.651			

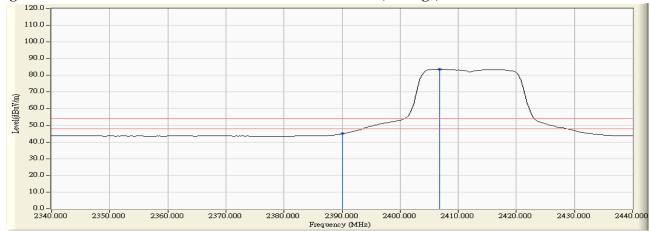
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



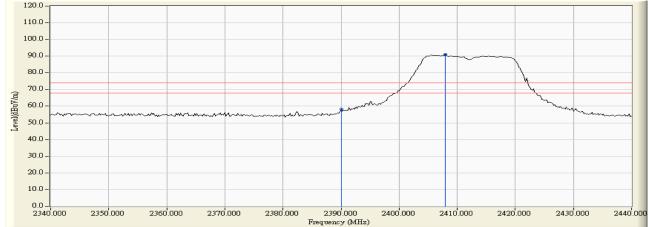
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

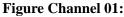
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna Printed on PCB

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	27.446	58.361	74.000	54.000	Pass
01 (Peak)	2408.000	30.934	60.263	91.197			
01 (Average)	2390.000	30.915	12.990	43.905	74.000	54.000	Pass
01 (Average)	2407.000	30.931	50.005	80.936			

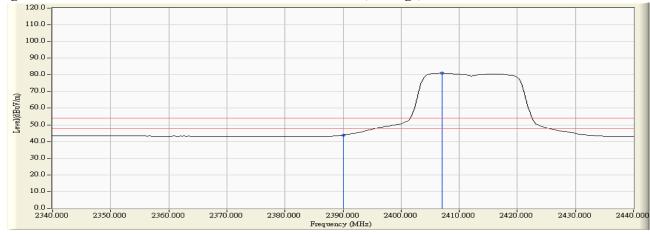
Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

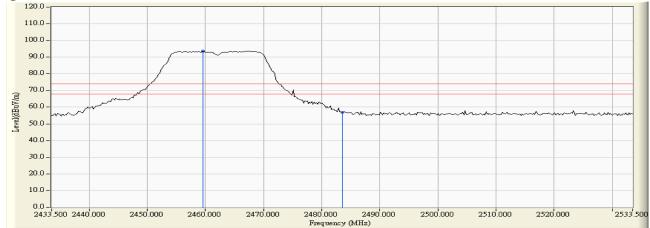
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna Printed on PCB

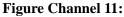
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2459.500	32.001	61.598	93.598			
11 (Peak)	2483.500	32.182	24.742	56.924	74.000	54.000	Pass
11 (Average)	2467.300	32.059	51.915	83.974			
11 (Average)	2483.500	32.182	12.973	45.155	74.000	54.000	Pass

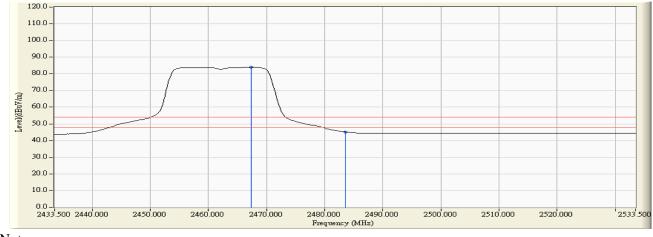
Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



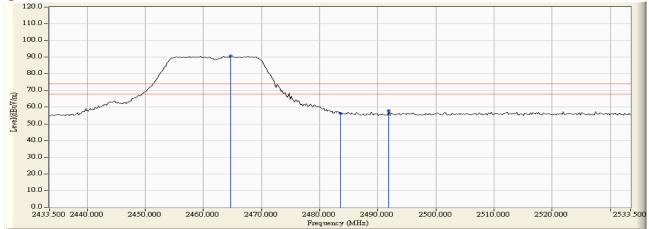
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

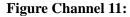
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna Printed on PCB

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2464.700	31.308	59.379	90.688			
11 (Peak)	2483.500	31.435	25.016	56.451	74.000	54.000	Pass
11 (Peak)	2491.900	31.492	26.264	57.756	74.000	54.000	Pass
11 (Average)	2467.300	31.326	49.207	80.533			
11 (Average)	2483.500	31.435	12.575	44.010	74.000	54.000	Pass
11 (Average)	2491.100	31.487	11.995	43.482	74.000	54.000	Pass

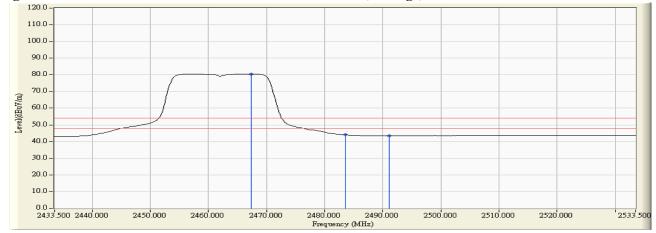
Figure Channel 11:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna Printed on PCB

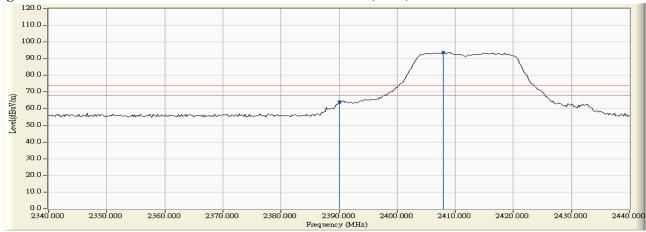
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RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Decult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	32.689	64.198	74.000	54.000	Pass
01 (Peak)	2408.000	31.611	62.269	93.881			
01 (Average)	2390.000	31.509	14.564	46.073	74.000	54.000	Pass
01 (Average)	2406.800	31.604	51.818	83.422			

