





ISO/IEC17025Accredited Lab.

Report No: FCC/IC 1009244-01 File reference No: 2010-12-16

Applicant: Group Sense Mobile-Tech Limited

Product: PDA with WiFi 802.11b/g

Model No: DT430

Trademark: Xplore

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4&FCC Part 15 Subpart C, Paragraph 15.247 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung Manager

Dated: Dec 16,2010

Results appearing herein relate only to the sample tested The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District, Shenzhen,CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-01

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Group Sense Mobile-Tech Limited

Address: 6 th Floor, Building 9, No.5 Science Park West Avenue, Hong Kong Science Park, Shatin,

Hong Kong

Telephone: 852-28328596 Fax: 852-25912397

1.3 Description of EUT

Product: PDA with WiFi 802.11b/g

Manufacturer: Group Sense Mobile-Tech Limited

Brand Name: X-plore
Model Number: DT430
Additional Model Name X-430
Additional Trade Name Pointex

Rating: Input: DC 5V; 1.5A Power Supply: S040EM1500230

Type of Modulation OFDM

Frequency range 2412-2462MHz

Number of Channel 11

Air Data Rate 54、48、36、24、18、12、9、6Mbps at 802.11g mode; 11、5.5、2、1Mbps at

802.11b mode

Frequency Selection By software

Antenna type chip dielectric antenna

1.4 Submitted Sample

2 Sample

The report refers only to the sample tested and does not apply to the bulk.

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1.5 Test Duration

2010-09-20 to 2010-12-15

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

		·							
2.0									
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date				
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2010-12-04	2011-12-03				
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	100126	2010-12-04	2011-12-03				
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2010-12-04	2011-12-03				
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2010-12-04	2011-12-03				
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2010-12-04	2011-12-03				
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2010-03-29	2011-03-28				
4-WIRE ISN	ROHDE&SCHWARZ	ENY 41	830663/044	2010-02-17	2011-02-16				
GG ENY22 Double 2-Wire ISN	ROHDE&SCHWARZ	ENY22	83066/016	2010-02-17	2011-02-16				
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2010-02-17	2011-02-16				
System Controller	CT	SC100	-	2010-02-17	2011-02-16				
Printer	EPSON	РНОТО ЕХЗ	CFNH234850	2010-02-17	2011-02-16				
FM-AM Signal Generator	JUNG.JIN	SG-150M	389911177	2010-02-17	2011-02-16				
Color TV Pattern Generator	PHILIPS	PM5418	LO621747	2010-02-17	2011-02-16				
Computer	IBM	8434	1S8434KCE99BLXL O*	-	-				
Oscillator	KENWOOD	AG-203D	3070002	2010-02-17	2011-02-16				

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Spectrum Analyzer	HAMEG	HM5012	1	-	1				
Power Supply	LW	APS1502	1	-	1				
5K VA AC Power Source	California Instruments	5001iX	56060	2010-02-17	2011-02-16				
CDN	EM TEST	CDN M2/M3	-	2010-02-17	2011-02-16				
Attenuation	EM TEST	ATT6/75	-	2010-02-17	2011-02-16				
Resistance	EM TEST	R100	-	2010-02-17	2011-02-16				
Electromagnetic Injection Clamp	LITTHI	EM101	35708	2010-02-17	2011-02-16				
Inductive Components	EM TEST	MC2630	-	2010-02-17	2011-02-16				
Antenna	EM TEST	MS100	-	2010-02-17	2011-02-16				
Signal Generator	ROHDE&SCHWARZ	SMT03	100029	2010-02-17	2011-02-16				
Power Amplifier	AR	150W1000	300999	2010-02-17	2011-02-16				
Field probe	Holaday	HI-6005	105152	2010-02-17	2011-02-16				
Bilog Antenna	Chase	CBL6111C	2576	2010-02-17	2011-02-16				
Loop Antenna	EMCO	6502	00042960	2010-02-17	2011-02-16				
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2010-02-17	2011-02-16				
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2010-08-14	2011-08-13				
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2010-07-03	2011-07-02				
Power meter	Anritsu	ML2487A	6K00003613	2010-02-17	2011-02-16				
Power sensor	Anritsu	MA2491A	32263	2010-02-17	2011-02-16				
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2010-05-14	2011-05-13				
3m OATS			N/A	2010-02-17	2011-02-16				

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3.0 **Technical Details**

3.1 **Summary of test results**

The FIIT has b	heen tested	according to	the following	specifications:
THE LUI HAS I	neen testeu	according to	յ աթ լարտալը	2 SDECINCAUOUS.

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107	Conducted Emission Test	PASS	Complies
& 15.207, RSS-210			
	Spectrum bandwidth of a		Complies
FCC Part 15 Subpart C	Orthogonal Frequency		
Paragraph 15.247(a)(2) Limit	Division Multiplex System	PASS	
RSS-210	Limit: 6dB		
	bandwidth>500kHz		
FCC Part 15, Paragraph	Maximum peak output		
15.247(b)	power	PASS	Complies
RSS-210	Limit: max. 30dBm		
FCC Part 15, Paragraph	Transmitter Radiated	PASS	Complies
15.109,15.205 & 15.209	Emission		
RSS-210	Limit: Table 15.209		
FCC Part 15, Paragraph	Power Spectral Density	PASS	Complies
15.247(d)	Limit: max. 8dBm		
RSS-210			
FCC Part 15, Paragraph	Out of Band Emission and	PASS	Complies
15.247(c)	Restricted Band		
	Radiation		
	Limit: 20dB less than		
	peak value of fundamental		
	frequency		
	Restricted band limit:		
	Table 15.209		
RSS-210	99% occupied bandwidth	PASS	Complies

3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

4.0 **EUT Modification**

No modification by Shenzhen Timeway Technology Consulting Co.,Ltd

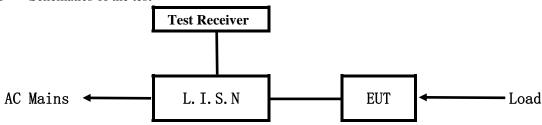
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5.

Power Line Conducted Emission Test

5.1 Schematics of the test

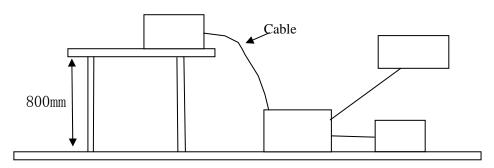


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 -2003.

Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

Two channels are provided to the EUT

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

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A. EUT

Device	Manufacturer	Model	FCC & IC ID
PDA with WiFi	Group Sense Mobile-Tech Limited	DT430	VRI-B134
802.11b/g			

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
N/A				

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Class A Lim	its (dB µ V)	Class B Limits (dB µ V)		
(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0	
$5.00 \sim 30.00$	73.0	60.0	60.0	50.0	

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Note: the worse cases was selected to conducted the test

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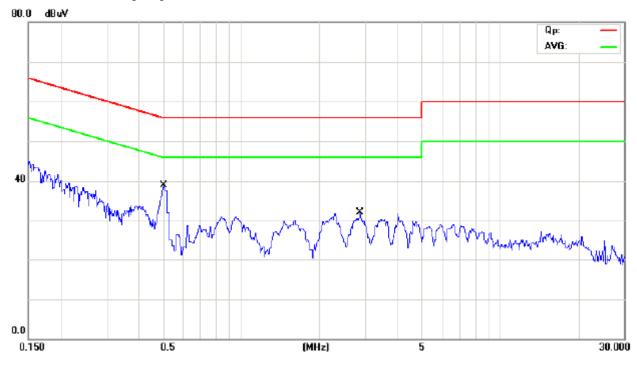
A Conducted Emission on Live Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Keep EUT Transmitting under WIFI mode

Power supply model S040EM1500230
Test Voltage: 120V~, 60Hz

Results: Pass

Please refer to following diagram for individual



Eraguanav		Reading	Limi	t		
Frequency (MHz)	Neutr	al	Live		(dB µ	V)
(WITIZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.5004			39.17	33.57	56.00	46.00
2.8688			30.45	26.05	56.00	46.00

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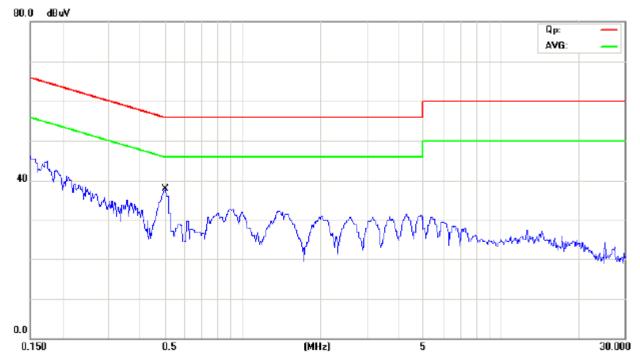
B Conducted Emission on Neutral Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Keep EUT Transmitting under WIFI mode

Power supply model S040EM1500230
Test Voltage: 120V~, 60Hz

Results: Pass

Please refer to following diagram for individual



Eroguanav		Reading	Limi	t		
Frequency (MHz)	Neutral		Line		(dB µ V)	
(MHZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.5000	38.67	32.87			56.00	46.00

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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.
- (3) The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup Distance = 3m Computer Pre -Amplifier EUT Turn-table Receiver

- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

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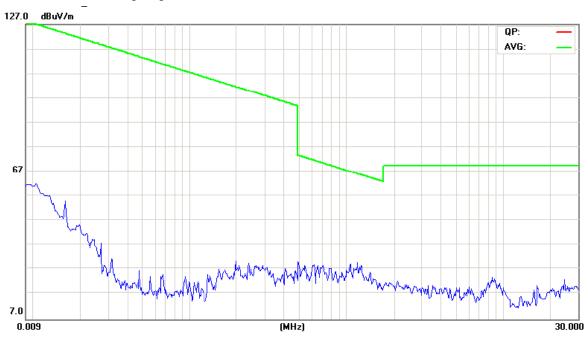
General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (0.009MHz----30MHz)

EUT set Condition: Transmitting (Low CH 802.11g 6M)

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dB μ V/m)	Limit@3m (dB μ V/m)

⁻The test data shows much less than the limit, no necessary take down the records.

