



Electromagnetic Compatibility Test Report

Amendment to Test Report No: MOT 181006

Issued on: December 14, 2006

Product Name

HC700-iDen

Model: F3130A, F3162A

FCC ID: AZ489FT7017

IC: 109U-89FT7017

Tested According to

FCC 47 CFR Part 15, Subparts B & C

FCC 47 CFR, Part 90 & Part 15.247

Industry Canada ICES-003, RSS-119, and RSS-210

Tests Performed for

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Test personnel

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Bluetooth:

Spurious Radiated Emissions, Restricted Bands

Reference document:	47 CFR §15.205 & DA 00-705		
Test Requirements:	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)).		
Test setup:	See Sec. 2.2	Pass	
Operating conditions:	Under normal test conditions		
Method of testing:	Radiated		
S.A. Settings:	f < 1GHz: RBW: 120kHz, VBW: 1MHz f > 1GHz: RBW: 1MHz, VBW: 3MHz		
Hopping function:	Disabled		
Environment conditions:	Ambient Temperature: 22°C	Relative Humidity: 48%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below		

Test results:

All measurements were done in horizontal and vertical polarizations; the results show the worst case

Middle channel, 2443 MHz					
Spurious Frequency [MHz]	Detector type	Spurious level [dBμV/m]	Limit [dBμV/m]	Reference Plot	Result
4887	Peak	38.19	74	Plot 10	Pass
4887	Average	23.58	54	Plot 10	Pass

WLAN 802.11b/g:

Spurious Radiated Emissions, Restricted Bands

Reference document:	47 CFR §15.247 (d) & §15.205		
Test Requirements:	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)).		
Test setup:	See Sec. 2.2	Pass	
Method of testing:	Radiated		
Operating conditions:	Under normal test conditions		
S.A. Settings:	RBW: 1MHz, VBW: 3MHz, Average: VBW: 10Hz		
Environment conditions:	Ambient Temperature: 22°C	Relative Humidity: 48%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below		

Test results:

Frequency [MHz]	Data Rate [Mbps]	Emission Frequency [MHz]	Detector Type	Pol. V/H	Emission Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]
802.11b Mode							
2437							All readings were at least 15 db below the limit
802.11g Mode							
2437							All readings were at least 15 db below the limit

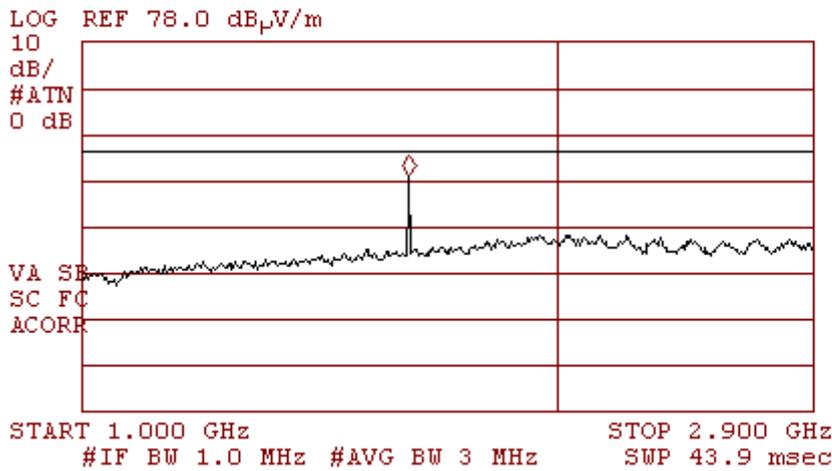
Note: Spurious Emission [dBµV/m] = measured [dBµV] + Correction-factor [dB (1/m)]
Correction Factor = Antenna factor + Cable Loss

Test Plots

Simultaneously Operated: Bluetooth (2443 MHz) +iDen 800(806.0625MHz)