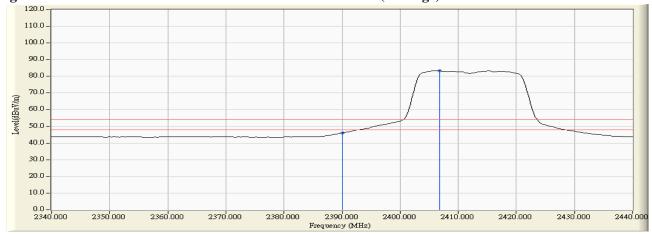
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

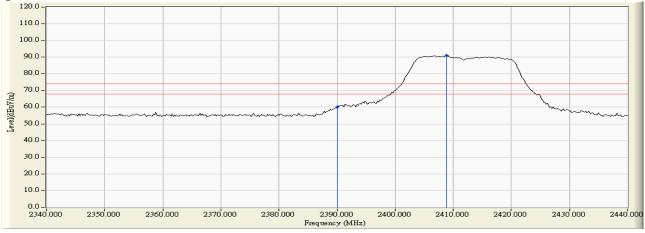


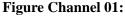
P	roduct	:	Bar Code Printer
Т	est Item	:	Band Edge Data
Т	est Site	:	No.3 OATS
Т	est Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
			-Antenna Printed on PCB

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Degult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	29.333	60.248	74.000	54.000	Pass
01 (Peak)	2408.800	30.937	60.067	91.003			
01 (Average)	2390.000	30.915	13.930	44.845	74.000	54.000	Pass
01 (Average)	2406.600	30.930	49.964	80.894			

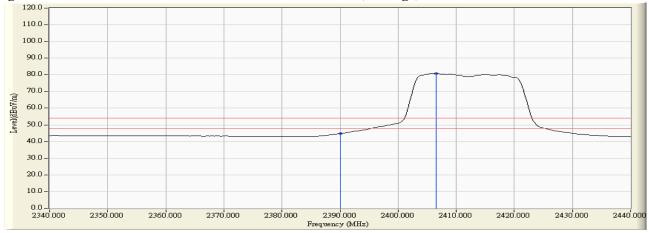
Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

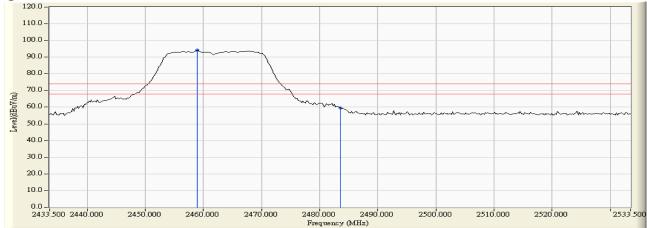
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna Printed on PCB

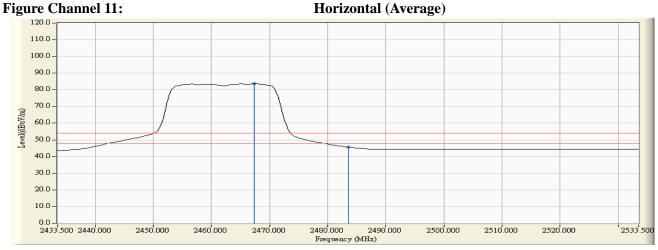
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2458.900	31.997	62.133	94.129			
11 (Peak)	2483.500	32.182	27.198	59.380	74.000	54.000	Pass
11 (Average)	2467.300	32.059	51.668	83.727			
11 (Average)	2483.500	32.182	13.409	45.591	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)



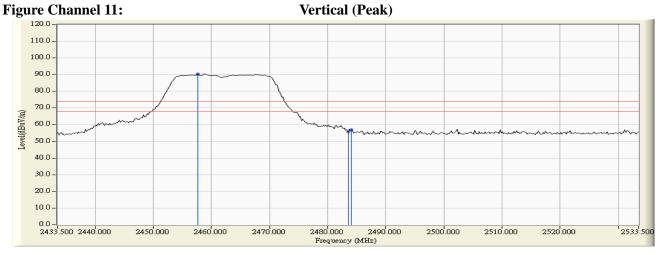


- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.



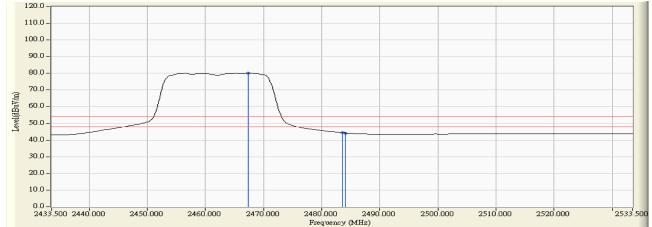
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna Printed on PCB

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2457.700	31.261	59.250	90.511			
11 (Peak)	2483.500	31.435	24.228	55.663	74.000	54.000	Pass
11 (Peak)	2484.100	31.439	25.477	56.916	74.000	54.000	Pass
11 (Average)	2467.300	31.326	48.873	80.199			
11 (Average)	2483.500	31.435	12.962	44.397	74.000	54.000	Pass
11 (Average)	2484.100	31.439	12.767	44.206	74.000	54.000	Pass





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) -Antenna PIFA

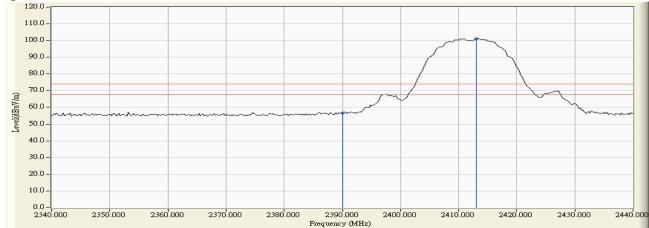
1

RF Radiated Measurement (Horizontal):

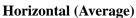
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	25.156	56.665	74.000	54.000	Pass
01 (Peak)	2413.000	31.646	69.447	101.093			
01 (Average)	2390.000	31.509	13.815	45.324	74.000	54.000	Pass
01 (Average)	2411.200	31.632	65.548	97.180			

Figure Channel 01:

Horizontal (Peak)









- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

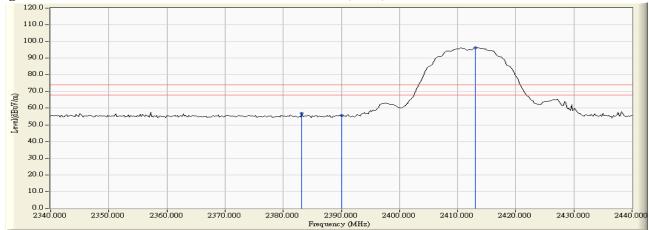


Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna PIFA

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2383.200	30.947	25.860	56.807	74.000	54.000	Pass
01 (Peak)	2390.000	30.915	24.594	55.509	74.000	54.000	Pass
01 (Peak)	2413.000	30.956	65.211	96.167			
01 (Average)	2390.000	30.915	12.437	43.352	74.000	54.000	Pass
01 (Average)	2414.800	30.968	61.326	92.294			

Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) - Antenna PIFA

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2460.500	32.008	65.665	97.673			
11 (Peak)	2483.500	32.182	22.534	54.716	74.000	54.000	Pass
11 (Peak)	2486.700	32.207	24.060	56.266	74.000	54.000	Pass
11 (Average)	2461.300	32.014	62.005	94.019			
11 (Average)	2483.500	32.182	12.135	44.317	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)

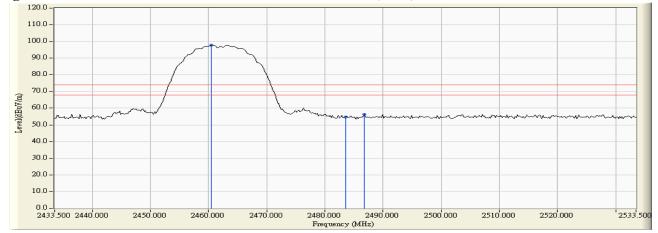


Figure Channel 11:

Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) -Antenna PIFA

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.500	31.280	64.278	95.558			
11 (Peak)	2483.500	31.435	23.896	55.331	74.000	54.000	Pass
11 (Peak)	2492.500	31.495	25.314	56.810	74.000	54.000	Pass
11 (Average)	2461.300	31.286	60.518	91.804			
11 (Average)	2483.500	31.435	12.121	43.556	74.000	54.000	Pass

Figure Channel 11:

Vertical (Peak)

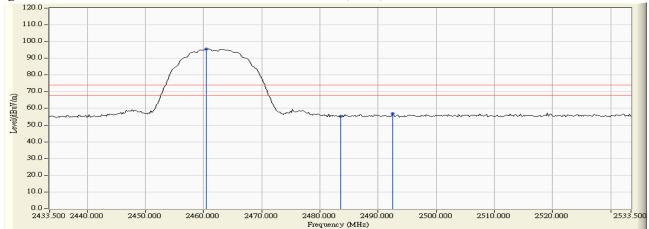
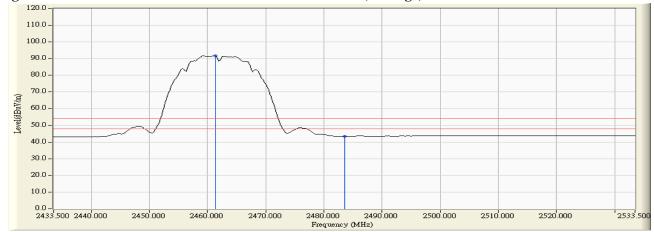


Figure Channel 11:

Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



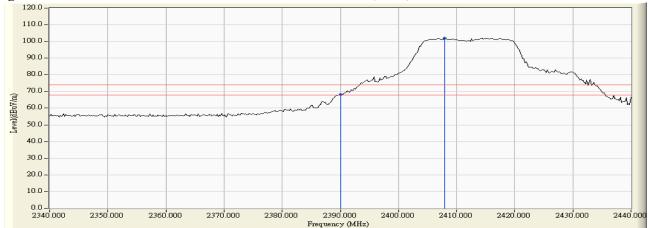
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna PIFA

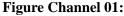
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	36.827	68.336	74.000	54.000	Pass
01 (Peak)	2408.000	31.611	70.275	101.887			
01 (Average)	2390.000	31.509	18.690	50.199	74.000	54.000	Pass
01 (Average)	2416.200	31.671	60.600	92.270			

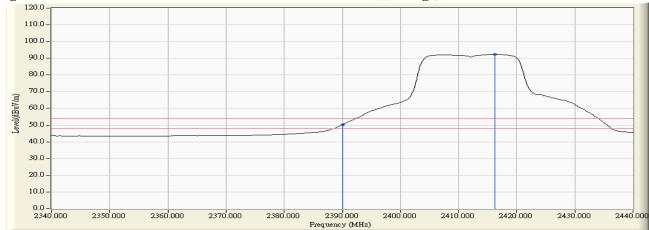
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



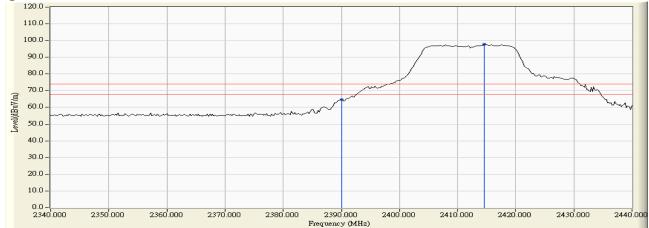
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) - Antenna PIFA

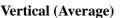
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	33.899	64.814	74.000	54.000	Pass
01 (Peak)	2414.600	30.967	66.948	97.915			
01 (Average)	2390.000	30.915	16.101	47.016	74.000	54.000	Pass
01 (Average)	2416.200	30.978	56.887	87.865			