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Transmitting mode (WIFI 802.11b CH1 11M)

Results: Pass

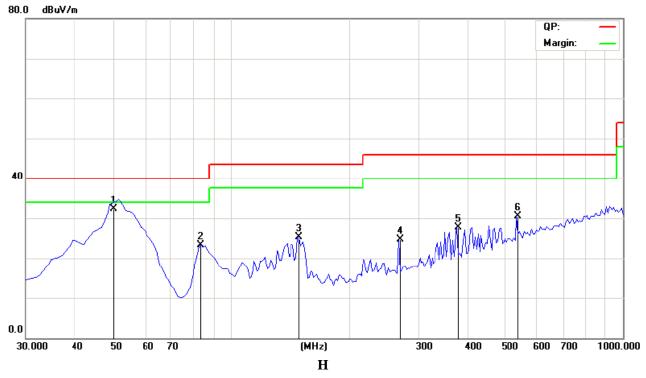
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
56.575	22.89	Н	40.00
107.600	18.67	Н	43.50
153.675	31.15	Н	43.50
270.075	29.31	Н	46.00
306.450	24.02	Н	46.00
362.225	26.06	Н	46.00
49.890	32.29	V	40.00
83.6688	23.33	V	40.00
148.825	25.39	V	43.50
270.075	24.47	V	46.00
379.200	27.72	V	46.00
536.825	30.55	V	46.00

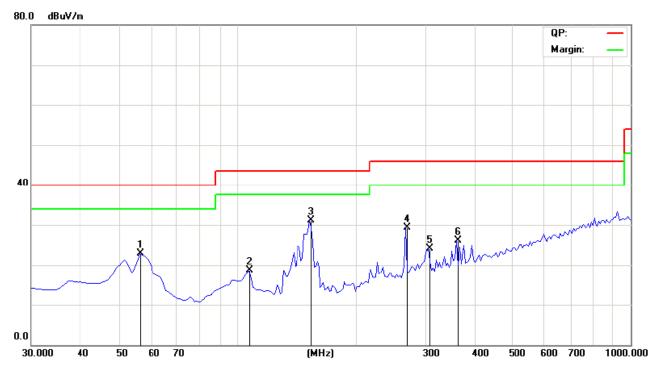
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Test Figure: transmitting mode





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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Transmitting mode (WIFI 802.11g CH1 6M)

Results: Pass

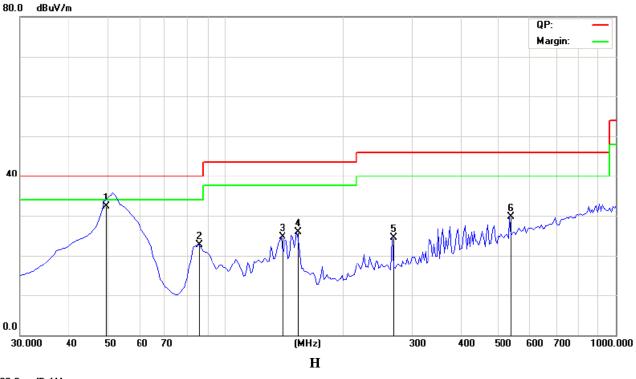
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
56.6750	22.98	Н	40.00
107.6000	17.43	Н	43.50
153.675	31.85	Н	43.50
270.075	28.87	Н	47.00
304.025	24.22	Н	47.00
362.225	26.56	Н	47.00
49.740	32.23	V	40.00
85.8983	22.78	V	40.00
139.125	24.63	V	43.50
153.6750	25.95	V	43.50
270.0750	24.51	V	47.00
536.8250	29.77	V	47.00

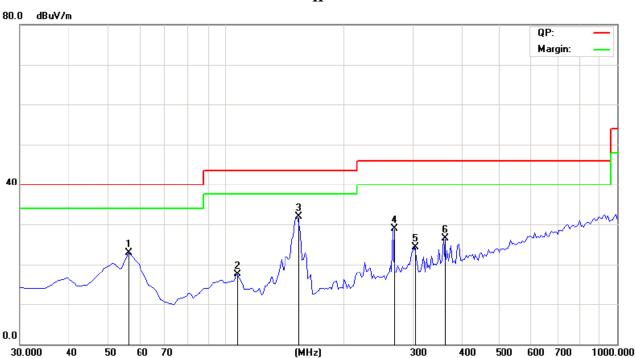
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Test Figure: receiving mode





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Operation Mode: Transmitting & Receiving under CH01 at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \) V/m)
2412.00	94.9(PK) /82.7 (AV)	V	Fundamental Frequency
2412.00	90.8(PK) /79.2 (AV)	Н	Fundamental Frequency
4824.00		Н	74(Peak)/ 54(AV)
4824.00		V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH06 at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	95.5 (PK) /81.9 (AV)	V	Fundamental Frequency
2437.00	91.6 (PK) /80.3 (AV)	Н	Fundamental Frequency
4874.00		Н	74(Peak)/ 54(AV)
4874.00		V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps
- 4. Test results are for the worst case condition

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Operation Mode:	TI AUSIIIILUUE	CK INCOM	iving under	CILLI AL UNIDOS

	0 0		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
2462.00	96.3 (PK) /83.9 (AV)	V	Fundamental Frequency
2462.00	91.9 (PK) /80.8 (AV)	Н	Tundamental Trequency
4924		Н	74(Peak)/ 54(AV)
4924		V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696		H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

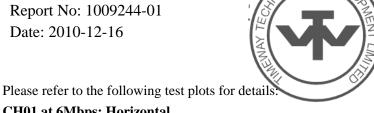
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 6Mbps
- 4. Test results are for the worst case condition

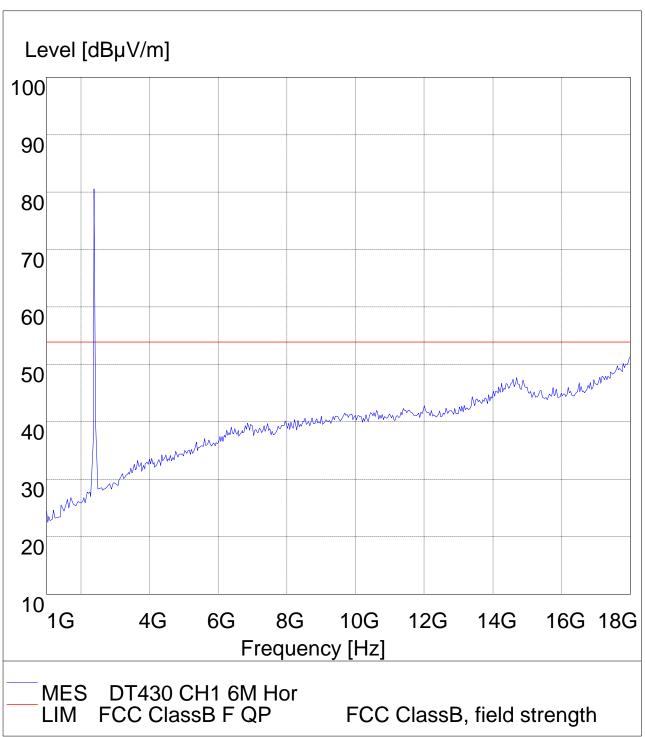
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CH01 at 6Mbps: Horizontal



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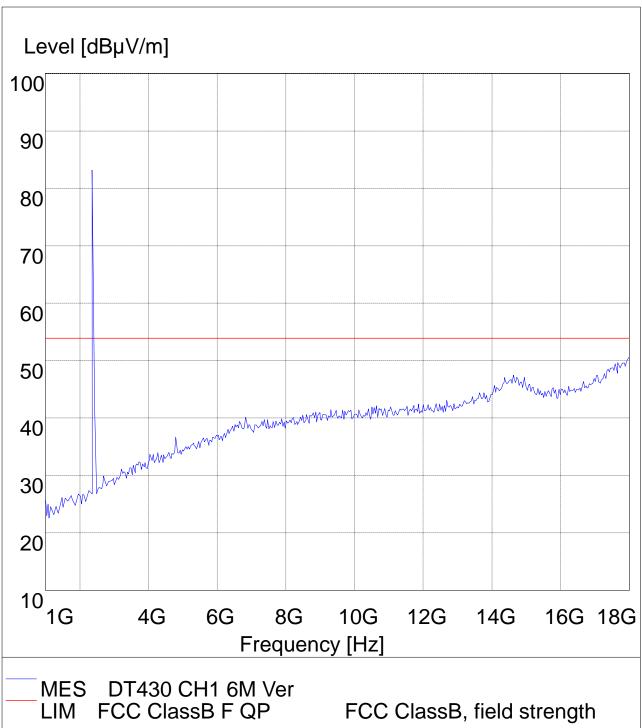
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CH01 at 6Mbps: Vertical