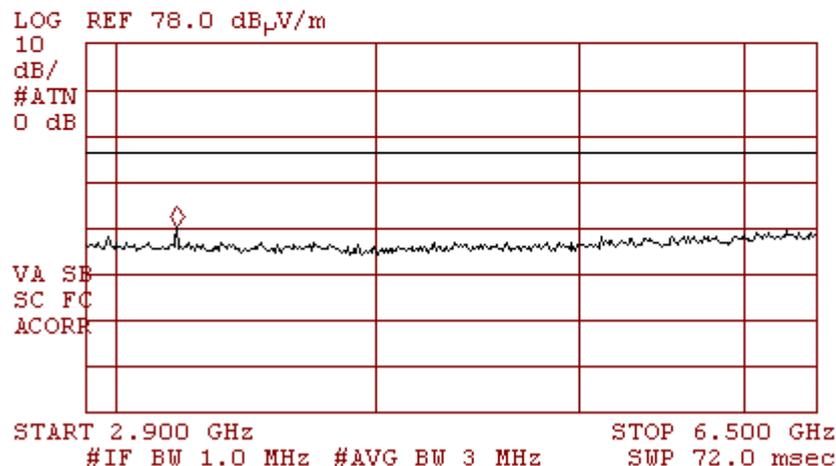
**Middle frequency
Horizontal & Vertical Polarization
Plot 1**

13:53:30 27 SEP 2006
 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 1.628 GHz
 48.94 dB μ V/m



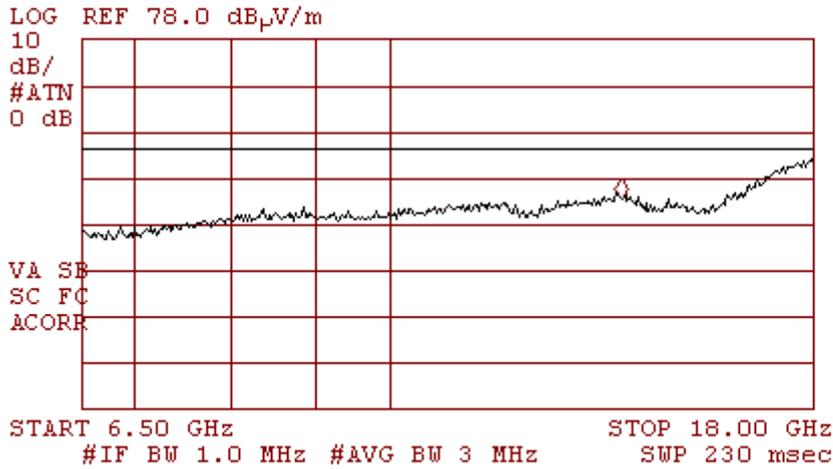
**Horizontal & Vertical Polarization
Plot 2**

13:50:08 27 SEP 2006
 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 3.260 GHz
 38.05 dB μ V/m

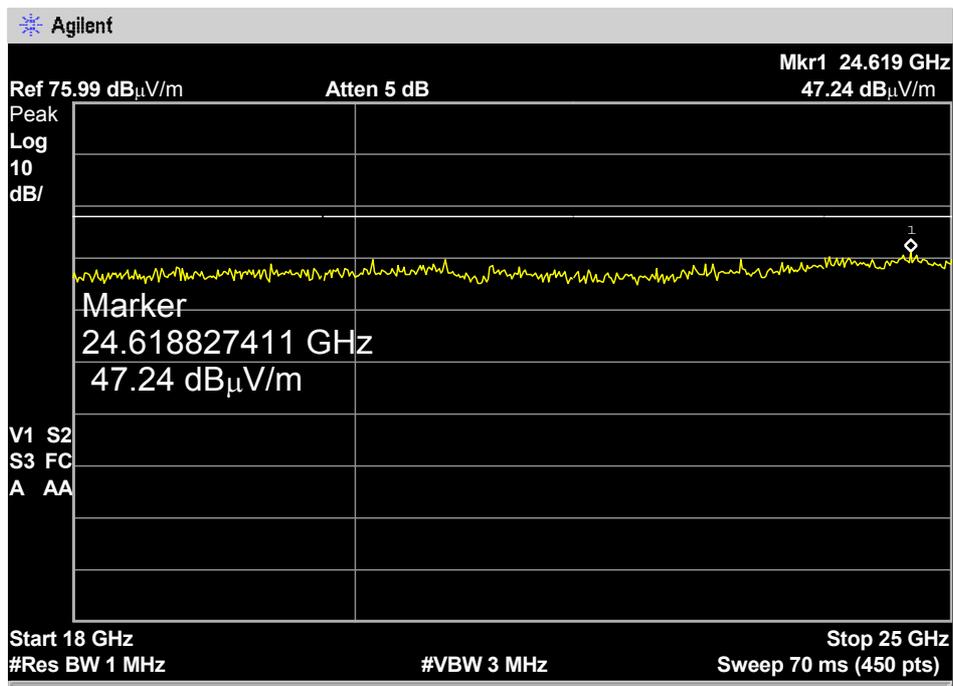


**Horizontal & Vertical Polarization
Plot 3**

13:46:18 27 SEP 2006
09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 14.23 GHz
43.22 dB μ V/m



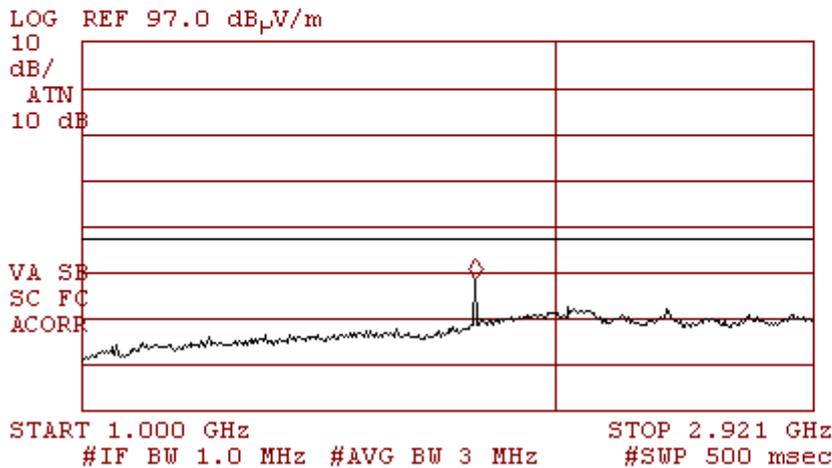
**Horizontal & Vertical Polarization
Plot 4**



Simultaneously Operated: Bluetooth (2443 MHz) +iDen 900 (896.01875 MHz)

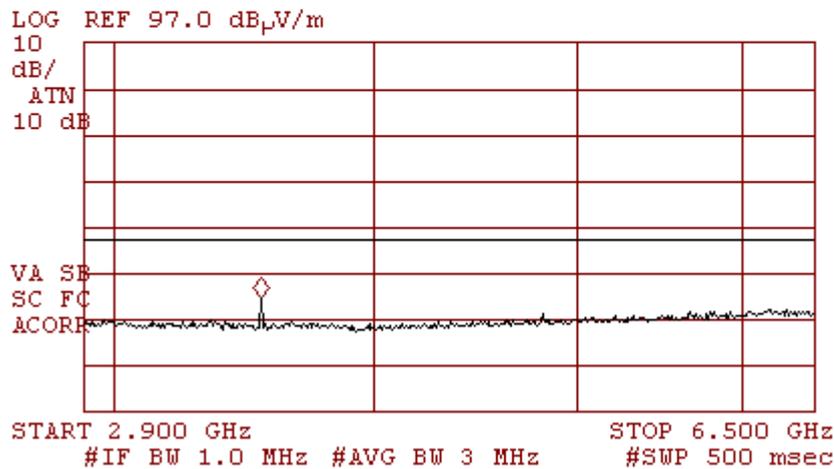
**Middle frequency
Horizontal & Vertical Polarization
Plot 5**

10:55:24 05 OCT 2006
~~09:31:34~~ 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 1.797 GHz
 45.52 dB μ V/m



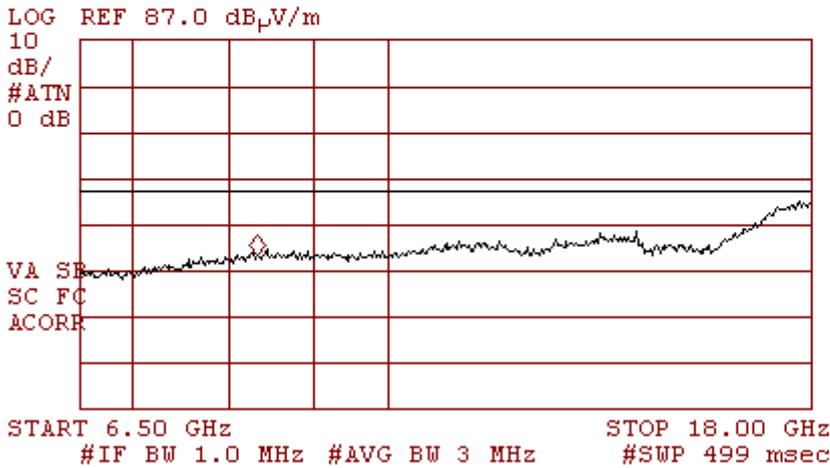
**Horizontal & Vertical Polarization
Plot 6**

11:00:26 05 OCT 2006
~~09:31:34~~ 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 3.598 GHz
 41.31 dB μ V/m

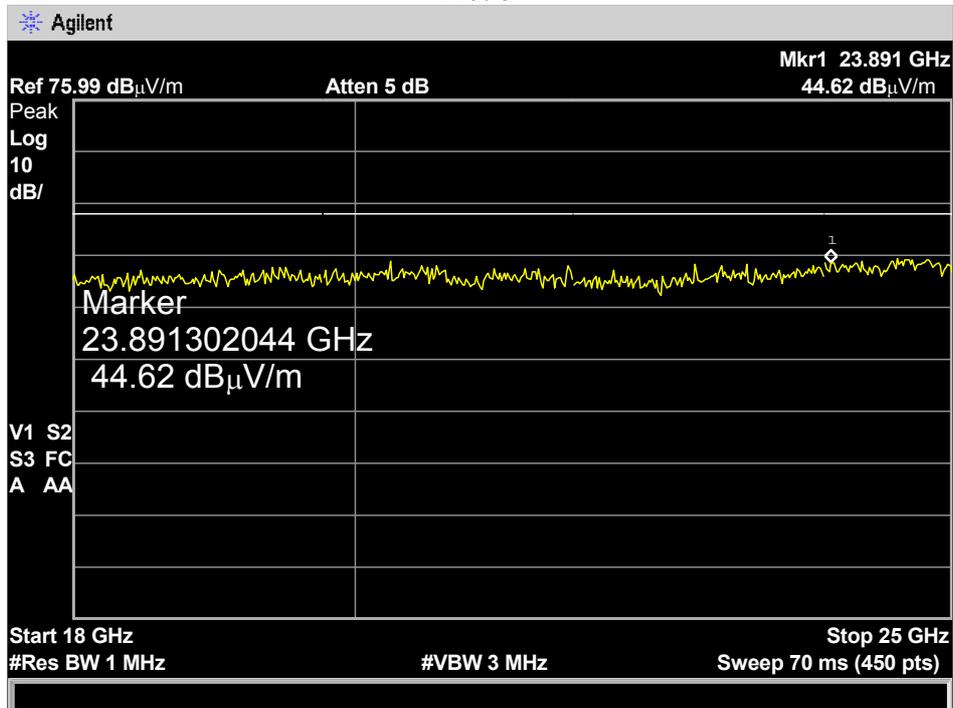


**Horizontal & Vertical Polarization
Plot 7**

11:08:35 05 OCT 2006
09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 8.59 GHz
40.00 dB μ V/m



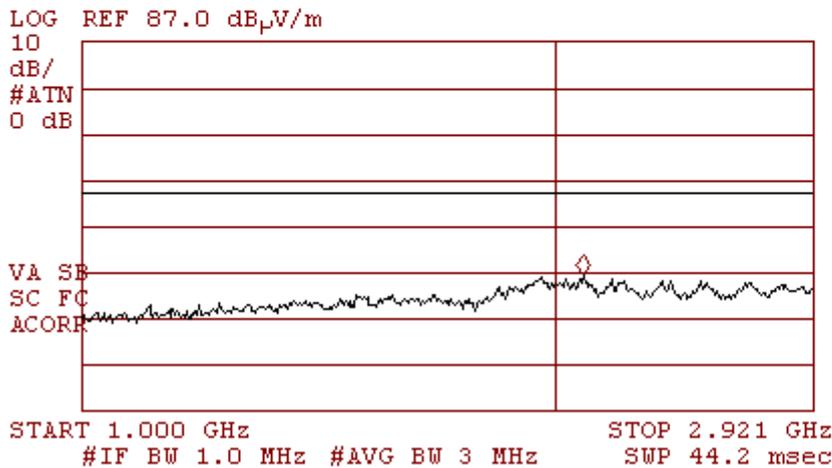
**Horizontal & Vertical Polarization
Plot 8**



Simultaneously Operated: Bluetooth (2443 MHz) & WLAN 802.1 b 11 Mbps channel 6

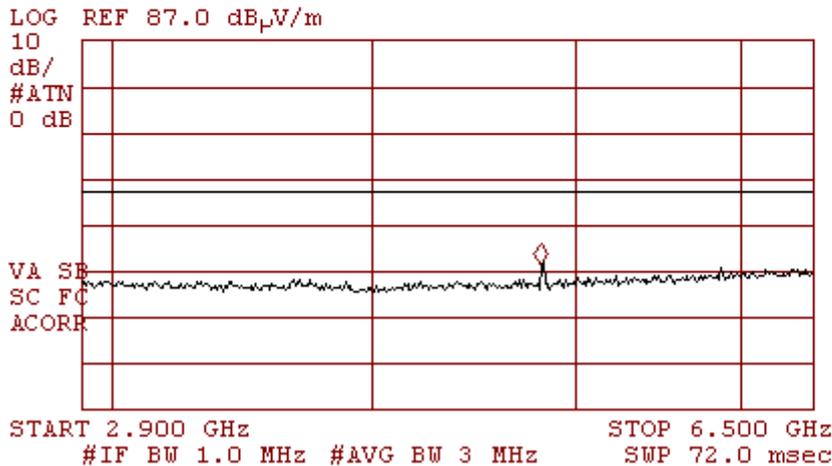
**Middle frequency
Horizontal & Vertical Polarization
Plot 9**

14:05:59 05 OCT 2006
~~09:31:34~~ 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 2.155 GHz
 36.09 dB μ V/m



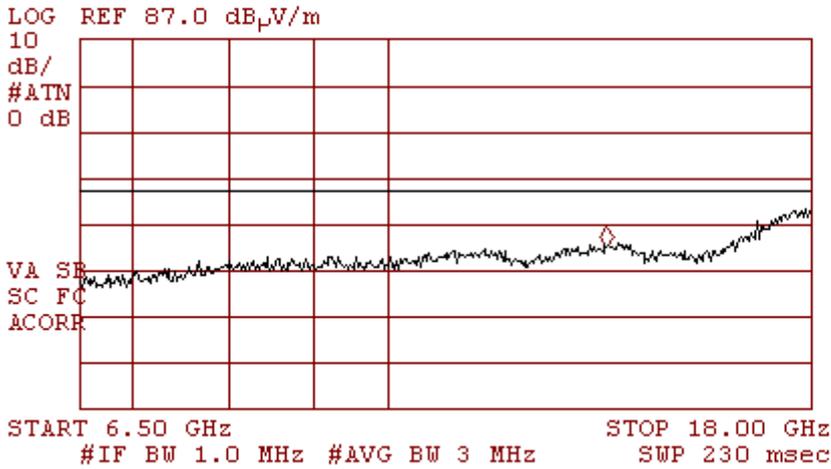
**Horizontal & Vertical Polarization
Plot 10**

14:15:52 05 OCT 2006
~~09:31:34~~ 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 4.887 GHz
 38.19 dB μ V/m

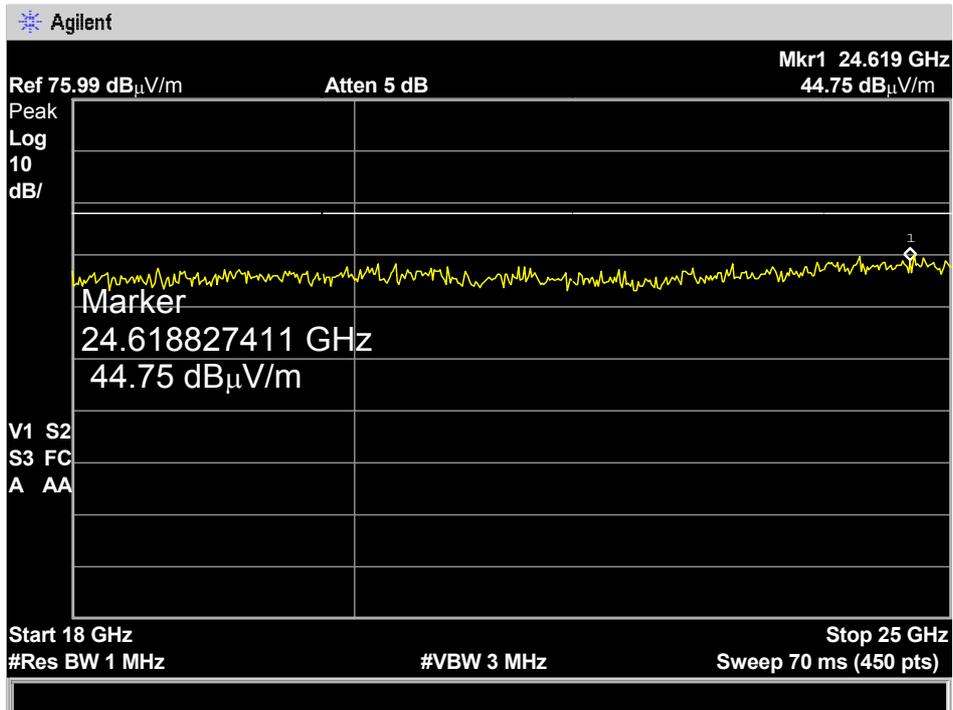


**Horizontal & Vertical Polarization
Plot 11**

14:17:36 05 OCT 2006
09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 13.98 GHz
41.87 dB μ V/m



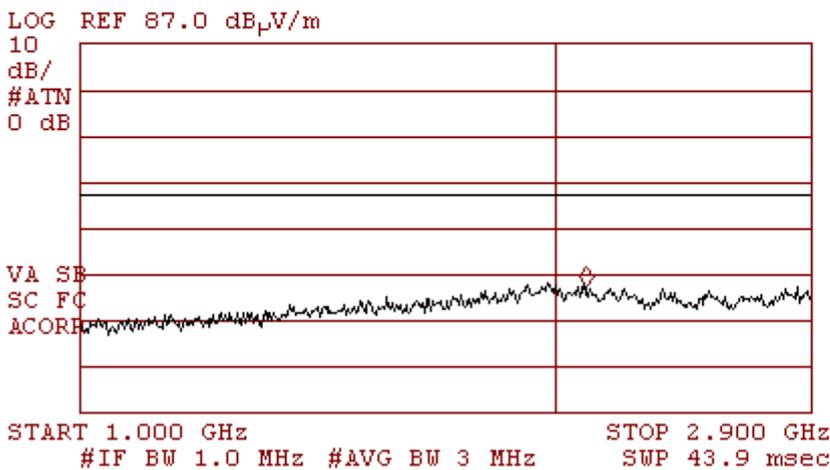
**Horizontal & Vertical Polarization
Plot 12**



Simultaneously Operated: Bluetooth (2443 MHz) & WLAN 802.1 b 54 Mbps channel 6

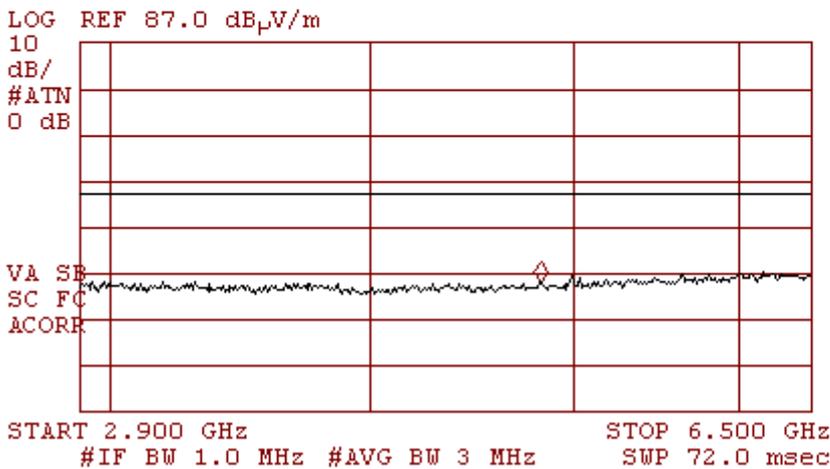
**Middle frequency
Horizontal & Vertical Polarization
Plot 13**

19:03:37 05 OCT 2006
 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 2.161 GHz
 33.98 dB μ V/m

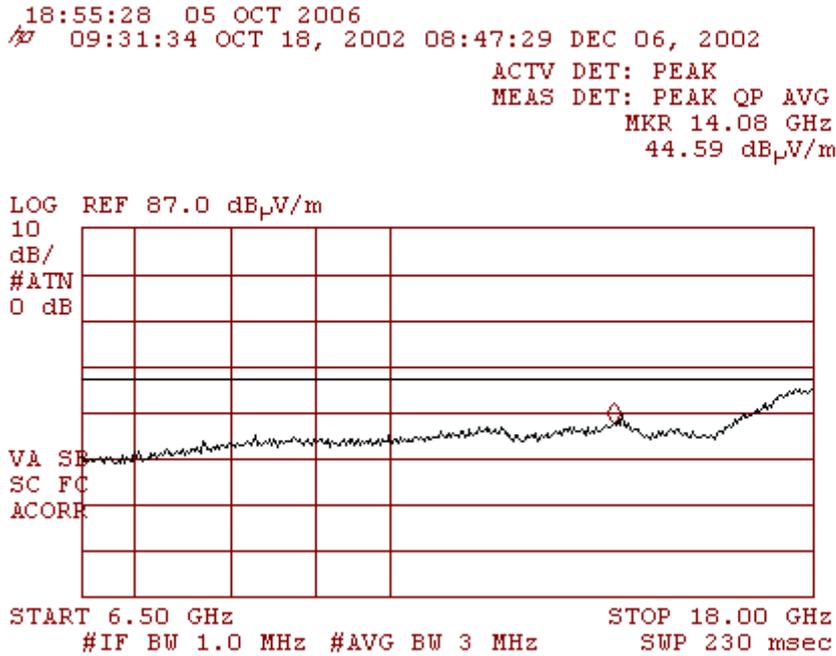


**Horizontal & Vertical Polarization
Plot 14**

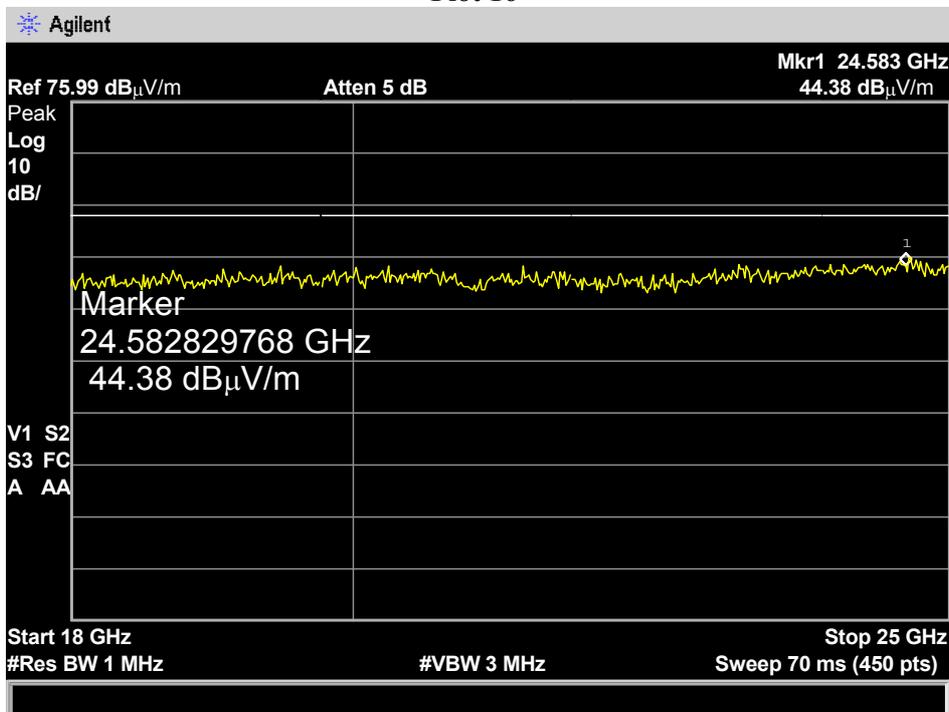
19:00:51 05 OCT 2006
 09:31:34 OCT 18, 2002 08:47:29 DEC 06, 2002
 ACTV DET: PEAK
 MEAS DET: PEAK QP AVG
 MKR 4.898 GHz
 34.99 dB μ V/m



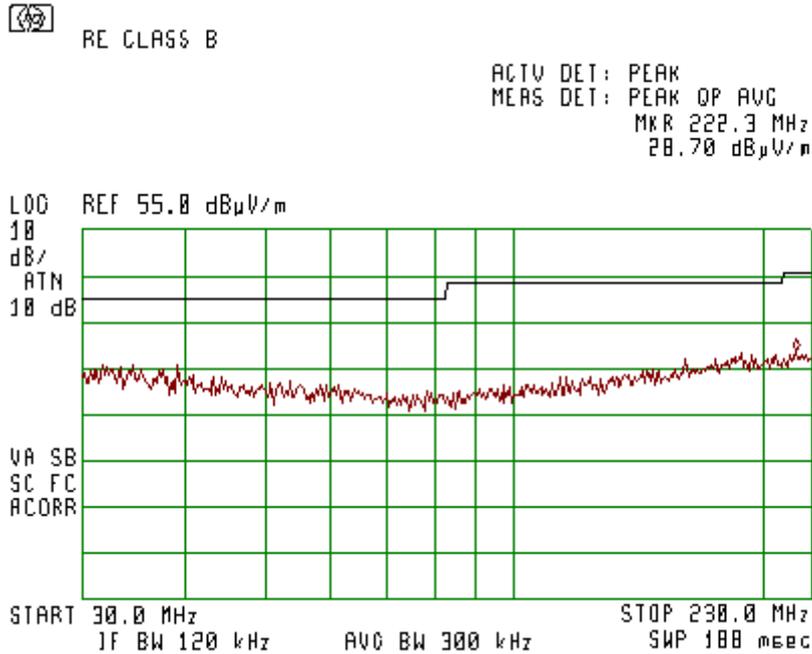
**Horizontal & Vertical Polarization
Plot 15**



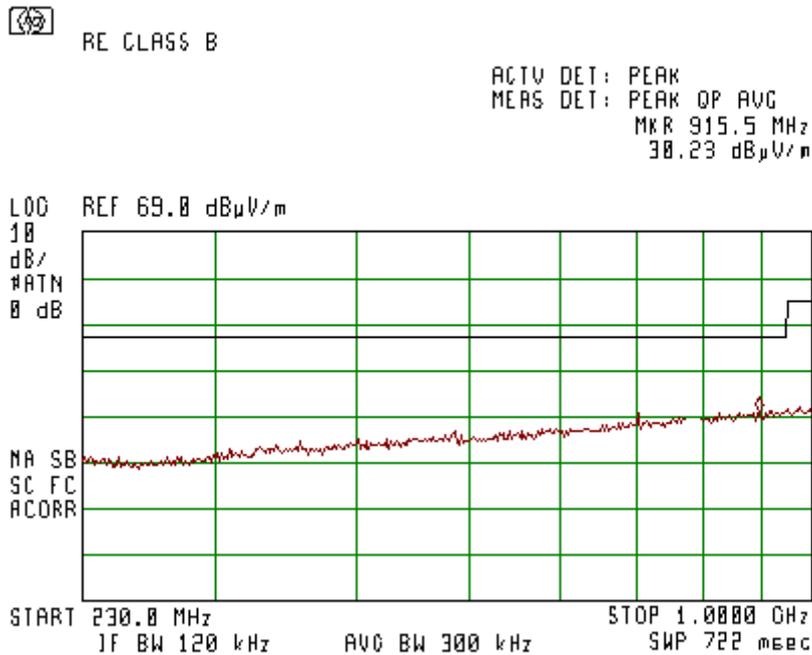
**Horizontal & Vertical Polarization
Plot 16**



Horizontal & Vertical Polarization 3 channels simultaneously
Plot 17



Horizontal & Vertical Polarization
(Vertical Polarization +Horizontal Polarization 3 channels simultaneously)
Plot 18



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