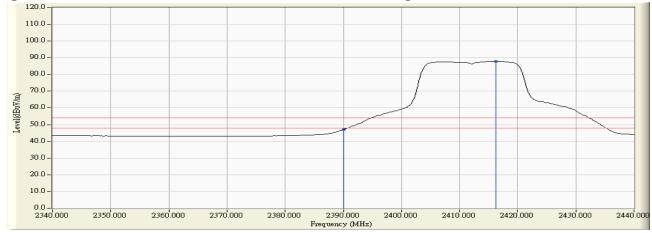
Figure Channel 01:

Vertical (Peak)









- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

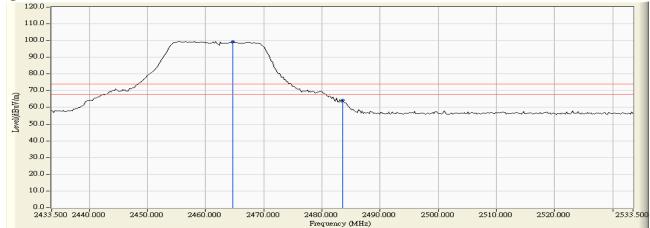
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Antenna PIFA

RF Radiated Measurement (Horizontal):

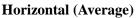
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2464.700	32.039	67.432	99.472			
11 (Peak)	2483.500	32.182	32.129	64.311	74.000	54.000	Pass
11 (Average)	2456.900	31.982	57.894	89.875			
11 (Average)	2483.500	32.182	14.889	47.071	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)









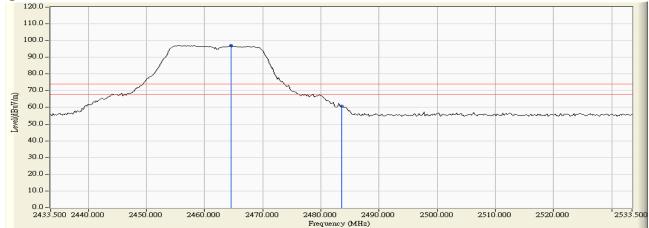
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) -Antenna PIFA

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2464.500	31.307	65.941	97.248			
11 (Peak)	2483.500	31.435	29.526	60.961	74.000	54.000	Pass
11 (Average)	2456.900	31.256	56.379	87.634			
11 (Average)	2483.500	31.435	14.186	45.621	74.000	54.000	Pass

Figure Channel 11:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna PIFA

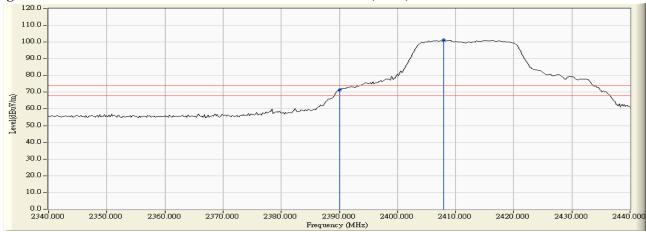
. . .

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Degult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	39.973	71.482	74.000	54.000	Pass
01 (Peak)	2408.000	31.611	69.642	101.254			
01 (Average)	2390.000	31.509	17.915	49.424	74.000	54.000	Pass
01 (Average)	2417.400	31.679	59.585	91.265			

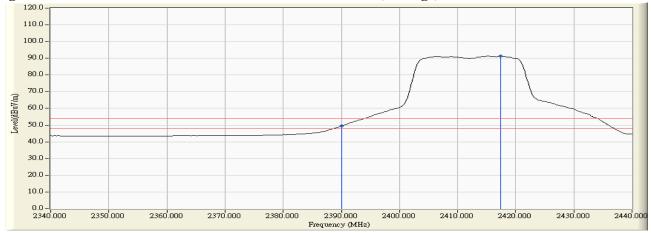
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



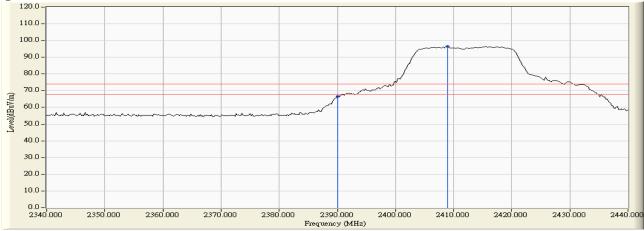
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna PIFA

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	35.631	66.546	74.000	54.000	Pass
01 (Peak)	2409.000	30.937	65.577	96.514			
01 (Average)	2390.000	30.915	15.174	46.089	74.000	54.000	Pass
01 (Average)	2417.400	30.985	55.748	86.734			

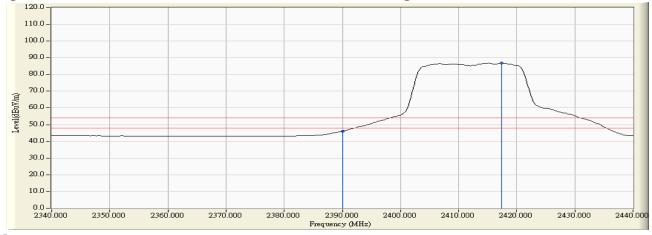
Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

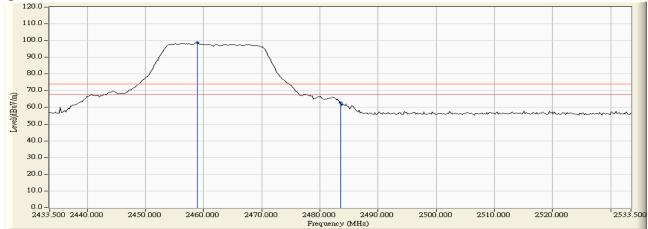
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna PIFA

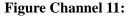
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2458.900	31.997	66.732	98.728			
11 (Peak)	2483.500	32.182	30.611	62.793	74.000	54.000	Pass
11 (Average)	2456.500	31.977	56.654	88.632			
11 (Average)	2483.500	32.182	14.466	46.648	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



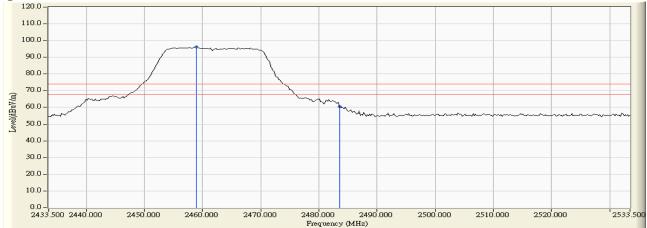
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.