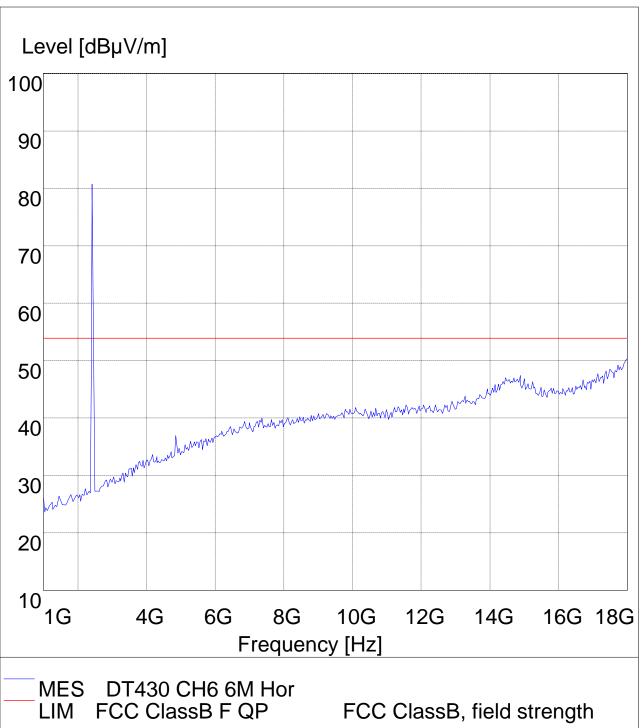
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CH06 at 6Mbps: Horizontal



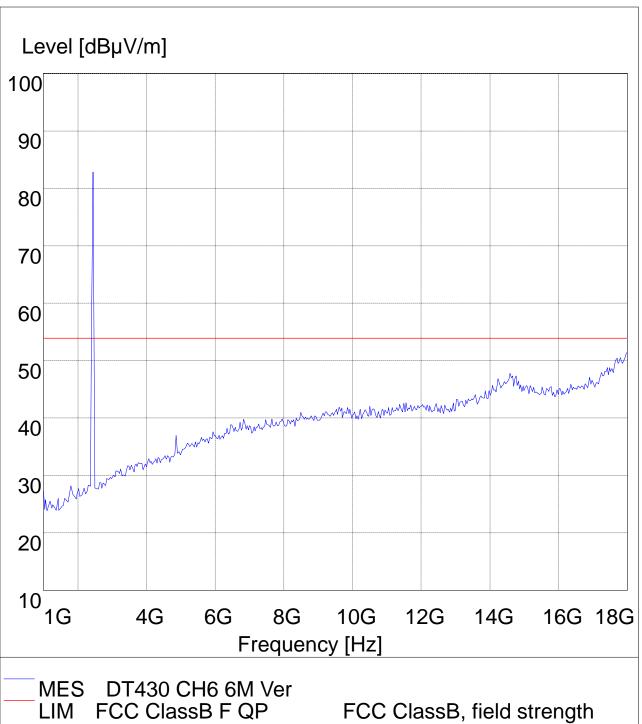
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CH06 at 6Mbps: Vertical



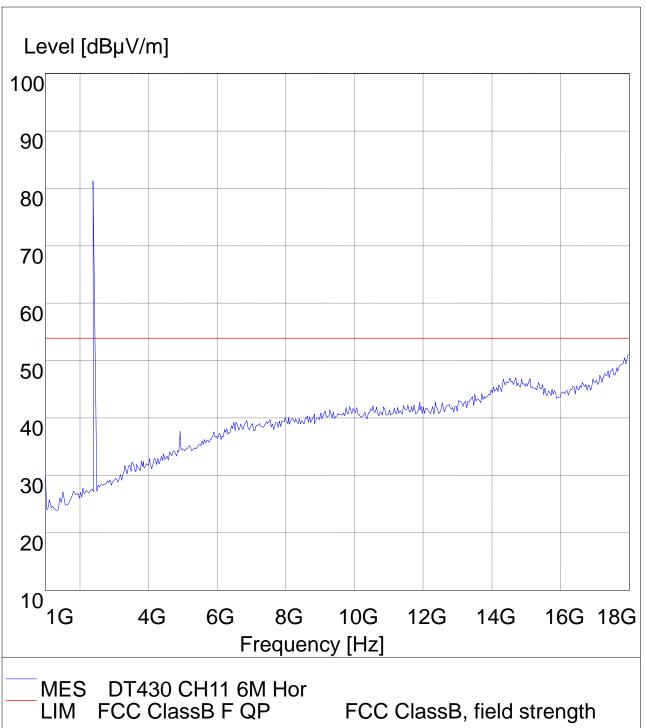
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CH11 at 6Mbps: Horizontal



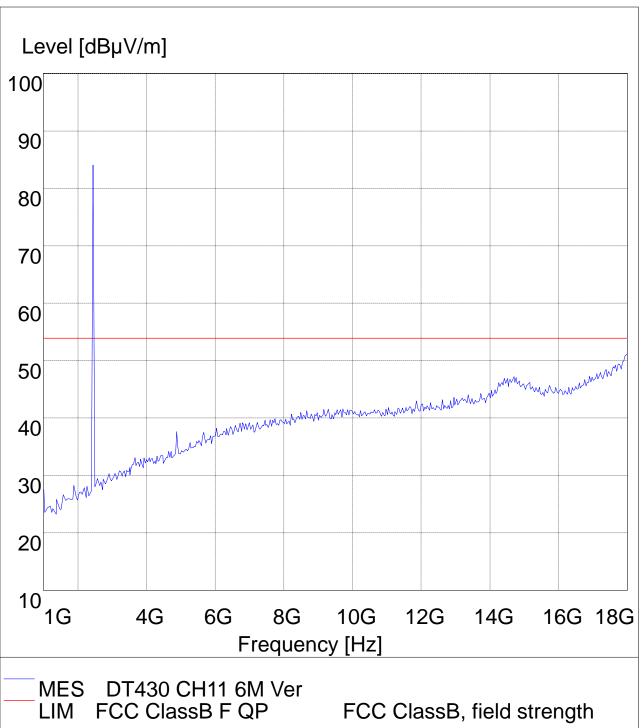
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CH11at 6Mbps: Vertical



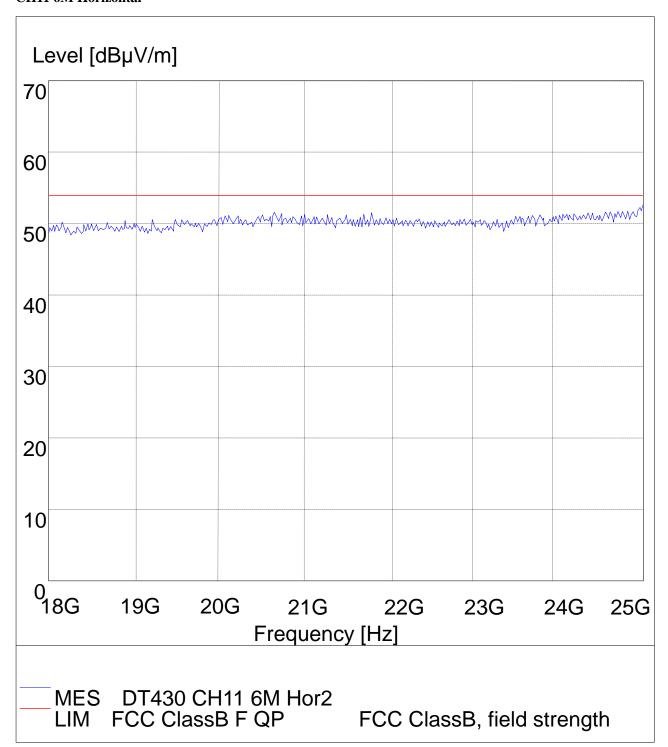
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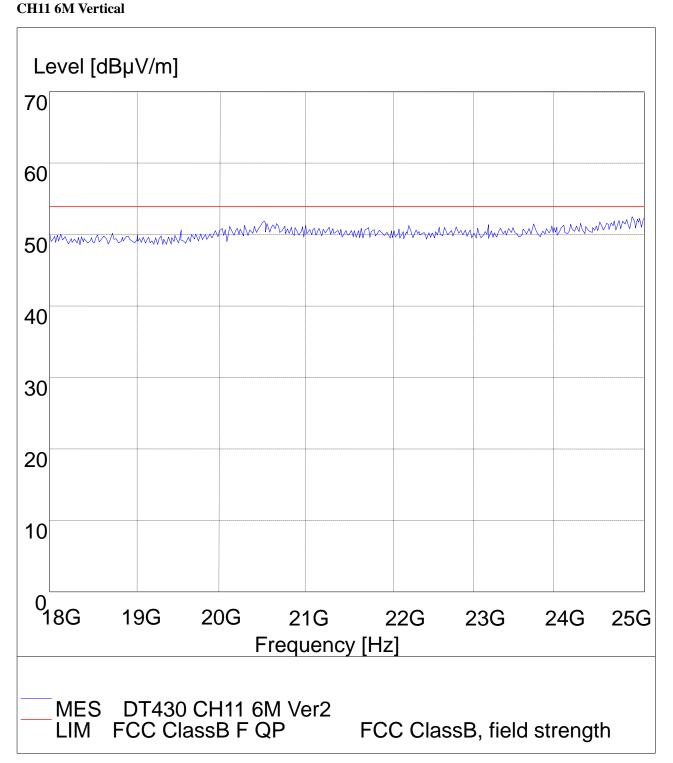
18-25G CH11 6M Horizontal



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18-25G



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Operation Mode: Transmitting & Receiving under CH01 at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2412.00	100.2 (PK)/ 87.6(AV)	V	Fundamental Frequency
2412.00	96.3 (PK)/84.1 (AV)	Н	Tundamental Frequency
4824.00	-	Н	74(Peak)/ 54(AV)
4824.00	1	V	74(Peak)/ 54(AV)
7236.00	1	H/V	74(Peak)/ 54(AV)
9648.00	1	H/V	74(Peak)/ 54(AV)
12060	-	H/V	74(Peak)/ 54(AV)
14472	-	H/V	74(Peak)/ 54(AV)
16684	-	H/V	74(Peak)/ 54(AV)
19296	1	H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH06 at 11Mbps