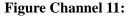
Product	:	Bar Code Printer
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
		-Antenna PIFA

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2458.900	31.270	64.980	96.249			
11 (Peak)	2483.500	31.435	28.890	60.325	74.000	54.000	Pass
11 (Average)	2456.500	31.252	54.984	86.237			
11 (Average)	2483.500	31.435	14.210	45.645	74.000	54.000	Pass

Figure Channel 11:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

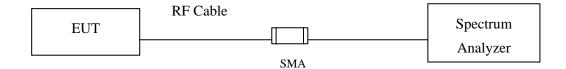
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

± 150Hz

7.6. Test Result of Occupied Bandwidth

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	10200	>500	Pass

Figure Channel 1:

<mark>gilent Spectrum Analyzer - Sw</mark>		SENSE:IN	Π	ALIGNAUTO	10:24:54 A	M Jun 24, 2013	
enter Freq 2.41200			Avg Type	e: Log-Pwr	TRAC	Е 1 2 3 4 5 6 РЕМ ИМИМИ ТРИNNNN	Frequency
0 dB/div Ref 20.00 (dBm			Mkr		90 GHz 81 dBm	Auto Tun
og 10.0 0.00			3 Maril 1			-4.U4 dBm	Center Fre 2.412000000 Gł
0.0	man n			n www	Vun -		Start Fr 2.387000000 G
0.0				- Way!	- Vurture	Works of Plant Prices	Stop Fr 2.437000000 G
enter 2.41200 GHz Res BW 100 kHz	#VE	SW 300 kHz		Sweep		0.00 MHz 1001 pts)	CF St 5.000000 M
XF MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - 5 - - 6 - - 7 - -	× 2.413 00 GHz 2.406 90 GHz 2.417 10 GHz	1.96 dBm -5.81 dBm -5.00 dBm	FUNCTION FUN	ICTION WIDTH	FUNCTIO	N VALUE	Auto M Freq Offs 0
8 9 0 1 2							

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	10200	>500	Pass

Figure Channel 6:

gilent Spectrum An		5 A		0711	SE:INT		ALIGNAUTO	10.01.504		Γ
Center Freq		000 GHz	Z D: Fast 🔾	Trig: Free	Run		e: Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWW	Frequency
0 dB/div Re	f 20.00 dBr	IFGa	ain:Low	#Atten: 30	dB		Mkr	2 2.431	90 GHz 15 dBm	Auto Tun
10.0 10.0 10.0				2 1	pad-and and a	3			-4.16 abm	Center Fre 2.437000000 GH
0.0	- 100	mar					h mas	Non a state		Start Fre 2.412000000 Gi
0.0 0.0 0.0		<u> </u>						- Valu	hangelunnenser	Stop Fr 2.462000000 G
enter 2.4370 Res BW 100	kHz		#VBW	300 kHz					0.00 MHz 1001 pts)	CF Sto 5.000000 M Auto M
MODE TRC SOL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - -		× 2.435 50 2.431 90 2.442 10	GHz	1.84 dB -5.15 dB -4.61 dB	m m		ICTION WIDTH	FUNCTIO		Freq Offs 0
7 8 9 0 1 2										
G	•						STATUS	3		

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	10200	>500	Pass

Figure Channel 11:

Agilent Spectrum A	nalvzer - Swe	ot SA		<u> </u>						
	RF 50 Ω	AC		SEN	ISE:INT		ALIGN AUTO		AM Jun 24, 2013	-
Center Freq	2.46200]	_	Avg Typ	e: Log-Pwr	TRA	CE 1 2 3 4 5 6 PE MWWWWW	Frequency
			10: Fast 🖵 Gain:Low	Trig: Free #Atten: 30				D		.
	ef 20.00 d	Bm					Mkr		90 GHz 34 dBm	Auto Tur
- og 10.0										Center Fre
0.00				2	para	3			-3.56 dBm	2.462000000 GH
10.0			ل کمی			T _A				
20.0			~~ V			V N				
30.0			5							Start Fr
40.0			}			1	2			2.437000000 G
	IN M	and the	ř.				hi mar	mr.		
0.0	m						1.4	1 len	monorante	Stop Fr
50.0										2.487000000 G
70.0										2.4010000000
enter 2.462	00 GHz			I	I	1	1	Span 5	0.00 MHz	CF Ste
Res BW 100) kHz		#VBW	/ 300 kHz			Sweep	4.80 ms ((1001 pts)	5.000000 M
KR MODE TRC SO	31	×		Y	FUN	ICTION FL	JNCTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> M
1 N 1 f	_	2.461 00		2.44 dE -5.34 dE						
2 N 1 f 3 N 1 f		2.456 90		-5.54 df -4.59 df						Freq Offs
5										0
6										_
8										
9										
10										
12										
G							STATU	5		L
							0.710			

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	16400	>500	Pass

Figure Channel 1:

Agilent Spectrum Analyzer - Swe	pt SA				
🕅 RL RF 50 Ω Center Freq 2.41200		SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	10:45:47 AM Jun 24, 2013 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 d	PNO: Fast 🕞 IFGain:Low	∫ Trig: Free Run #Atten: 30 dB	Mkr	2 2.403 80 GHz -7.17 dBm	Auto Tune
10.0 0.00 -10.0	2 Alvelor	motor motor	1 martinet 3	-6.28 dBm	Center Fred 2.412000000 GHz
-20.0 -30.0 -40.0 -50.0 Heallin Marine Marine	Marul Martin and Maria			Mmark and	Start Free 2.387000000 GH:
-50.0 Keed/M ^(M) -60.0 -70.0					Stop Free 2.437000000 GH
Center 2.41200 GHz #Res BW 100 kHz		300 kHz	•	Span 50.00 MHz 4.80 ms (1001 pts)	CF Step 5.000000 MH
MKS Mu003 TEC SQL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - - 7 - - - 9 - - -	X 2.417 00 GHz 2.403 80 GHz 2.420 20 GHz	Y Fl -0.28 dBm -7.17 dBm -6.55 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Mar Freq Offset 0 Hz
10 11 12 MSG			STATUS	3	

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	16450	>500	Pass

Figure Channel 6:

Agilent Spectrum Analyzer - Swept SA	
Center Freq 2.437000000 GHz Avg Type: Log PNO: Fast C Trig: Free Run	TYPE MWWWWWW
IFGain:Low #Atten: 30 dB	DET P N N N N N
	Mkr2 2.428 80 GHz Auto Tur
	-6.63 dBm
10 dB/div Ref 20.00 dBm	-6.63 UBIII
	Center Fro
0.00 2 2 and a for the second se	-5.70 dBm 2.437000000 G
0.0	
20.0	Start Fr
40.0	<u>ատիրիսիսիսիսիսիսիսիսիսիսիսիսիսիսիսիսիսիսի</u>
40.0	2.4 1200000 0
10.0 Low Martin -	· · · · · · · · · · · · · · · · · · ·
	and the second se
50.0	Stop Fr
70.0	2.462000000 G
enter 2.43700 GHz	Span 50.00 MHz
	5.000000 M
IKR MODE TRC SCL X Y FUNCTION FUNCTION	WIDTH FUNCTION VALUE Auto M
1 N 1 f 2.438 25 GHz 0.30 dBm 2 N 1 f 2.428 80 GHz -6.63 dBm	
3 N 1 f 2.445 25 GHz -7.60 dBm	Freg Offs
4	
5	0
6 7	
8	
9	
0	
11 12 12 12 12 12 12 12 12 12 12 12 12 1	

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	16400	>500	Pass

Figure Channel 11:

Agilent Spectrum Analyzer - Swept SA					
W RL RF 50 Ω AC Center Freq 2.462000000 (GHz	Avg Type	ALIGNAUTO 10:59 e: Log-Pwr	008 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 🎧 Trig: Fre IFGain:Low #Atten: 3			53 80 GHz -6.59 dBm	Auto Tune
Log 10.0 .000	2 Ibelandrofmalmal	ry prober of water band and		-5.69 dBm	Center Free 2.462000000 GH
-20.0 -30.0 -40.0 -50.0 acad ^{wyWWWWWWWWWWWWW}			Window Caller	- Sul Marin	Start Fre 2.437000000 GH
-50.0 kad ^{lwr⁴⁴}					Stop Fre 2.487000000 G⊢
Center 2.46200 GHz #Res BW 100 kHz	#VBW 300 kH		Sweep 4.80 m	· · · ·	CF Ste 5.000000 MH Auto Ma
2 N 1 f 2.453 3 N 1 f 2.470 4 - - - - 5 - - 6 - -	Y 7 00 GHz 0.31 c 3 80 GHz -6.59 c 0 20 GHz -6.08 c	lBm lBm	NCTION WIDTH FUT	NCTION VALUE	Freq Offse
7 8 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10					
MSG			STATUS		

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	17600	>500	Pass

Figure Channel 1:

Agilent Spectrum Analyzer - Swe	pt SA				
Center Freq 2.41200		SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	11:07:51 AM Jun 24, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
10 dB/div Ref 20.00 d	PN0: Fast G IFGain:Low	┘ Trig: Free Run #Atten: 30 dB	Mkr	2 2.403 20 GHz -7.44 dBm	Auto Tune
10.0 0.00 -10.0	2 Juiliolui	1 rehalingeheelen	hala and a second se	-7.05 dBm	Center Fred 2.412000000 GH:
-20.0 -30.0 -40.0 -50.0 control (1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	and a second sec		h De Maranela Derror	partines the standing the standing	Start Free 2.387000000 GH
-50.0 0000000000000000000000000000000000					Stop Fre 2.437000000 GH
Center 2.41200 GHz #Res BW 100 kHz	#VBW	300 kHz	-	Span 50.00 MHz 4.80 ms (1001 pts)	CF Stej 5.000000 MH
MKR MODE TFC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - - 7 - - - 9 - - - 10 - - - 11 - - -	× 2.407 00 GHz 2.403 20 GHz 2.420 80 GHz	Y F1 -1.05 dBm -7.44 dBm -7.05 dBm		FUNCTION VALUE	A <u>uto</u> Mar Freq Offse 0 H
ISG			STATUS	;	l

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	17400	>500	Pass

Figure Channel 6:

				0						
ilent Spectrum A										
	RF 50 Ω			SEN	ISE:INT		ALIGNAUTO		M Jun 24, 2013	Frequency
enter Freq	2.43700			Tui u Fue	D	Avg Type	: Log-Pwr	TRA	2E123456 PEMWWWWWW	requeitcy
		P	NO: Fast 🕞 Gain:Low	∫ Trig: Free #Atten: 30					ETPNNNNN	
		IFU	Jain:Low	#Atten: 50						Auto Tu
							Mkr		20 GHz	Autoru
dB/div R	ef 20.00 d	Bm						-7.	13 dBm	
pg										
0.0						1				Center Fr
			2			∲' <u>∧</u> 3				
00			malmalar	moundantes	mbrohan	hundred			-6.67 dBm	2.437000000 G
0.0			- <u> </u>							
0.0			12			1				
		في	191 - C			, k	n.			Start Fr
0.0	Ward all all all all all all all all all al	- November				+	Jun Lynne	-	"YIMWWWW	2.412000000 G
0.0	Maryana	~~//··					VV	MULY CONTRACT	l.	2.1120000000
an wow	T I								Whilewhar	
).O *****										
0.0									I	Stop Fr
										2.462000000 G
5.0										
enter 2.437								Cnon 5	0.00 MHz	
licer 2.437			#\/D\/	300 kHz			Qwoon	9 pan 3	1001 pts)	CF St
LES DAA 100			#VDVV	JUU KIIZ			oweep	4.60 1115 (1001 pts)	5.000000 N
R MODE TRC S	CL	×		Y		ICTION FUN	ICTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> N
1 N 1 f		2.442 0		-0.67 dE						
2 N 1 f 3 N 1 f		2.428 2		-7.13 dE -6.89 dE						
4 <u>1 1</u>		2.445 6		-6.89 GE	sm					Freq Offs
5	-									0
3										
7										
B										
9	+									
1	-									
2										
3							STATUS			