	0 0		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2437.00	97.9(PK)/ 84.5(AV)	V	Fundamental Frequency
2437.00	94.2(PK)/83.0 (AV)	Н	Tundamental Trequency
4874.00		H/V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps
- 4. test results are for the worst case condition

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					,	
Operation Mode:	T	0 D	<u> </u>		CTT11 .	. 4 117/1
Operation woode:	Transmitting	$\alpha \kappa$	weiving.	iinaer	(.HII)	at ilivinns

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2462.00	98.1(PK/84.9AV)	V	Fundamental Frequency
2462.00	94.5(PK)/82.2AV)	Н	Tundamental Prequency
4924	1	H/V	74(Peak)/ 54(AV)
7368	1	H/V	74(Peak)/ 54(AV)
9848	1	H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772	1	H/V	74(Peak)/ 54(AV)
17234	1	H/V	74(Peak)/ 54(AV)
19696	-	H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps
- 4. Test results are for the worst case condition

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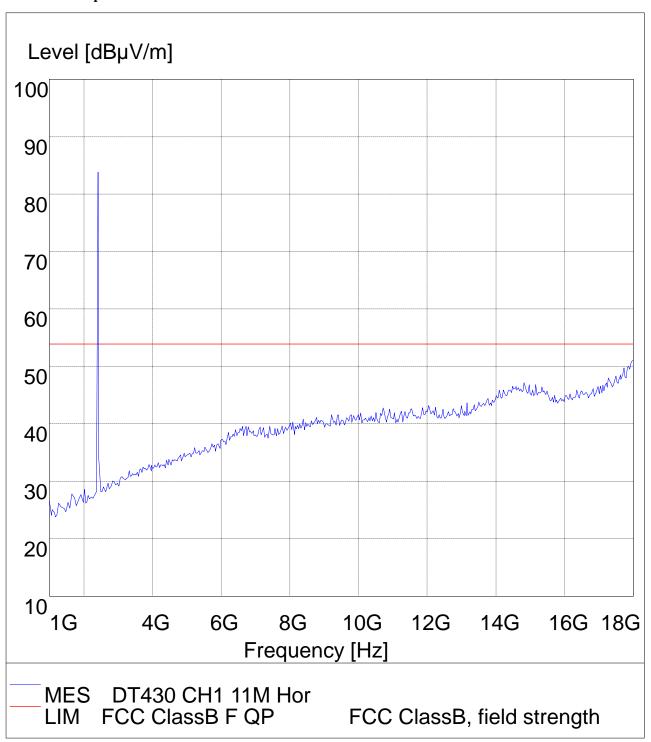
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Please refer to the following test plots for details

CH01 at 11Mbps: Horizontal



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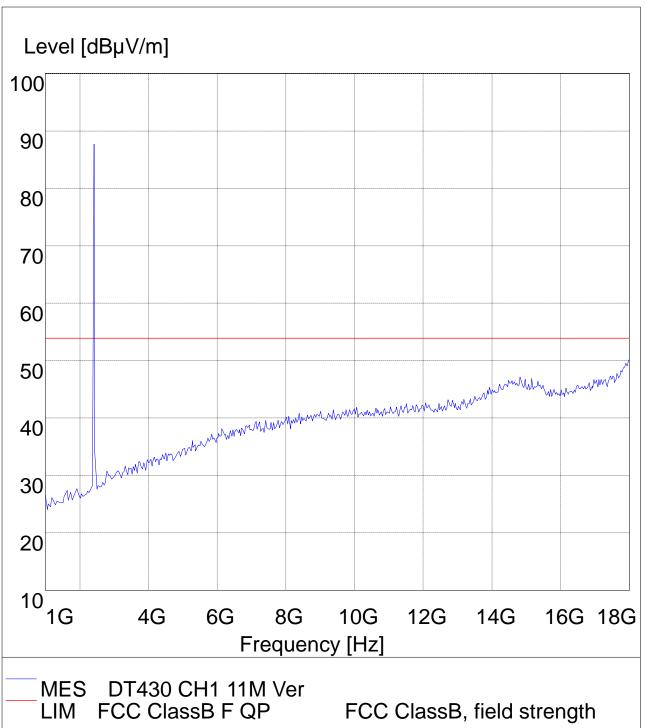
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CH01 at 11Mbps: Vertical



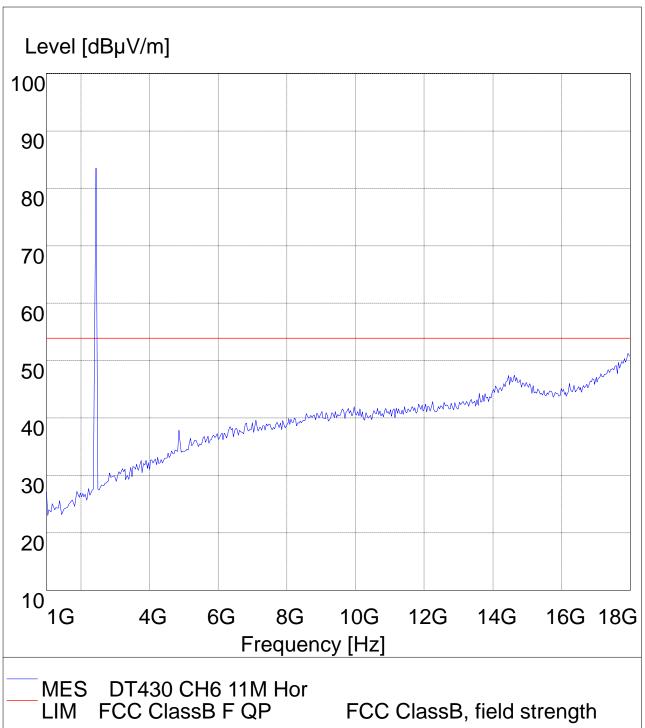
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CH06 at 11Mbps: Horizontal



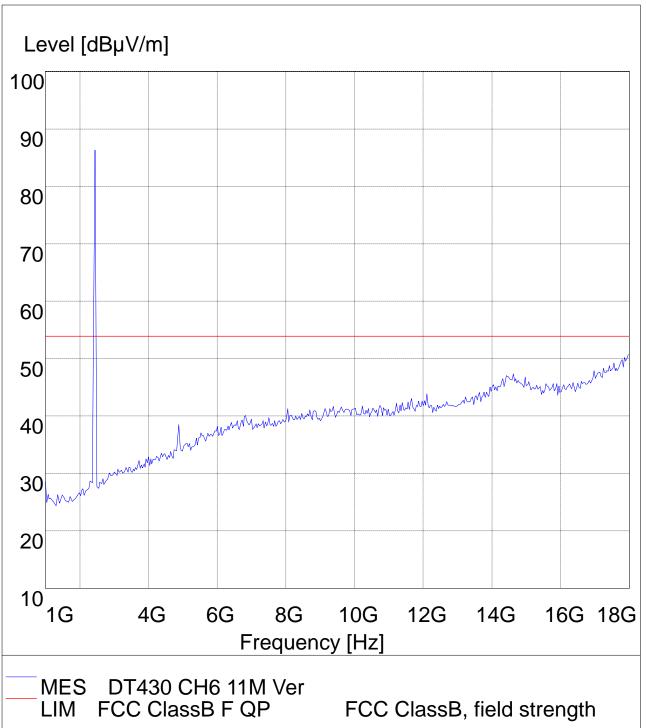
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CH06 at 1Mbps: Vertical



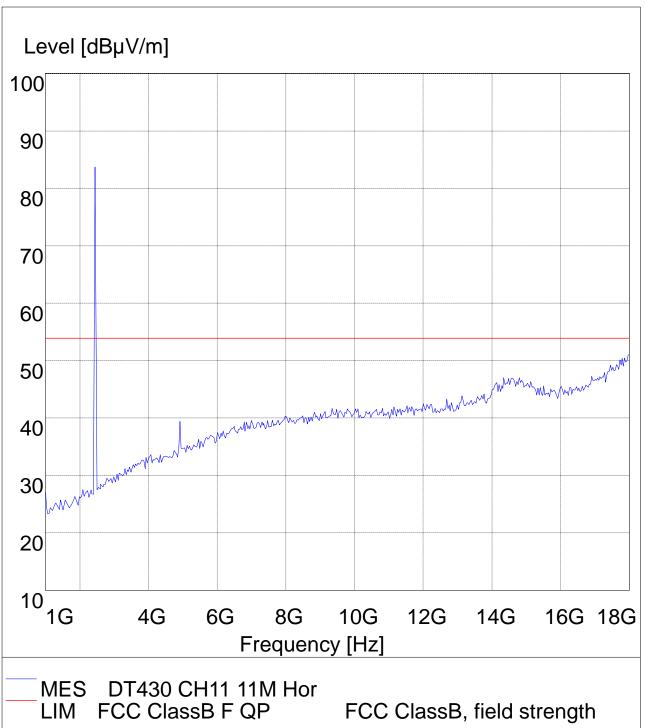
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CH11 at 11Mbps: Horizontal