Product	:	Bar Code Printer
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	17400	>500	Pass

Figure Channel 11:

Agilent Spectrum Analyzer - Swe	pt SA				
	AC	SENSE:INT	ALIGN AUTO	11:45:53 AM Jun 24, 2013	Frequency
Center Freg 2.46200	0000 GHz]	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast 😱	Trig: Free Run		TYPE MWWWWW DET P N N N N N	
	IFGain:Low	#Atten: 30 dB		DET J	
			Mkr	2 2.453 20 GHz	Auto Tun
				-7.07 dBm	
10 dB/div Ref 20.00 d	BM			-7.07 0.011	
-					
10.0	_				Center Fre
0.00	▲ ²		3		2.462000000 GH
-10.0	Julivila	mbertrolies about	monter and	-6.70 dBm	
-10.0					
-20.0					04
-30.0	and the second		- Anno -		Start Fre
-30.0	and the stand of the		WWW IN	MALL .	2.437000000 GH
-40.0	41.			1 - WANKAPORT AND	
-30.0 -40.0 -50.0				Munderson for Marine	
					Stop Fre
-60.0					
-70.0					2.487000000 GH
Center 2.46200 GHz				Span 50.00 MHz	
#Res BW 100 kHz	#\/D\M	300 kHz	Swoon	4.80 ms (1001 pts)	CF Ste
#Res BW 100 RHz	#*0**	JOO KHZ	Gweep	4.00 ms (100 ms)	5.000000 MH
MKR MODE TRC SCL	X	Y FU	NCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
1 N 1 f	2.463 30 GHz	-0.70 dBm			
2 N 1 f	2.453 20 GHz	-7.07 dBm			
3 N 1 f	2.470 60 GHz	-7.48 dBm			Freq Offs
<u>4</u> 5					01
6					
7					
8					
9					
10					
11 12					
		1			
MSG			STATUS		

8. **Power Density**

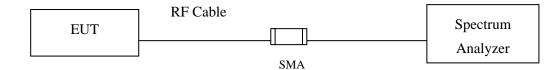
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

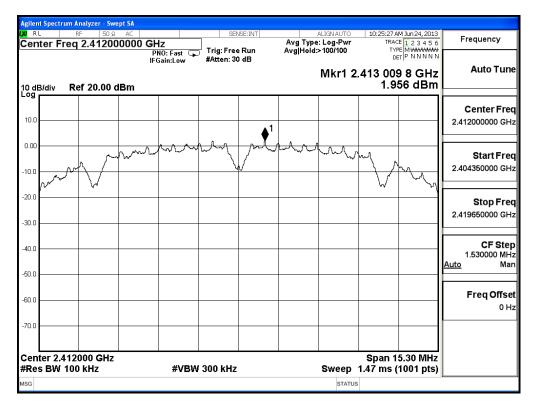
 \pm 1.27 dB

8.6. Test Result of Power Density

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	1.956	< 8dBm	Pass

Figure Channel 1:



Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	2.260	< 8dBm	Pass

Figure Channel 6:

	437000 GHz 100 kHz		#VBW	300 kHz			Sweep		5.30 MHz 1001 pts)	
	427000 CH7							Enon 1	5 20 MU-	
70.0										
60.0										Freq Offs 0 H
										Erog Offo
50.0										1.530000 Mi <u>Auto</u> Mi
40.0										CF Ste
.0										2.444650000 G
.0.0										Stop Fr
10.0	\sim V							\square	han hay	
	ma m	Ung						\uparrow	w.	Start Fr 2.429350000 G
0.00		h.		ᡁ᠕᠊᠕	m	hankar				
10.0			▲ 1							2.437000000 GH
.og										Center Fre
0 dB/div	Ref 20.00 dl	Bm					Mkr1 2		63 GHz 60 dBm	
		PNO: IFGain	Fast 😱 :Low	#Atten: 30		Arginola.				Auto Tui
	req 2.43700	0000 GHz		Trig: Free			: Log-Pwr	TRAC	E123456	Frequency
RL	RF 50 Ω	AC		CEN	ISE:INT		ALIGNAUTO	10.22.257	M Jun 24, 2013	I

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	1.966	< 8dBm	Pass

Figure Channel 11:

	rum Analyzer - Swept SA							
Center F	RF 50 Ω AC Freq 2.462000000	PNO: Fast 😱	SENSE:II	Avş n Avg	ALIGN AUTO Type: Log-Pwr Hold:>100/100	TRACI TYP	M Jun 24, 2013 E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Frequency
10 dB/div	Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB		Mkr1 2	2.460 990	.,	Auto Tun
- og 10.0			▲ ¹					Center Fre 2.462000000 GH
10.00	m mm	J. Awa Amah		La northanna	And had had had		M.	Start Fre 2.454350000 G⊦
30.0								Stop Fre 2.469650000 G⊦
40.0								CF Ste 1.530000 MH <u>Auto</u> Ma
60.0								Freq Offs 0 F
70.0								
	462000 GHz 100 kHz	#VBW	300 kHz		Sweep	Span 14 1.47 ms (*	5.30 MHz 1001 pts)	
ISG					STATU	S		