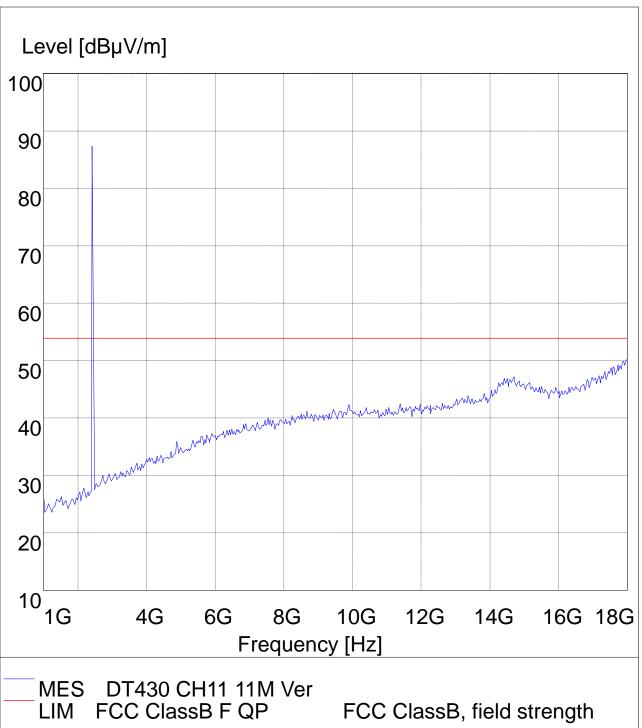
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CH11 at 11Mbps: Vertical



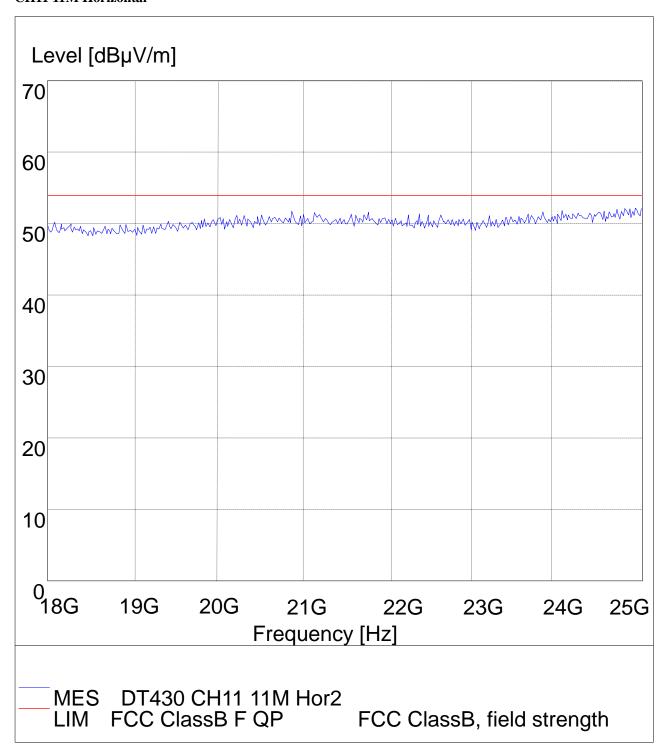
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18-25G CH11 11M Horizontal



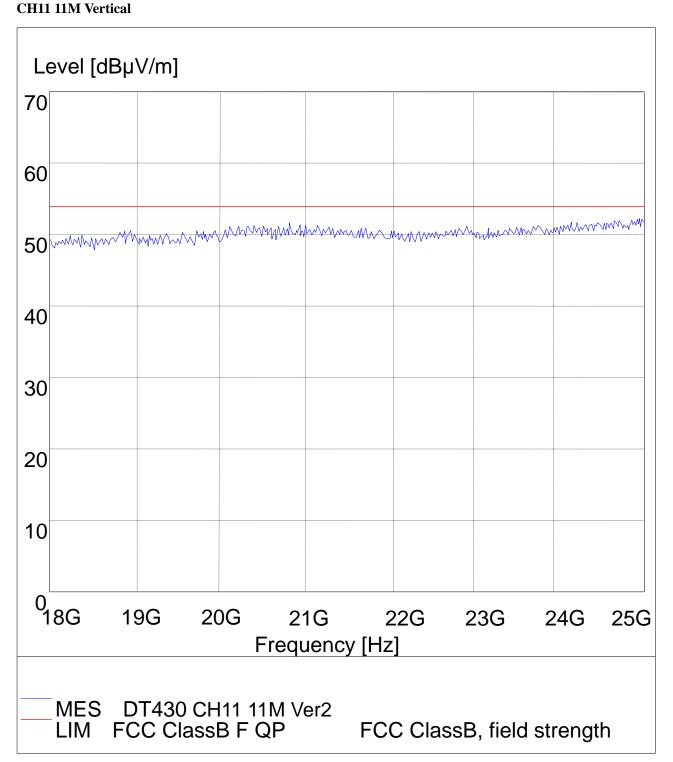
The report refers only to the sample tested and does not apply to the bulk.

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18-25G



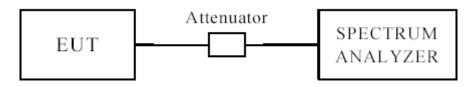
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500KHz

7.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator.

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 100 KHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4 Test Result

EU'	Т	PDA with	WiFi 802.	11b/g	Model		DT430		
Mod	de	8	302.11b		Input Voltage		120V)V~	
Temper	ature	24	4 deg. C,	deg. C, Humidity		Humidity		RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ındwidth Hz)		num Limit MHz)	Pass/ Fail	
1		2412	1 11		.04		0.5	Pass	
6		2437	1 11		.04		0.5	Pass	
11		2462	1 11		.04		0.5	Pass	

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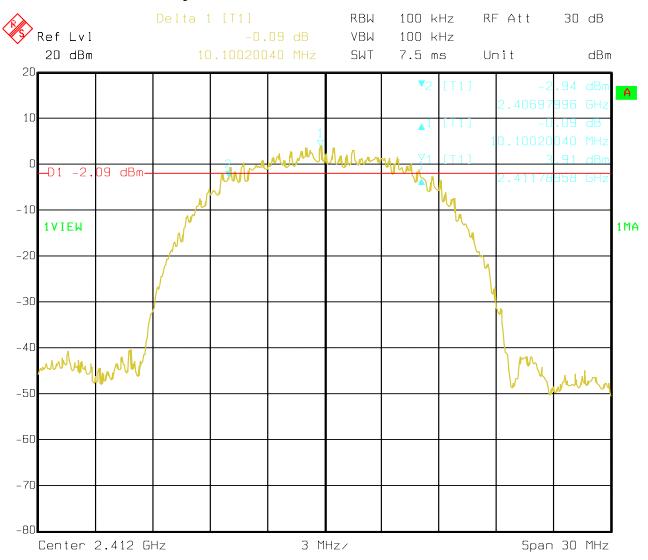
Report No: 1009244-01

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Test Figure:

1. Condition: 802.11b at 11Mbps of CH01



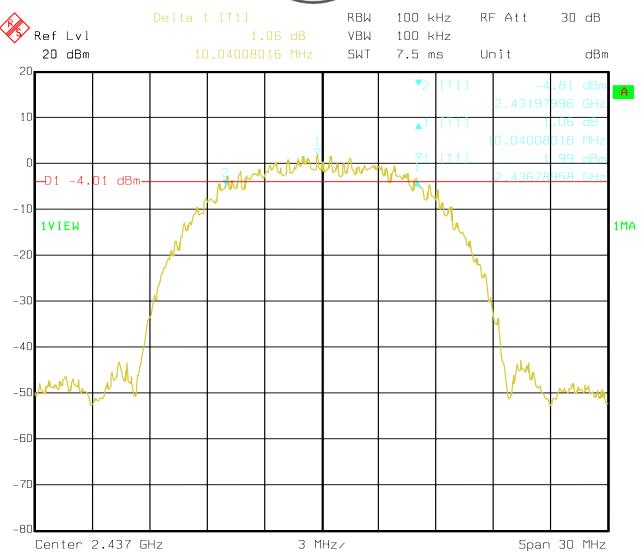
Date: 26.SEP.2010 16:01:47

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2. Condition: 802.11b at 11Mbps of CH06



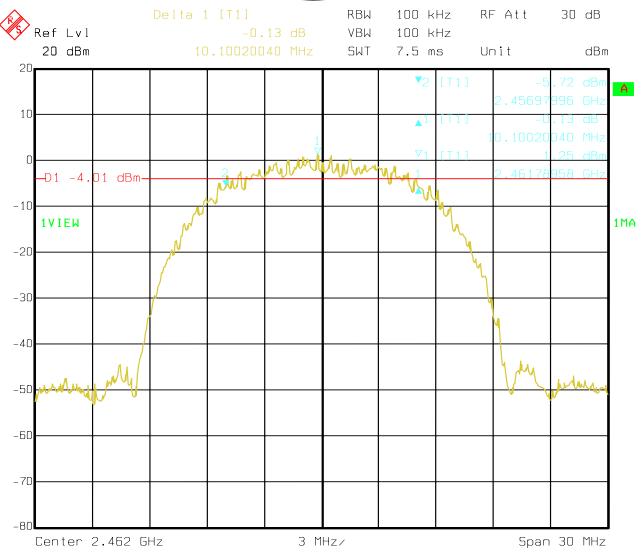
Date: 26.SEP.2010 16:04:18

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3. 802.11b at 11Mbps of CH11



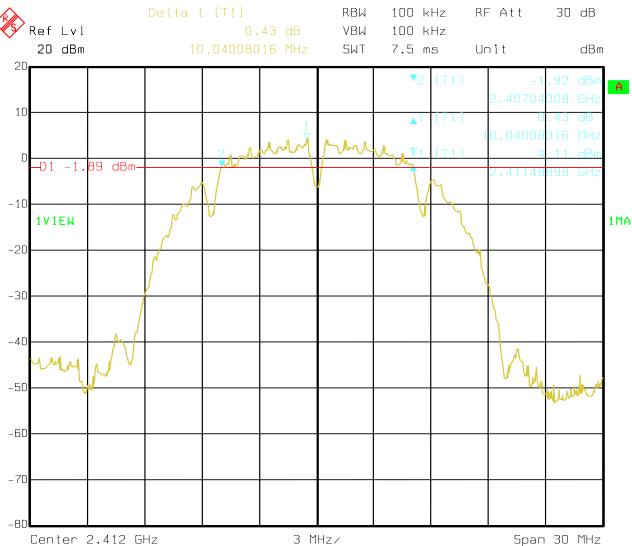
Date: 26.SEP.2010 16:06:33

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4. 802.11b at 1Mbps of CH01



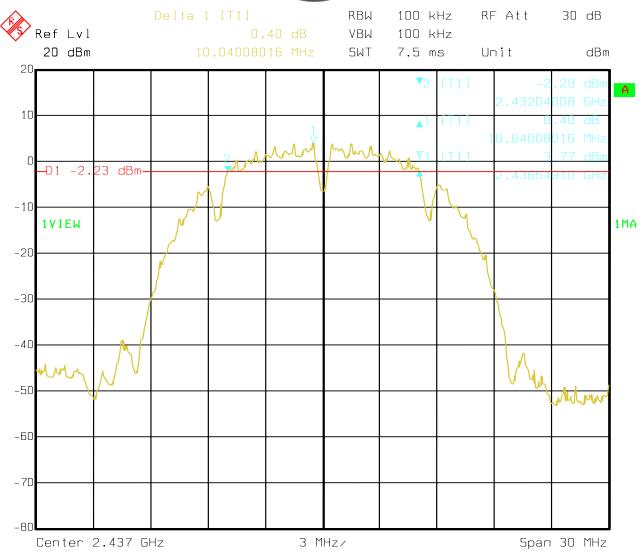
Date: 26.SEP.2010 11:07:48

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5. 802.11b at 1Mbps of CH06



Date: 26.SEP.2010 11:09:41

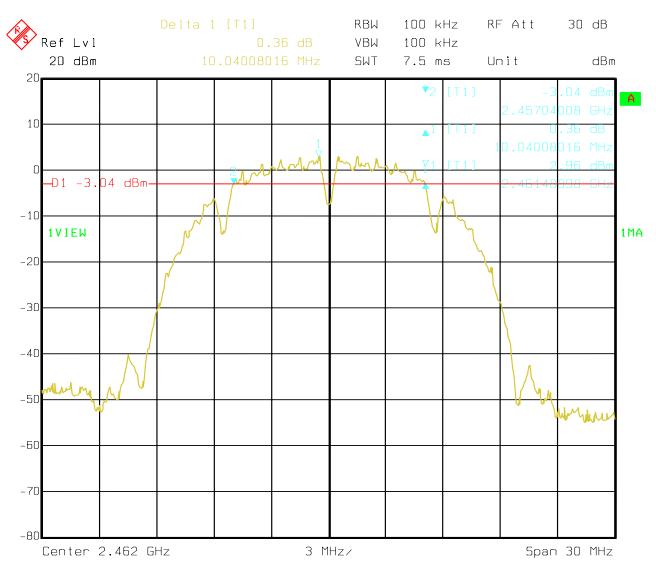
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6. 802.11b at 1Mbps of CH11



Date: 26.SEP.2010 11:14:16

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Date: 2010-12-16

EUT		PDA with	with WiFi 802.11b/g Model		lel	WF3	35	
Mode		8	302.11g		Input Voltage		oltage 120V	
Temperat	ure	24 deg. C,			Humidity		56% RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		num Limit MHz)	Pass/ Fail
1		2412	6	16	.59		0.5	Pass
6		2437	6	16	.59		0.5	Pass
11		2462	6	16	.59		0.5	Pass

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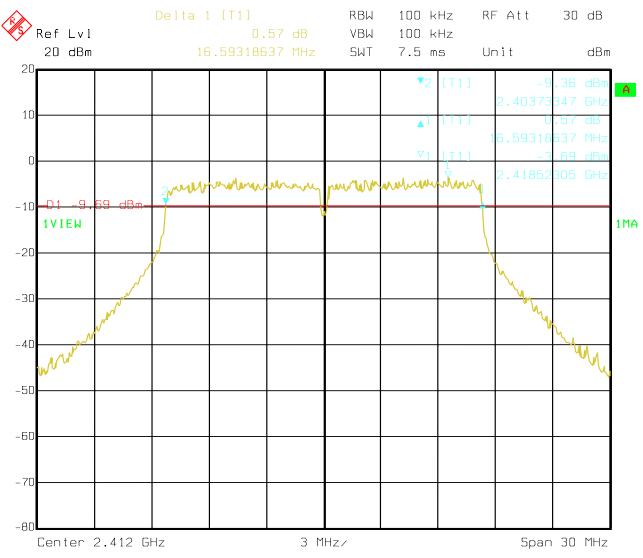
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Test Plots:

1. 802.11g at 6Mbps of CH01



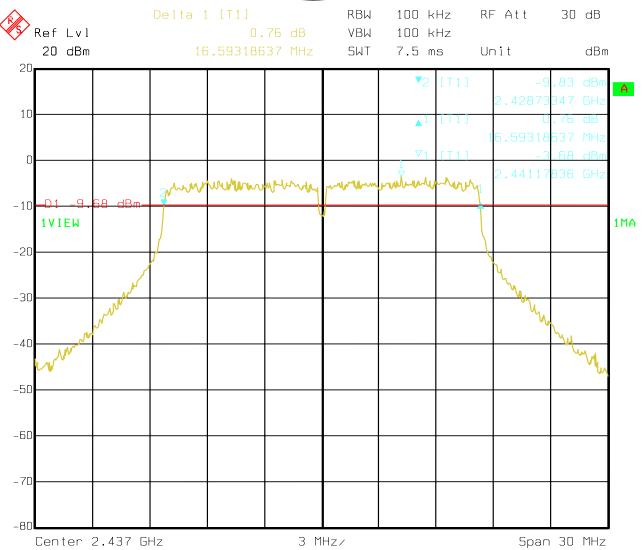
Date: 26.SEP.2010 14:23:38

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2. 802.11g at 6Mbps of CH06



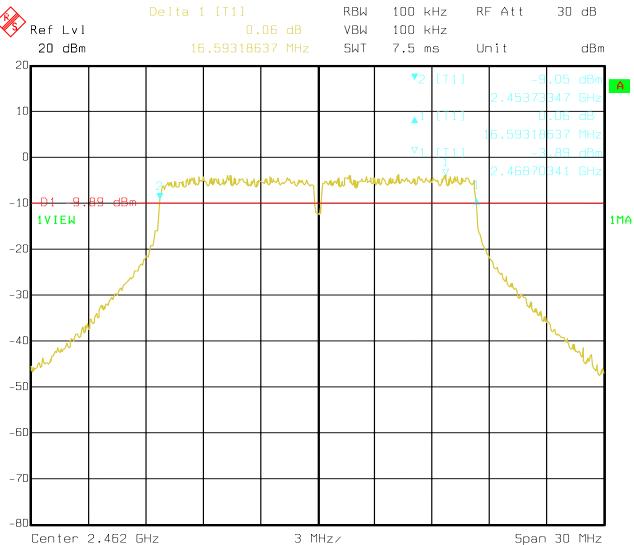
Date: 26.SEP.2010 14:25:24

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3. 802.11g at 6Mbps of CH11



Date: 26.SEP.2010 14:27:16

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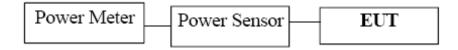
Date: 2010-12-16



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8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

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8.4Test Results

EUT	EUT PDA with WiFi 802.11b/g		Model		WF35		
Mode	de 802.11b Input Vo		Input Voltage		1	20V~	
Temperature	e	24 deg	g. C,	C, Humidity		56% RH	
Channel	Cha	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB	nit	Pass/ Fail
1		2412	12.34		30		Pass
6		2437	10.65		30		Pass
11		2462	9.64		30)	Pass

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

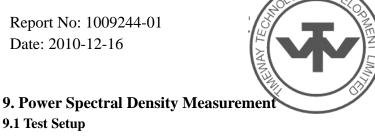
EUT		PDA with WiF	Fi 802.11b/g	Model		WF35	
Mode		802.1	1g	Input Voltage		1	20V~
Temperature	e	24 deg	g. C,	Humidity		50	5% RH
Channel	Ch	annel Frequency (MHz)	Peak Power (dBm)	Output	Peak F Lin (dB	nit	Pass/ Fail
1		2412	8.45		30)	Pass
6		2437	8.50		30)	Pass
11		2462	8.67		30)	Pass

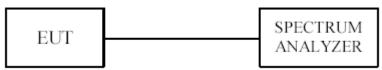
Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

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9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3KHz RBW and 10kHz VBW, set sweep time=500s

The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span / 3KHz for a full response of the mixer in the spectrum analyzer.

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9.4Test Result

EUT PDA with WiFi 802.11		Fi 802.11b/g	Model		DT430		
Mode	802.11b Input Volta		Input Voltage		1	20V~	
Temperature	e	24 deg	g. C,	Humidi	nidity		5% RH
Channel	Ch	annel Frequency (MHz)	Final RF Po Level in 3kH (dBm)		Maximur (dB		Pass/ Fail
1		2412	-10.38		8		Pass
6		2437	-11.09		8		Pass
11		2462	-13.68		8		Pass

Note: For 802.11b mode at finial test to get the worst-case emission at 11Mbps for CH11, CH06 and CH01

EUT	PDA with WiFi 802.11b/g		Model		WF35			
Mode		802.11g Input Vo		nput Voltage				
Temperature	e	24 deg. C,		Humidi	Humidity		56% RH	
Channel	Ch	annel Frequency (MHz)	Final RF Po Level in 3kH: (dBm)		Maximur (dB		Pass/ Fail	
1		2412	-18.79		8		Pass	
6		2437	-18.80		8		Pass	
11		2462	-19.80		8		Pass	

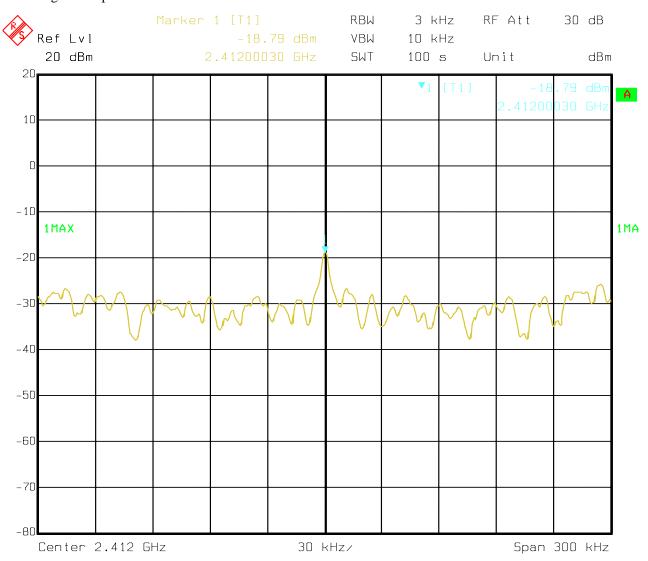
Note: For 802.11g mode at finial test to get the worst-case emission at 6Mbps for CH11, CH06 and CH01

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9.5Photo of Power Spectral Density Measurement

1.802.11g at 6Mbps of CH01



Date: 26.SEP.2010 14:37:12

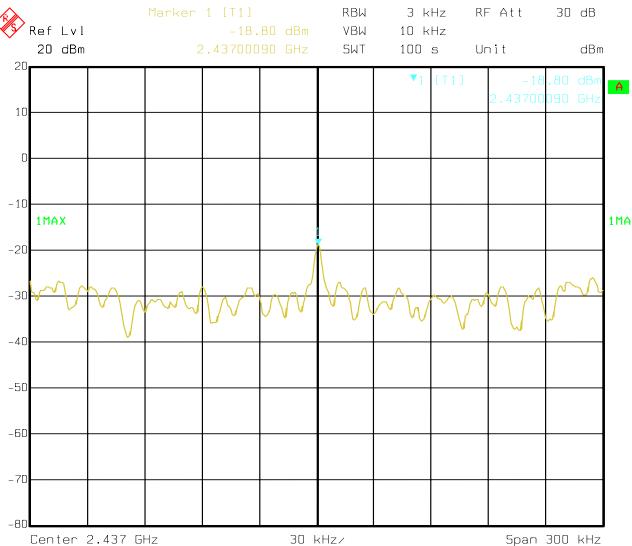
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2. 802.11g at 6Mbps at CH06



Date: 26.SEP.2010 14:40:00

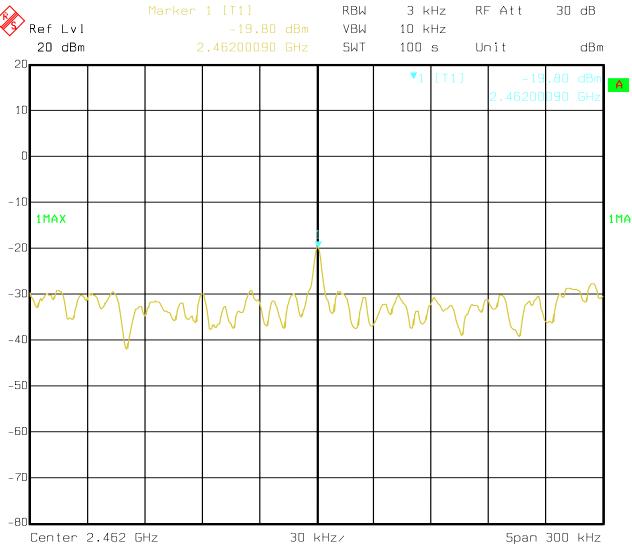
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3. 802.11g at 6Mbps of CH11



Date: 26.SEP.2010 14:43:05

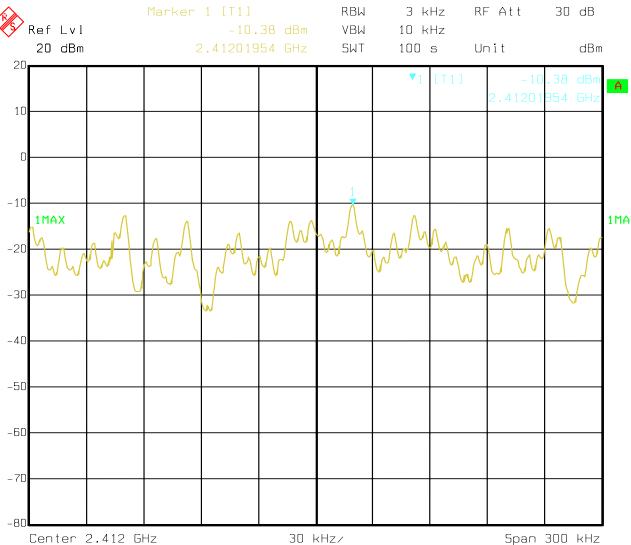
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4. 802.11b at 11Mbps of CH01



Date: 26.SEP.2010 16:15:14

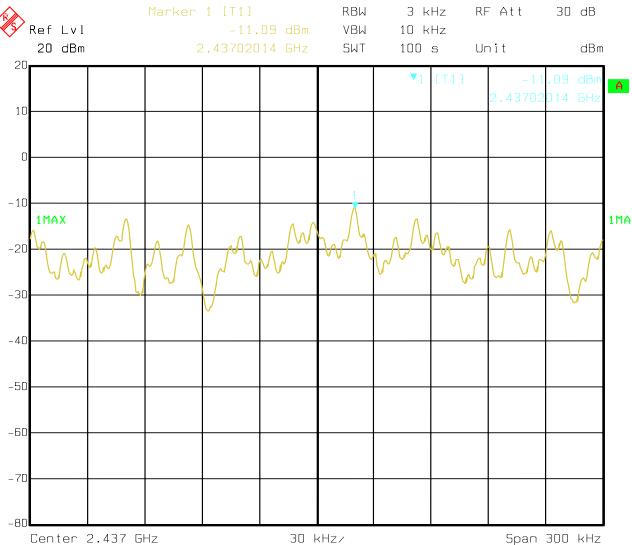
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5. 802.11b at 11Mbps of CH06



Date: 26.SEP.2010 16:17:59

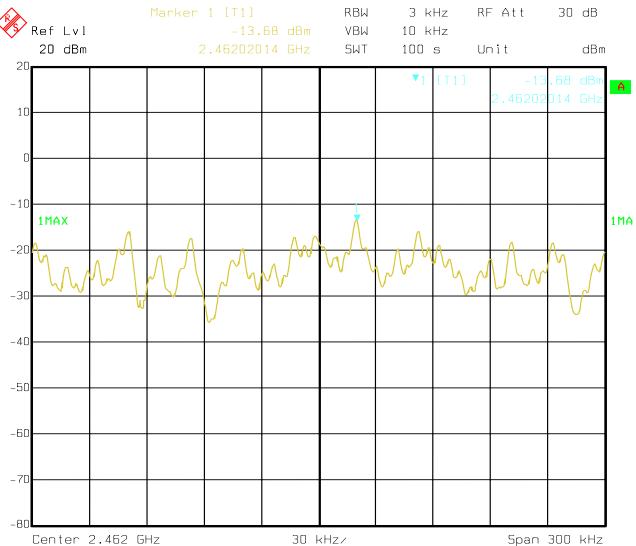
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6. 802.11b at 11Mbps of CH11



Date: 26.SEP.2010 16:20:46

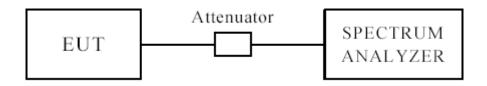
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10 Out of Band Measurement





The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=VBW=100 kHz. A conducted measurement used

10.4Test Result

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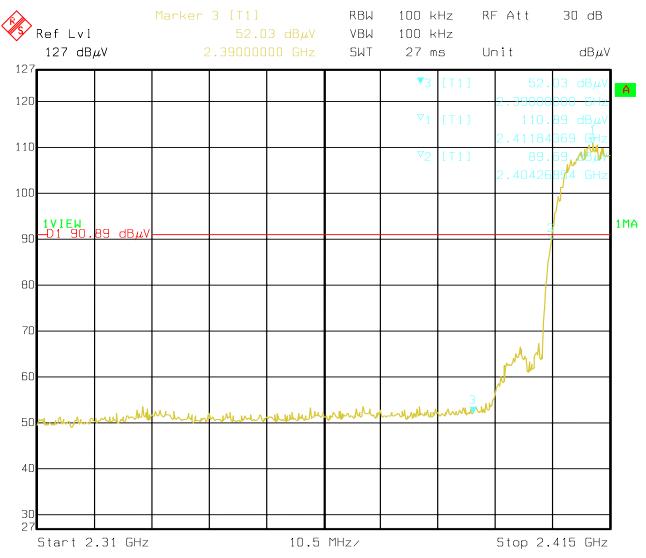
For 802.11b mode

CH01 at 11Mbps

10.4 Out of Band Test Result

Product:	PDA with Wi	Fi 802.11b/g	Test Mode:	CH1
Mode	Keeping Tr	ansmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pas	SS	Detector	PK
The Max. FS in	PK (dBμV/m)	45.3(H)/47.6(V)	Limit	$74(dB\mu V/m)$
Restrict Band	AV(dBμV/m)	32.2(H)/33.5(V)	Limit	54(dBµV/m)

Test Figure:



Date: 26.SEP.2010 16:11:25

Note: The Max. FS in Restrict Band are measured in conventional method.

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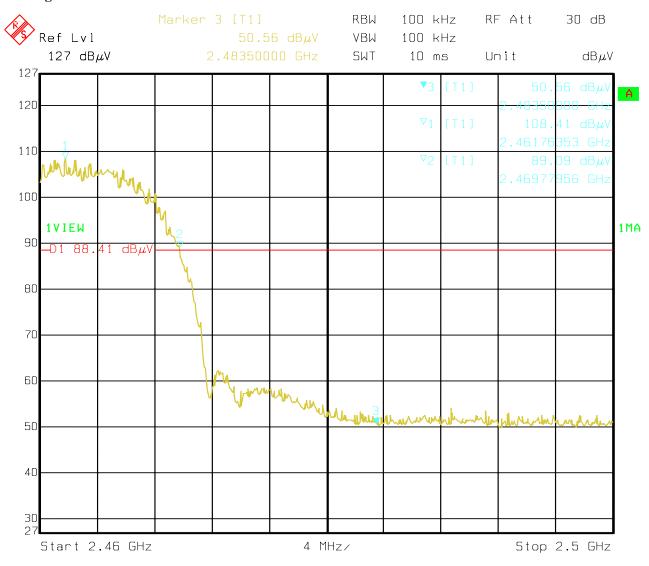


CH11 at 11Mbps

10.4 Out of Band Test Result

Product:	PDA with Wi	Fi 802.11b/g	Test Mode:	CH11		
Mode	Keeping Transmitting		Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pas	SS	Detector	PK		
The Max. FS in	PK (dBµV/m)	45.8(H)/48.7(V)	Limit	$74(dB\mu V/m)$		
Restrict Band	$AV(dB\mu V/m)$	32.8(H)/34.1(V)	Lillit	$54(dB\mu V/m)$		

Test Figure:



Date: 26.SEP.2010 16:09:15

Note: The Max. FS in Restrict Band are measured in conventional method.

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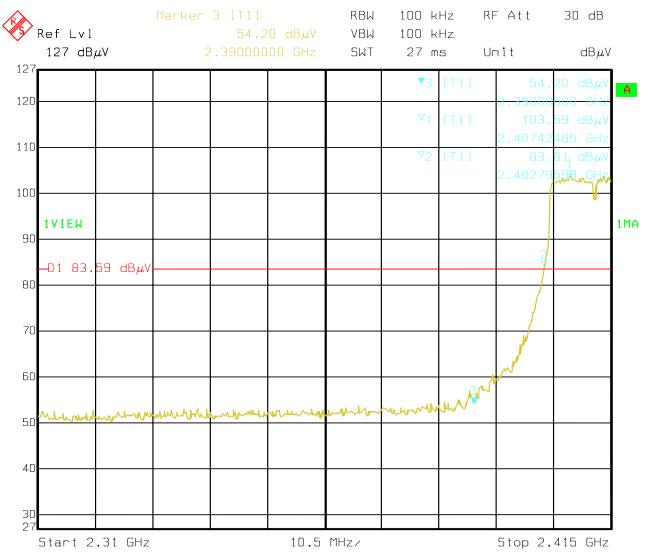
For 802.11g mode

CH01 at 6Mbps

10.4 Out of Band Test Result

Product:	PDA with Wi	Fi 802.11b/g	Test Mode:	CH1
Mode	Keeping Tr	ansmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pas	SS	Detector	PK
The Max. FS in	PK (dBμV/m)	45.1(H)/48.9(V)	Limit	$74(dB\mu V/m)$
Restrict Band	AV(dBμV/m)	33.0(H)/33.9(V)	Liffill	54(dBμV/m)

Test Figure:



Date: 26.SEP.2010 14:33:04

Note: The Max. FS in Restrict Band are measured in conventional method.

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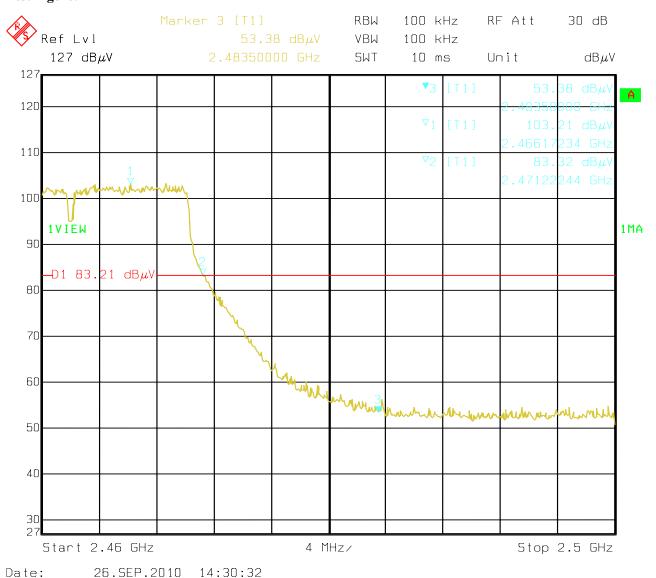


CH11 at 6Mbps

10.4 Out of Band Test Result

Product:	PDA with WiFi 802.11b/g		Test Mode:	CH11		
Mode	Keeping Transmitting		Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pas	SS	Detector	PK		
The Max. FS in	PK ($dB\mu V/m$)	46.1(H)/49.7(V)	Limit	$74(dB\mu V/m)$		
Restrict Band	$AV(dB\mu V/m)$	33.7(H)/35.2(V)	Lillit	$54(dB\mu V/m)$		

Test Figure:



Note: 1. The Max. FS in Restrict Band are measured in conventional method.

2. Final Level = Reading + AF + Cable - Preamp

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11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

he antenna is chip dielectric antenna. The maximum Gain of this antenna is -0.8dBi

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12.0 Maximum Permissible Exposure

Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2 , H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100000			5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2 , H 2 or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

MPE Calculation Method

 $E(V/m) = (30*P*G)^{0.5}/d$ Power Density: $Pd(W/m^2) = E^2/377$

 $\mathbf{E} = \text{Electric Field (V/m)}$

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

 $Pd = (30*P*G) / (377*d^2)$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

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Calculated Result and Limit

802.11b Mode

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
0.832	12.34	17.140	0.0028	1	Compiles

802.11g Mode

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
0.832	8.67	7.362	0.0012	1	Compiles

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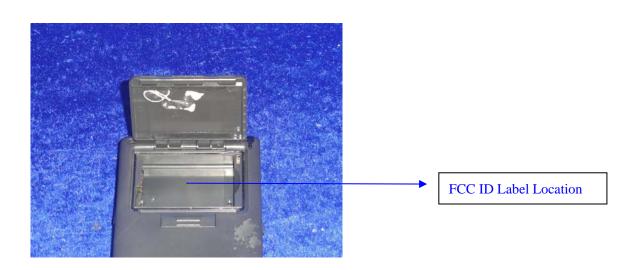


13.0 FCC ID Label

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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14.0 Photo of testing

14.1 Conducted test View--



14.2 Emission Radiated test View--



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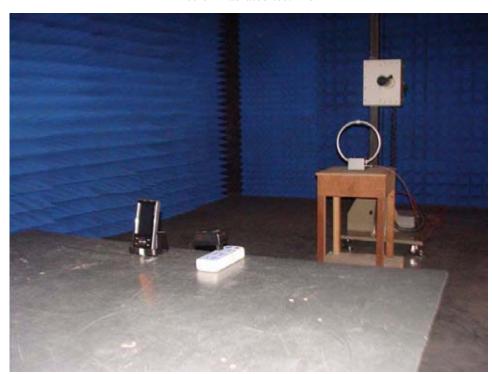
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Emission Radiated test View--



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Photographs - EUT





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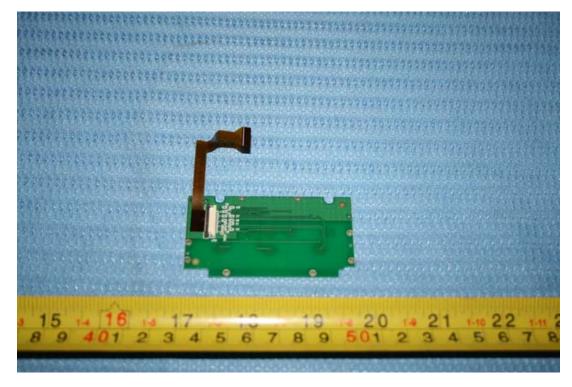
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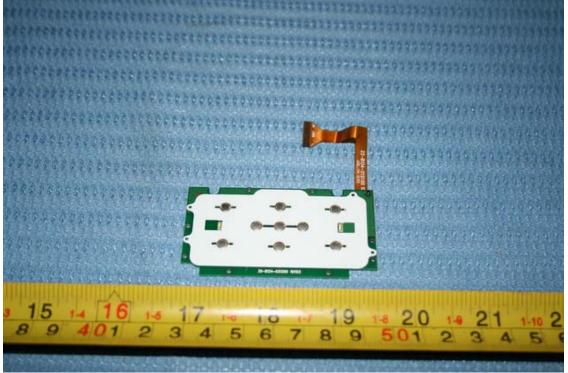
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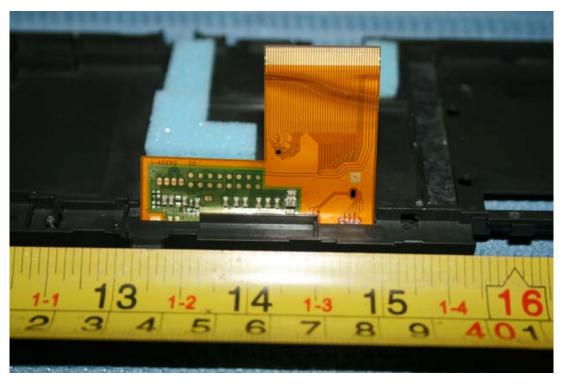
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