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-0.171	< 8dBm	Pass

Figure Channel 1:

ilent Spectrum / RL enter Frec	RF 50 Ω	AC	łz	1	ISE:INT	Avg Type	ALIGN AUTO : Log-Pwr	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6	Frequency
	ef 20.00 c	P IF	NO: Fast 🕞 Gain:Low	Trig: Free #Atten: 30		Avg Hold:		.417 018	B 4 GHz 71 dBm	Auto Tui
0.0							1			Center Fr 2.412000000 G
.0	pm	handhrud	mmlmml	handrong	hondown	handra	humber			Start Fr 2.399700000 G
1.0	and a second							- Charles	What you have have have have have have have have	Stop Fr 2.424300000 G
.0										CF St 2.460000 M <u>Auto</u> N
.0										Freq Off 0
enter 2.412	200 CH2							Enan 2	4.60 MHz	
Res BW 10			#VBW	300 kHz			Sweep	2.40 ms (

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	0.254	< 8dBm	Pass

Figure Channel 6:

	43700 GHz 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.40 ms (4.68 MHz 1001 pts)	
70.0										0 H
60.0										Freq Offse
50.0										Auto Ma
40.0										CF Ste 2.467500 M
30.0 رور انيما	www							<u>~</u>	mawy wy	2.449337500 GI
20.0	- And							L.		Stop Fre
10.0	- free	I MUNIN PRAT	- V P1 4 V 14 (P U V V V		MANN NOW -		1004 P. 00			2.424662500 Gł
0.00		d. asharr	wownhow	han lan		mmhrow	Na solla la	A		Start Fre
10.0					.1					2.437000000 GH
IO dB/div	Ref 20.00 (aBm						0.2		Center Fre
	D-6 00 00 .		- Comillon				Mkr1	2.438 2	83 GHz 54 dBm	Auto Tur
Center F	req 2.43700		i Hz PNO: Fast 🖵 FGain:Low	Trig: Free #Atten: 30		Avg Type Avg Hold:	:: Log-Pwr >100/100	TRAC TYF DE	E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	Trequency
KU <mark>RL</mark>	RF 50 Ω			SEI	VSE:INT		ALIGNAUTO		M Jun 24, 2013	Frequency

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	0.270	< 8dBm	Pass

Figure Channel 11:

	um Analyzer - Swe									L
Center Fi	RF 50 Ω req 2.46200	Р	1z NO: Fast 😱 Gain:Low	Trig: Free #Atten: 30			ALIGN AUTO : Log-Pwr :>100/100	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	Frequency
10 dB/div	Ref 20.00 d		Gain:Low	#Atten. ot			Mkr1 2	2.457 00 0.2	6 2 GHz 70 dBm	Auto Tune
10.0			1							Center Fre 2.462000000 GH
10.00		nentron	mouland	walking	pandman	handyar	hunhu	why		Start Fre 2.449700000 G⊦
20.0	rown we want								hall when the	Stop Fre 2.474300000 G⊦
40.0										CF Ste 2.460000 MH <u>Auto</u> Ma
60.0										Freq Offs 0 F
-70.0										
Center 2.4 #Res BW	16200 GHz 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.40 ms (4.60 MHz 1001 pts)	
ISG							STATU	IS		

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-0.989	< 8dBm	Pass

Figure Channel 1:

		nalyzer - Sw									
Cent		^{ε 50 Ω}	00000 G	Hz PNO: Fast 🗔	S⊟^] Trig:Free			ALIGN AUTO : Log-Pwr >100/100	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E M WWWWW	
10 dB	8/div Re	ef 20.00 d	IF	Gain:Low	#Atten: 30		ai		2.417 0	16 GHz 89 dBm	Auto Tuno
10.0								1			Center Freq 2.412000000 GHz
0.00 -10.0		- Jurin	hand	ala, Ama	Lundra	minter	munhand	non Ammil	-m		Start Freq 2.398800000 GHz
-20.0	manana	man							h	hand the start of	Stop Fred 2.425200000 GHz
-40.0										- '\ _* ''\	CF Step 2.640000 MH Auto Mar
-50.0 -											Freq Offse 0 Hz
-70.0											
	er 2.412 BW 100		1	#VBW	300 kHz		1	Sweep	Span 2 2.53 ms (6.40 MHz 1001 pts)	
MSG								STATU	5		

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-0.669	< 8dBm	Pass

Figure Channel 6:

enter Fr	RF 50 Ω eq 2.43700	PI	IZ NO: Fast 😱 Gain:Low	S⊟ Trig:Free #Atten:30			ALIGNAUTO : Log-Pwr >100/100	TRAC	M Jun 24, 2013 E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Frequency
dB/div	Ref 20.00 d		Jam.Low	Friden, or			Mkr1 2		89 GHz 69 dBm	Auto Tui
					_ 1					Center Fr 2.437000000 G
.0	, when	Munhur	Mulmu	havelying	monoliment	mmhan	mulan	and the second sec		Start Fr 2.423950000 G
).0	NA NA							h h	www.	Stop Fr 2.450050000 G
μ. α. 1.0 1.0										CF St 2.610000 M <u>Auto</u> M
.0										Freq Off 0
0.0										
enter 2.4 Res BW 1	3700 GHz 100 kHz	1	#VBW	300 kHz	1		Sweep		6.10 MHz 1001 pts)	

Product	:	Bar Code Printer
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-0.669	< 8dBm	Pass

Figure Channel 11:

	46200 GHz 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.53 ms (6.10 MHz 1001 pts)	
70.0										
60.0										Freq Offs 01
50.0										<u>Auto</u> M
0.0										CF St 2.610000 M
0.0	W.I.M. WW.							h _{ly}	hin Mart Mary	Stop Fr 2.475050000 G
0.0	Mar	Mundow	Munhmu	hundrey	pmbourd	mmhand	malund	how		Start Fr 2.448950000 G
10.0					1					2.462000000 G
odB/div	Ref 20.00 (Bm						-0.0		Center Fr
	Dof 20.00 /		Gain:Low	#Atten: 30) a 🗅		Mkr1 2	2.463 278		Auto Tu
	req 2.46200	00000 GH	NO: Fast 😱	Trig: Free #Atten: 30	Run		: Log-Pwr	TRAC	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	Frequency
RL	RF 50 Ω	AC		SEN	ISE:INT		ALIGN AUTO	11:46:26 A	M Jun 24, 2013	

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs