ENGINEERING TEST REPORT

Altitude 350-2 Access Point
Model No.: Altitude 350-2 Detach 15939
(Class II Permissive Changes for Additional Antennas)

FCC ID: RJF-A3502A

Applicant:

Extreme Networks Inc.
3585 Monroe Street
Santa Clara, CA 95051
United States

In Accordance With

FEDERAL COMMUNICATIONS COMMISSION (FCC)
Part 15, Subpart C, Section 15.247 - Digital Modulation Transmitters Operating in the Frequency Band 2400 - 2483.5 MHz and 5.725-5.850 GHz
&
Part 15, Subpart E
Unlicensed National Information Infrastructure Devices
Operating in Frequency Bands 5.15-5.25 GHz (indoor operation only) and 5.25-5.35 GHz

UltraTech's File No.: CNI-109FCC15CE-C2PC

This Test report is Issued under the Authority of Tri M. Luu, Professional Engineer, Vice President of Engineering UltraTech Group of Labs Date: September 10, 2007	
Report Prepared by: Dan Huynh Issued Date: September 10, 2007	Tested by: Mr. Hung Trinh, RFI Technologist Test Dates: October 9 – November 21, 2006

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government.*

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EXHIBIT 1. INTRODUCTION

1.1. SCOPE

Reference:	• FCC Part 15, Subpart C, Section 15.247 • FCC Part 15, Subpart E - Unlicensed National Information Infrastructure Devices
Title:	Code of Federal Regulations (CFR) Title 47 - Telecommunication, Part 15
Purpose of Test:	Class II Permissive Change for additional antennas; see Table 1.1.1 Antennas List for details.
Environmental Classification:	• Residential • Commercial, industrial or business

Table 1.1.1 Antennas List

Antenna #	Type	Model	Frequency Range (MHz)	Gain (dBi)	Coax Cable Length/Type	RF Connector Type
Cushcraft Corporation						
1	Directional	SR2405135D	2400-2500	5	3 feet / 19AWG CMP(ETL) C(ETL) 9700851	RPSMA
2	Omni, 2 inputs	S24493DS	2400-2500 & 4900-5900	3	3 feet / 19AWG CMP(ETL) C(ETL) 9700851	RPSMA, 2ea.
3	Omni	SL24513P	2400-2500 & 5150-5350	3	3 feet / 19AWG CMP(ETL) C(ETL) 9700851	RPSMA
4	Directional	S24497P	2400-2500 & 4900-5990	7	3 feet / 19AWG CMP(ETL) C(ETL) 9700851	RPSMA
Hyperlink Technologies						
5	Omni	HG2458CU	2300-2600 & 4900-6000	3	1 foot / 20AWG Coleman Cable 921021	N-Female
Maxrad						
6	Omni, 2 inputs	MDO24005PTRPMSMA	2400-2485	5.2	3 feet / 19AWG CMP(ETL) C(ETL) 9700851	RPSMA, 2ea

1.2. RELATED SUBMITTAL(S)/GRANT(S)

None.

1.3. NORMATIVE REFERENCES

Publication	Year	Title
FCC CFR Part 15	2006	Code of Federal Regulations – Telecommunication
ANSI C63.4	2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
CISPR 22 EN 55022 +A1 +A2	2003-04-10 1998 2000 2003	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
CISPR 16-1-1	2003	Specification for Radio Disturbance and Immunity measuring apparatus and methods
FCC Test Procedures	Mar. 23, 2005	Measurement of Digital Transmission Systems. Operating under Section 15.247
FCC Docket	2003	Revision of Parts 2 and 15 of Commission's Rules to permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz band
FCC Procedures	2001	Guidelines for Assessing Unlicensed National Information Infrastructure Devices (UNII)-Part 15 Subpart E - November 2001

EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1. CLIENT INFORMATION

APPLICANT	
Name:	Extreme Networks Inc.
Address:	3585 Monroe Street Santa Clara, CA 95051 United States
Contact Person:	Mr. Mark Darula Phone #: 408 579-3249 Fax #: 408 579-3000 Email Address: mdarula@extremenetworks.com

MANUFACTURER	
Name:	Celestica Kladno SRO
Address:	Billundska 311 27201 Kladno Czech Republic
Contact Person:	Jozef Trabalka Phone #: 420 312 821 100 Fax #: n/a

2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

Brand Name:	Extreme Networks Inc.
Product Name:	Altitude 350-2 Access Point
Model Name or Number:	Altitude 350-2 Detach 15939
Serial No.:	0500005462050425
Part No.:	L30250-F600-A961
CPU's Frequencies:	25 MHz and 40 MHz
Power input source:	Generic External AC/DC Adapter

2.3. EUT'S TECHNICAL SPECIFICATIONS

TRANSMITTER	
Equipment Type:	Base / Mobile
Intended Operating Environment:	▪ Residential ▪ Commercial, light industry & heavy industry
Power Supply Requirement:	6.0V @ 2.0A at input of unit using a generic FCC, IC & CE approved external AC-DC adaptor.
RF Output Power Rating: **Model with External Antennas:** ▪ 802.11b (2412-2462 MHz): ▪ 802.11g (2412-2462 MHz): ▪ 802-11a (5180-5240 MHz): ▪ 802-11a (5260-5320 MHz): ▪ 802-11a (5745-5825 MHz):	 **Model with External Antennas:** ▪ 17.5 to 21.0 dBm (Power Settings: 16.0 to 20.0 dBm) ▪ 16.7 to 23.3 dBm (Power Settings: 10.5 to 20.0 dBm) ▪ 14.6 to 14.9 dBm (Power Settings: 18 dBm) ▪ 14.8 to 14.9 dBm (Power Settings: 18 dBm) ▪ 20.8 to 23.0 dBm (Power Settings: 15.0 to 19.0 dBm) See output power measurements in this test report for details
Operating Frequency Range:	▪ 802.11b (2412-2462 MHz) ▪ 802.11g (2412-2462 MHz) ▪ 802-11a (5180-5240 MHz) ▪ 802-11a (5260-5320 MHz) ▪ 802-11a (5745-5825 MHz)
RF Output Impedance:	50 ohms
Channel Spacing:	▪ 5 MHz for 802.11b/g ▪ 20MHz for 802.11a
Occupied Bandwidths: ▪ 802.11b (2412-2462 MHz): ▪ 802.11g (2412-2462 MHz): ▪ 802-11a (5180-5240 MHz): ▪ 802-11a (5260-5320 MHz): ▪ 802-11a (5745-5825 MHz):	 ▪ 11.6 MHz (6 dB BW) ▪ 16.6 MHz (6 dB BW) ▪ 16.6 MHz (6 dB BW) ▪ 26.1 MHz (26 dB BW) ▪ 27.2 MHz (26 dB BW)
Duty Cycle:	100%
Modulation Type:	BPSK, QPSK, CCK and OFDM
Antenna Connector Type:	Non-integral (2 external antennas, using RPSMA connectors for mating).

RECEIVER	
Operating Frequency Range:	▪ 802.11b (2412-2462 MHz) ▪ 802.11g (2412-2462 MHz) ▪ 802-11a (5180-5240 MHz) ▪ 802-11a (5260-5320 MHz) ▪ 802-11a (5745-5825 MHz)
RF Output Impedance:	50 ohms
Channel Spacing:	5 MHz for 802.11b/g and 20MHz for 802.11a
Antenna Connector Type:	Same as transmitter
Antenna Description:	Same as transmitter

2.4. LIST OF EUT'S PORTS

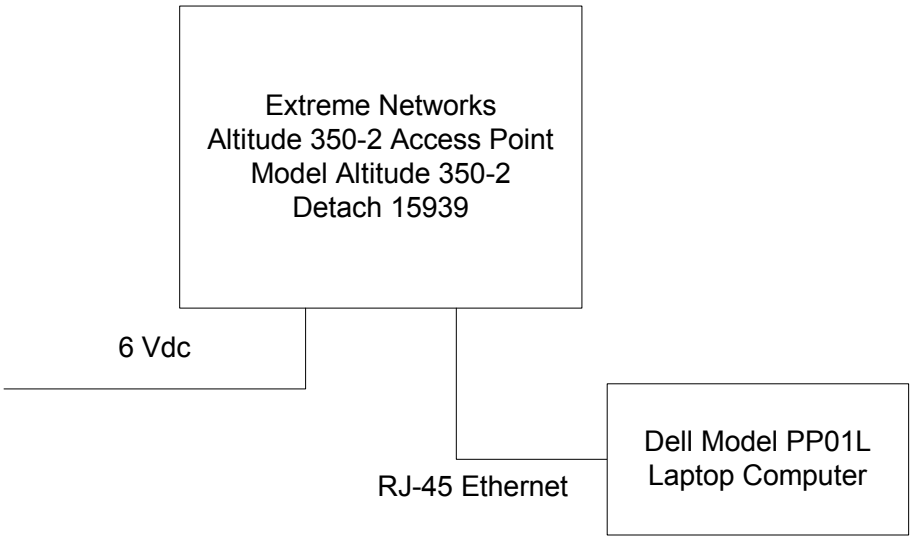
Port Number	EUT's Port Description	Number of Identical Ports	Connector Type	Cable Type (Shielded/Non-shielded)
1	Ethernet port	1	RJ45	Non-shielded
2	DC in port	1	RAPC712 equivalent	Non-shielded
3	RF Antenna port (external antenna version only)	2	Reverse-polarity SMA (RPSMA)	N/A – mates directly to antennae or shielded antenna cable

2.5. ANCILLARY EQUIPMENT

The EUT was tested while connected to the following representative configuration of ancillary equipment necessary to exercise the ports during tests:

Ancillary Equipment # 1	
Description:	Laptop Computer
Brand name:	Dell
Model Name or Number:	PP01L
FCC Approval:	FCC Class B -DoC
Connected to EUT's Port:	RJ-45 Ethernet

2.6. GENERAL TEST SETUP



- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

Temperature:	21°C
Humidity:	51%
Pressure:	102 kPa
Power input source:	6 Vdc using external AC/DC adaptor

3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TESTS

Operating Modes:	▪ Each of lowest, middle and highest channel frequencies transmits continuously for emissions measurements. ▪ The EUT operates in normal Direct Sequence mode for occupancy duration, and frequency separation.
Special Test Software:	Special software is provided by the Applicant to select and operate the EUT at each channel frequency continuously and for co-location testing, simultaneously on both 2.4 and 5 GHz. For example, the transmitter will be operated at each of lowest, middle and highest frequencies individually continuously during testing.
Special Hardware Used:	N/A
Transmitter Test Antenna:	The EUT is tested with the antenna fitted in a manner typical of normal intended use.

Transmitter Test Signals
Frequency(ies) Tested: ▪ 802.11b/g (2412-2462 MHz): 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447 2452, 2457 and 2462 MHz ▪ 802-11a (5180-5240 MHz): 5180, 5220 and 5240 MHz ▪ 802-11a (5260-5320 MHz): 5260, 5300 and 5320 MHz ▪ 802-11a (5745-5825 MHz): 5745, 5765, 5785, 5805 and 5825 MHz
Transmitter Wanted Output Test Signals (Model with External Antennas): ▪ 802.11b (2412-2462 MHz): 17.5 to 21.0 dBm (Power Settings: 16.0 to 20.0 dBm) ▪ 802.11g (2412-2462 MHz): 16.7 to 23.3 dBm (Power Settings: 10.5 to 20.0 dBm) ▪ 802-11a (5180-5240 MHz): 14.6 to 14.9 dBm (Power Settings: 18 dBm) ▪ 802-11a (5260-5320 MHz): 14.8 to 14.9 dBm (Power Settings: 18 dBm) ▪ 802-11a (5745-5825 MHz): 20.8 to 23.0 dBm (Power Settings: 15.0 to 19.0 dBm)

EXHIBIT 4. SUMMARY OF TEST RESULTS

4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- AC Powerline Conducted Emissions were performed in UltraTech's shielded room, 16'(L) by 12'(W) by 12'(H).

- Radiated Emissions were performed at the Ultratech's 3-10 Meter Open Field Test Site (OFTS) situated in the Town of Oakville, province of Ontario. This test site has been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville Open Field Test Site has been filed with FCC office (FCC File No.: 31040/SIT 1300B3) and Industry Canada office (Industry Canada File No.: IC2049). Last Date of Site Calibration: Jan. 10, 2006.

4.2. MODIFICATIONS INCORPORATED IN THE EUT FOR COMPLIANCE PURPOSES

None.

4.3. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS @ FCC 15.247

FCC Section(s)	Test Requirements	Compliance (Yes/No)
15.107(a) & 15.207	AC Power Conducted Emissions	N/A
15.247(a)(2)	6dB Bandwidth of a Digital Modulation System	N/A
15.247(b) & 1.1310	Maximum Peak Power (Conducted)	Yes
15.247(c)	RF Conducted Spurious Emissions at the Transmitter Antenna Terminal	N/A
15.247(d)	Transmitted Power Density of a Digital Modulation System	N/A
15.247(c), 15.209 & 15.205	Transmitter Radiated Emissions	Yes
15.109	Class B Radiated Emissions	Yes

4.4. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS @ FCC 15.407

FCC Section(s)	Test Requirements	Compliance (Yes/No)
15.203 & 15.204(c)	Antenna requirements	Yes.
15.407(e)	Within the 5.15-5.25 GHz band, U-NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations	Yes.
15.407(c)	The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.	Yes.
15.407(g)	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual	Yes.
15.407(a)	Power Limits (Peak Transmit Power and Power Spectral Density) & 26 dB Bandwidth	Yes, only Transmit Power need to be re-test to ensure the continuing compliance with the original grant
15.407(b)	Band-edge & Undesired Emissions (Conducted)	N/A for Class II Permissive Change
15.407(b), 15.205 & 15.209	Band-edge & Undesired Emissions (Radiated)	Yes.
15.107 & 15.207	Class B - AC Power Conducted Emissions on Tx, Rx and standby modes	Yes. A separate test report will be provided upon request.
15.109(a)	Class B - Radiated Emissions from Unintentional Radiators	Yes. A separate test report will be provided upon request.

4.5. RF EXPOSURE & INTERMODULATION FOR MULTIPLE TRANSMISSION @ FCC 15.247 & 15.407

FCC Section(s)	Test Requirements	Compliance (Yes/No)
15.407(f), 1.1307, 1.1310, 2.1091 & 2.1093	RF Exposure Limit	Yes.
N/A	Intermodulation	Yes

EXHIBIT 5. TEST DATA [§ 15.247 – OPERATION WITHIN THE BANDS 2400-2483.5 MHz and 5725-5850 MHz]

5.1. OUTPUT POWER (CONDUCTED) [§ 15.247(b)]

5.1.1. Limits

- **FCC 15.247(b)(3):** Maximum peak output power of the transmitter shall not exceed 1 Watt.
- **FCC 15.247(b)(4):** If transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.1.2. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Spectrum Analyzer/ EMI Receiver	Rohde & Schwarz	FSEK20/B4/B21	834157/005	9 kHz – 40 GHz with external mixer
RF Signal Generator	Hewlett Packard	HP 83752B	3610A00457	0.01 – 20 GHz
67297 RF Detector (Diode Detector)	Herotex	DZ122-553	63400	..
Storage Oscilloscope	Philips	PM3320A	ST9907959	--

5.1.3. Method of Measurements & Test Arrangement

Refer to "FCC Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005"

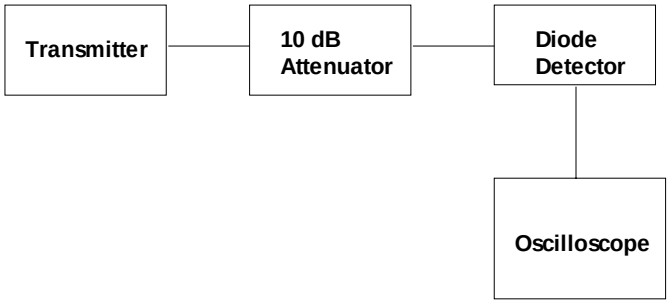
This is an RF conducted test. Use a direct connection between the antenna port of the transmitter, peak diode detector and oscilloscope, through suitable attenuation. Power Output Option 1, total peak output power measurement, was used to test this DTS device.

Power Output Option 1:

The total peak power was measured using peak detector diode method as described below:

Step 1:

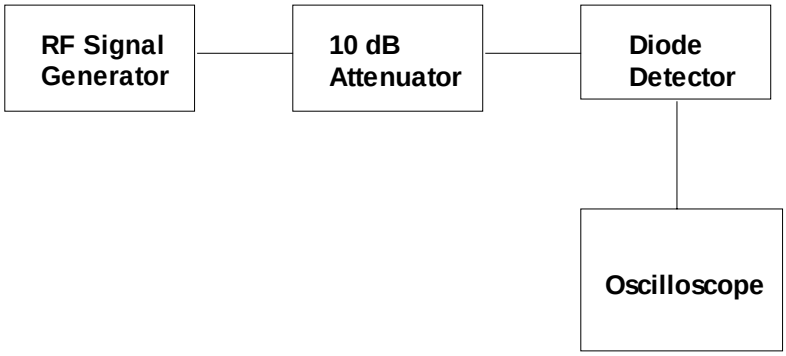
- Connect the transmitter output to a diode detector through an attenuator
- Connect the diode detector to the vertical channel of an oscilloscope.
- Observe and record the y parameter of the DC level on the oscilloscope.



Step 2: Peak Power Measurements

- Replace the transmitter by a RF signal generator
- Set the signal generator frequency be the same as the transmitter frequency
- Adjust the rf output level of the RF signal generator until the DC level on the oscilloscope is same as that (y) recorded in step 1.
- Measure the RF signal generator output level using a power meter
- Calculate the total peak power (Pp) by adding the signal generator level with the attenuator value and the cable loss.
- Calculate the peak EIRP: EIRP = Pp + G

Where: EIRP: Effective isotropic radiated power in dBm
Pp: Peak conducted power in dBm
G: Transmitter antenna gain in dBi



5.1.4. Test Data

Method of Output Power Measurements:

Option #1: Total Peak Power using Peak Diode Detector for 802.11b, 802.11g and 802.11a

5.1.4.1. Test Configuration #1: Power Setting for Antenna #1 Cushcraft Directional Antenna (Model SR2405135D, 5 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	16.5	17.60	57.54
2417	17.5	17.80	60.26
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	19.0	20.00	100.00
2462	19.5	19.80	95.50

5.1.4.2. Test Configuration #2: Power Setting for Antenna #2 Cushcraft Omni Antenna (Model S24493DS, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	18.0	17.90	61.66
2417	17.5	17.80	60.26
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	20.0	20.10	102.33
2462	20.0	19.90	97.72

5.1.4.3. Test Configuration #3: Power Setting for Antenna #3 Cushcraft Omni Antenna (Model SL24513P, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	17.5	17.80	60.26
2417	17.5	17.80	60.26
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	20.0	20.10	102.33
2462	20.0	19.90	97.72

5.1.4.4. Test Configuration #4: Power Setting for Antenna #4 Cushcraft Directional Antenna (Model S24497P, 7 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	16.5	17.60	57.54
2417	16.0	17.50	56.23
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	20.0	20.10	102.33
2462	20.0	19.90	97.72

5.1.4.5. Test Configuration #5: Power Setting for Antenna #5 Hyperlink Technologies Omni Antenna (Model HG2458CU, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	17.5	17.80	60.26
2417	17.5	17.80	60.26
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	20.0	20.10	102.33
2462	20.0	19.90	97.72

5.1.4.6. Test Configuration #6: Power Setting for Antenna #6 Maxrad Omni, 2 Inputs Antenna (Model MDO24005PTRPMSMA, 5.2 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	17.5	17.80	60.26
2417	17.5	17.80	60.26
2422	20.0	20.80	120.23
2427	20.0	21.00	125.89
2432	20.0	20.10	102.33
2437	20.0	20.30	107.15
2442	20.0	20.00	100.00
2447	20.0	20.10	102.33
2452	20.0	20.10	102.33
2457	20.0	20.10	102.33
2462	20.0	19.90	97.72

5.1.4.7. Test Configuration #7: Power Setting for Antenna #1 Cushcraft Directional Antenna (Model SR2405135D, 5 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	10.5	16.70	46.77
2417	14.0	20.50	112.20
2422	15.5	21.50	141.25
2427	16.0	22.00	158.49
2432	16.0	22.20	165.96
2437	16.5	22.30	169.82
2442	20.0	23.30	213.80
2447	19.0	22.90	194.98
2452	18.5	22.30	169.82
2457	17.0	22.00	158.49
2462	14.5	20.60	114.82

5.1.4.8. Test Configuration #8: Power Setting for Antenna #2 Cushcraft Omni Antenna (Model S24493DS, 3 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	13.0	19.30	85.11
2417	15.0	21.50	141.25
2422	16.0	22.20	165.96
2427	18.0	22.90	194.98
2432	18.5	23.00	199.53
2437	19.5	23.20	208.93
2442	20.0	23.30	213.80
2447	19.5	22.90	194.98
2452	18.5	22.60	181.97
2457	17.5	22.30	169.82
2462	15.5	21.00	125.89

5.1.4.9. Test Configuration #9: Power Setting for Antenna #3 Cushcraft Omni Antenna (Model SL24513P, 3 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	13.5	19.60	91.20
2417	15.5	21.70	147.91
2422	16.5	22.50	177.83
2427	18.0	22.90	194.98
2432	19.0	23.10	204.17
2437	19.5	23.20	208.93
2442	20.0	23.30	213.80
2447	19.0	22.80	190.55
2452	18.5	22.60	181.97
2457	17.5	22.30	169.82
2462	15.5	21.00	125.89

5.1.4.10. Test Configuration #10: Power Setting for Antenna #4 Cushcraft Directional Antenna (Model S24497P, 7 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	10.5	16.70	46.77
2417	14.0	20.50	112.20
2422	15.0	21.20	131.83
2427	16.0	22.00	158.49
2432	17.5	22.80	190.55
2437	17.5	22.70	186.21
2442	19.0	23.10	204.17
2447	18.5	22.80	190.55
2452	18.0	22.10	162.18
2457	17.0	22.00	158.49
2462	14.5	20.60	114.82

5.1.4.11. Test Configuration #11: Power Setting for Antenna #5 Hyperlink Technologies Omni Antenna (Model HG2458CU, 3 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	12.5	19.20	83.18
2417	15.0	21.30	134.90
2422	16.5	22.50	177.83
2427	17.5	22.80	190.55
2432	18.5	22.90	194.98
2437	19.0	23.00	199.53
2442	20.0	23.30	213.80
2447	19.0	22.80	190.55
2452	18.0	22.40	173.78
2457	17.5	22.30	169.82
2462	15.5	21.00	125.89

5.1.4.12. Test Configuration #12: Power Setting for Antenna #6 Maxrad Omni, 2 Inputs Antenna (Model MDO24005PTRPMSMA, 5.2 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
2412	13.0	19.30	85.11
2417	14.5	21.20	131.83
2422	16.5	22.50	177.83
2427	17.0	22.60	181.97
2432	18.0	22.80	190.55
2437	19.5	23.20	208.93
2442	20.0	23.30	213.80
2447	20.0	23.30	213.80
2452	18.5	22.60	181.97
2457	18.0	22.10	162.18
2462	15.5	21.00	125.89

5.1.4.13. Test Configuration #13: Power Setting for Antenna #2 Cushcraft Omni Antenna (Model S24493DS, 3 dBi gain), 802.11a Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
5745	19.0	22.96	197.70
5765	18.0	22.86	193.20
5785	15.0	21.06	127.64
5805	16.0	21.46	139.96
5825	16.5	21.56	143.22

5.1.4.14. Test Configuration #14: Power Setting for Antenna #4 Cushcraft Directional Antenna (Model S24497P, 7 dBi gain), 802.11a Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
5745	19.0	22.96	197.70
5765	19.0	22.96	197.70
5785	18.0	22.46	176.20
5805	17.5	22.26	168.27
5825	18.5	22.56	180.30

5.1.4.15. Test Configuration #15: Power Setting for Antenna #5 Hyperlink Technologies Omni Antenna (Model HG2458CU, 3 dBi gain), 802.11a Modulation (64QAM @ 54Mbps)

Frequency (MHz)	Art Software Setting (dBm)	Peak Power at Antenna Terminals	
		(dBm)	(mW)
5745	19.0	22.96	197.70
5765	17.0	22.16	164.44
5785	15.0	21.06	127.64
5805	15.0	20.76	119.12
5825	15.5	21.16	130.62

5.2. SPURIOUS EMISSIONS (RADIATED @ 3 METERS) [§§ 15.247(c), 15.209 & 15.205]

5.2.1. Limits

In any 100 KHz bandwidth outside the operating frequency band, the radio frequency power that is produced by modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 KHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in @ 15.209(a), which lesser attenuation.

All other emissions inside restricted bands specified in @ 15.205(a) shall not exceed the general radiated emission limits specified in @ 15.209(a)

Remarks:

- Applies to harmonics/spurious emissions that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209.
- @ **FCC CFR 47, Para. 15.237(c)** - The emission limits as specified above are based on measurement instrument employing an average detector. The provisions in @**15.35** for limiting peak emissions apply.

FCC 47 CFR § 15.205(a) - Restricted Frequency Bands

MHz	MHz	MHz	GHz
0.090 - 0.110	162.0125 - 167.17	2310 - 2390	9.3 - 9.5
0.49 – 0.51	167.72 - 173.2	2483.5 - 2500	10.6 - 12.7
2.1735 - 2.1905	240 - 285	2655 - 2900	13.25 - 13.4
8.362 - 8.366	322 - 335.4	3260 - 3267	14.47 - 14.5
13.36 - 13.41	399.9 - 410	3332 - 3339	14.35 - 16.2
25.5 – 25.67	608 - 614	3345.8 - 3358	17.7 - 21.4
37.5 – 38.25	960 - 1240	3600 - 4400	22.01 - 23.12
73 - 75.4	1300 - 1427	4500 - 5250	23.6 - 24.0
108 – 121.94	1435 - 1626.5	5350 - 5460	31.2 - 31.8
123 – 138	1660 - 1710	7250 - 7750	36.43 - 36.5
149.9 – 150.05	1718.8 - 1722.2	8025 - 8500	Above 38.6
156.7 – 156.9	2200 - 2300	9000 - 9200	

FCC 47 CFR § 15.209(a)
-- Field Strength Limits within Restricted Frequency Bands --

Frequency (MHz)	Field Strength Limits (microvolts/m)	Distance (Meters)
0.009 - 0.490	2,400 / F (KHz)	300
0.490 - 1.705	24,000 / F (KHz)	30
1.705 - 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

5.2.2. Method of Measurements

Refer to "FCC Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005" and Ultratech Test Procedures, File # ULTR P003-2004 and ANSI C63.4 for measurement methods

Radiated emission test: Applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp (and possibly a high-pass filter) is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation. See Section 15.35(b) and (c).

5.2.3. Test Equipment List

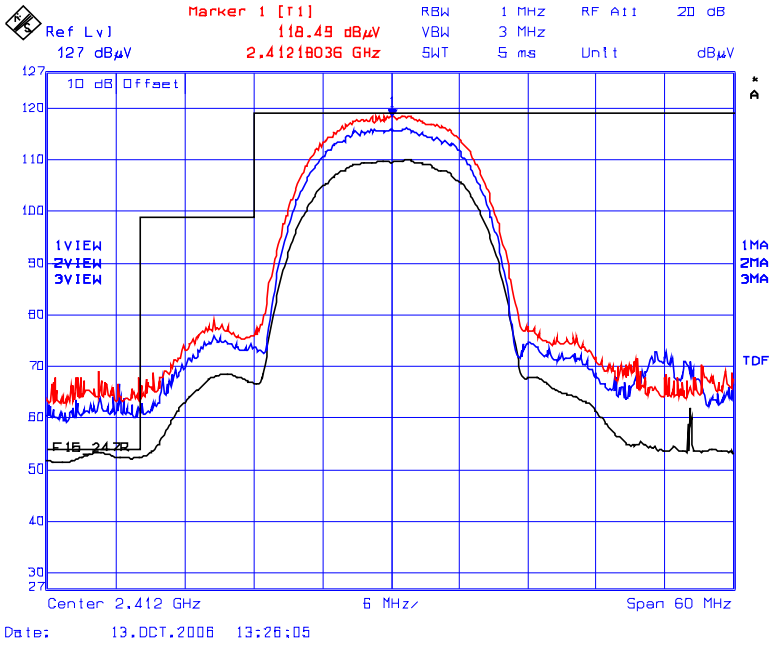
Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Spectrum Analyzer	Rohde & Schwarz	FSEK20/B4/B21	834157/005	9 kHz – 40 GHz
Microwave Amplifier	Hewlett Packard	HP 83017A		1 GHz to 26.5 GHz
Biconilog Antenna	EMCO	3143	1029	20 MHz to 2 GHz
Horn Antenna	EMCO	3155	9701-5061	1 GHz – 18 GHz
Horn Antenna	EMCO	3160-09	..	18 GHz – 26.5 GHz

5.2.4. Test Data

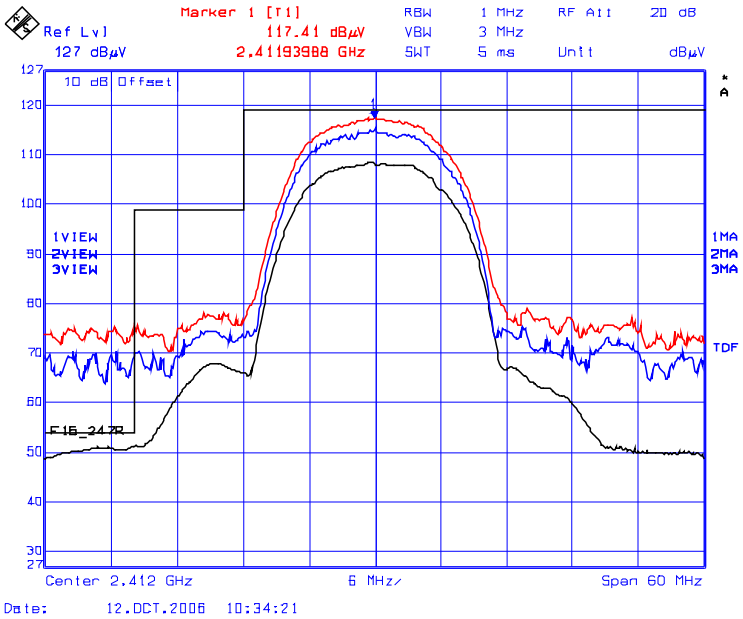
5.2.4.1. Band-edges Emissions (Radiated at 3 Meters)

5.2.4.1.1. EUT with Antenna #1 Cushcraft Directional Antenna (Model SR2405135D, 5 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

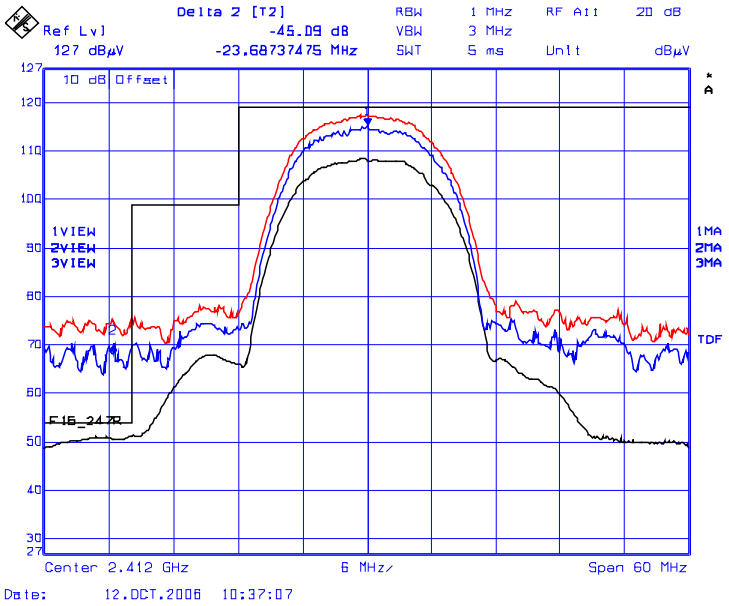
Plot 5.2.4.1.1.1 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting: 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



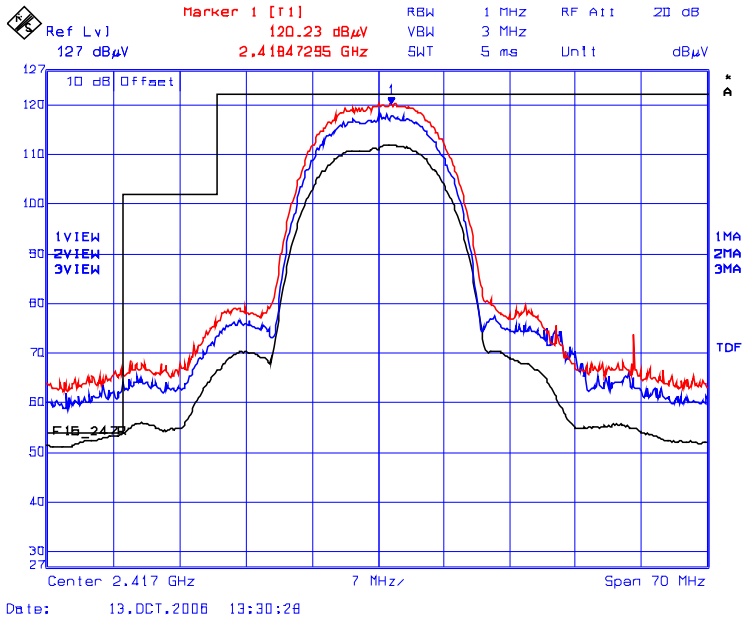
Plot 5.2.4.1.1.2a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz, Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 117.41 dBµV/m – 45.09 dB = 72.32 dBµV/m < Limit (74 dBµV/m)



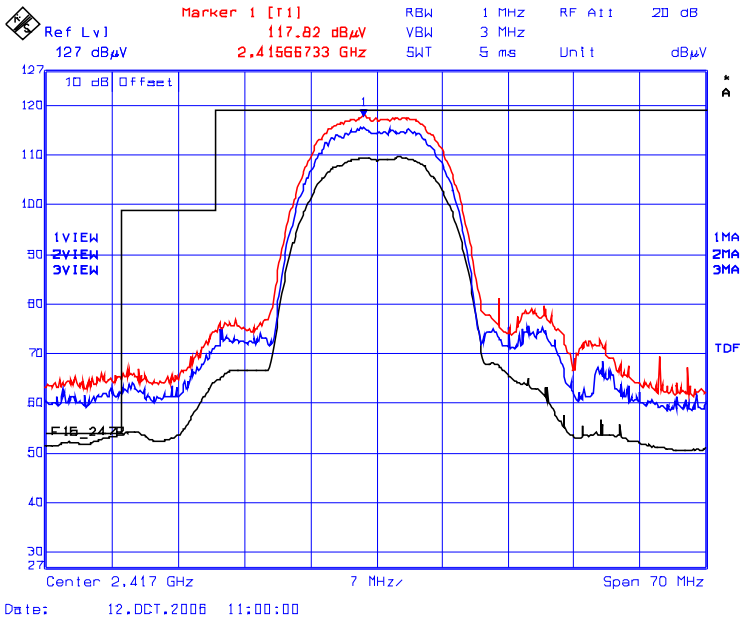
Plot 5.2.4.1.1.2b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz, Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 45.09 dB



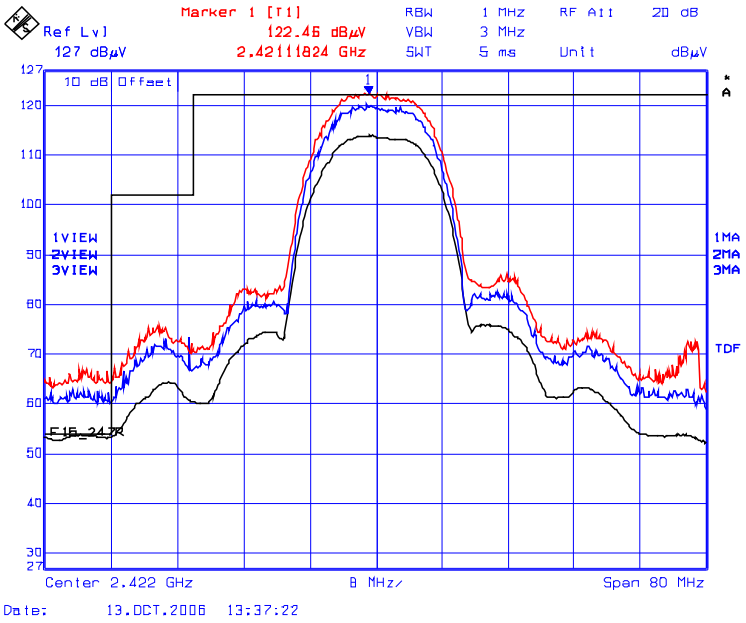
Plot 5.2.4.1.1.3 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



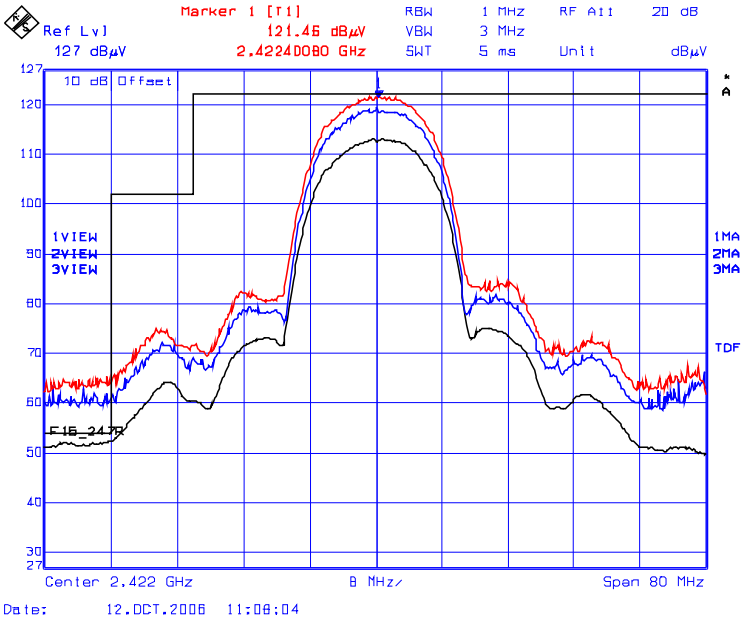
Plot 5.2.4.1.1.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



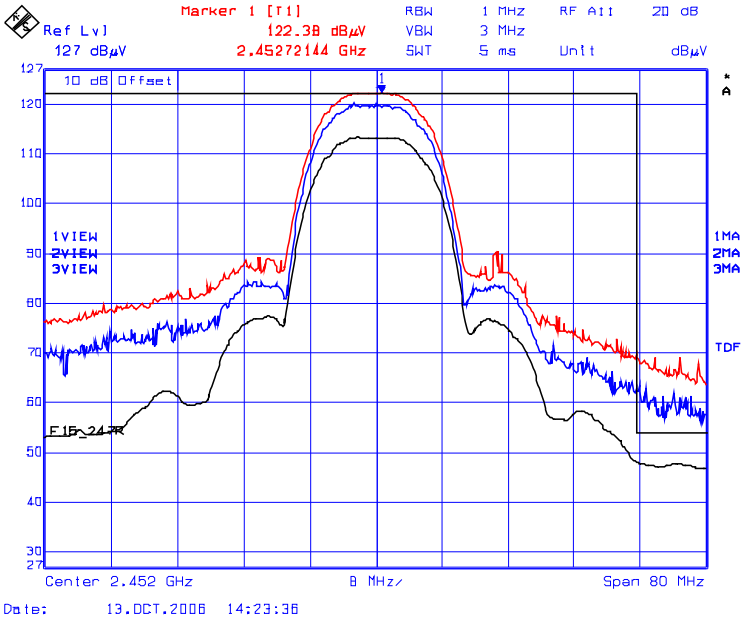
Plot 5.2.4.1.1.5 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



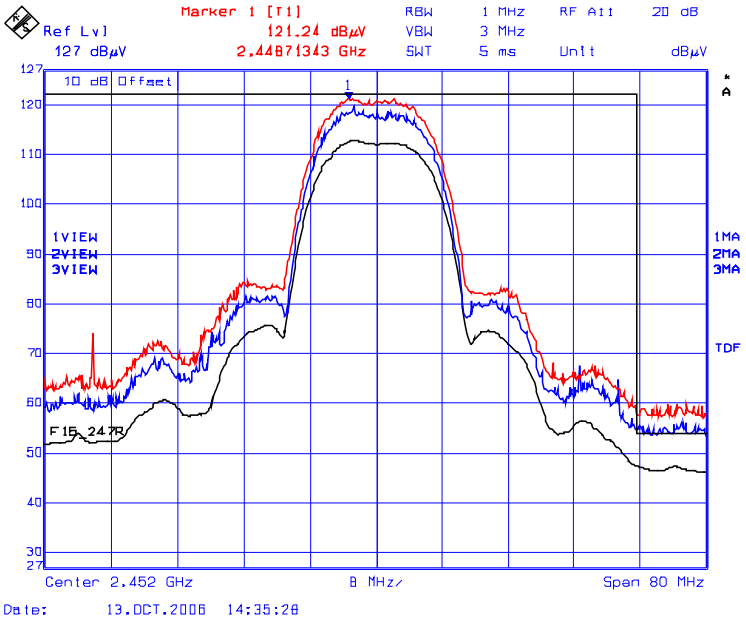
Plot 5.2.4.1.1.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



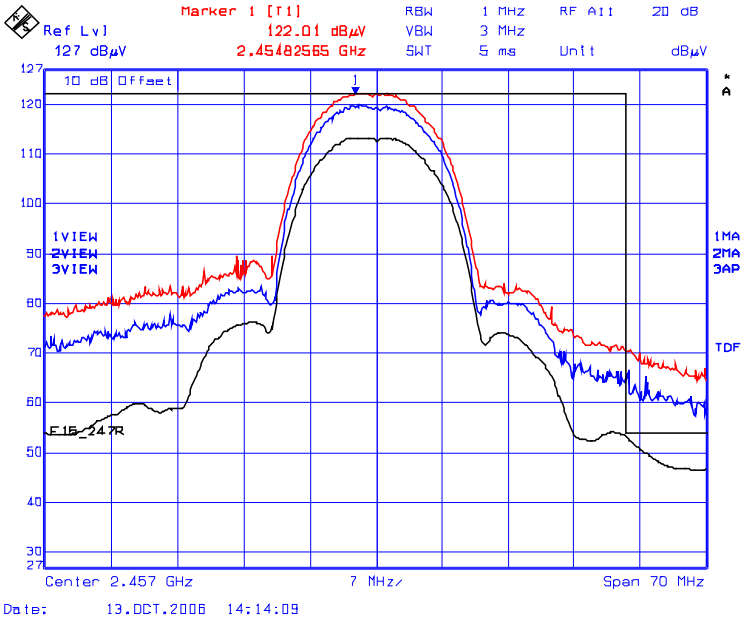
Plot 5.2.4.1.1.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2452 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



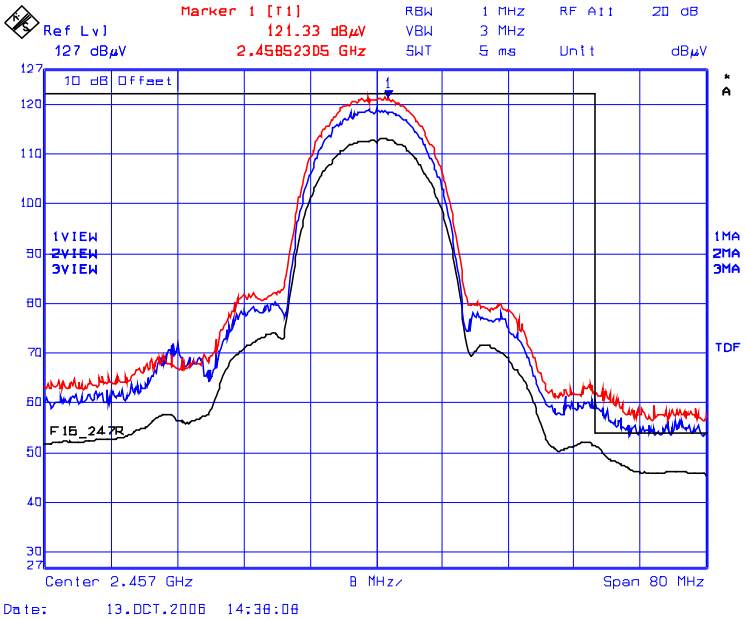
Plot 5.2.4.1.1.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2452 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



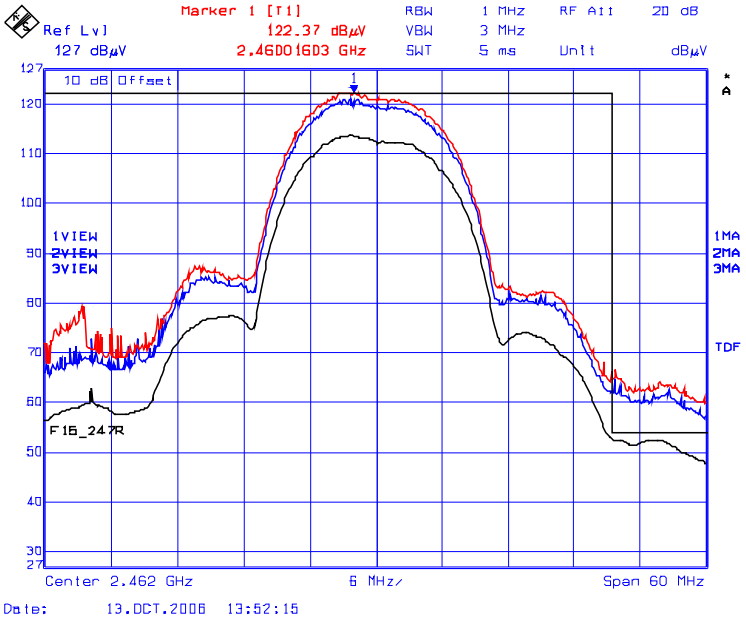
Plot 5.2.4.1.1.9 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2457 MHz; Power Setting 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



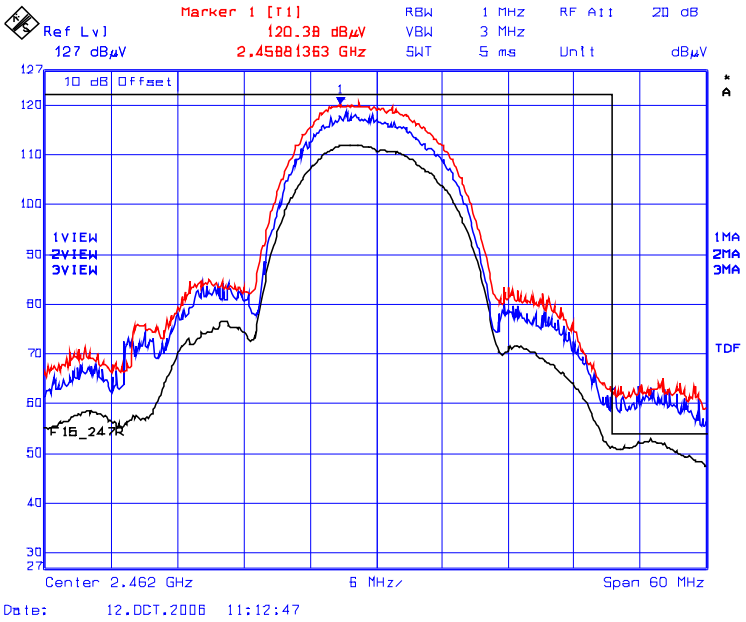
Plot 5.2.4.1.1.10 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2457 MHz; Power Setting 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW= 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW= 10 Hz



Plot 5.2.4.1.1.11 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting 19.5dBm
Trace 1: RBW= 1 MHz, VBW= 3 MHz; Trace 2: RBW= 500 kHz, VBW= 1 MHz; Trace 3: RBW= 1 MHz, VBW= 10 Hz

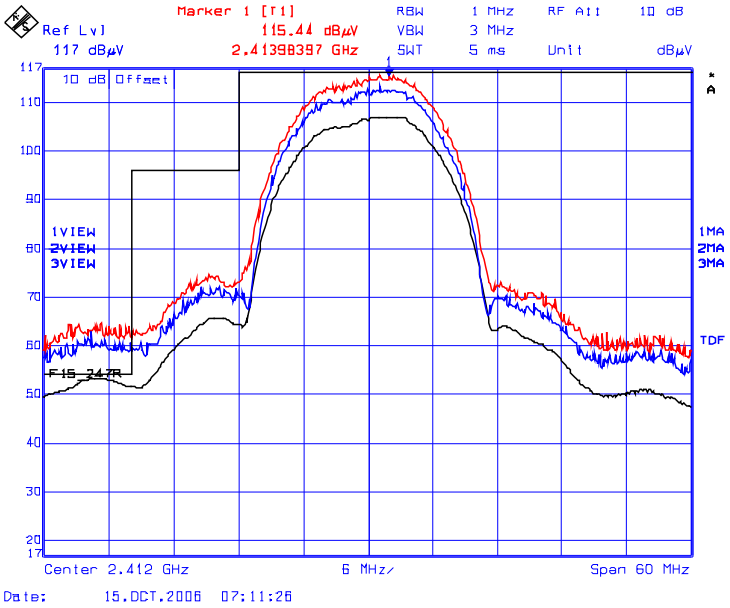


Plot 5.2.4.1.1.12 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

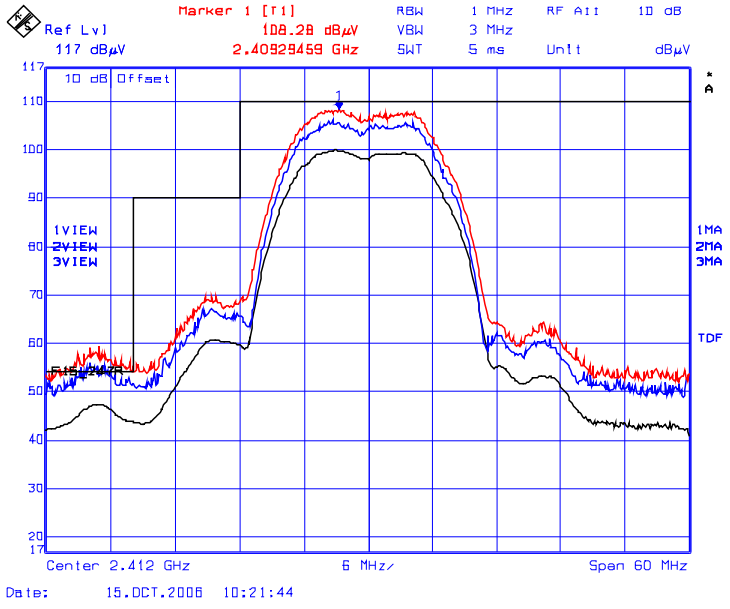


5.2.4.1.2. EUT with Antenna #2 Cushcraft Omni Antenna (Model S24493DS, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Plot 5.2.4.1.2.1 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

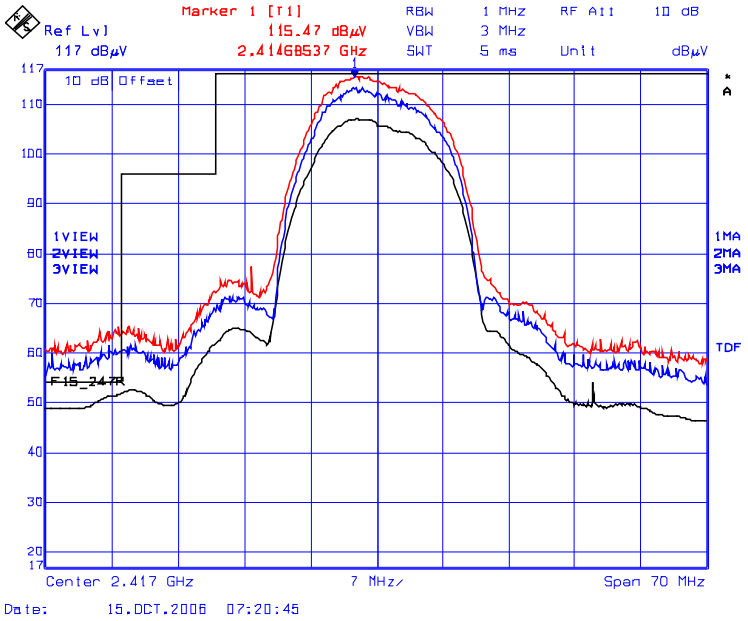


Plot 5.2.4.1.2.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

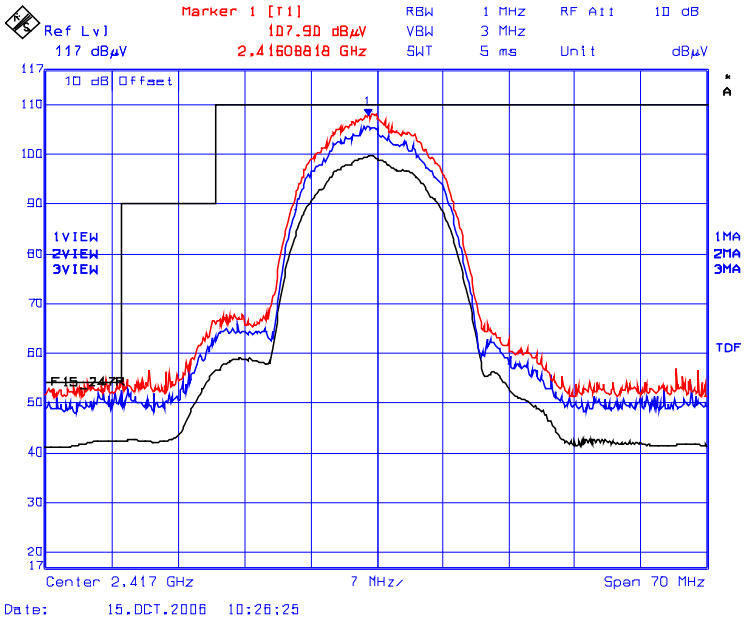


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

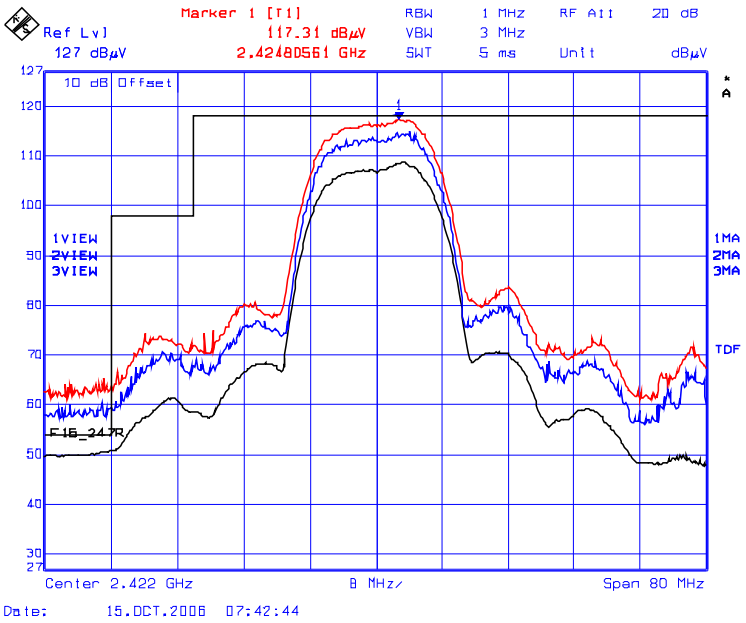
Plot 5.2.4.1.2.3 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



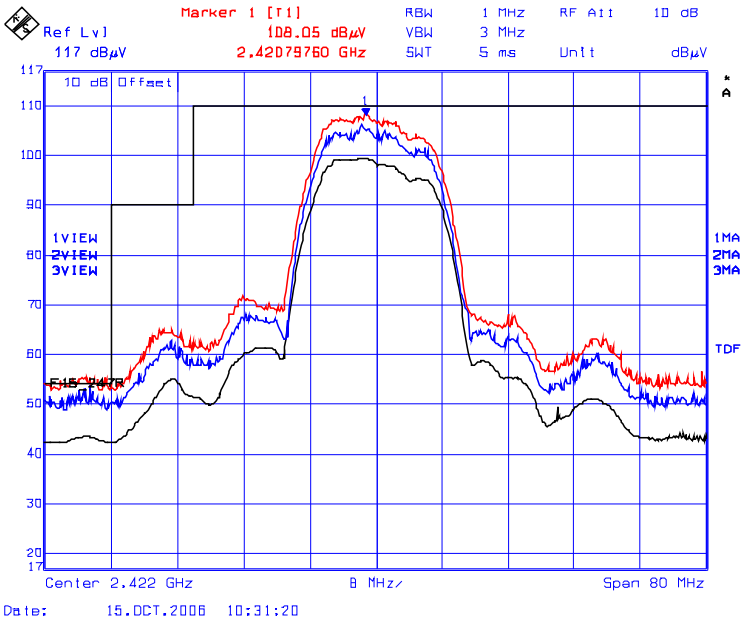
Plot 5.2.4.1.2.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



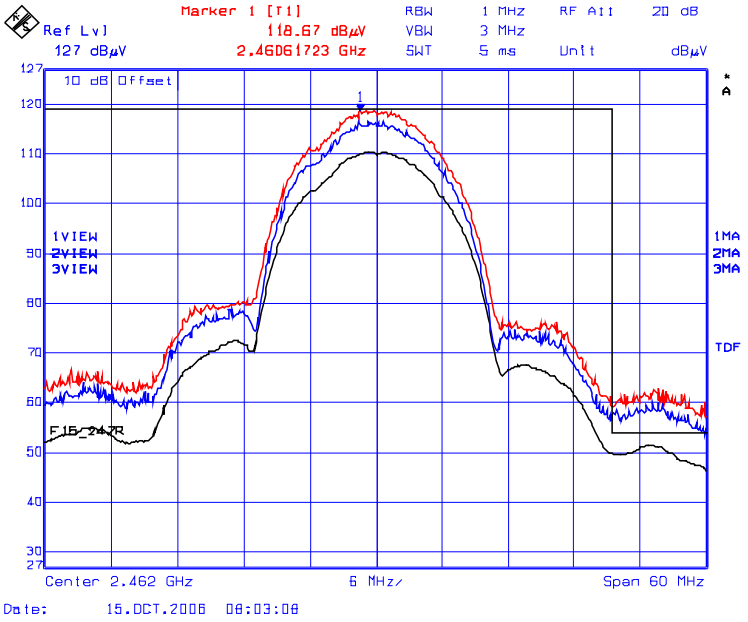
Plot 5.2.4.1.2.5 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



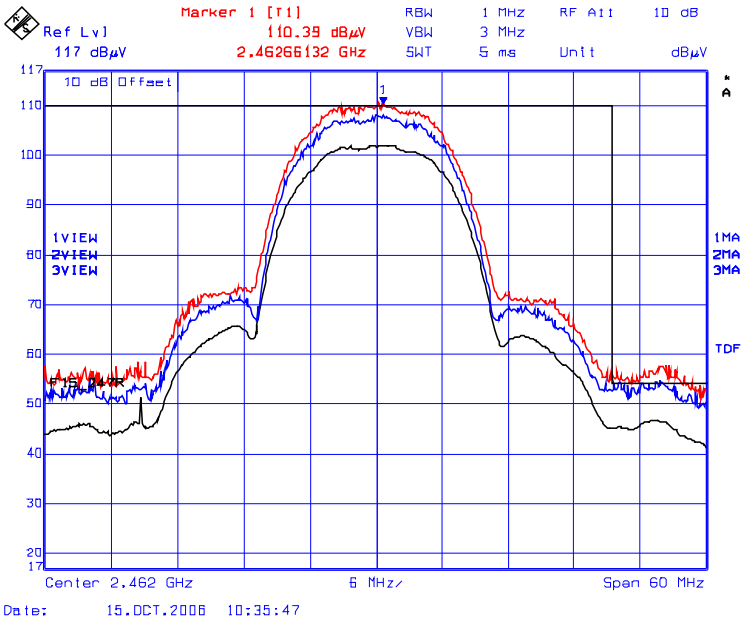
Plot 5.2.4.1.2.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.2.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

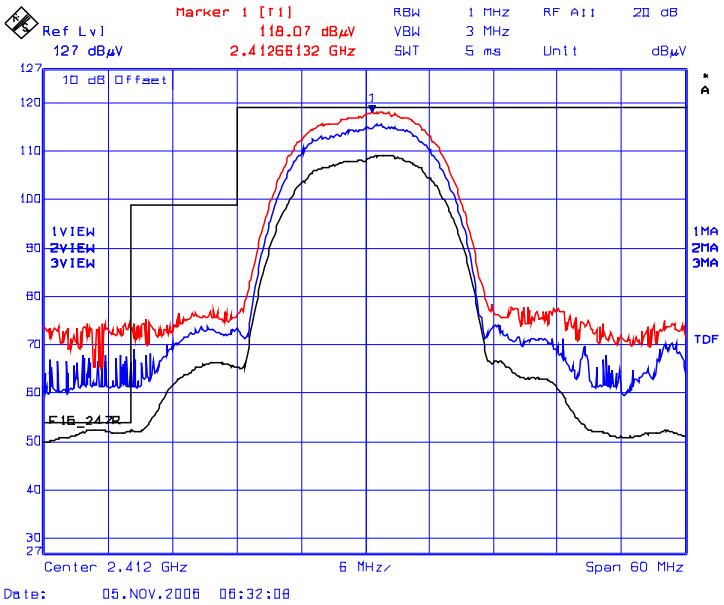


Plot 5.2.4.1.2.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

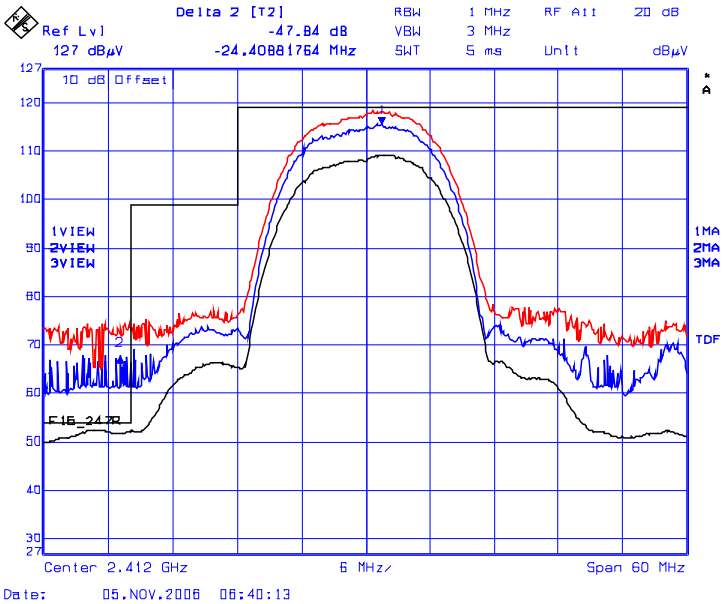


5.2.4.1.3. EUT with Antenna #3 Cushcraft Omni Antenna (Model SL24513P, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Plot 5.2.4.1.3.1a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.07 dBµV/m – 47.84 dB = 70.23 dBµV/m < Limit (74dBµ/m)

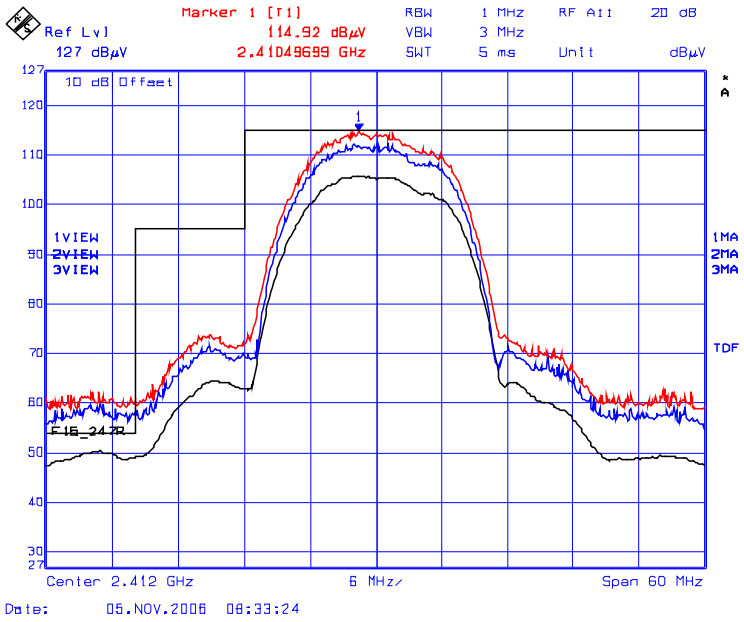


Plot 5.2.4.1.3.1b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW= 1 MHz, VBW= 10 Hz
Delta (Peak to Band-Edge): 47.84 dB

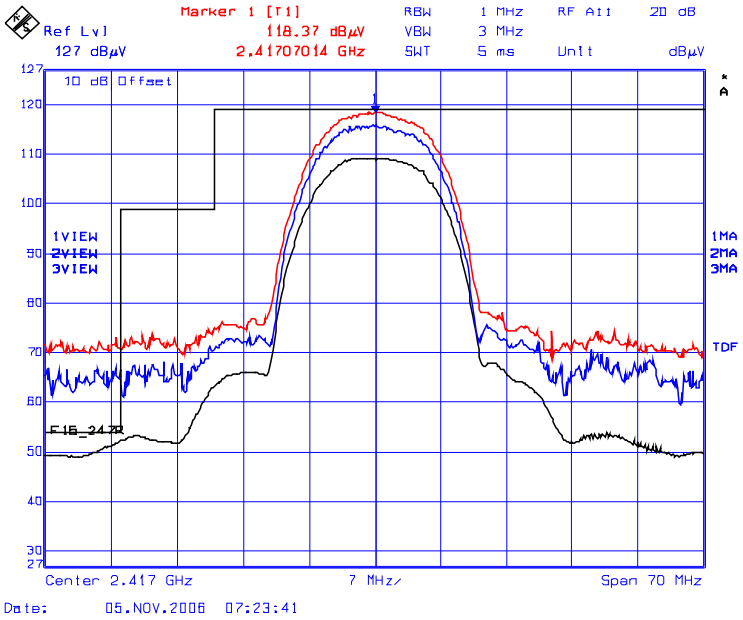


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

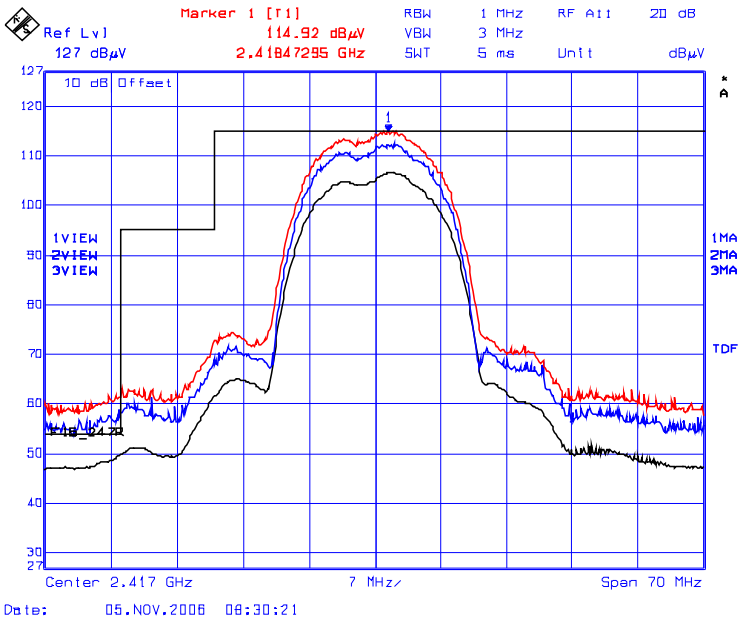
Plot 5.2.4.1.3.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



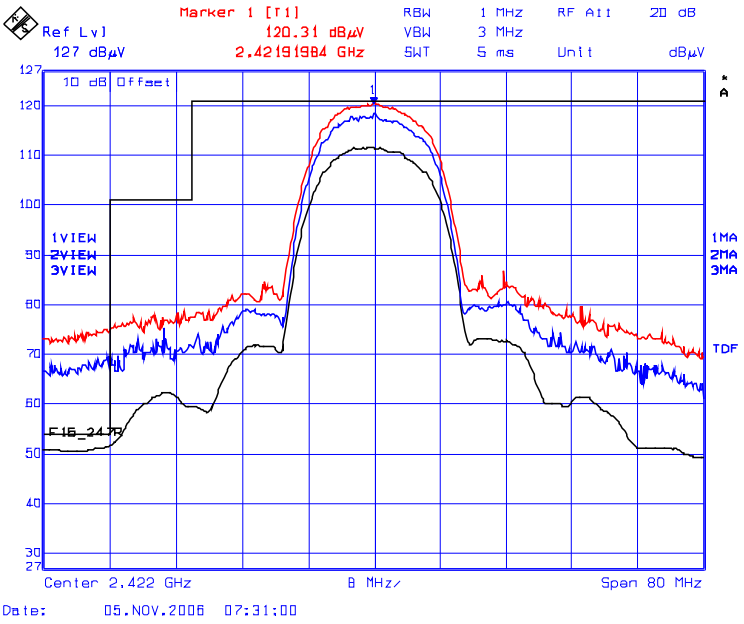
Plot 5.2.4.1.3.3 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



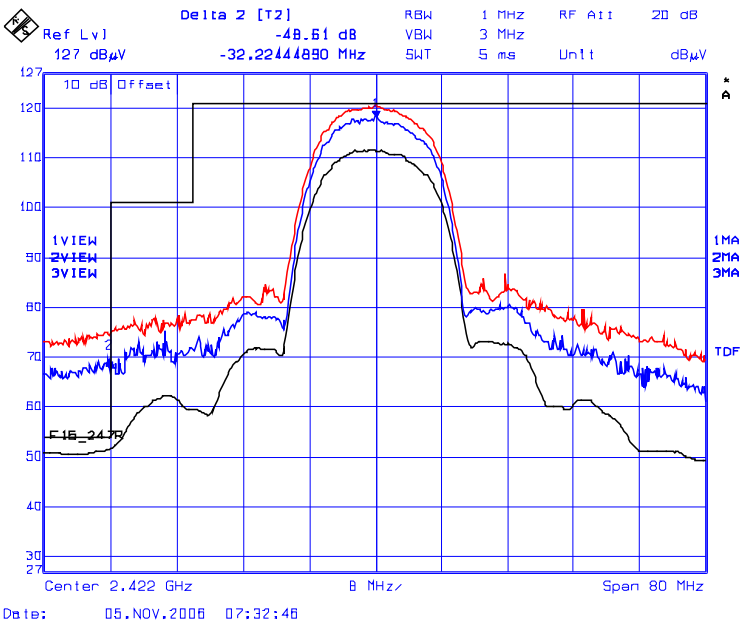
Plot 5.2.4.1.3.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



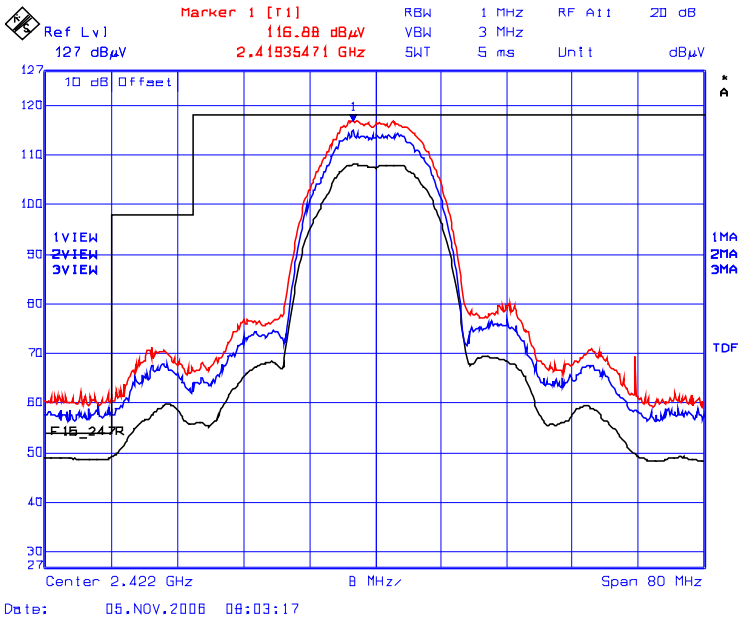
Plot 5.2.4.1.3.5a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 120.31dBµV/m – 48.61 dB = 71.70dBµV/m < Limit (74dBµ/m)



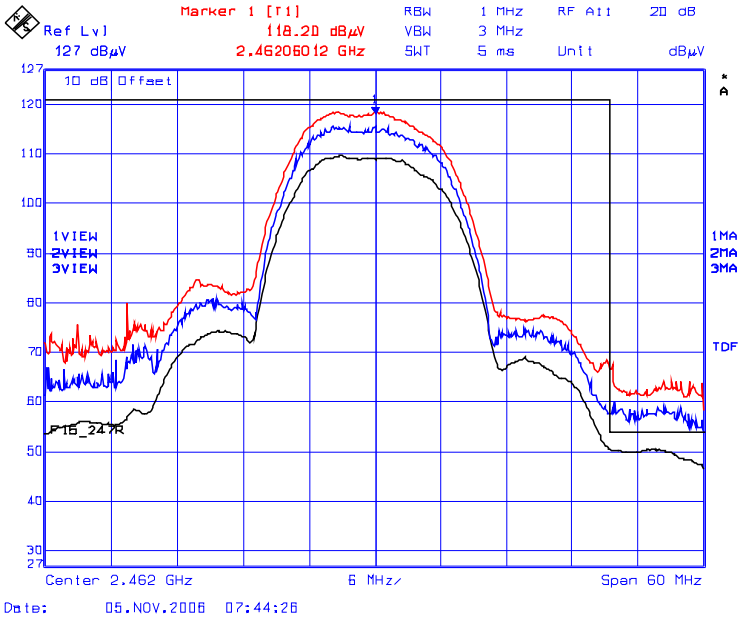
Plot 5.2.4.1.3.5b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 48.61 dB



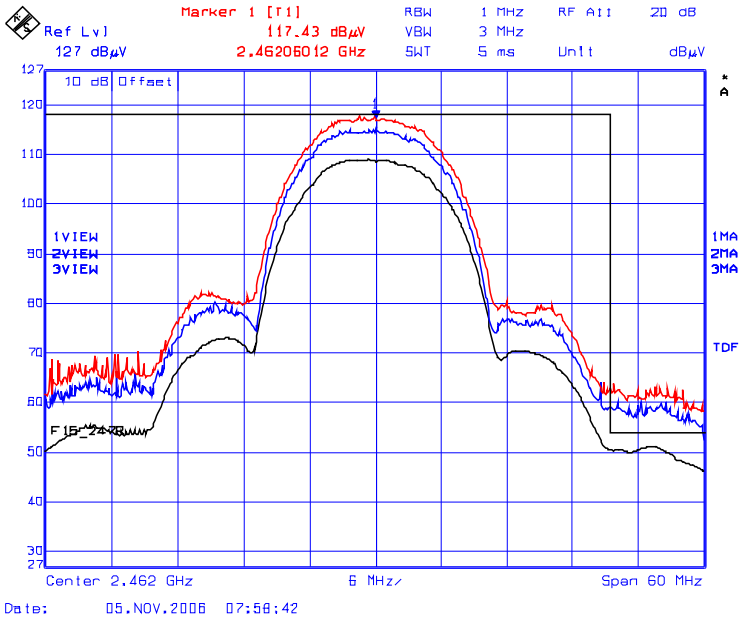
Plot 5.2.4.1.3.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.3.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

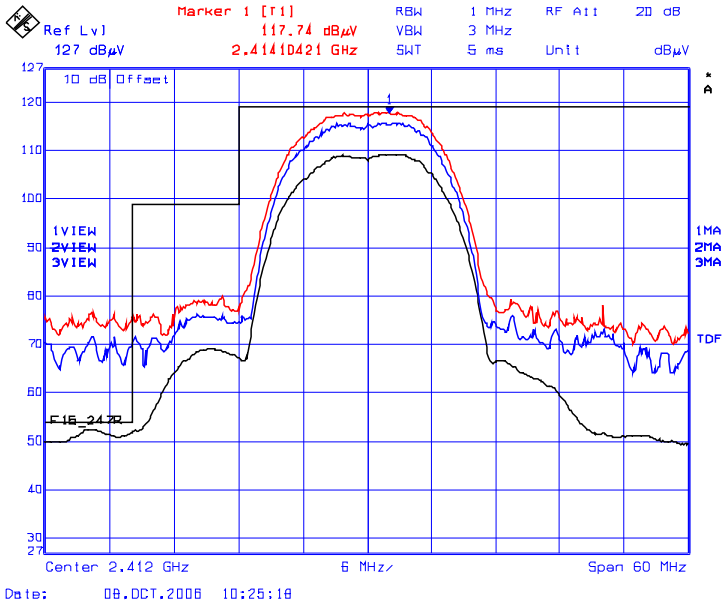


Plot 5.2.4.1.3.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

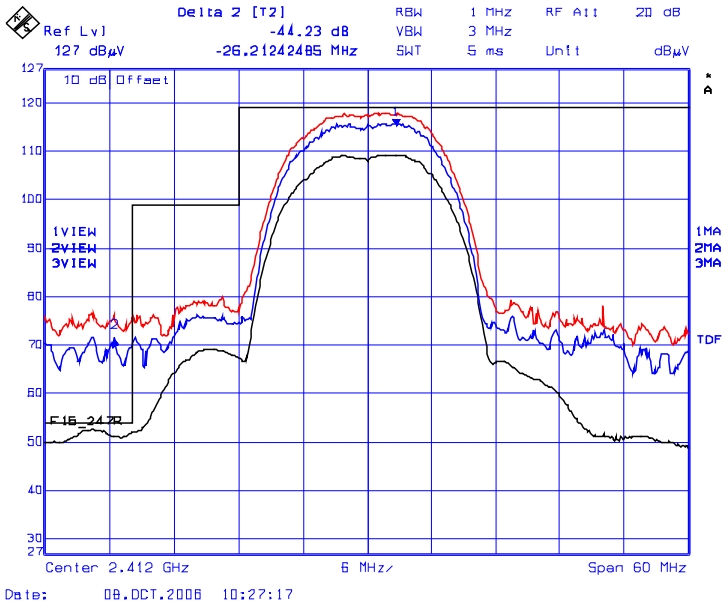


5.2.4.1.4. EUT with Antenna #4 Cushcraft Directional Antenna (Model S24497P, 7 dBi gain), 802.11b Modulation (CCK @ 11 Mbps

Plot 5.2.4.1.4.1a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 117.74 dBµV/m – 44.23 dB = 73.51 dBµV/m < Limit (74 dBµV/m)

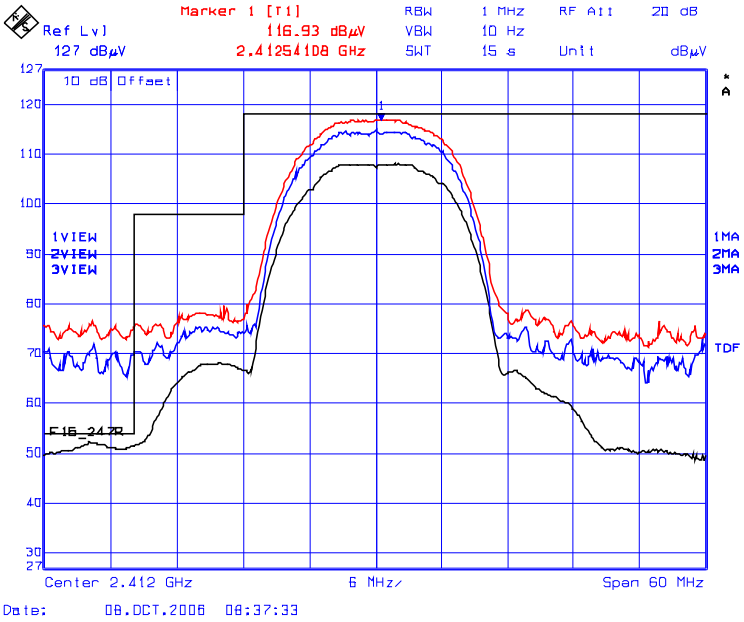


Plot 5.2.4.1.4.1b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 44.23 dB

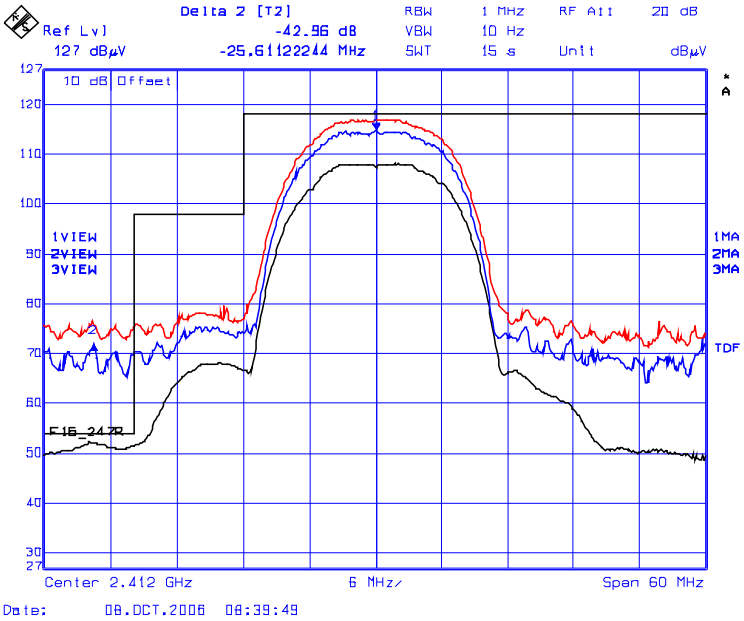


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

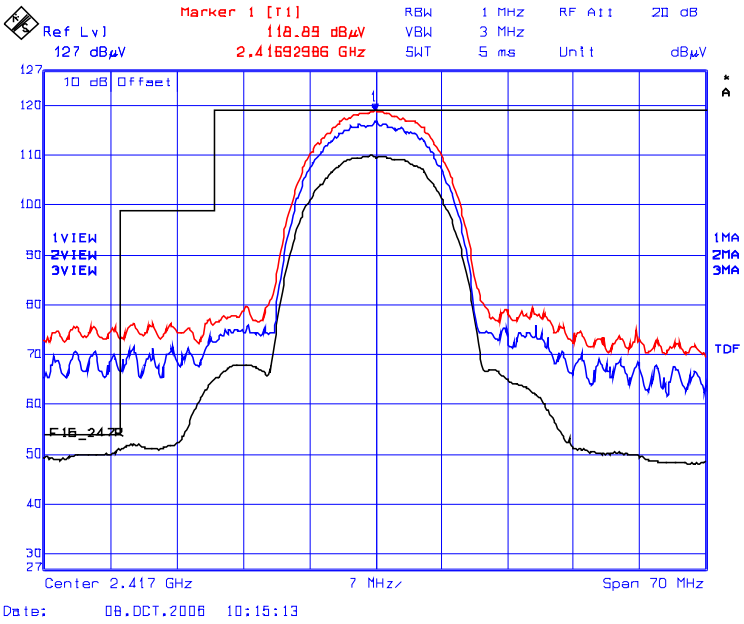
Plot 5.2.4.1.4.2a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 116.93 dBµV/m – 42.96 dB = 73.97 dBµV/m < Limit (74 dBµV/m)



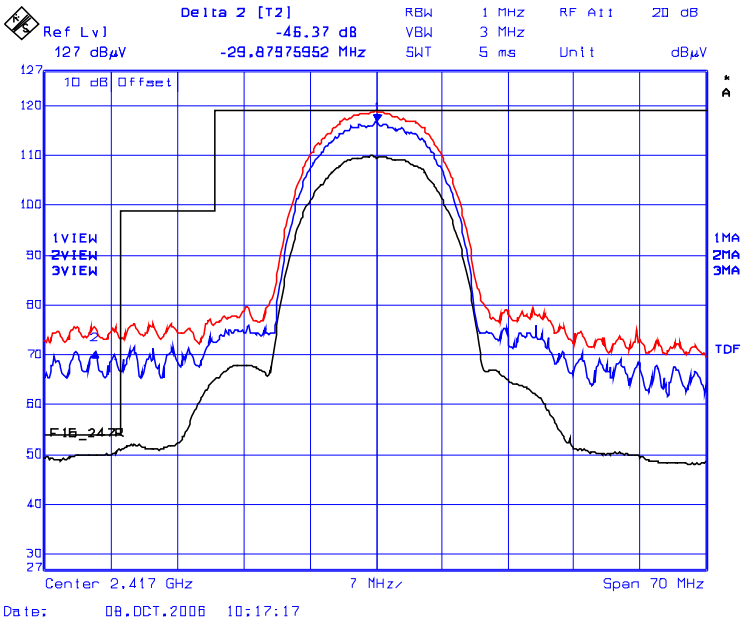
Plot 5.2.4.1.4.2b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 42.96 dB



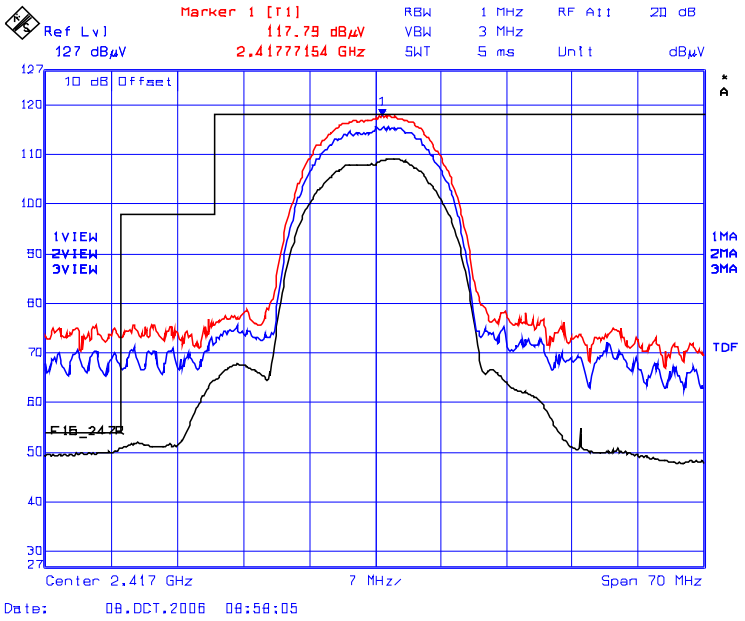
Plot 5.2.4.1.4.3a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.89 dBµV/m – 46.37 dB = 72.52 dBµV/m < Limit (74 dBµV/m)



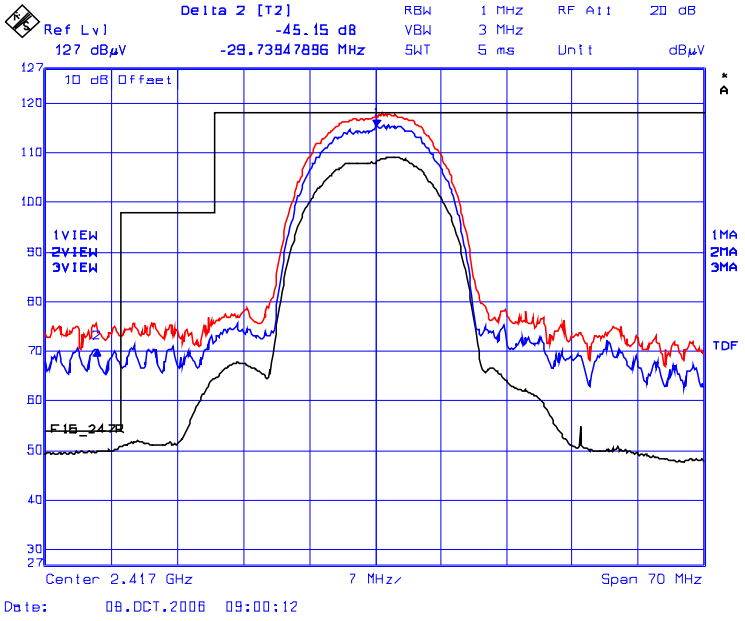
Plot 5.2.4.1.4.3b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 46.37 dB



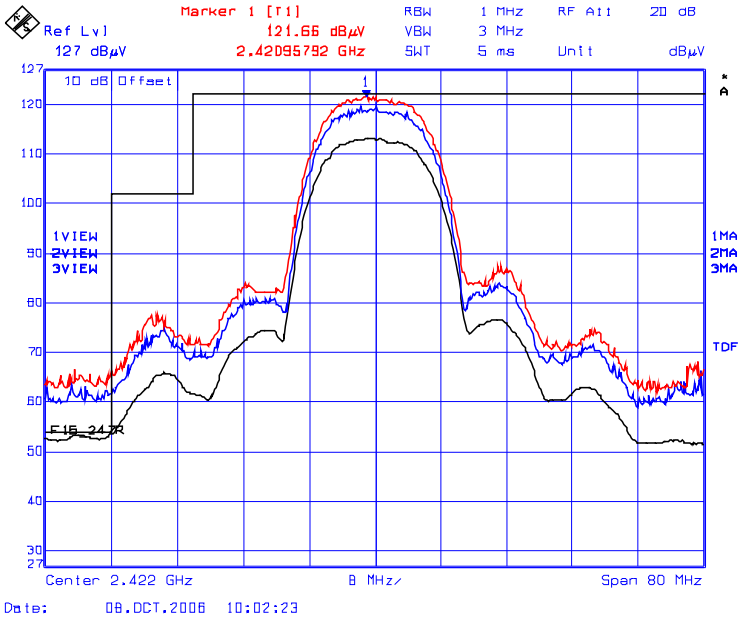
Plot 5.2.4.1.4.4a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz, Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 117.79 dBµV/m – 45.15 dB = 72.64 dBµV/m < Limit (74 dBµV/m)



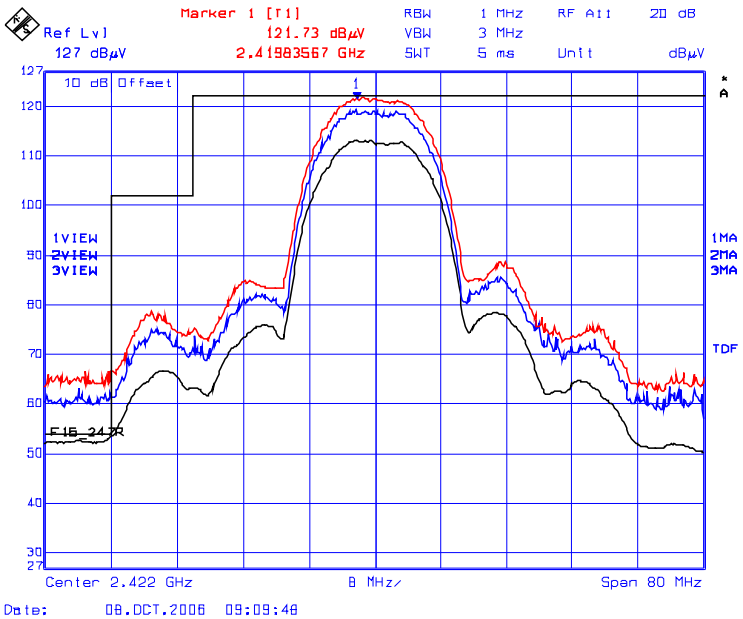
Plot 5.2.4.1.4.4b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz, Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge): 45.15 dB



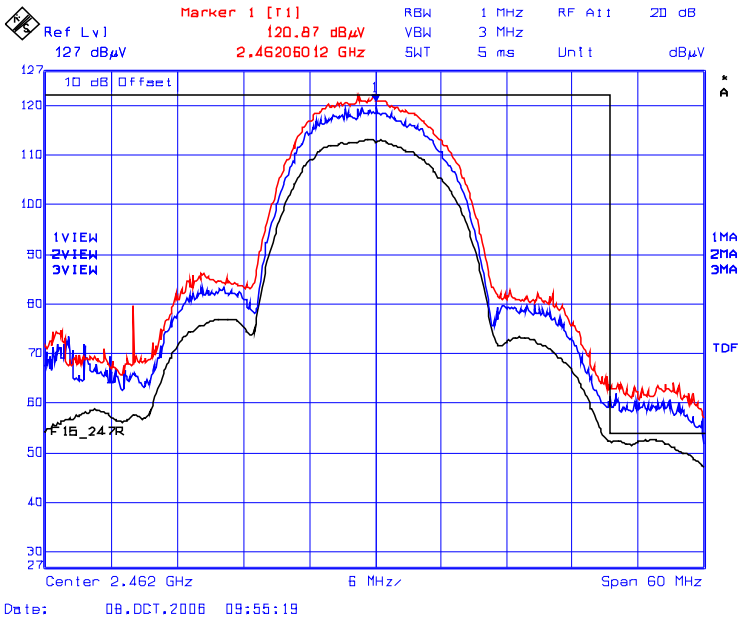
Plot 5.2.4.1.4.5 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



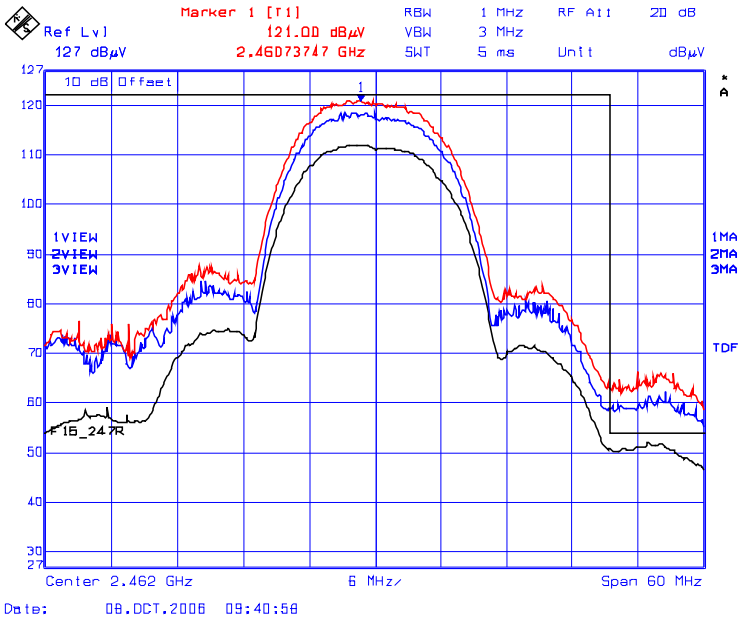
Plot 5.2.4.1.4.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.4.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

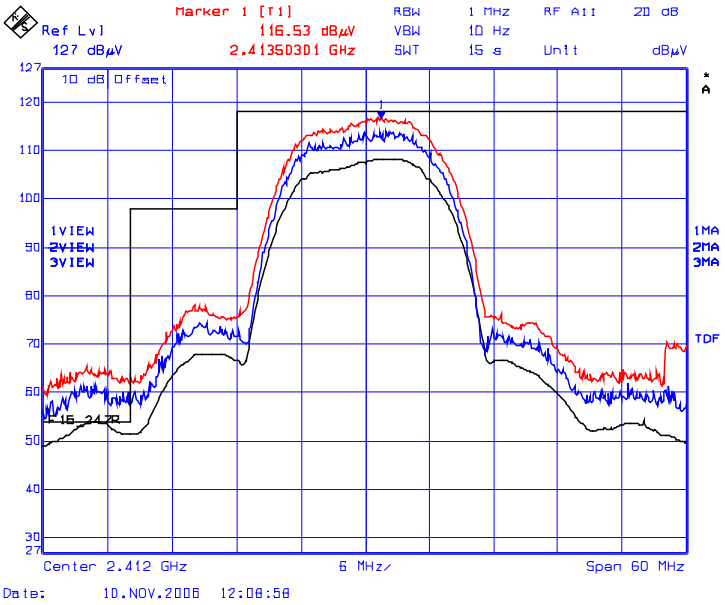


Plot 5.2.4.1.4.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

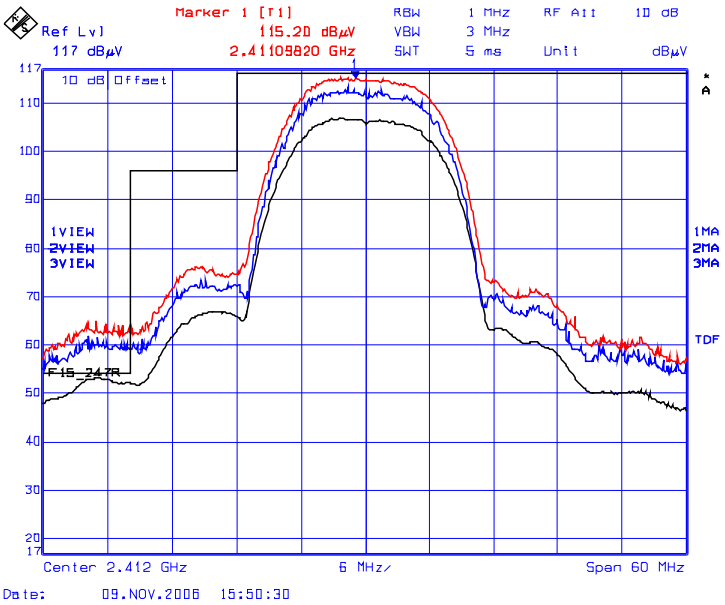


5.2.4.1.5. EUT with Antenna #5 Hyperlink Technologies Omni Antenna (Model HG2458CU, 3 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

Plot 5.2.4.1.5.1 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

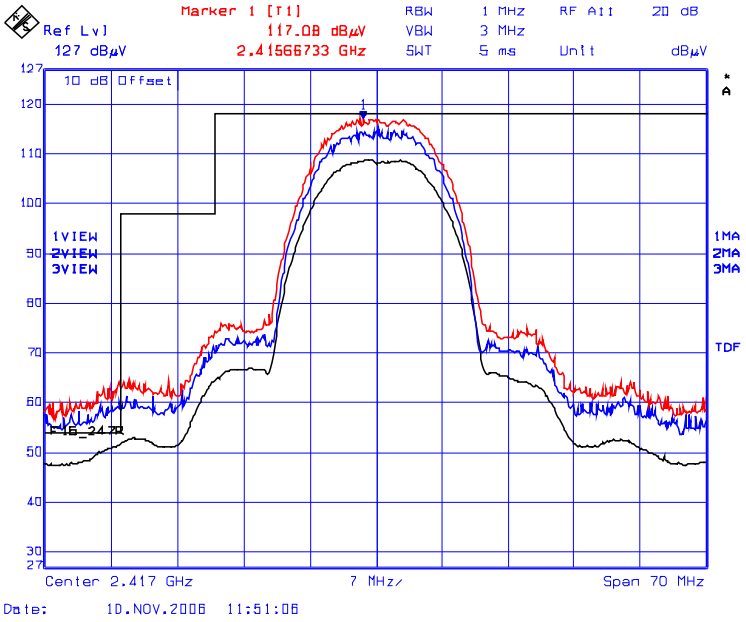


Plot 5.2.4.1.5.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

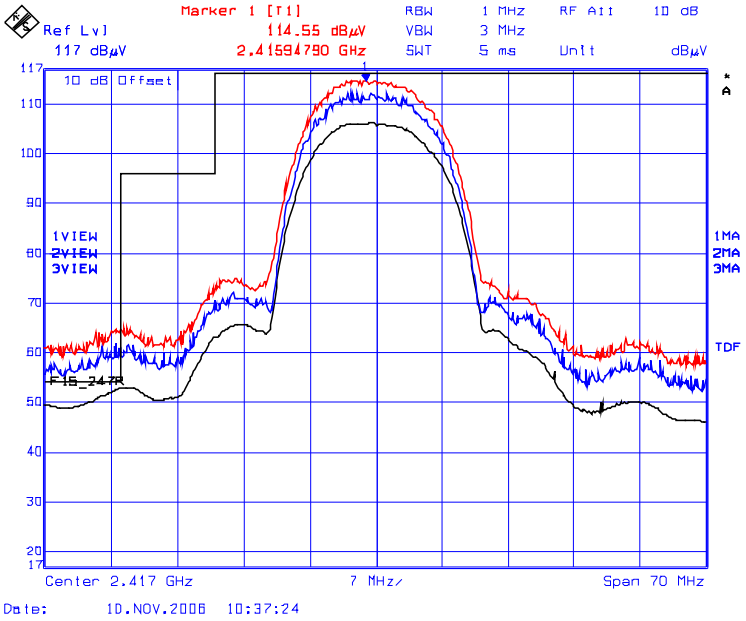


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

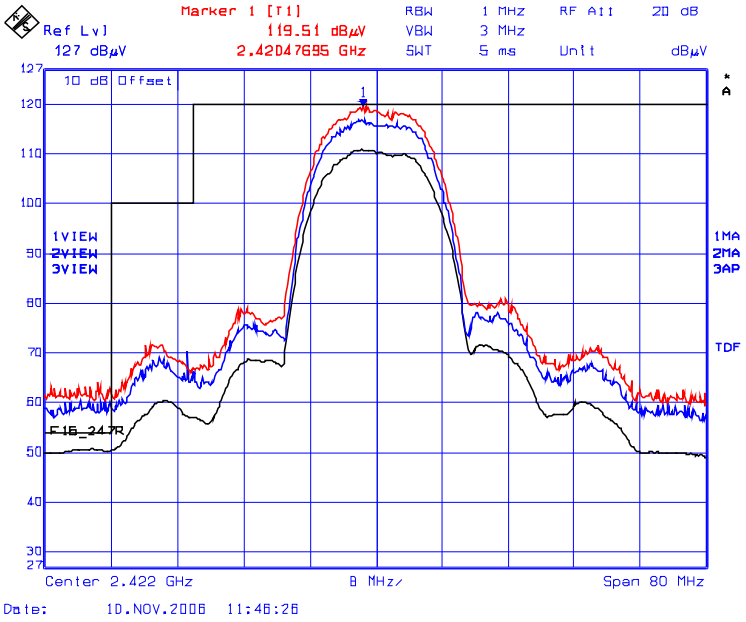
Plot 5.2.4.1.5.3 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



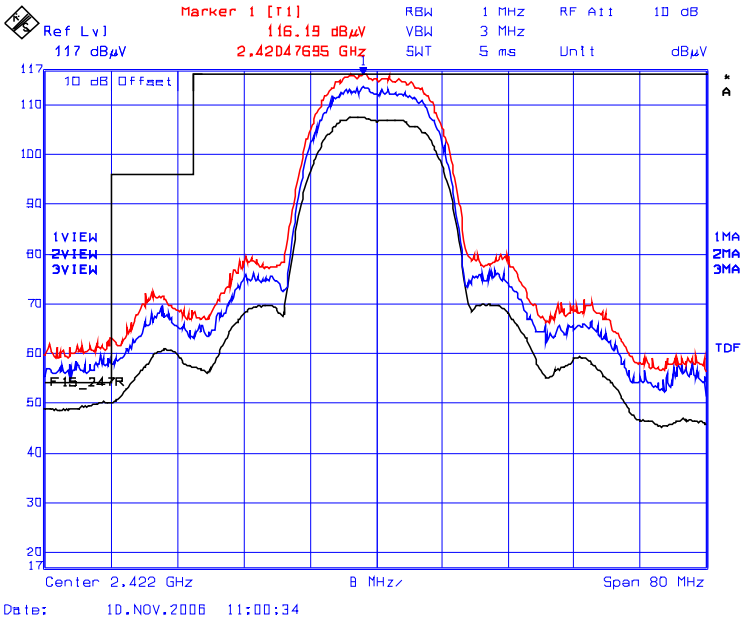
Plot 5.2.4.1.5.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



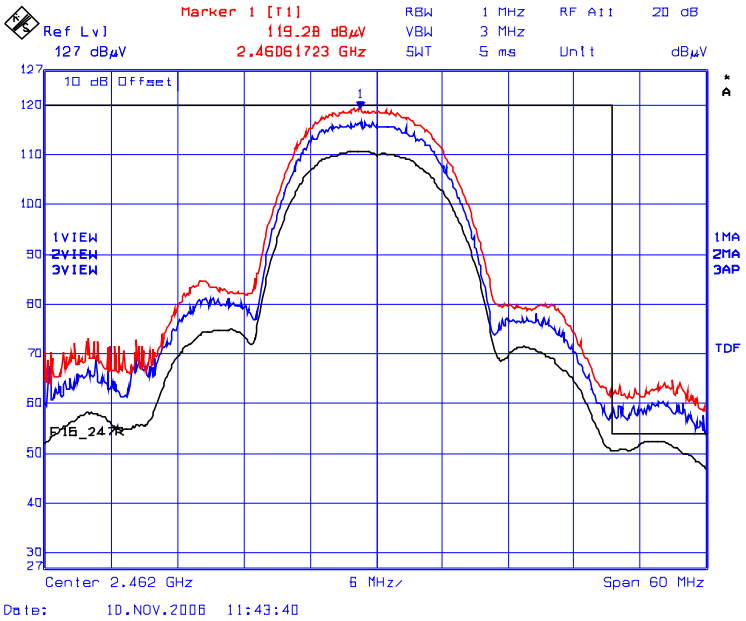
Plot 5.2.4.1.5.5 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



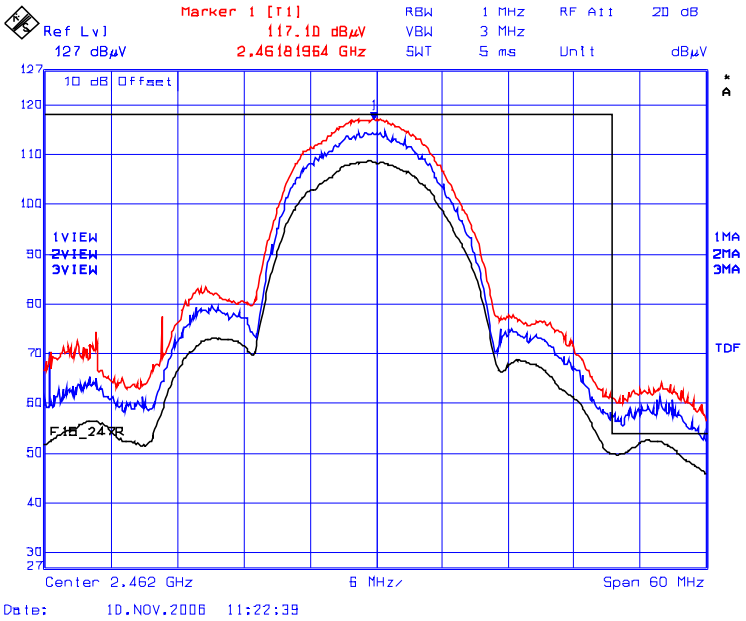
Plot 5.2.4.1.5.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.5.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

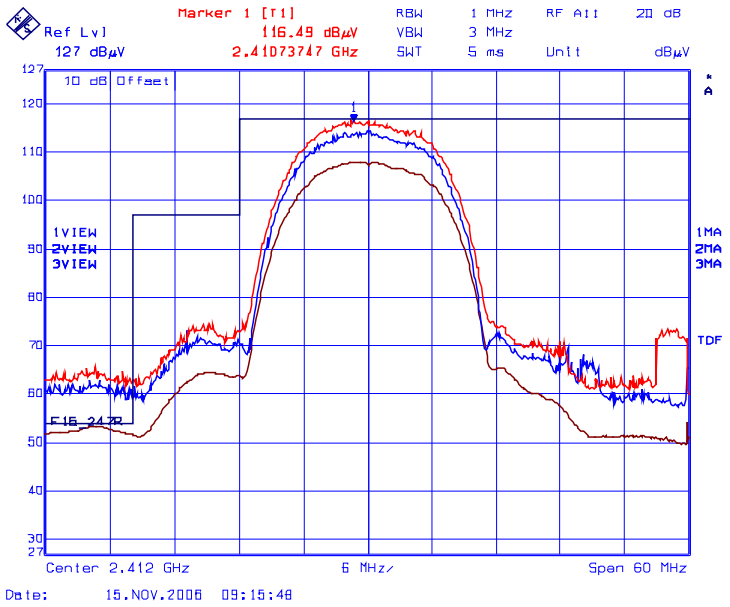


Plot 5.2.4.1.5.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

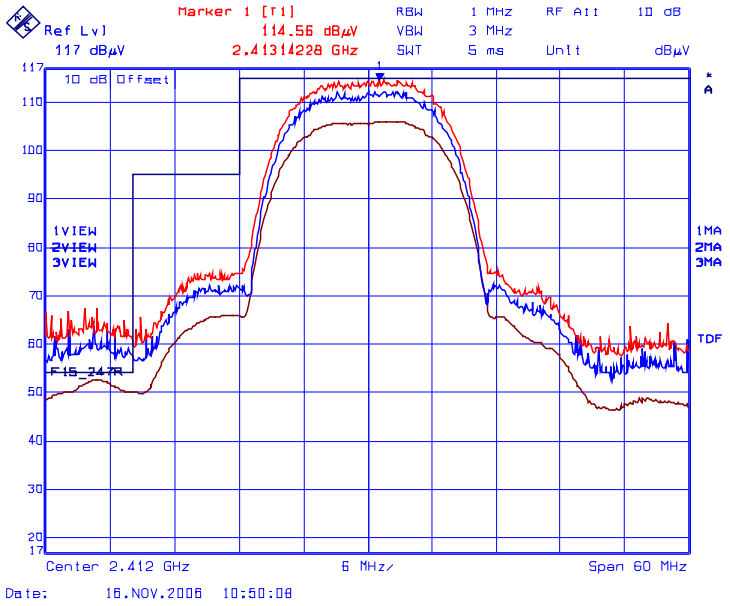


5.2.4.1.6. EUT with Antenna #6 Maxrad Omni, 2 Inputs Antenna (Model MDO24005PTRPMSMA, 5.2 dBi gain), 802.11b Modulation (CCK @ 11 Mbps)

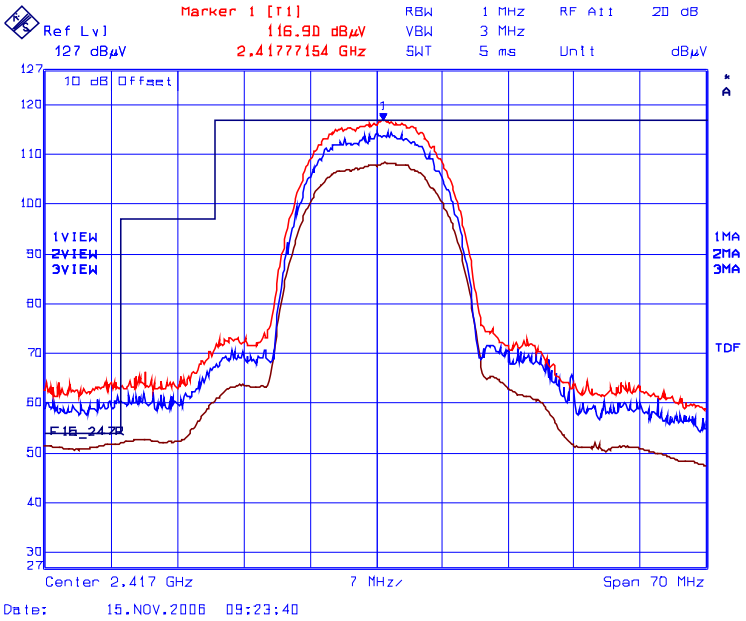
Plot 5.2.4.1.6.1 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



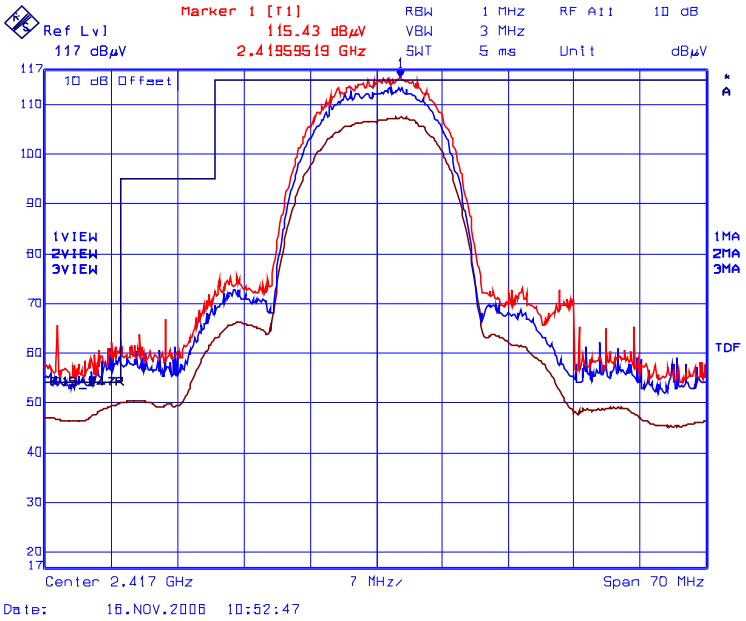
Plot 5.2.4.1.6.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



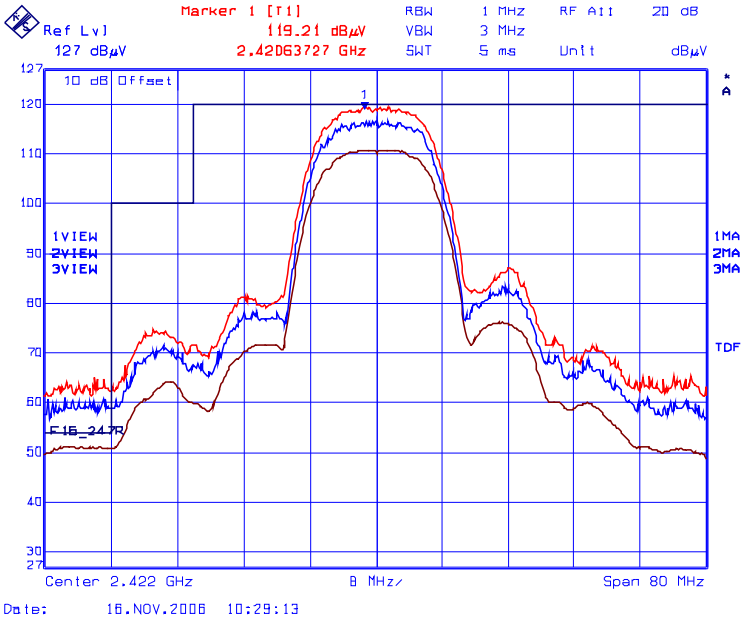
Plot 5.2.4.1.6.3 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW= 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



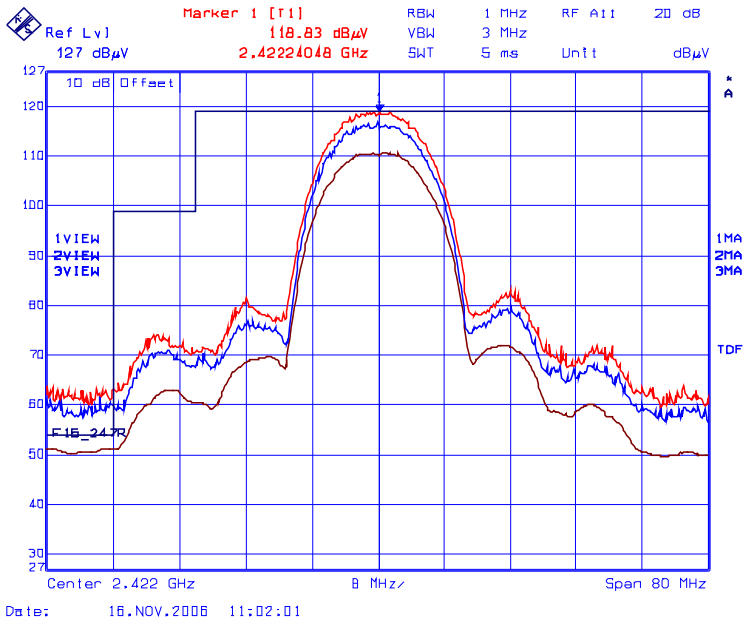
Plot 5.2.4.1.6.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz; Power Setting 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



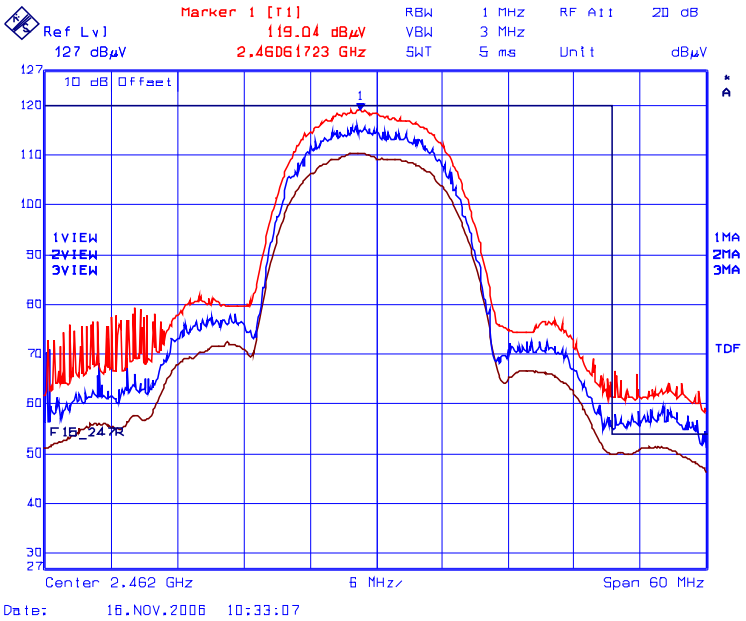
Plot 5.2.4.1.6.5 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz; Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



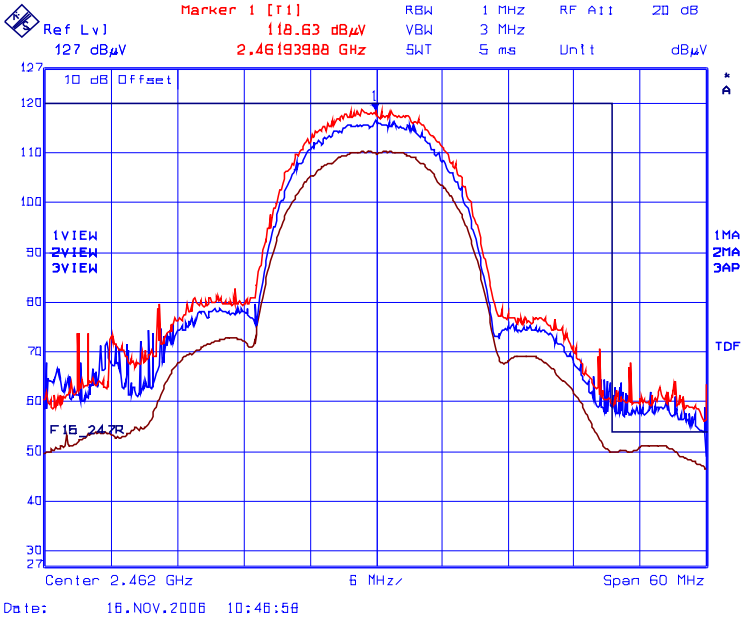
Plot 5.2.4.1.6.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz; Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.6.7 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz; Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

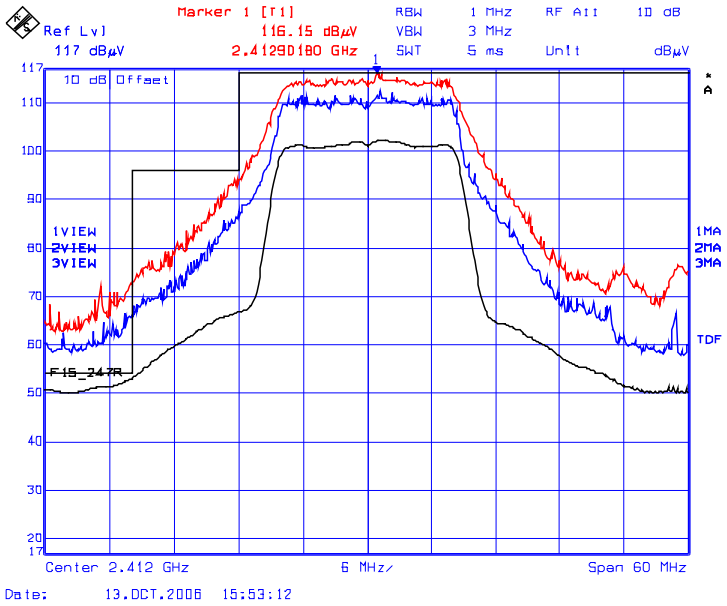


Plot 5.2.4.1.6.8 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz; Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

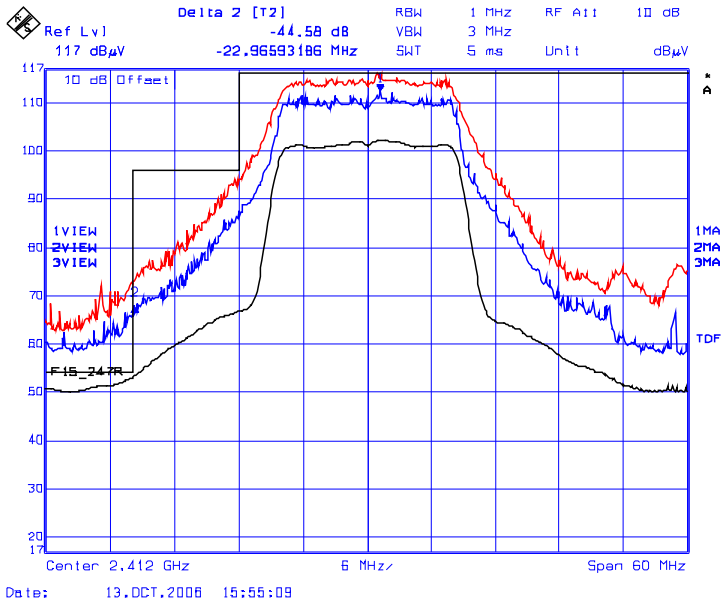


5.2.4.1.7. EUT with Antenna #1 Cushcraft Directional Antenna (Model SR2405135D, 5 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Plot 5.2.4.1.7.1a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz, Power Setting: 10.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 116.15 dBµV/m – 44.58 dB = 71.57 dBµV/m < Limit (74dBµV/m)

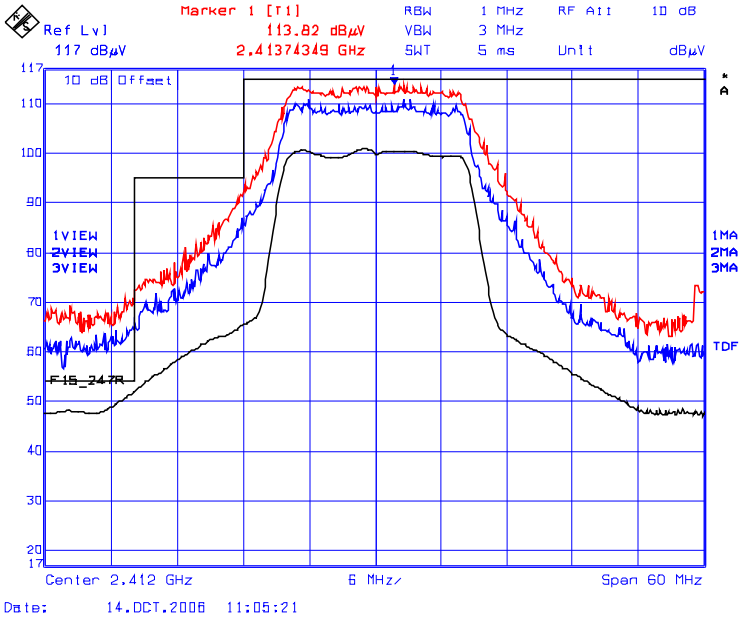


Plot 5.2.4.1.7.1b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 44.58 dB

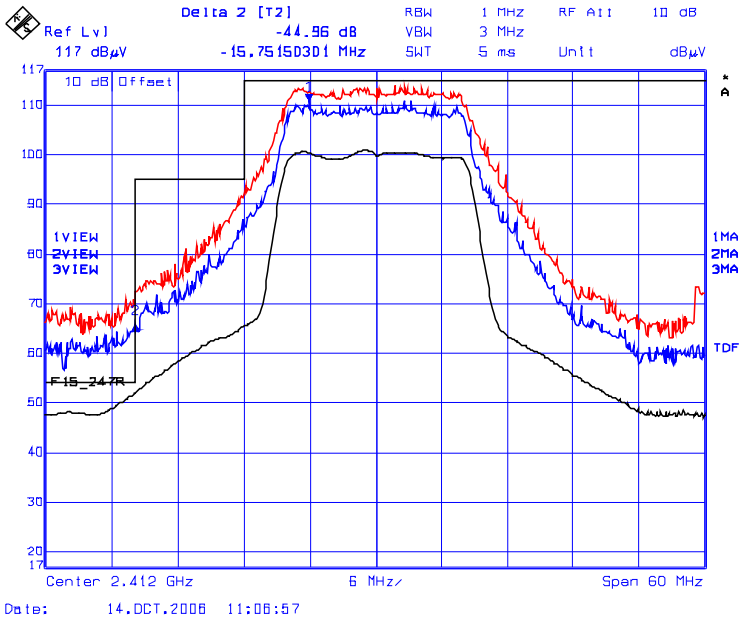


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

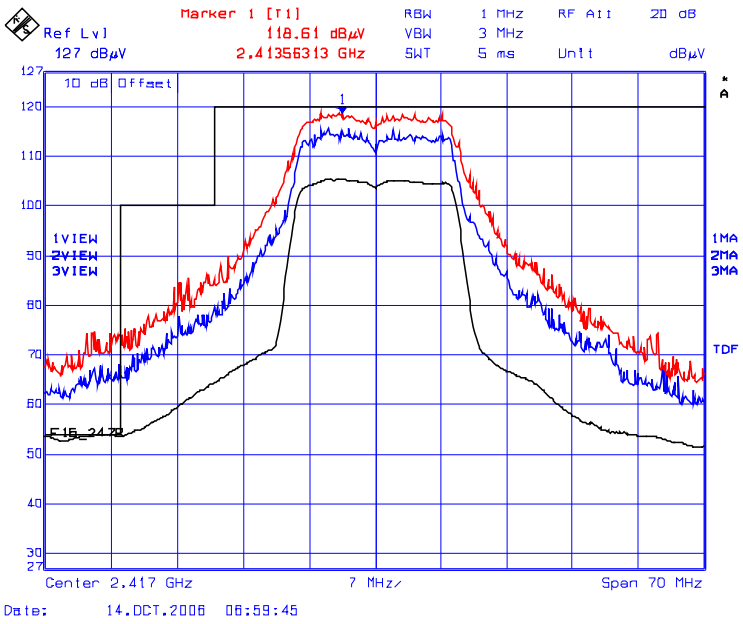
Plot 5.2.4.1.7.2a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz, Power Setting: 10.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 113.82 dBµV/m – 44.96 dB = 68.86 dBµV/m < Limit (74dBµ/m)



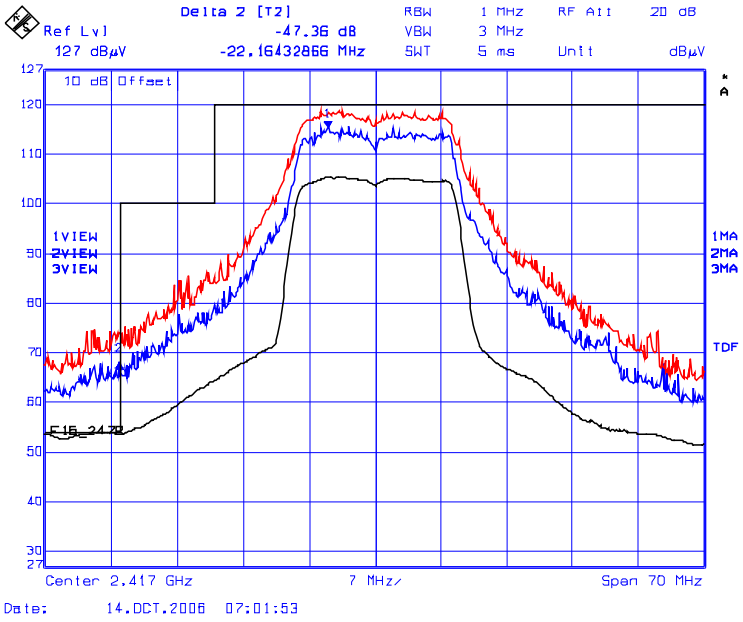
Plot 5.2.4.1.7.2b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 44.96 dB



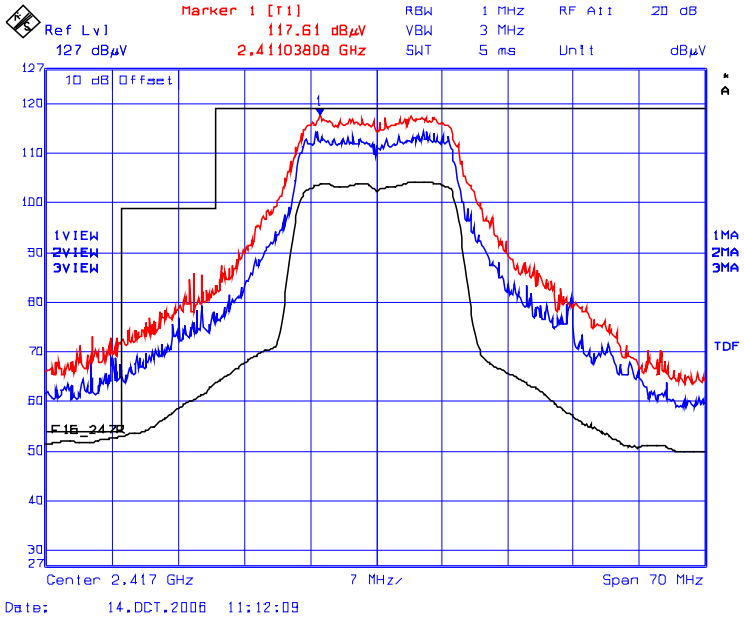
Plot 5.2.4.1.7.3a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz, Power Setting: 14.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.61 dBµV/m – 47.36 dB = 71.254 dBµV/m < Limit (74dBµV/m), Average 53.95dBµV/m



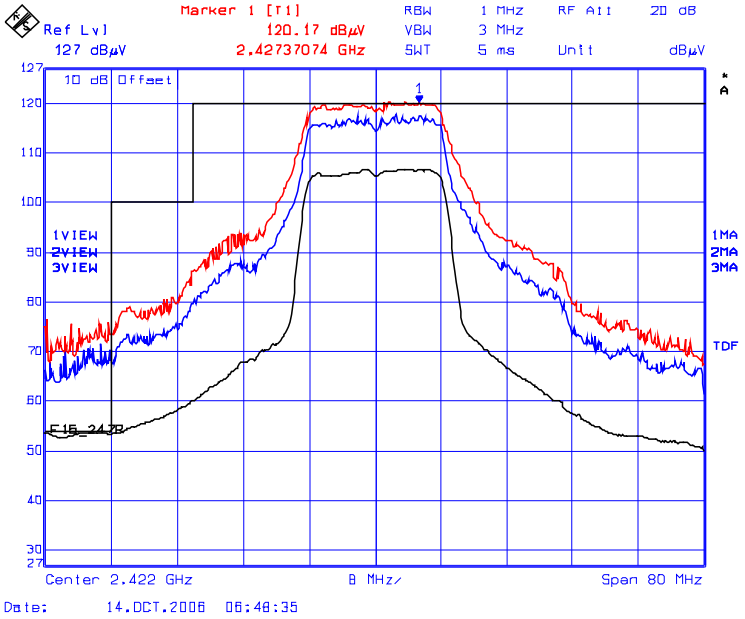
Plot 5.2.4.1.7.3b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.36 dB



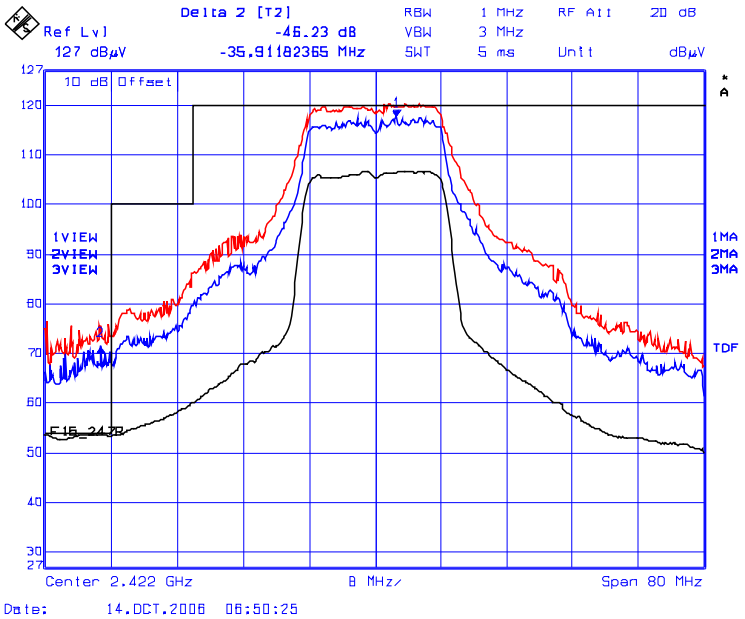
Plot 5.2.4.1.7.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz, Power Setting: 14.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



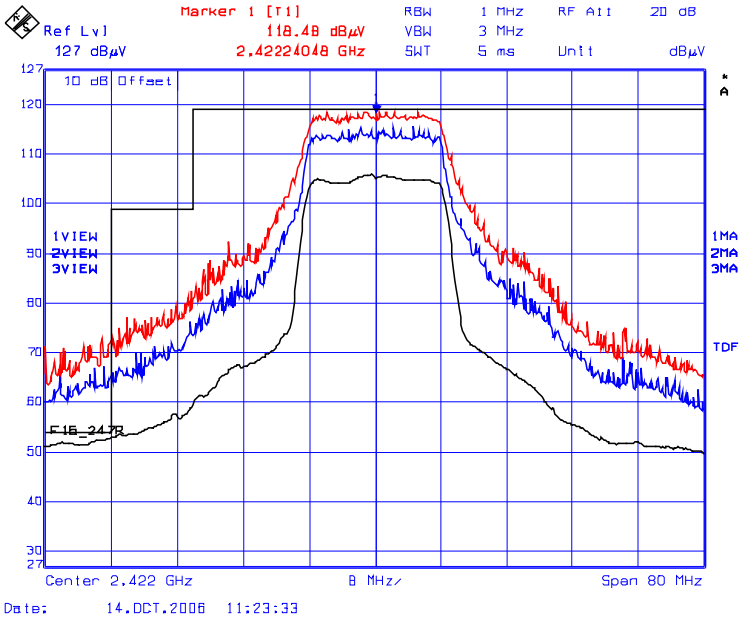
Plot 5.2.4.1.7.5a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 120.17dBµV/m – 46.23 dB = 73.94dBµV/m < Limit (74 dBµV/m), Average 53.68dBµV/m



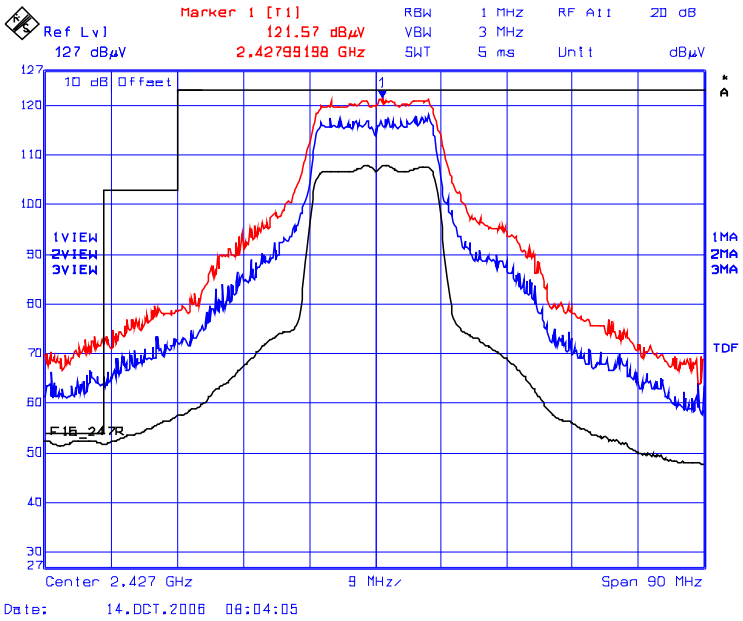
Plot 5.2.4.1.7.5b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 46.23 dB



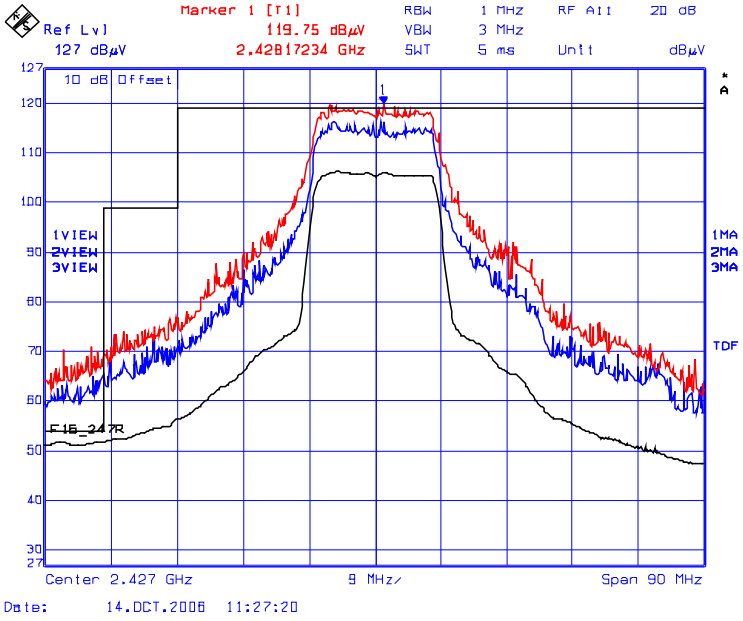
Plot 5.2.4.1.7.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



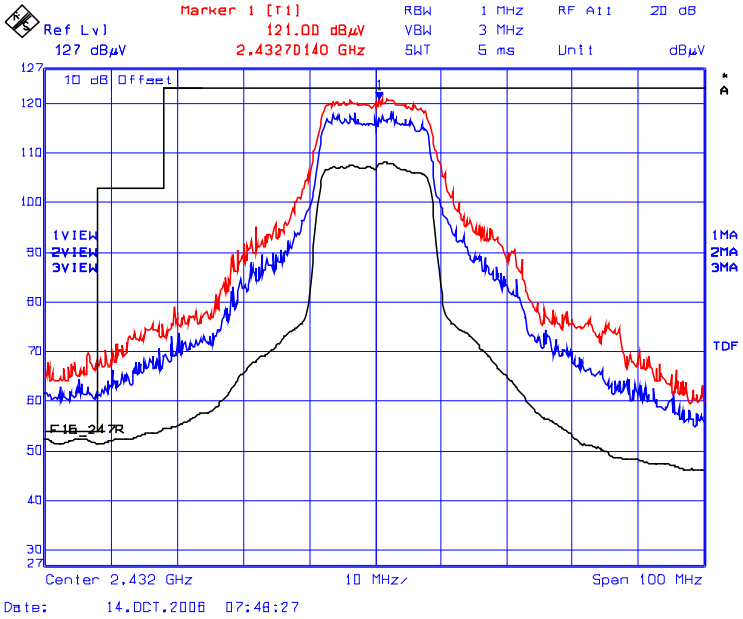
Plot 5.2.4.1.7.7 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2427 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



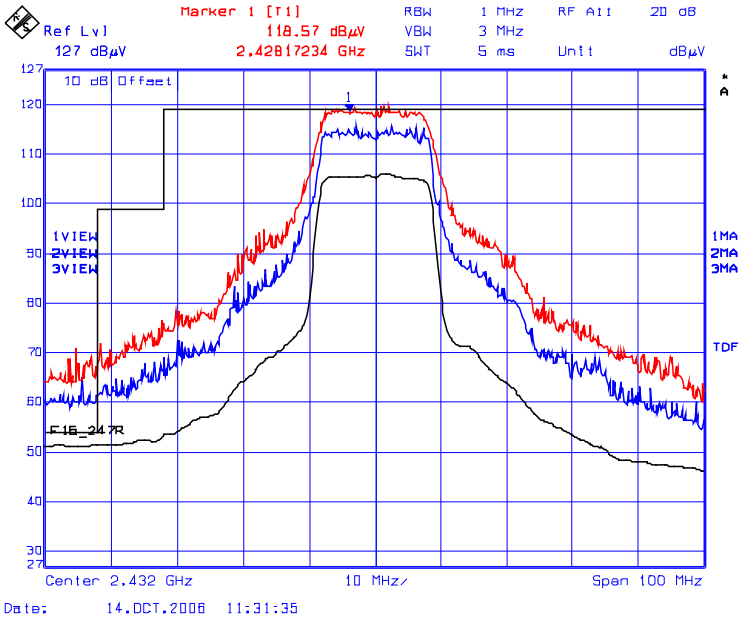
Plot 5.2.4.1.7.8 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2427 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



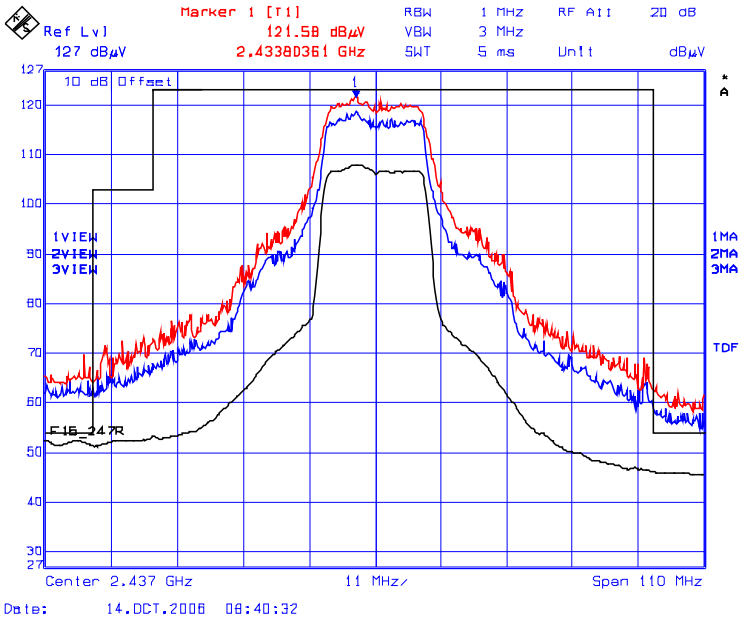
Plot 5.2.4.1.7.9 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2432 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



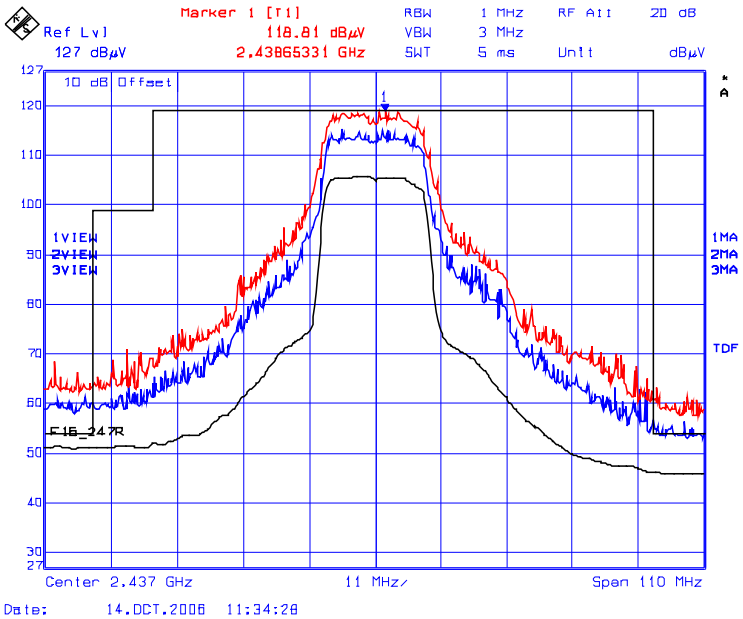
Plot 5.2.4.1.7.10 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2432 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



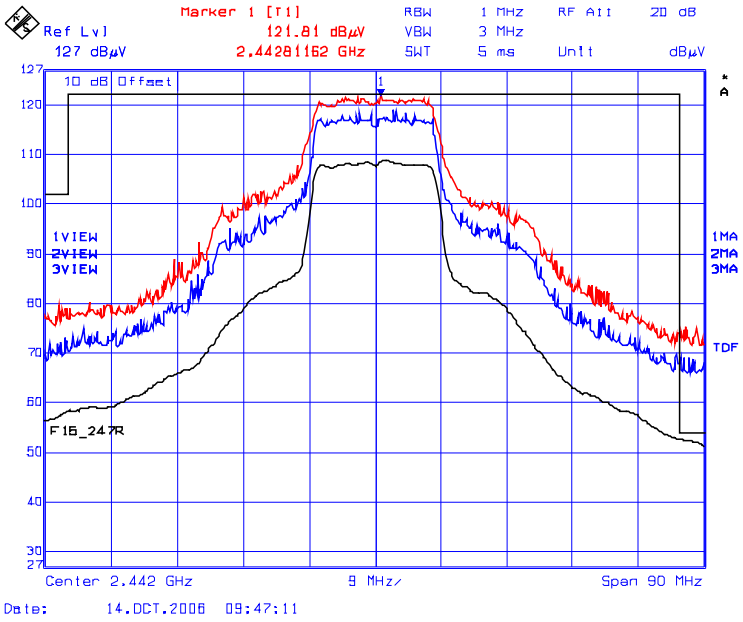
Plot 5.2.4.1.7.11 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2437 MHz, Power Setting: 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



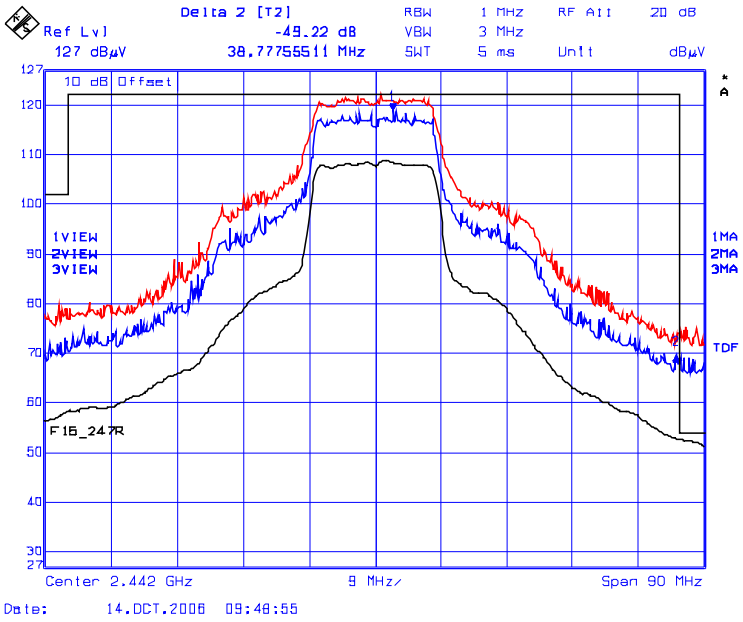
Plot 5.2.4.1.7.12 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2437 MHz, Power Setting: 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



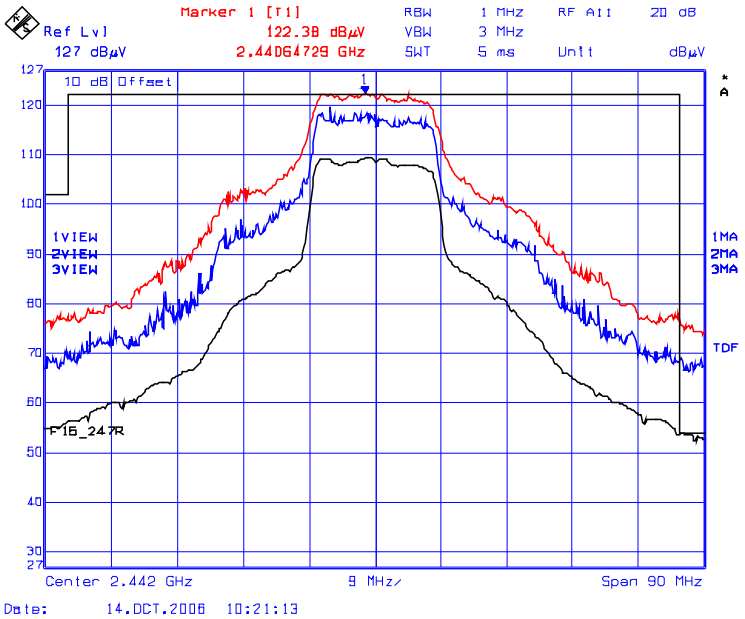
Plot 5.2.4.1.7.13a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2442MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 121.81/m – 49.22= 72.59 dBµV/m < Limit (74 dBµV/m)



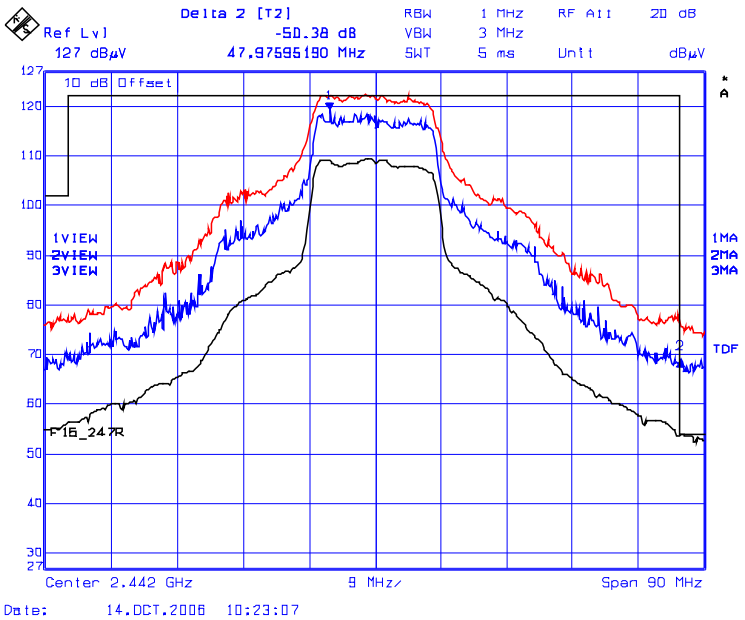
Plot 5.2.4.1.7.13b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 49.22



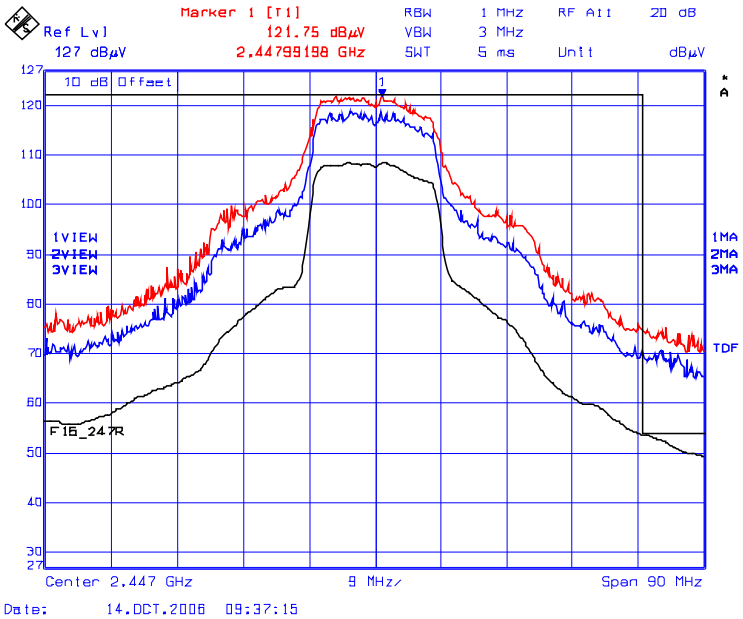
Plot 5.2.4.1.7.14a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2442MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 122.38 dBµV/m – 50.38= 72.00 dBµV/m < Limit (74 dBµV/m)



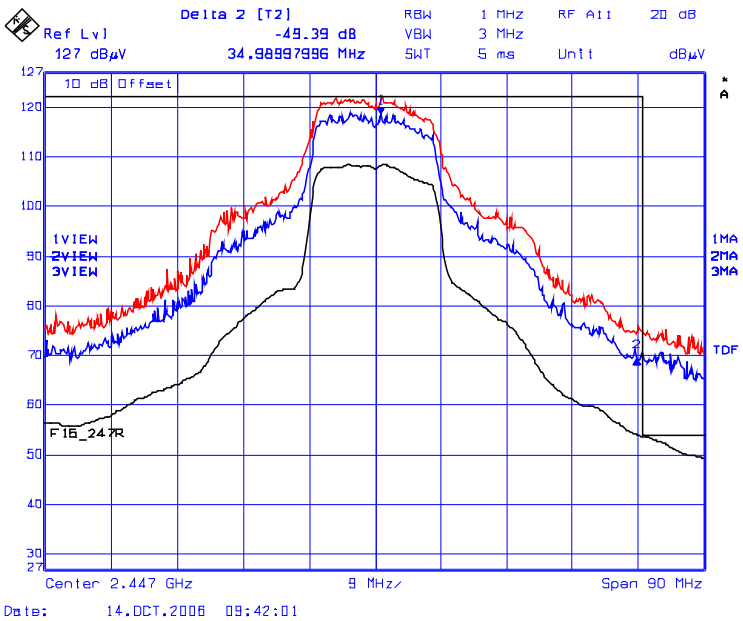
Plot 5.2.4.1.7.14b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 50.38



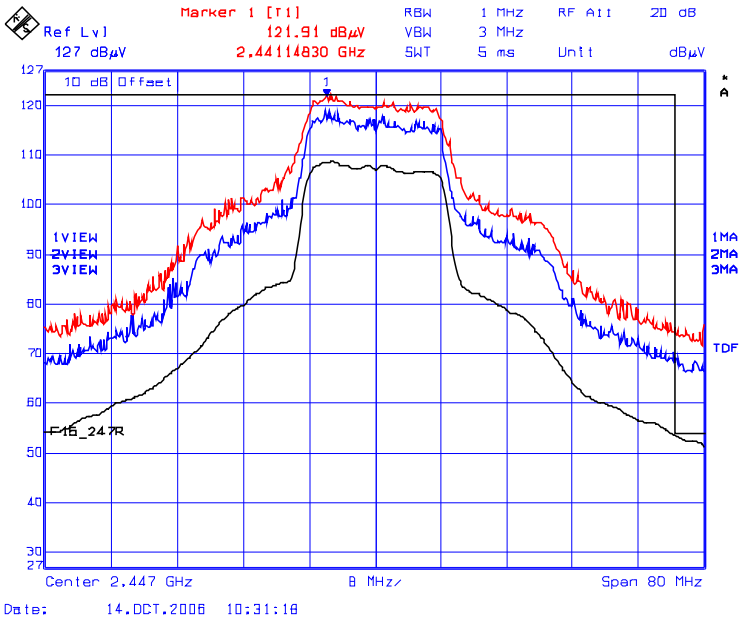
Plot 5.2.4.1.7.15a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2447 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 121.75 dBµV/m – 49.39 = 72.36 dBµV/m < Limit (74 dBµV/m)



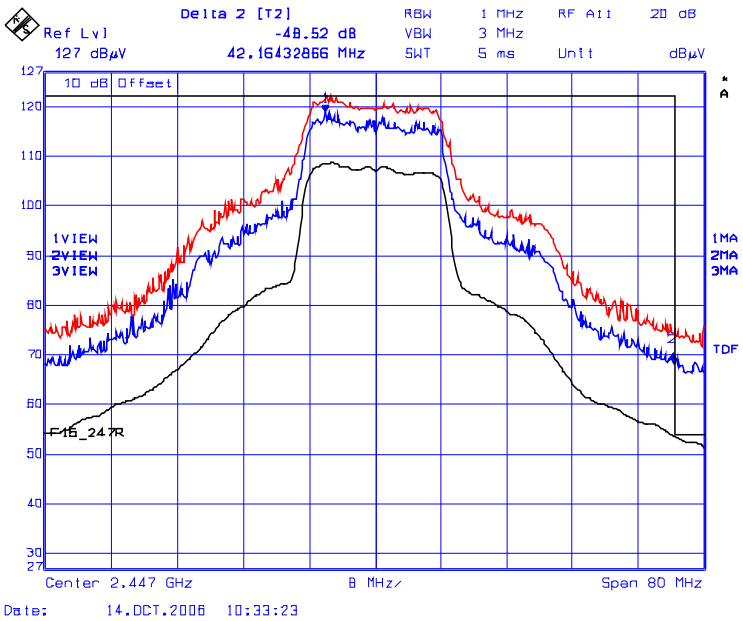
Plot 5.2.4.1.7.15b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 49.39



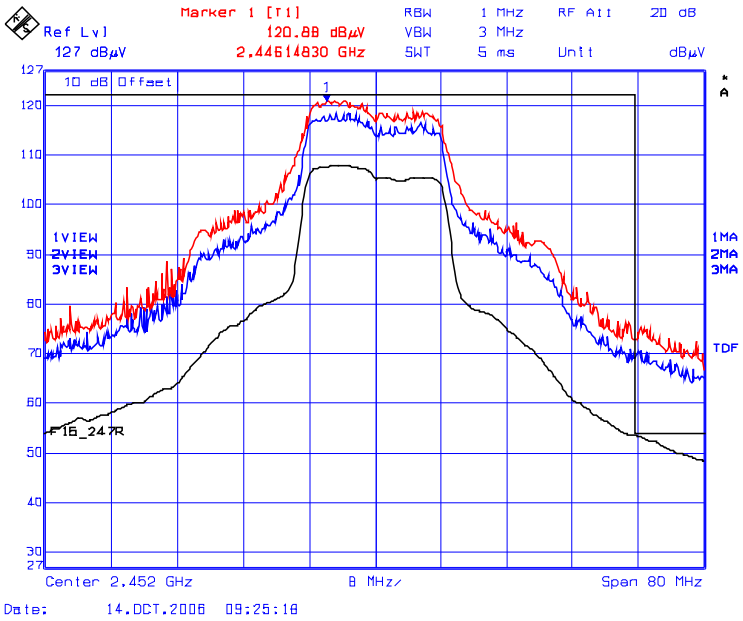
Plot 5.2.4.1.7.16a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2447 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 121.91 dBµV/m – 48.52 = 73.39 dBµV/m < Limit (74 dBµV/m)



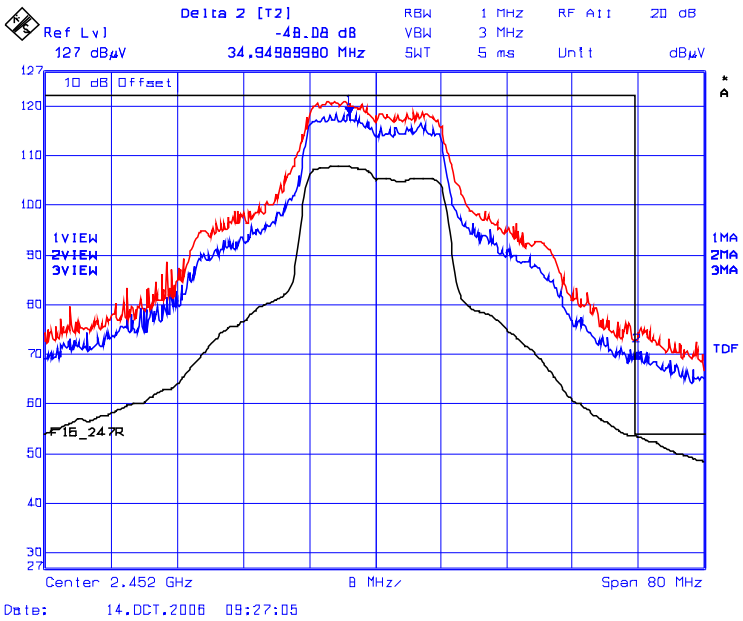
Plot 5.2.4.1.7.16b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.52



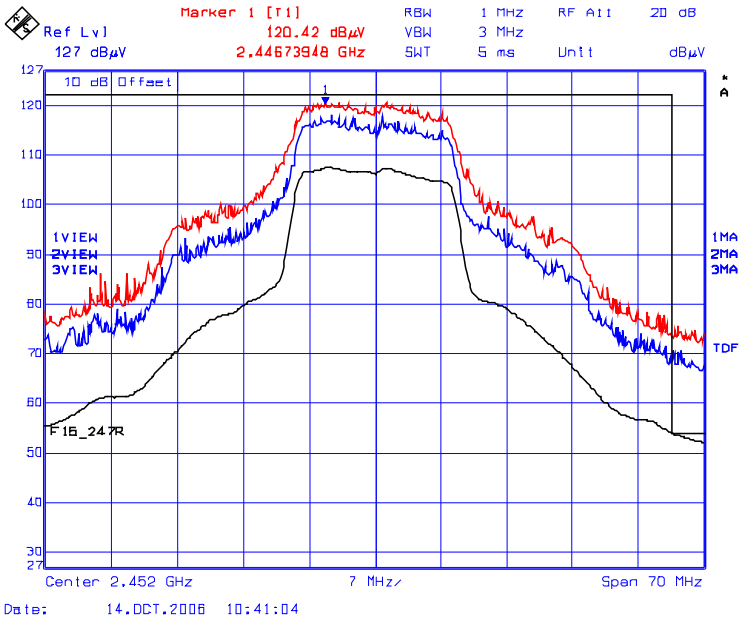
Plot 5.2.4.1.7.17a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 120.88 dBµV/m – 48.08 dB = 72.80 dBµV/m < Limit (74 dBµV/m)



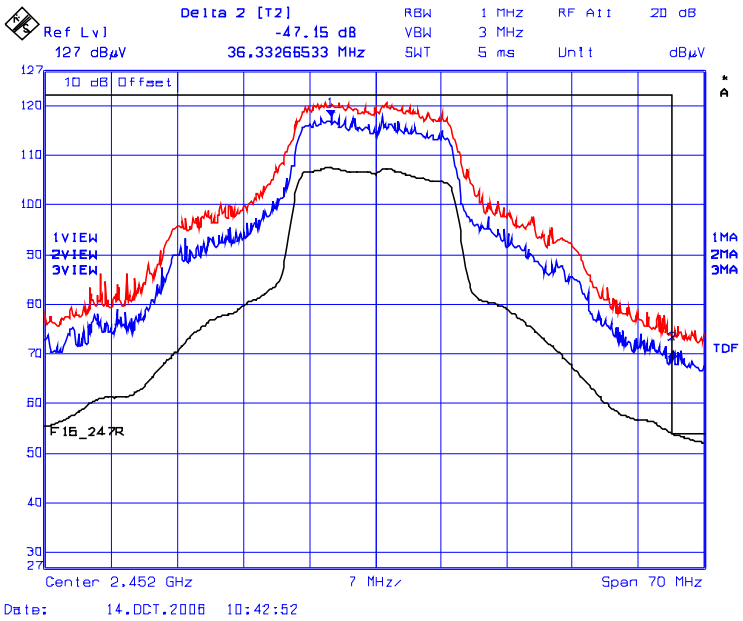
Plot 5.2.4.1.7.17b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.08 dB



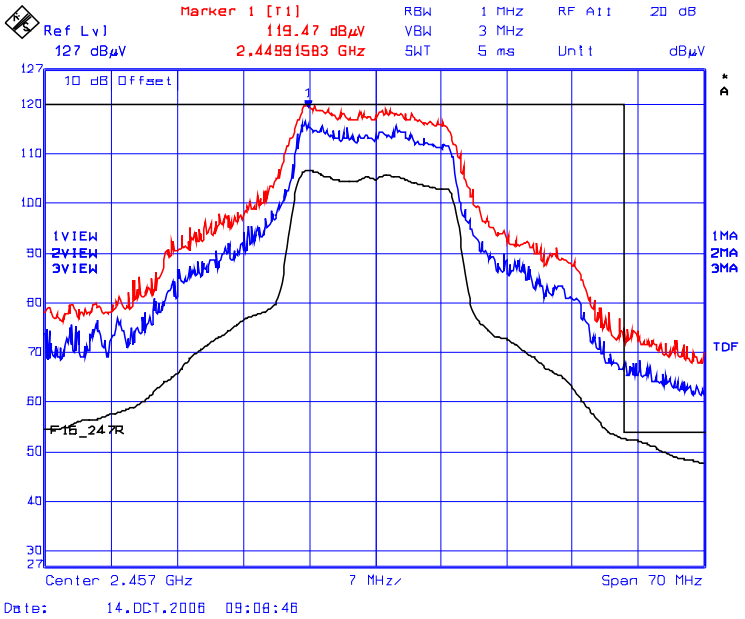
Plot 5.2.4.1.7.18a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 120.42 dBµV/m – 47.15 dB = 73.27dBµV/m < Limit (74 dBµV/m), Average 53.81dBµV/m



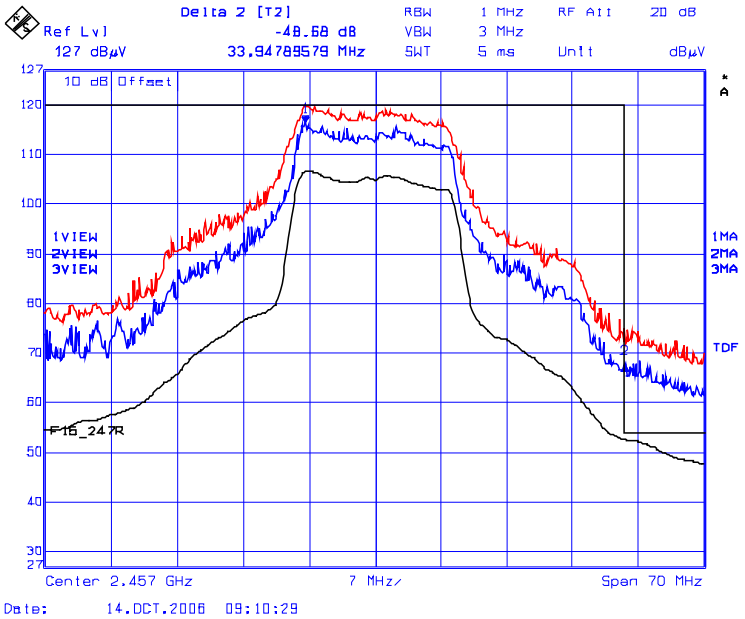
Plot 5.2.4.1.7.18b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.15 dB



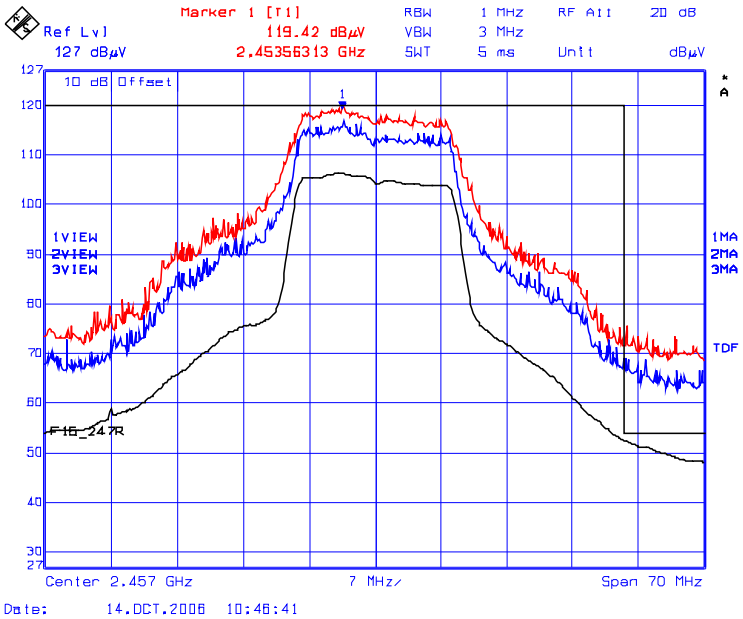
Plot 5.2.4.1.7.19a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2457 MHz, Power Setting: 17.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.47dBµV/m – 48.68 dB = 70.79 dBµV/m < Limit (74 dBµV/m)



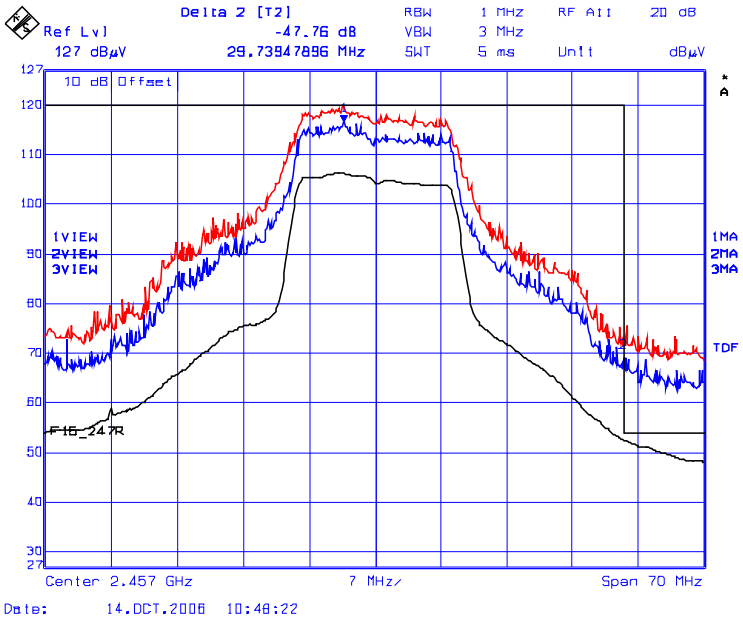
Plot 5.2.4.1.7.19b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.68 dB



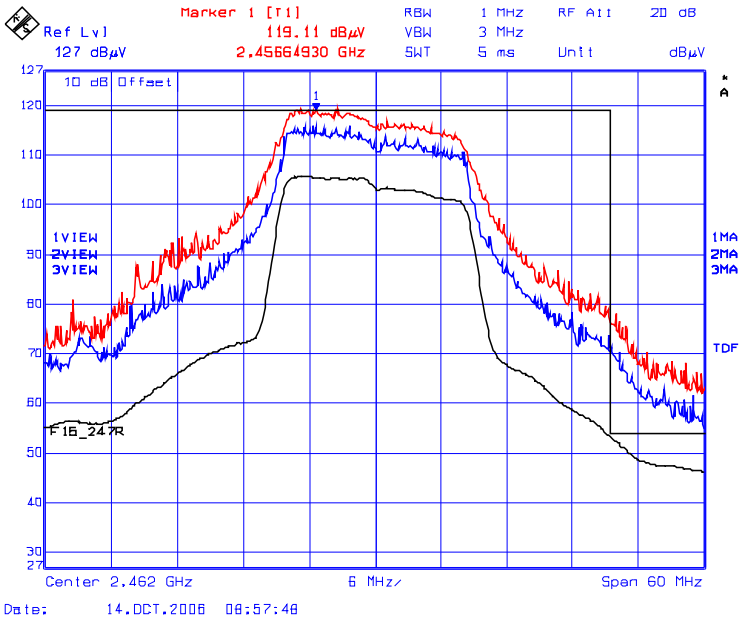
Plot 5.2.4.1.7.20a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2457 MHz, Power Setting: 17.0 dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.42 dBµV/m – 47.76 dB = 71.66 dBµV/m < Limit (74 dBµV/m)



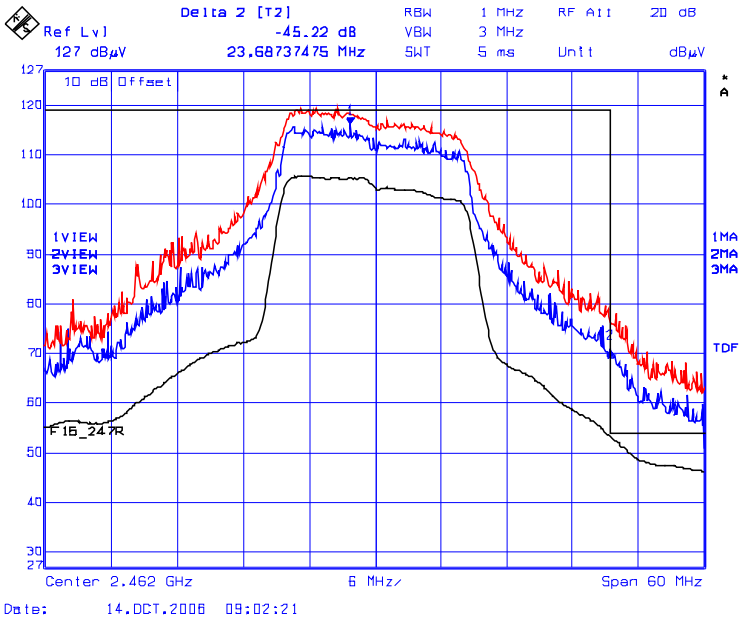
Plot 5.2.4.1.7.20b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.76 dB



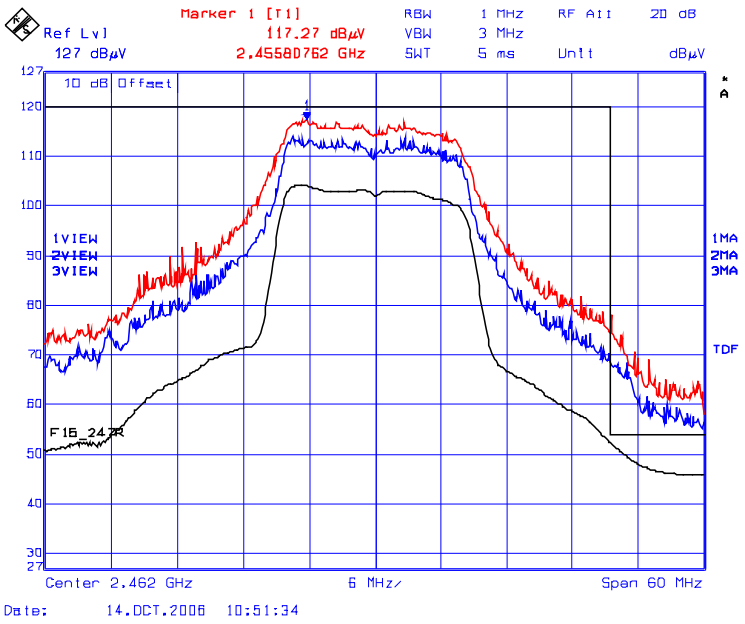
Plot 5.2.4.1.7.21a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz, Power Setting: 14.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.11dBµV/m – 45.22 dB = 73.89 dBµV/m < Limit (74 dBµV/m)



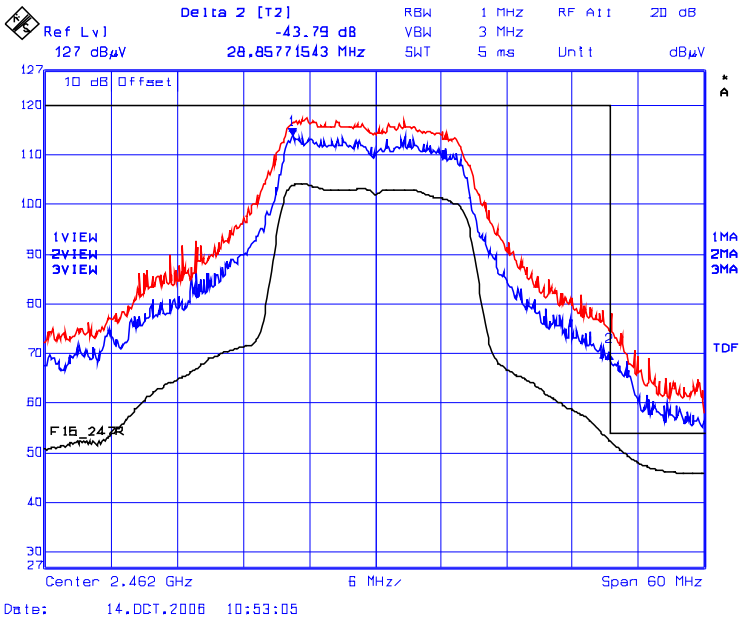
Plot 5.2.4.1.7.21b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 45.22 dB



Plot 5.2.4.1.7.22a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz, Power Setting: 14.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 117.27 dBµV/m – 43.79 dB= 73.48 dBµV/m < Limit (74 dBµV/m)

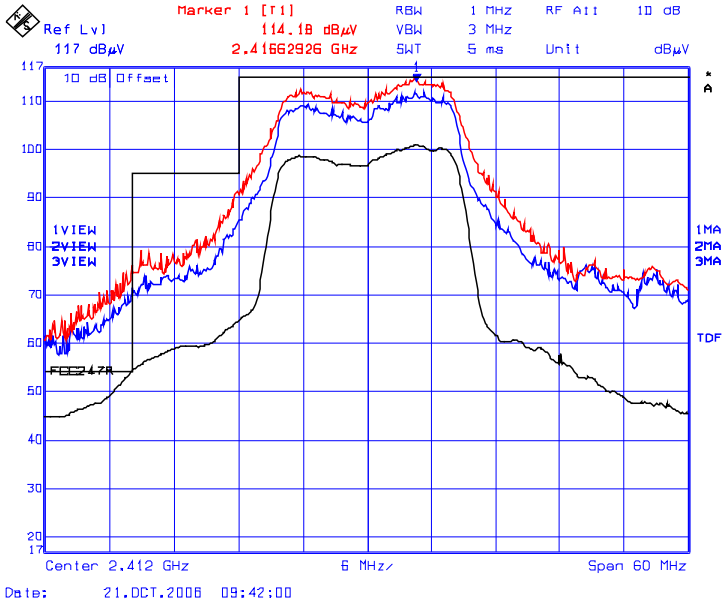


Plot 5.2.4.1.7.22b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 43.79 dB

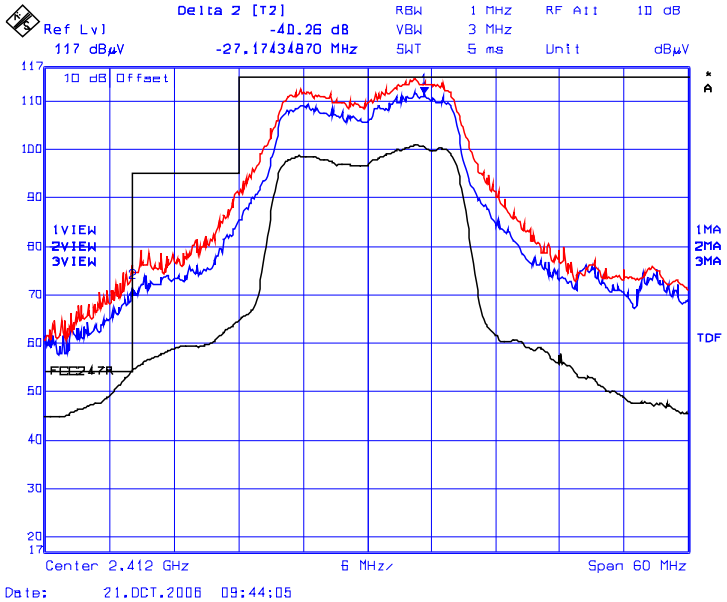


5.2.4.1.8. EUT with Antenna #2 Cushcraft Omni Antenna (Model S24493DS, 3 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

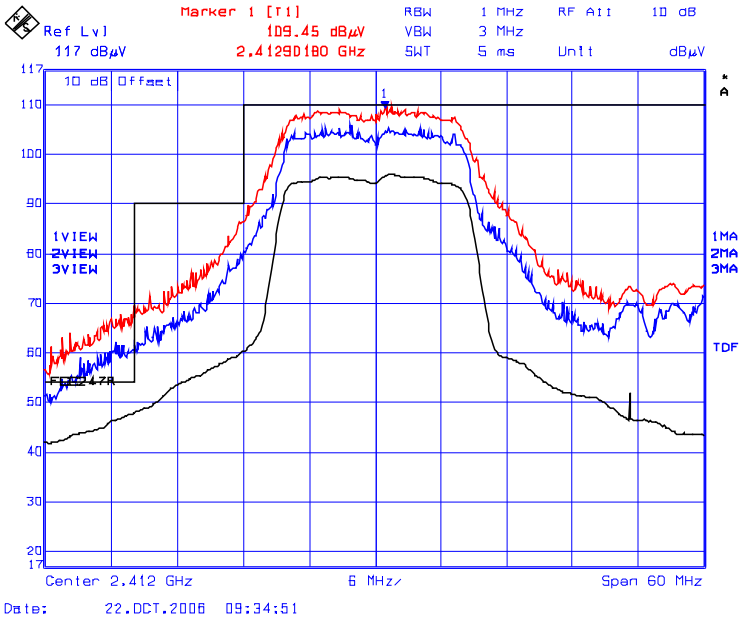
Plot 5.2.4.1.8.1a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz, Power Setting: 13.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 114.18 dBµV/m – 40.26 dB = 73.92 dBµV/m < Limit (74 dBµV/m)



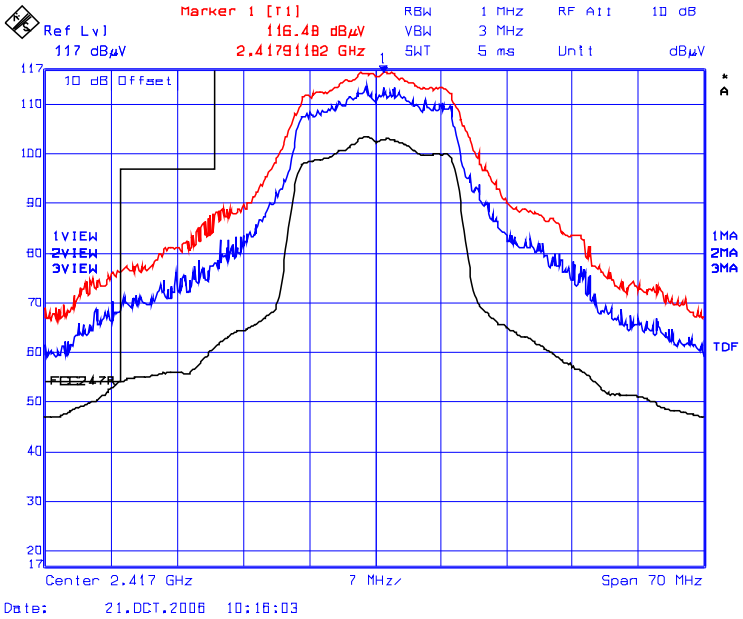
Plot 5.2.4.1.8.1b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 40.26 dB



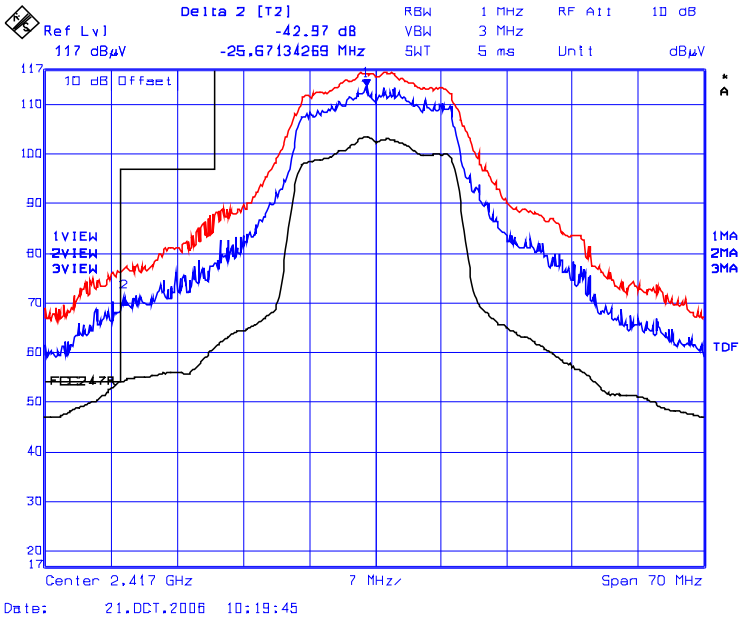
Plot 5.2.4.1.8.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz, Power Setting: 13.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



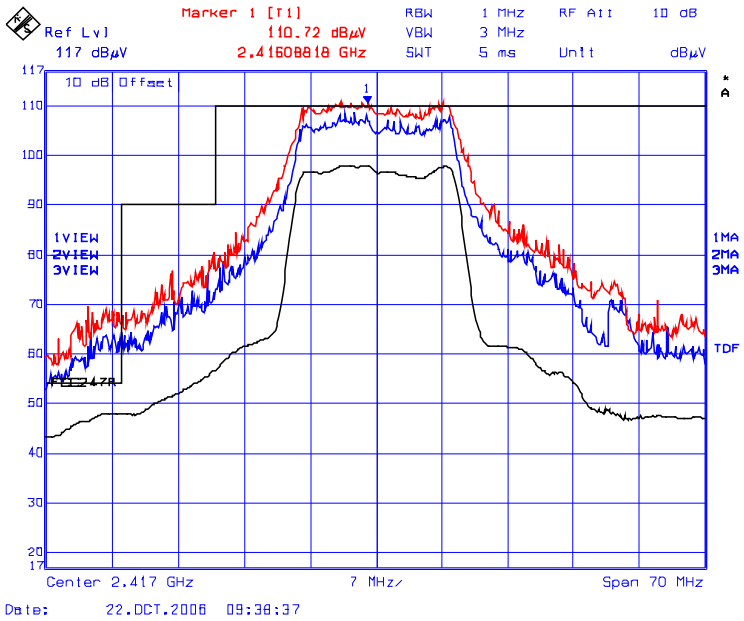
Plot 5.2.4.1.8.3a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz, Power Setting: 15.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 116.48 dBµV/m – 42.97 dB= 73.51dBµV/m < Limit (74 dBµV/m)



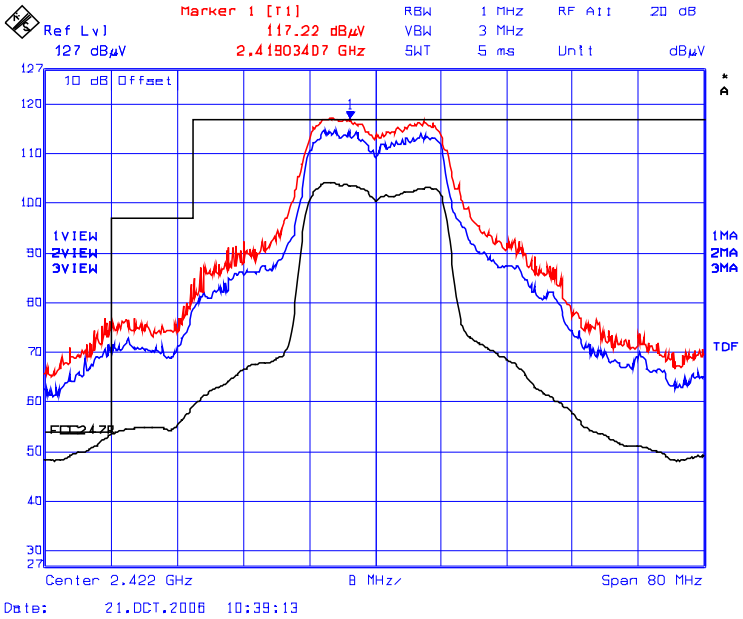
Plot 5.2.4.1.8.3b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 42.97 dB



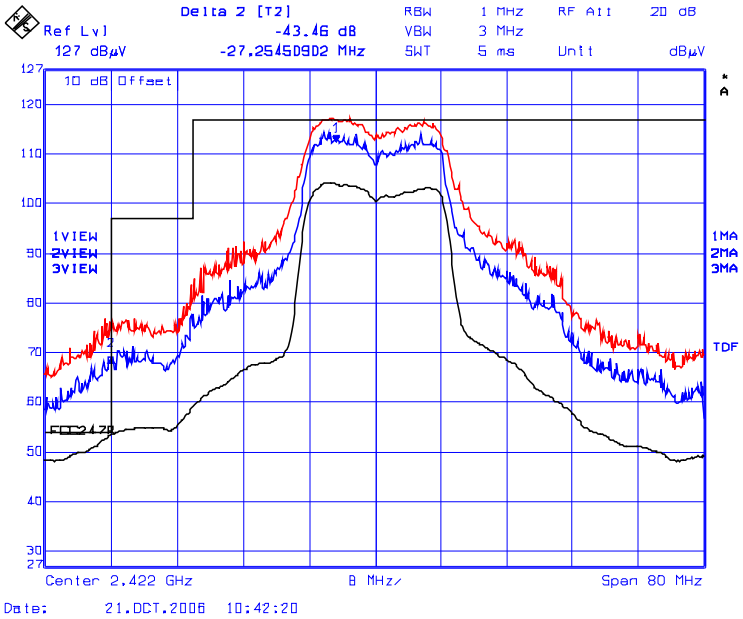
Plot 5.2.4.1.8.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz, Power Setting: 15.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



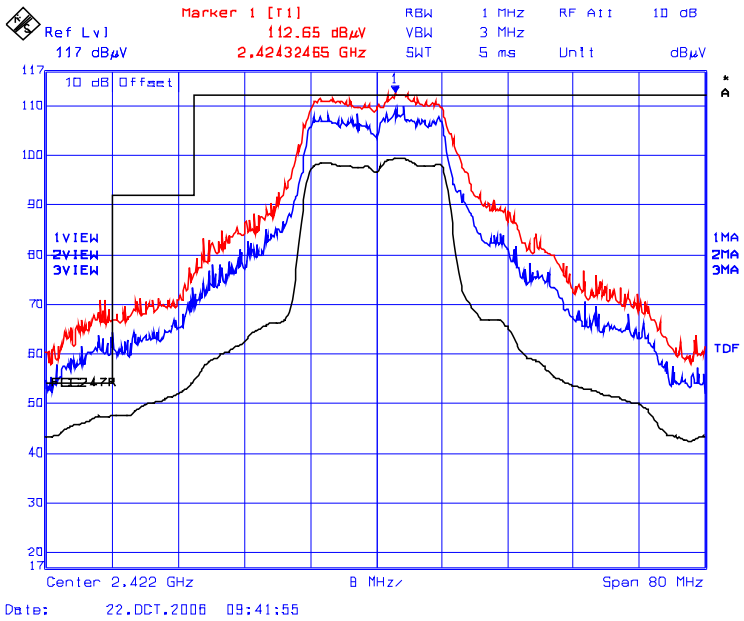
Plot 5.2.4.1.8.5a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 117.22 dBµV/m – 43.46 dB = 73.76 dBµV/m < Limit (74 dBµV/m)



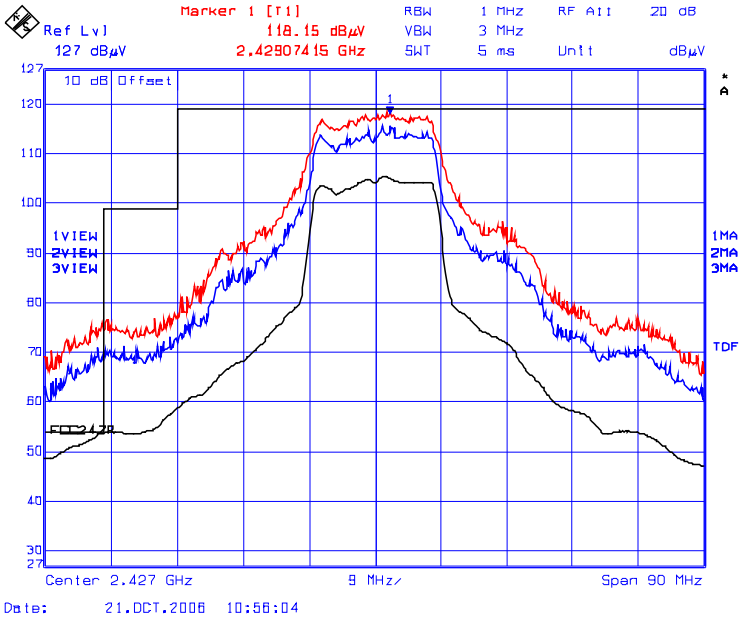
Plot 5.2.4.1.8.5b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 43.46 dB



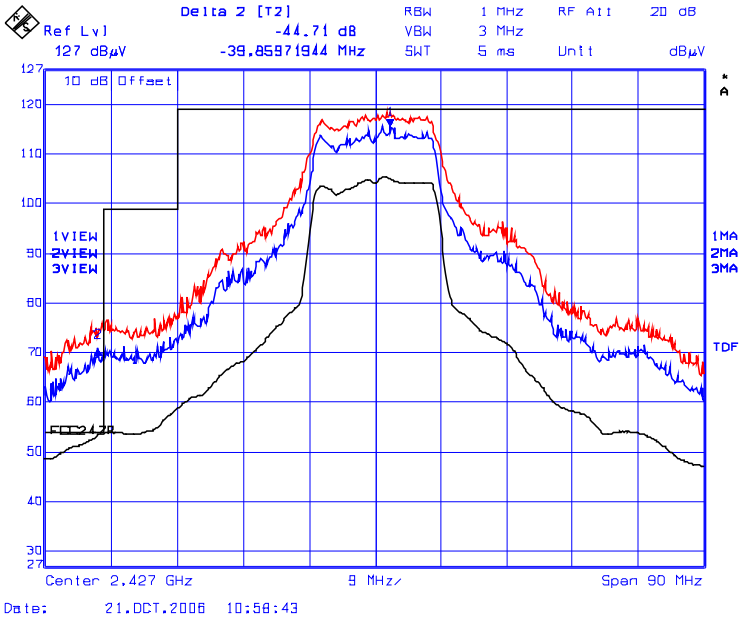
Plot 5.2.4.1.8.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz, Power Setting: 16.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



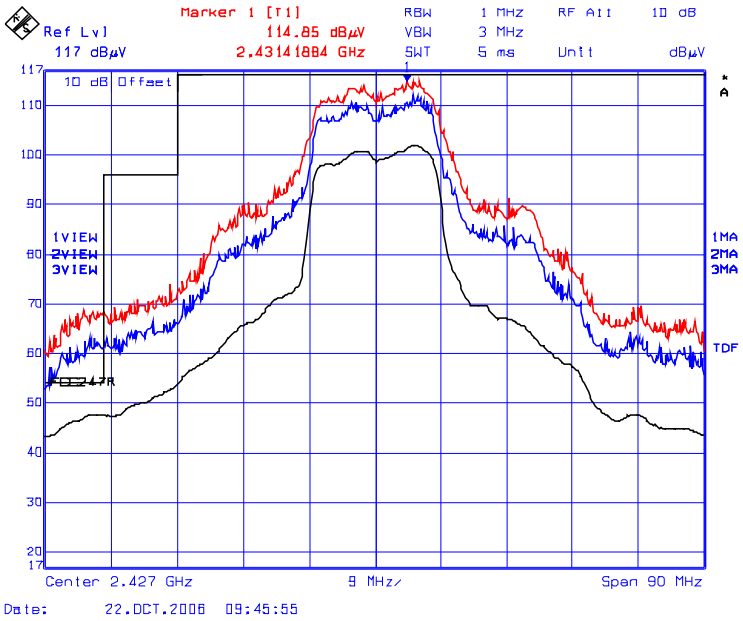
Plot 5.2.4.1.8.7a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2427 MHz, Power Setting: 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.15 dBµV/m – 44.71 dB = 73.44dBµV/m < Limit (74 dBµV/m)



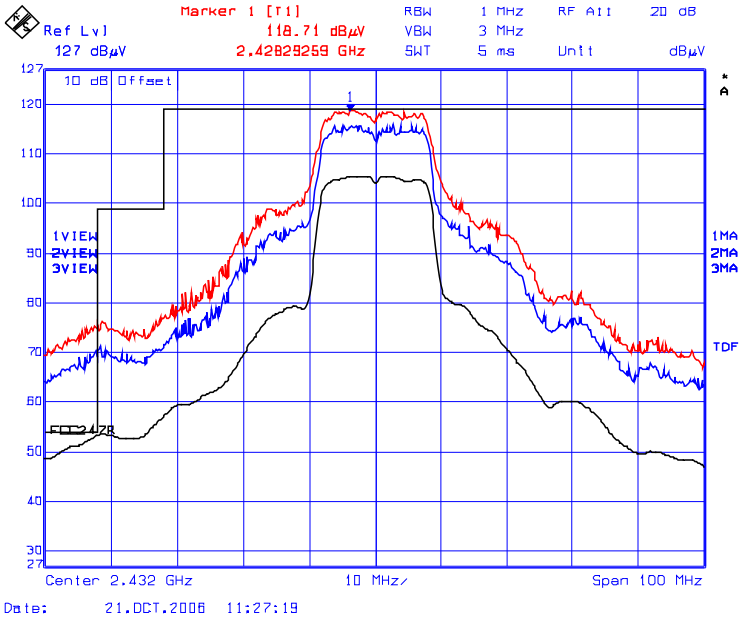
Plot 5.2.4.1.8.7b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 44.71 dB



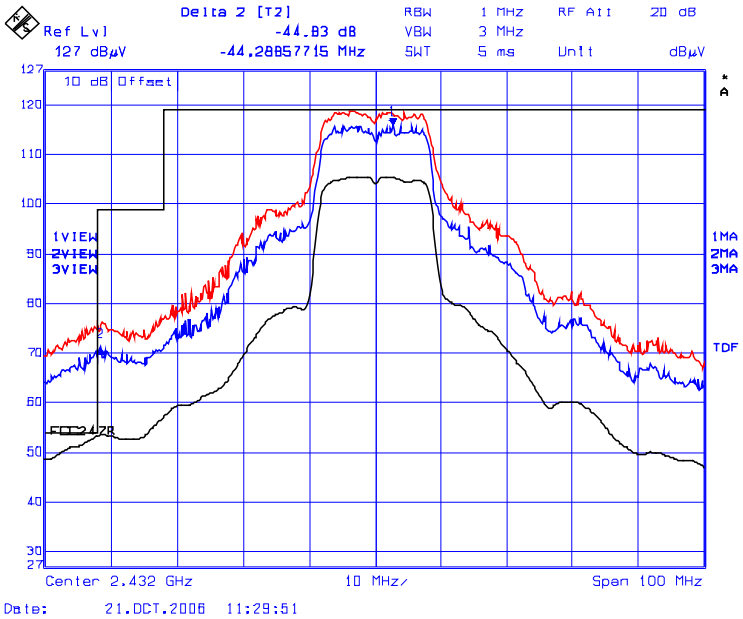
Plot 5.2.4.1.8.8 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2427 MHz, Power Setting: 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



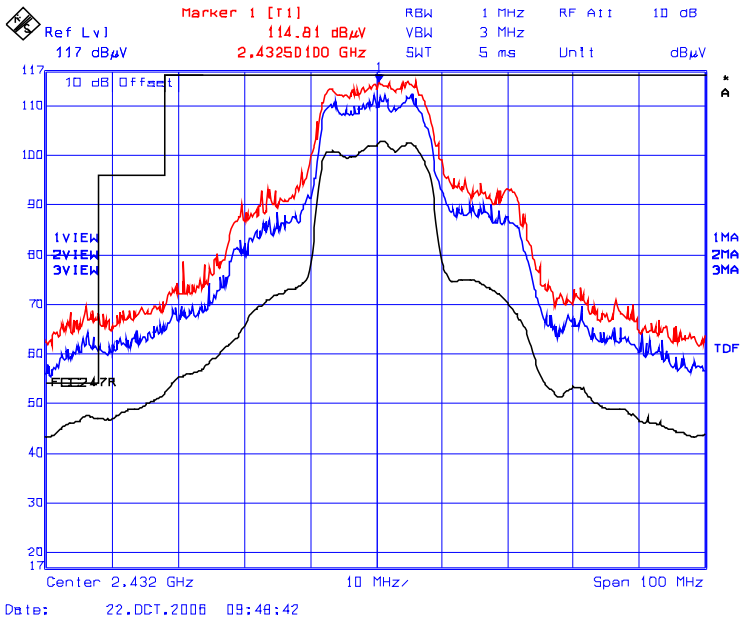
Plot 5.2.4.1.8.9a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2432 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.71dBµV/m – 44.83 dB = 73.88 dBµV/m < Limit (74 dBµV/m)



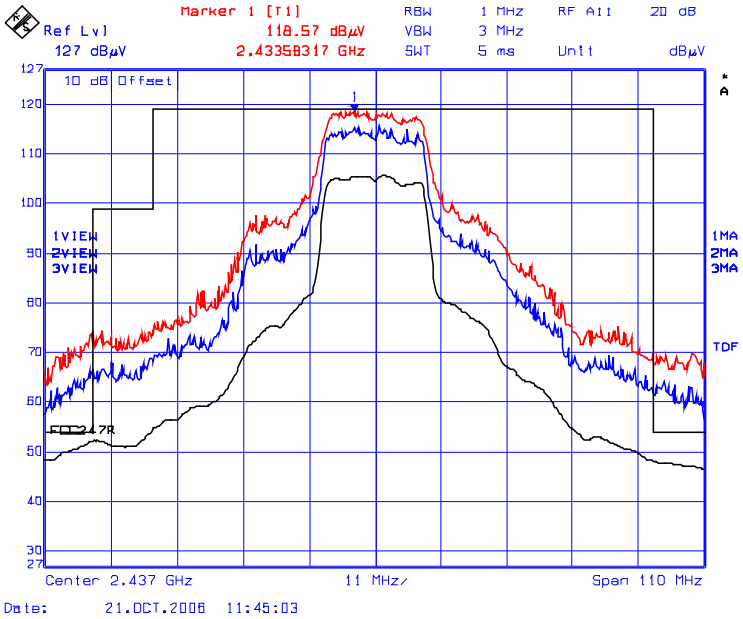
Plot 5.2.4.1.8.9b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 44.83 dB



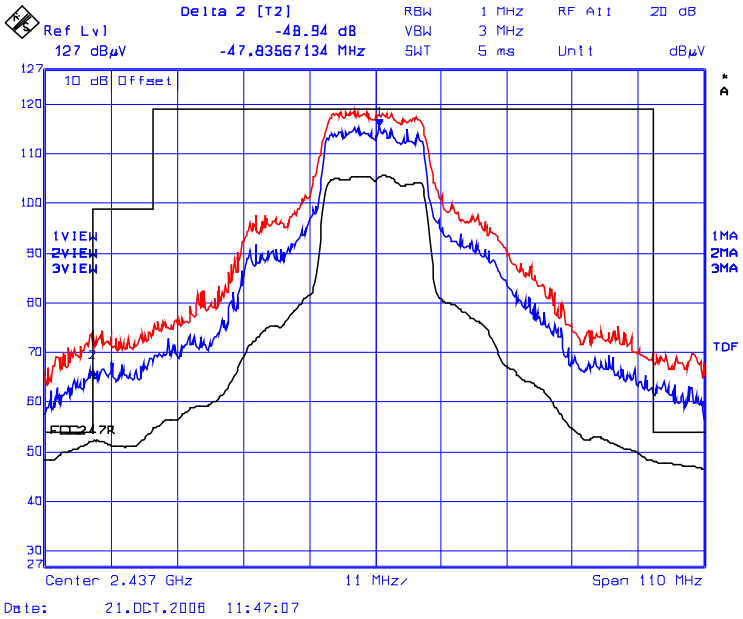
Plot 5.2.4.1.8.10 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2432 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



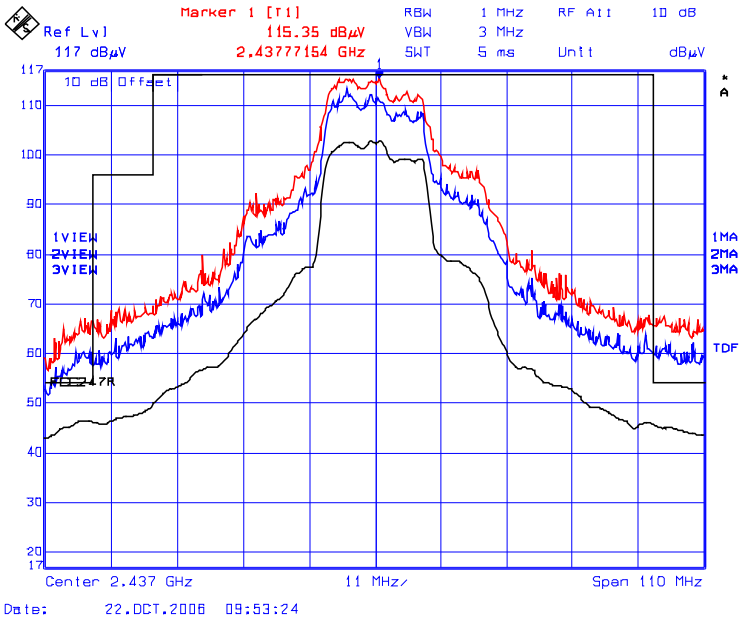
Plot 5.2.4.1.8.11a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2437 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 118.57 dBµV/m – 48.94 dB = 69.63 dBµV/m < Limit (74 dBµV/m)



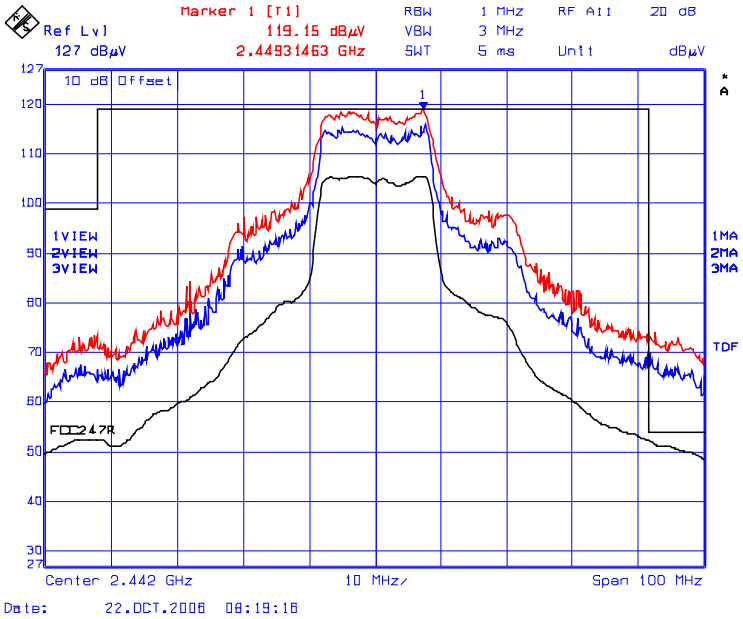
Plot 5.2.4.1.8.11b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.94 dB



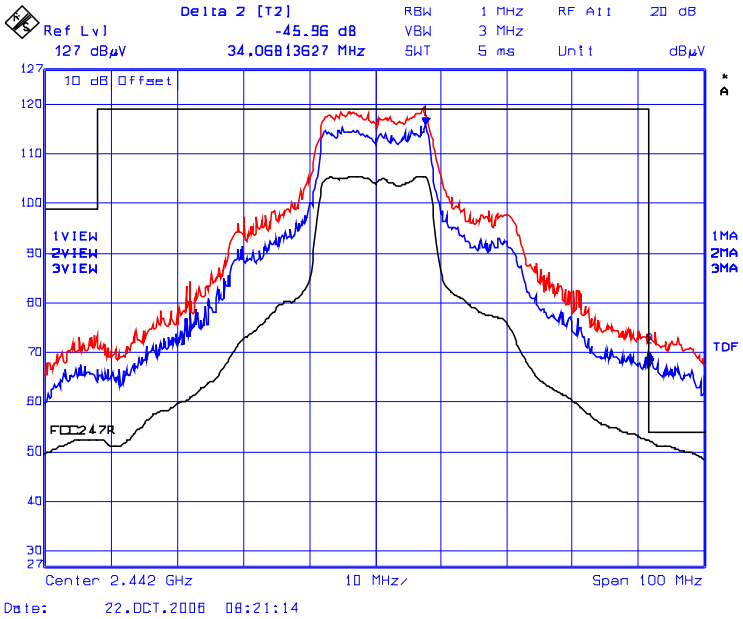
Plot 5.2.4.1.8.12 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2437 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



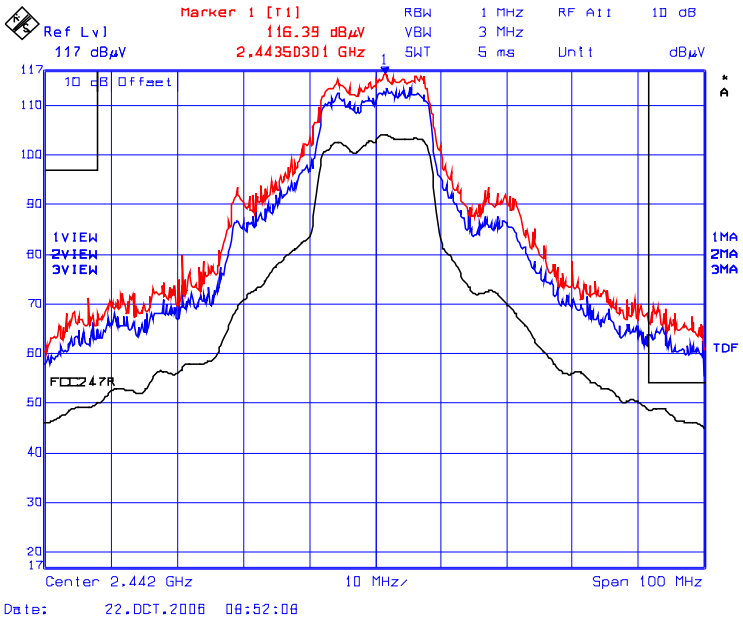
Plot 5.2.4.1.8.13a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2442 MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.15 dBµV/m – 45.96 dB= 73.19 dBµV/m < Limit (74 dBµV/m)



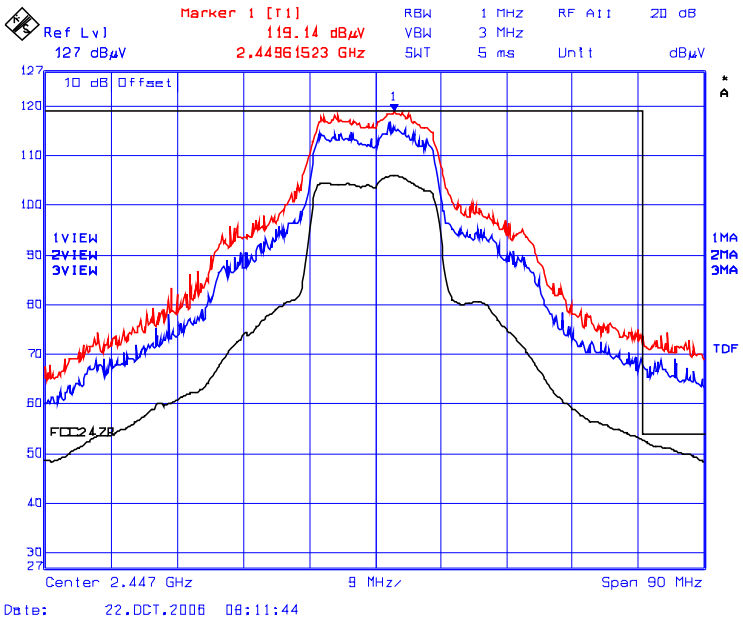
Plot 5.2.4.1.8.13b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 45.96 dB



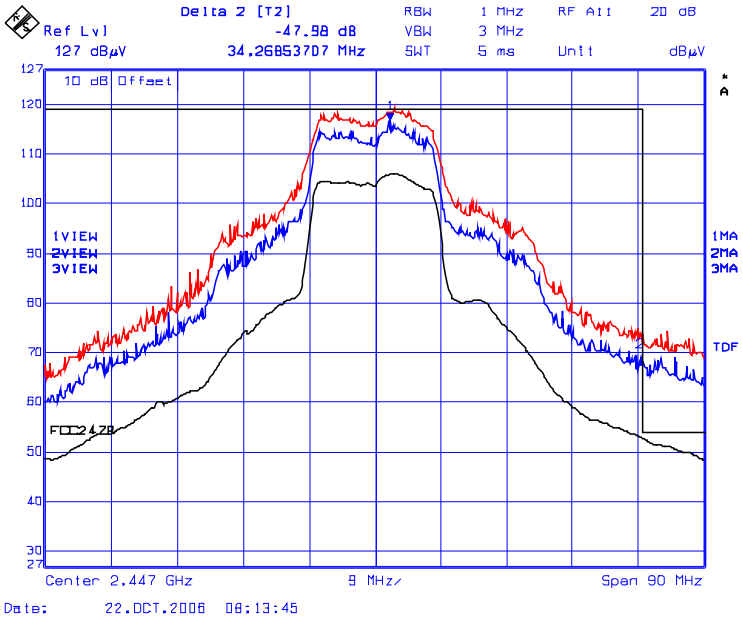
Plot 5.2.4.1.8.14 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2442 MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



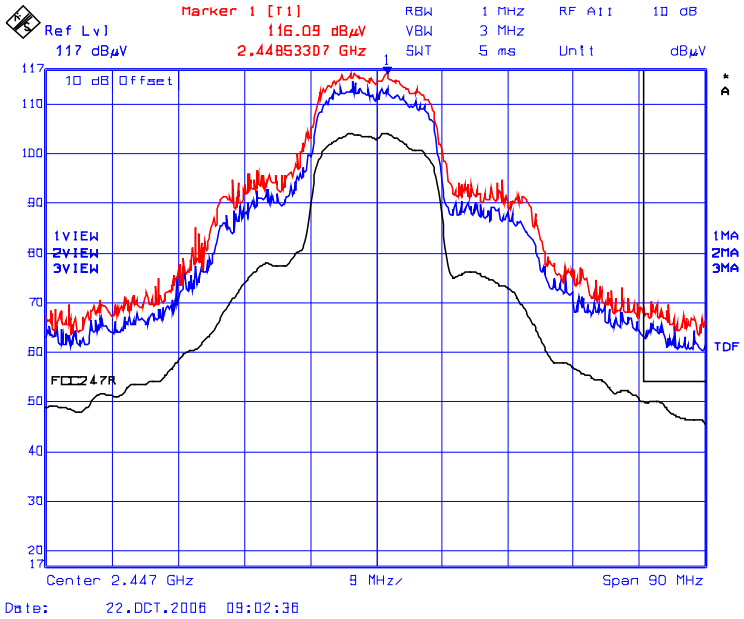
Plot 5.2.4.1.8.15a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2447 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.14 dBµV/m – 47.98 dB = 71.16dBµV/m < Limit (74 dBµV/m)



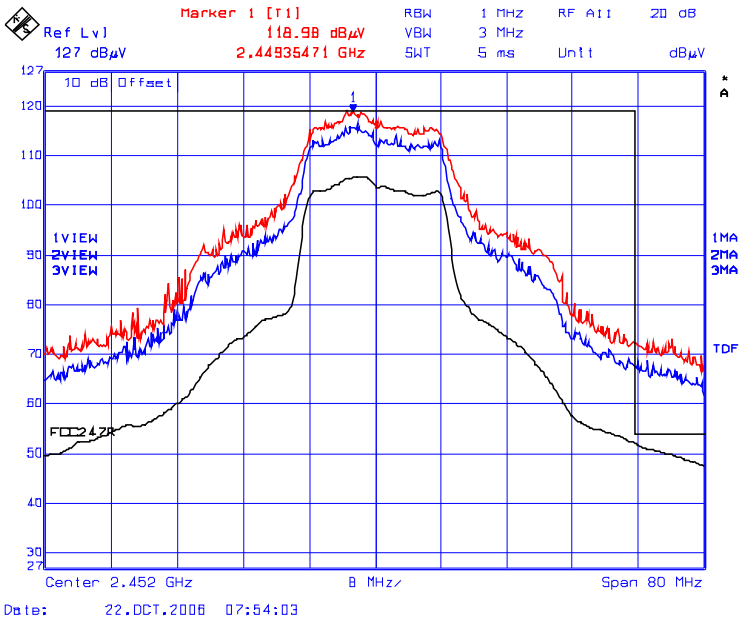
Plot 5.2.4.1.8.15b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.98 dB



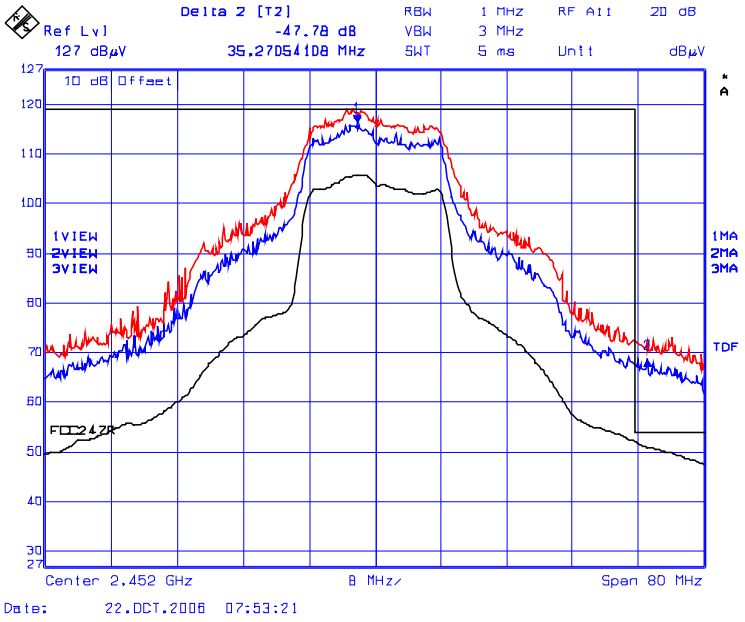
Plot 5.2.4.1.8.16 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2447 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



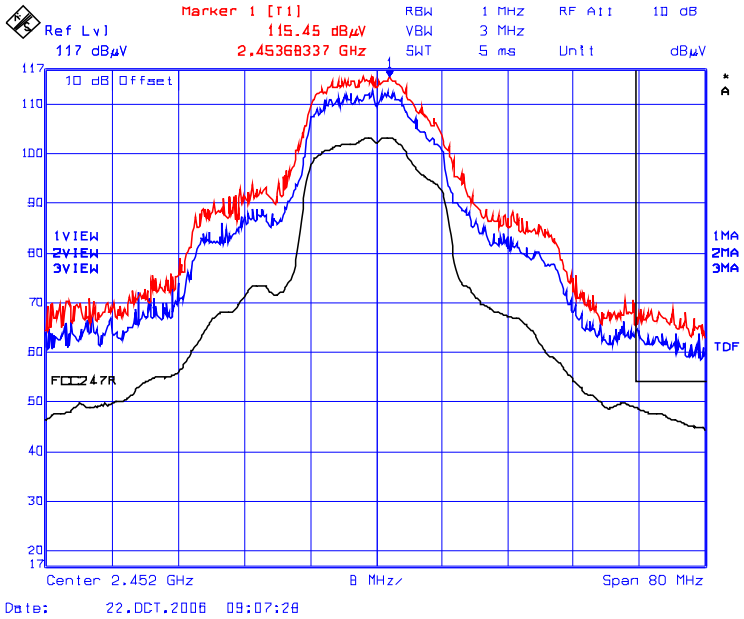
Plot 5.2.4.1.8.17a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 118.98 dBµV/m – 47.78 dB= 71.20 dBµV/m < Limit (74 dBµV/m)



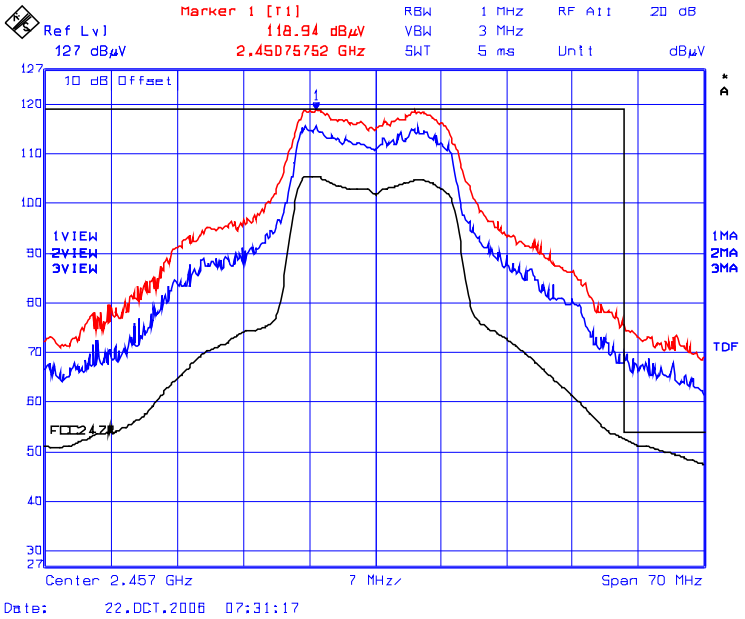
Plot 5.2.4.1.8.17b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.78 dB



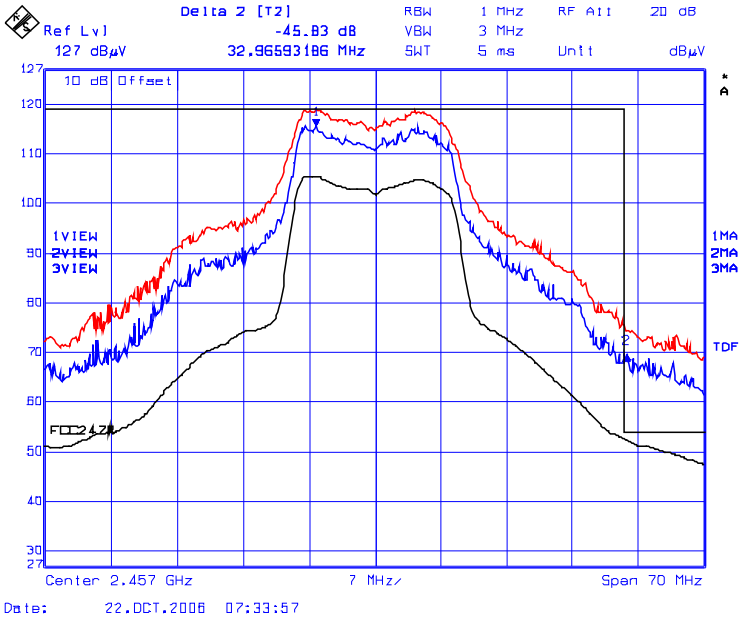
Plot 5.2.4.1.8.18 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



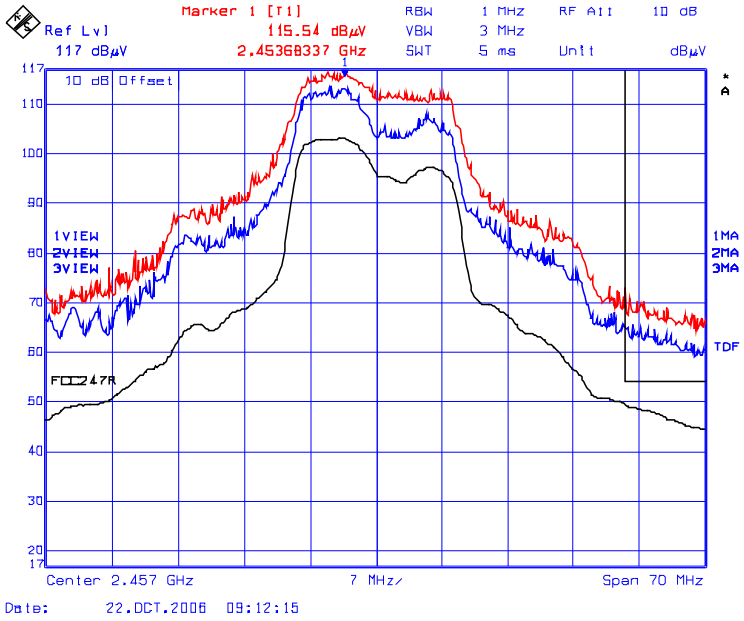
Plot 5.2.4.1.8.19a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2457 MHz, Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 118.94 dBµV/m – 45.83 dB = 73.11dBµV/m < Limit (74 dBµV/m)



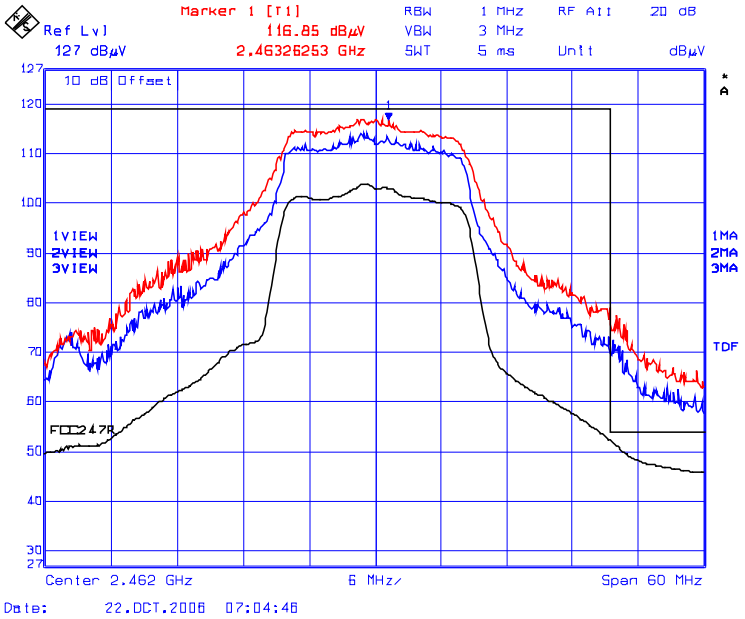
Plot 5.2.4.1.8.19b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 45.83 dB



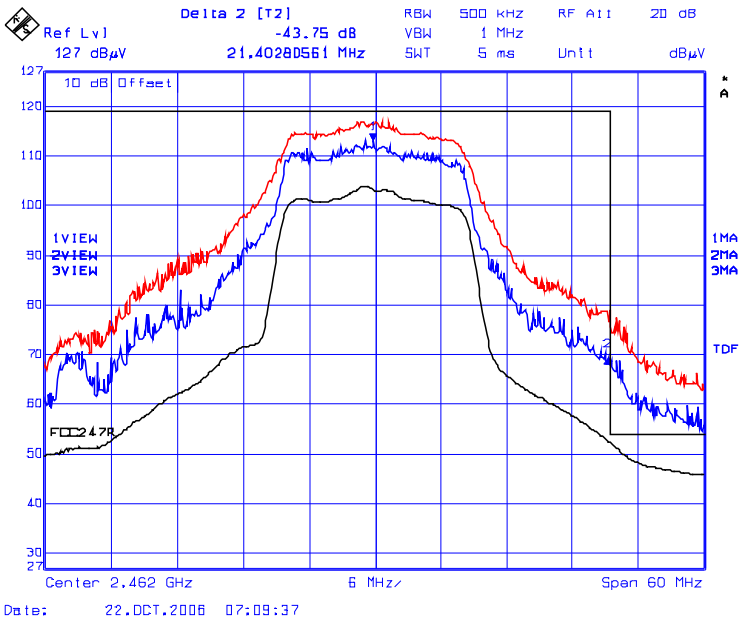
Plot 5.2.4.1.8.20 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2457 MHz, Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



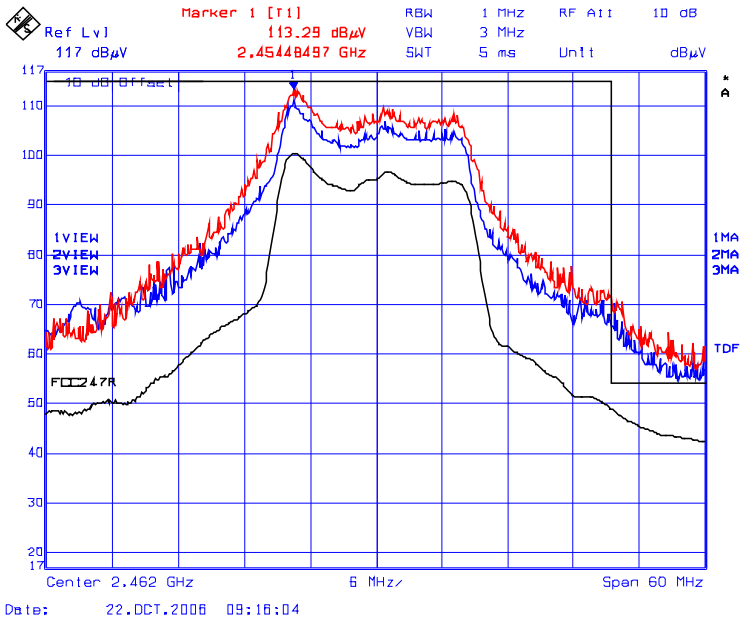
Plot 5.2.4.1.8.21a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 116.85 dBµV/m – 43.75 dB = 73.10 dBµV/m < Limit (74 dBµV/m)



Plot 5.2.4.1.8.21b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 43.75 dB

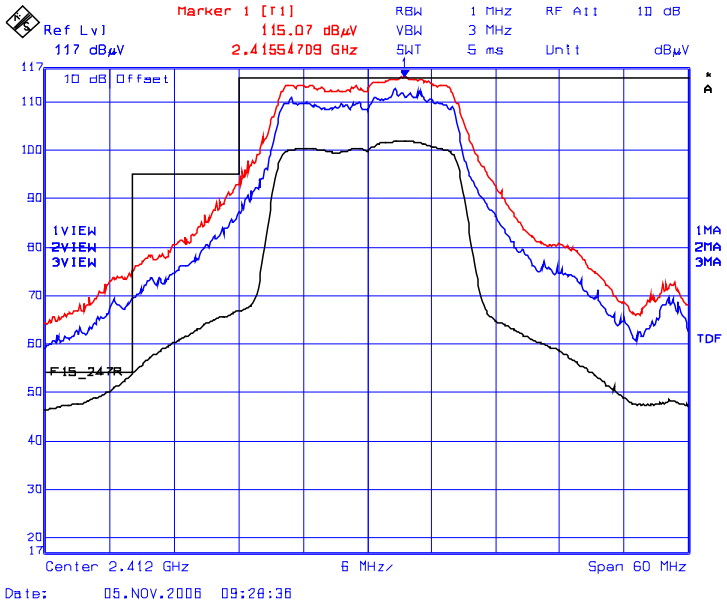


Plot 5.2.4.1.8.22 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz

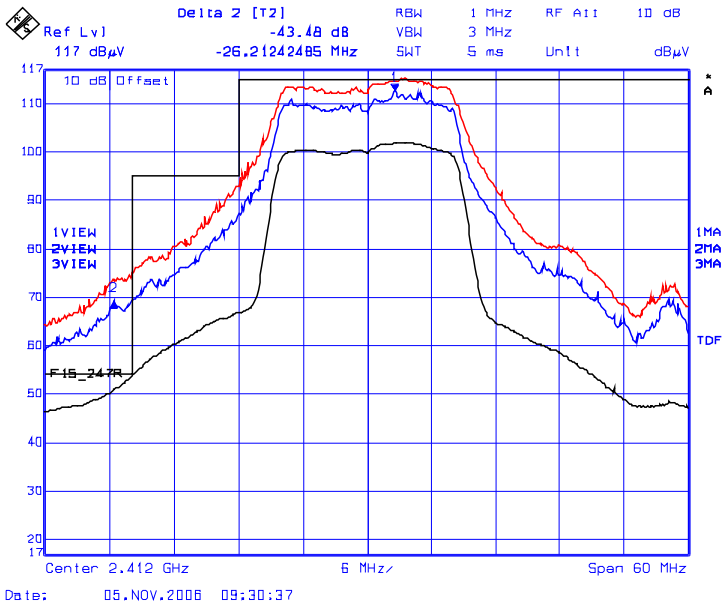


5.2.4.1.9. EUT with Antenna #3 Cushcraft Omni Antenna (Model SL24513P, 3 dBi gain), 802.11g Modulation (64QAM @ 54Mbps)

Plot 5.2.4.1.9.1a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2412 MHz, Power Setting: 13.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 115.07 dBµV/m – 43.48 dB = 71.59 dBµV/m < Limit (74 dBµV/m), Average 53.92dBµV/m

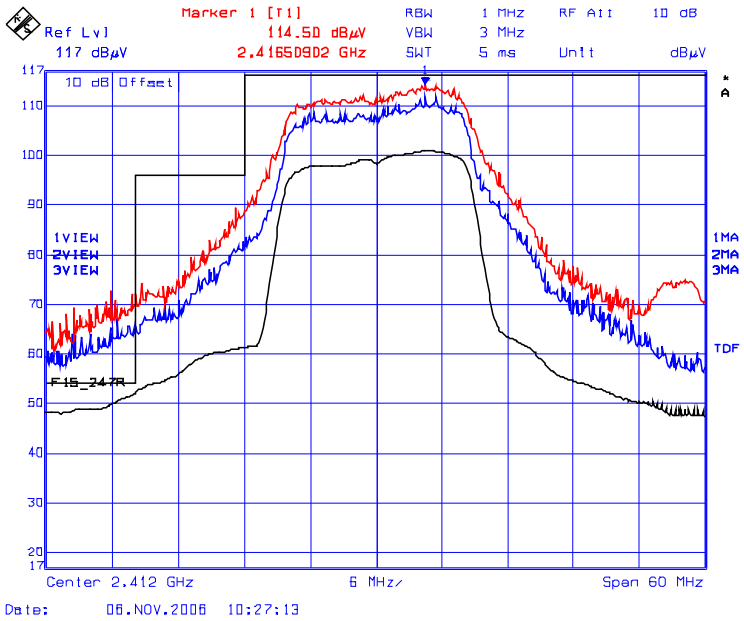


Plot 5.2.4.1.9.1b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 43.48 dB

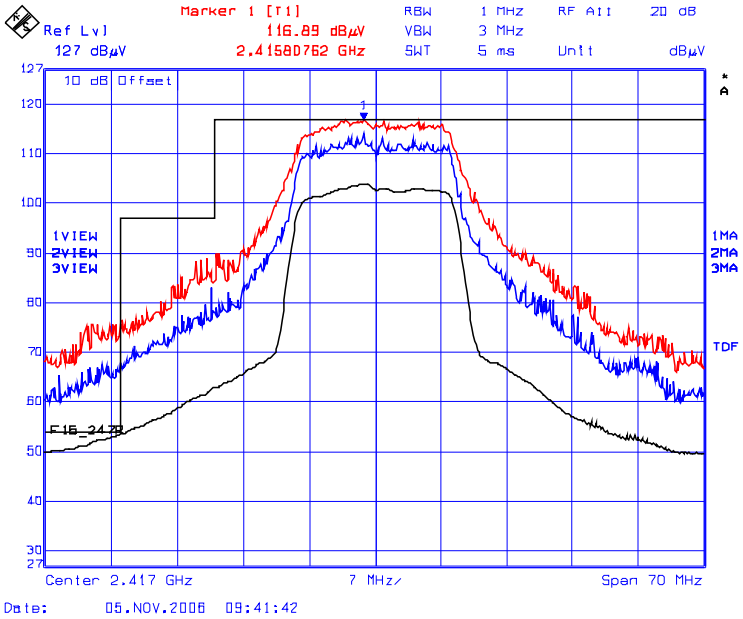


- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

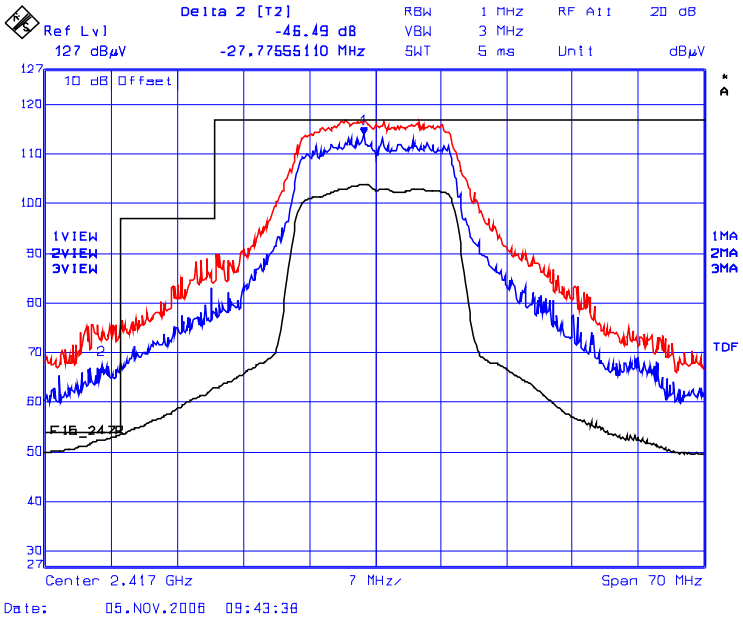
Plot 5.2.4.1.9.2 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2412 MHz, Power Setting: 13.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



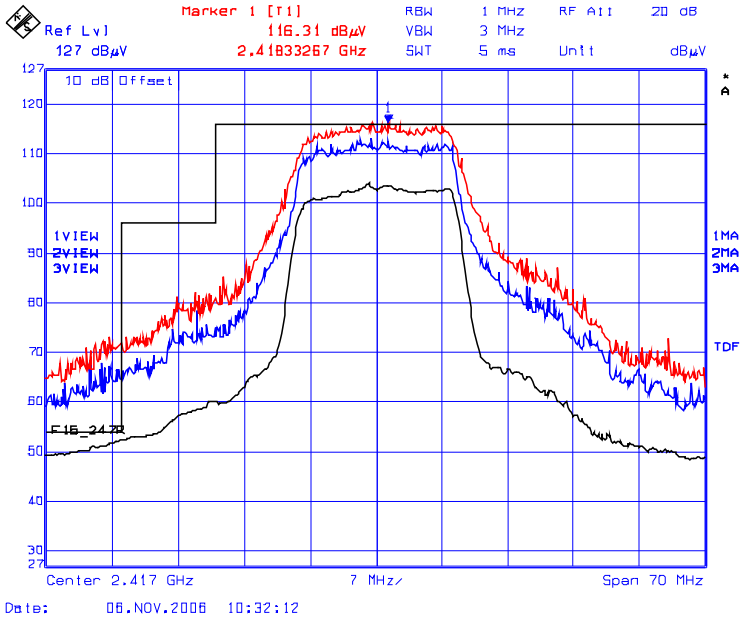
Plot 5.2.4.1.9.3a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2417 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 116.89 dBµV/m – 46.49 dB = 70.40 dBµV/m < Limit (74 dBµV/m)



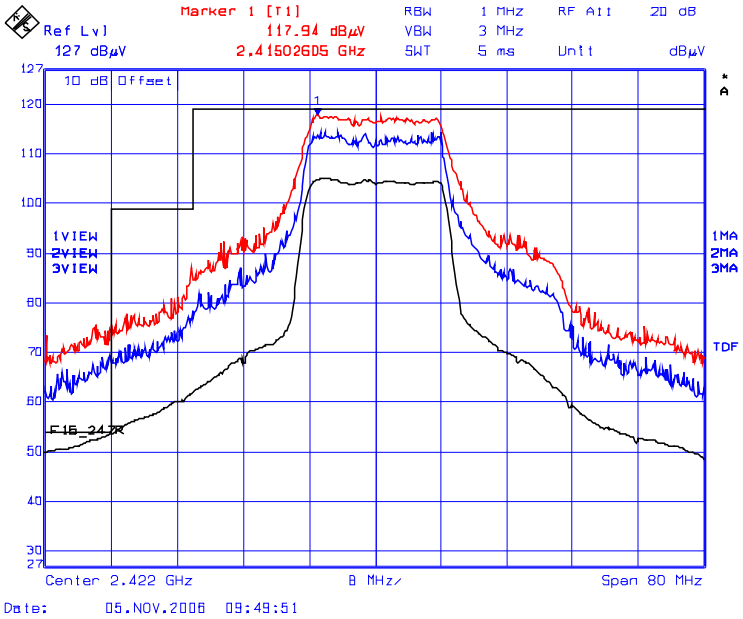
Plot 5.2.4.1.9.3b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 46.49 dB



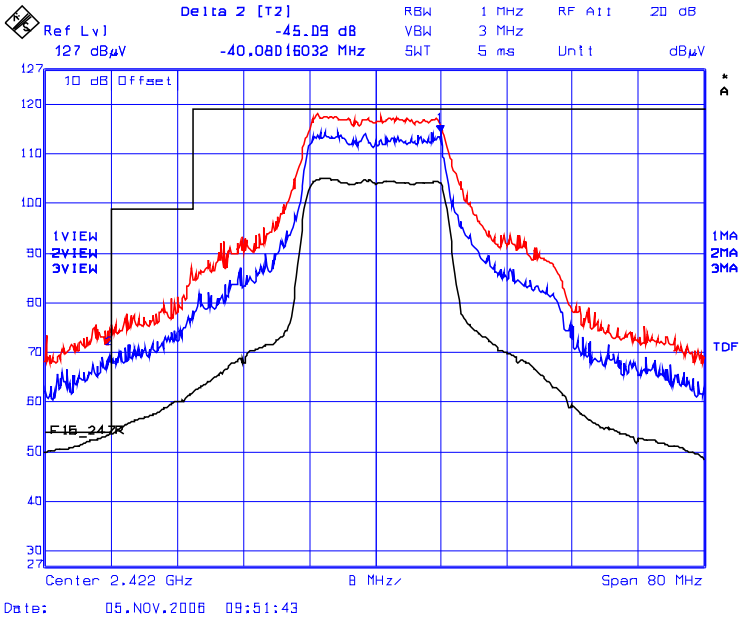
Plot 5.2.4.1.9.4 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2417 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



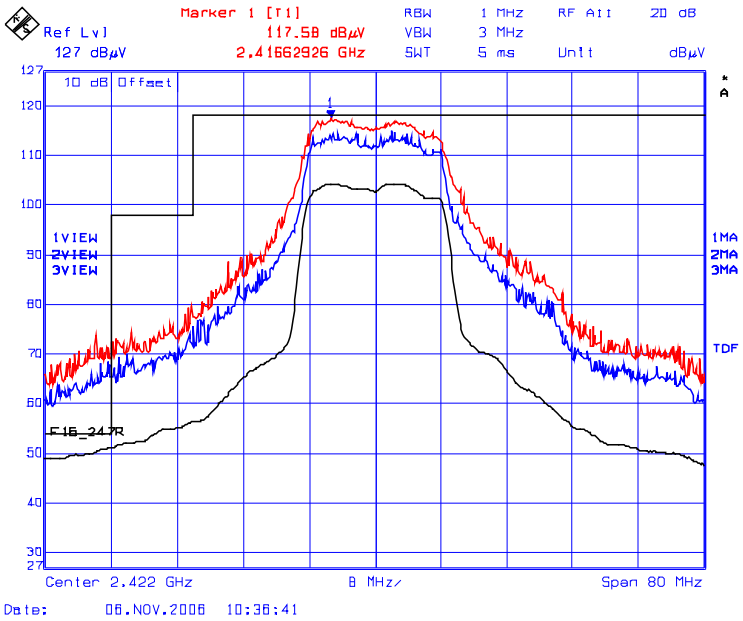
Plot 5.2.4.1.9.5a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2422 MHz, Power Setting: 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 117.94 dBµV/m – 45.09 dB = 72.85 dBµV/m < Limit (74 dBµV/m)



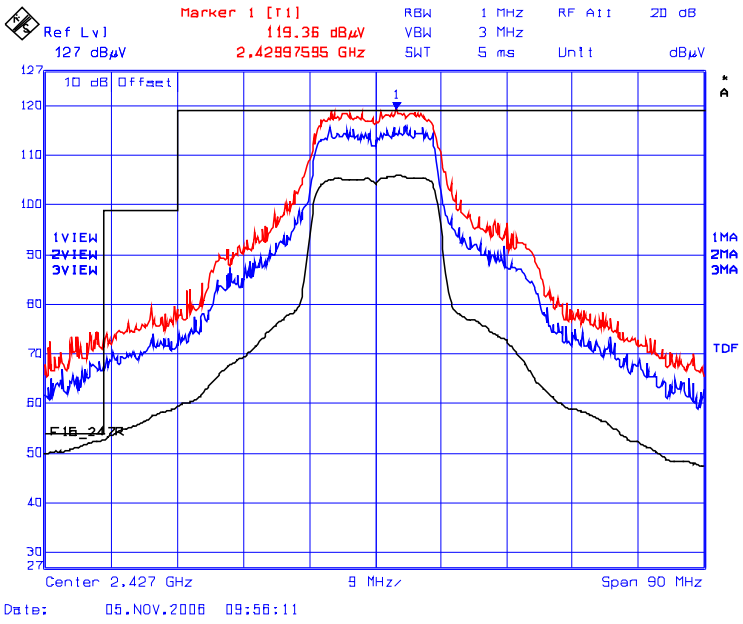
Plot 5.2.4.1.9.5b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 45.09 dB



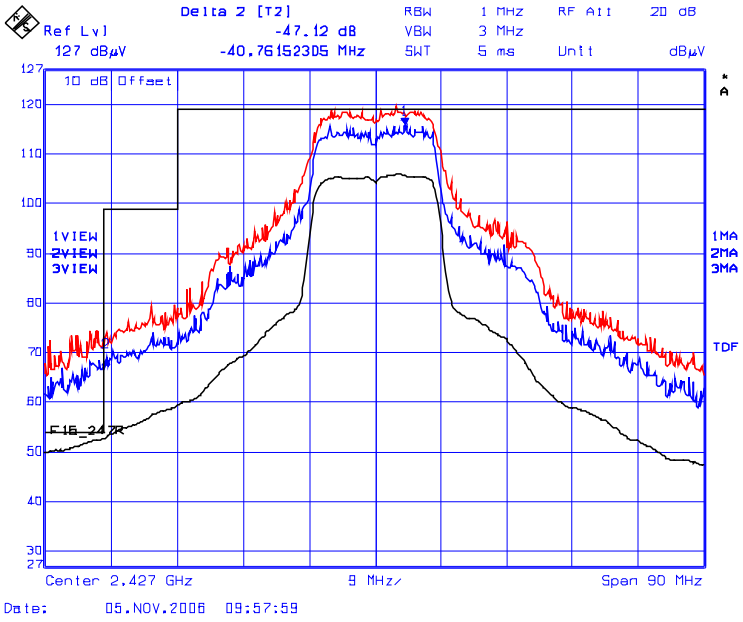
Plot 5.2.4.1.9.6 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2422 MHz, Power Setting: 16.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



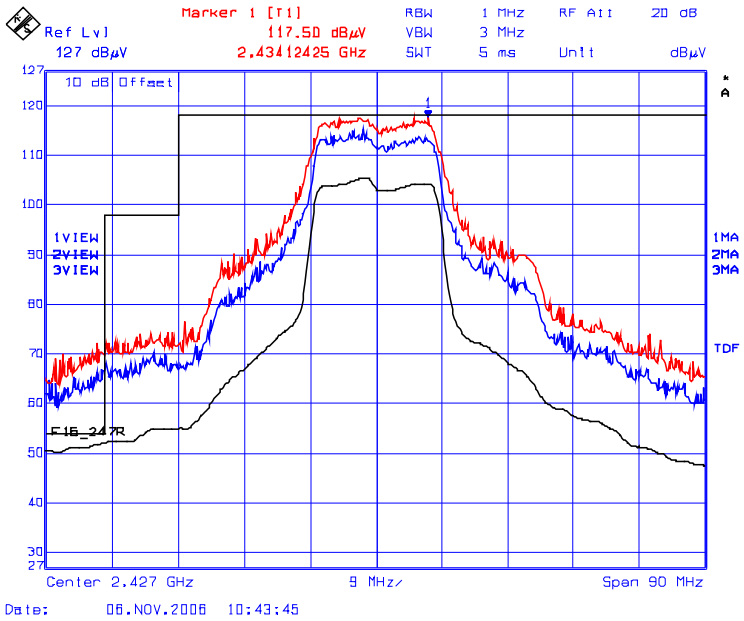
Plot 5.2.4.1.9.7a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2427 MHz, Power Setting: 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 119.36dBµV/m – 47.12 dB = 72.24 dBµV/m < Limit (74 dBµV/m)



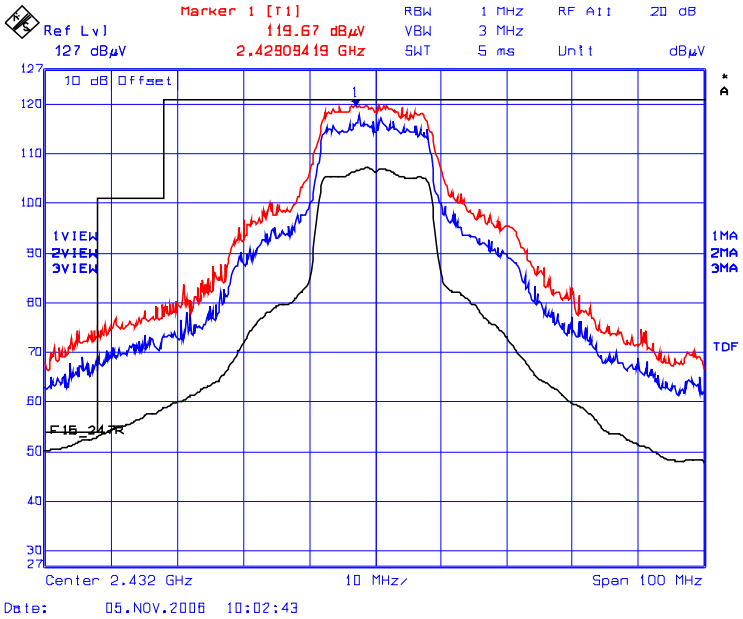
Plot 5.2.4.1.9.7b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 47.12 dB



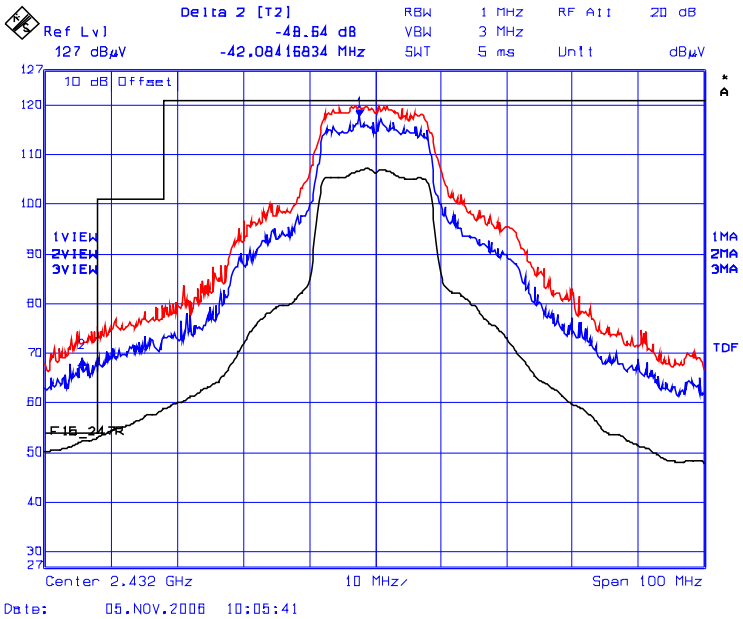
Plot 5.2.4.1.9.8 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2427 MHz, Power Setting: 18.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



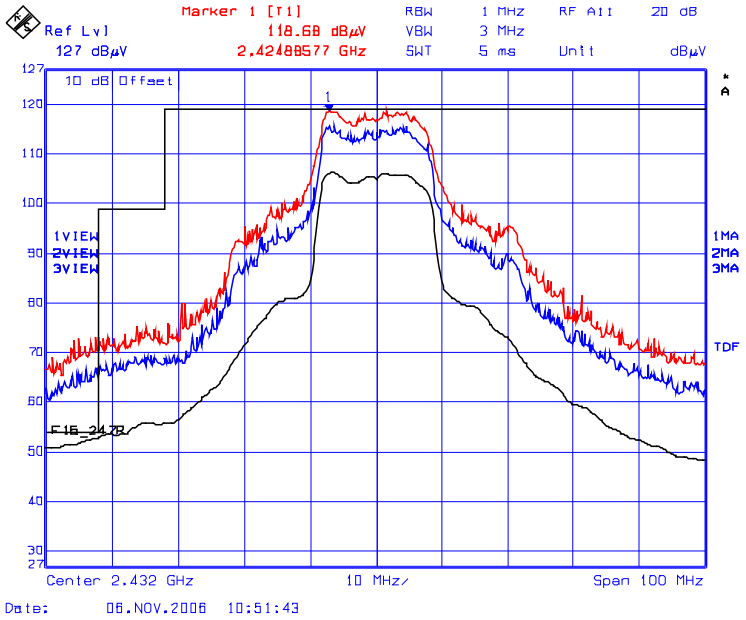
Plot 5.2.4.1.9.9a Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2432 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2390 MHz: 119.67 dBµV/m – 48.64 dB = 71.03 dBµV/m < Limit (74 dBµV/m)



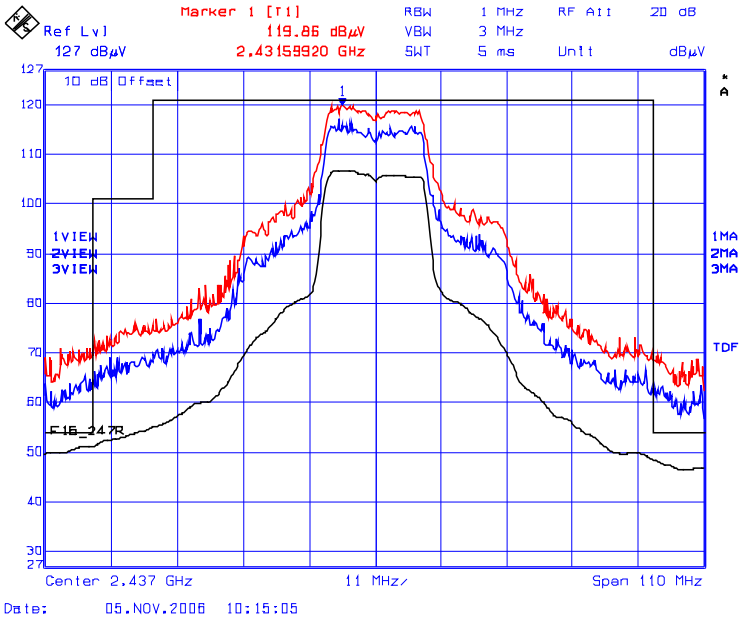
Plot 5.2.4.1.9.9b Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.64 dB



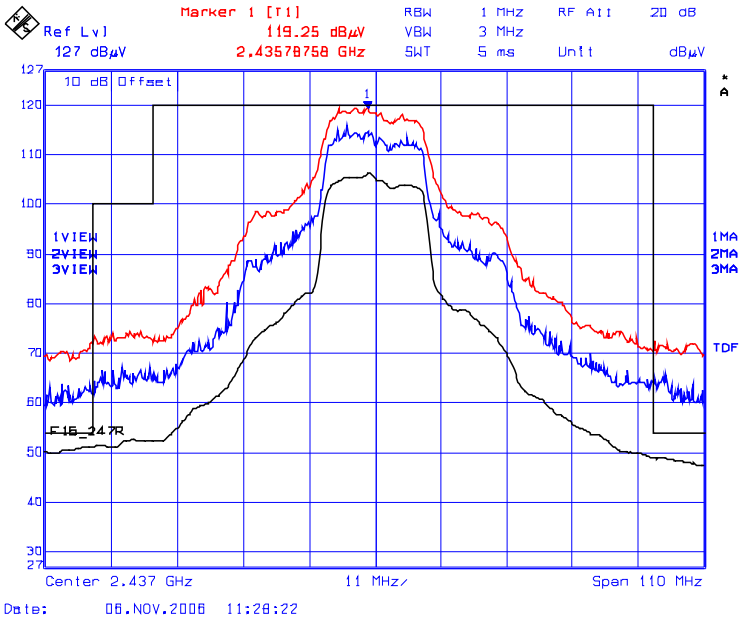
Plot 5.2.4.1.9.10 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2432 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



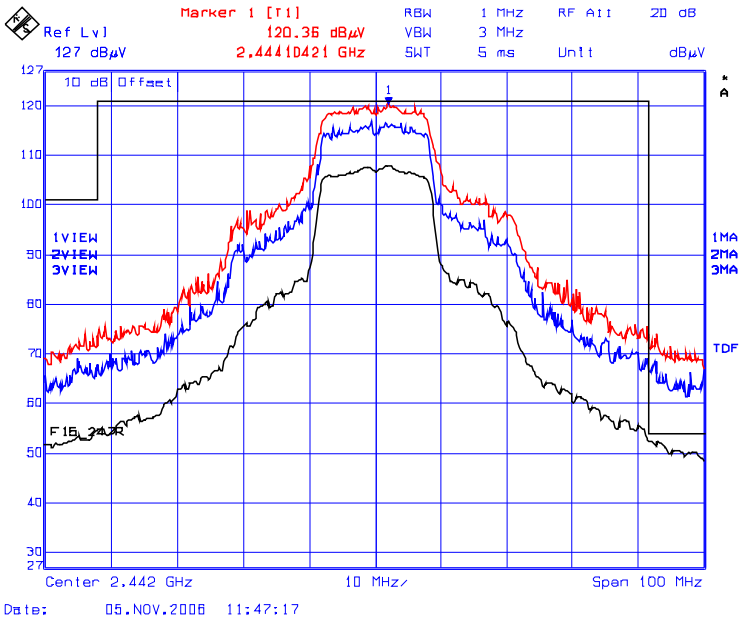
Plot 5.2.4.1.9.11 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2437 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



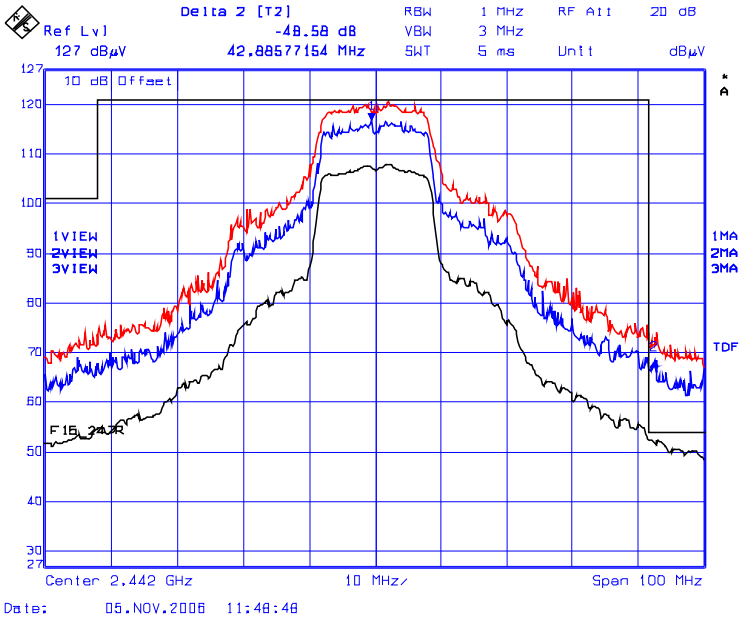
Plot 5.2.4.1.9.12 Lower Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2437 MHz, Power Setting: 19.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



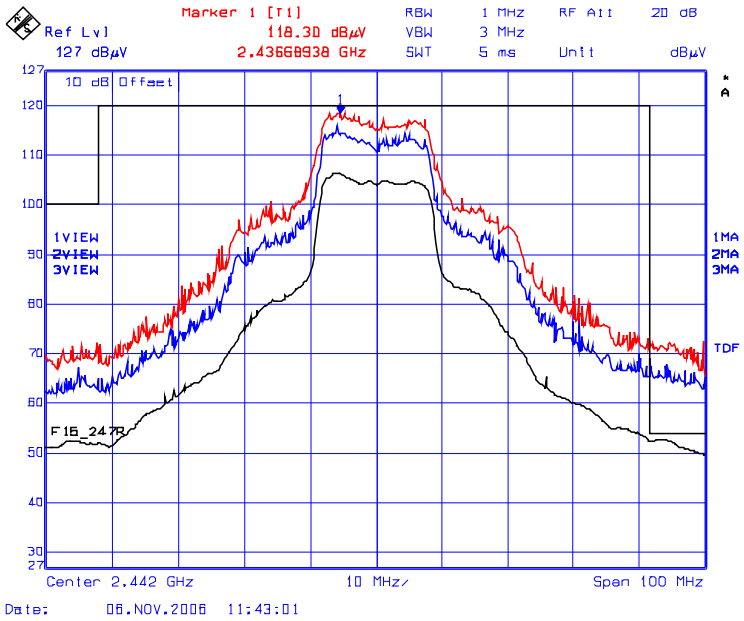
Plot 5.2.4.1.9.13a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2442 MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 120.36 dBµV/m – 48.58 dB = 71.78 dBµV/m < Limit (74 dBµV/m)



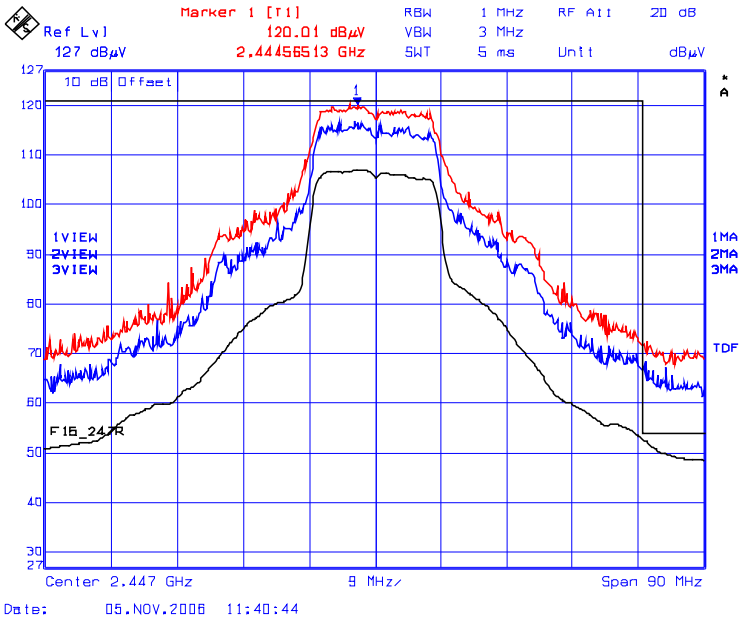
Plot 5.2.4.1.9.13b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.58 dB



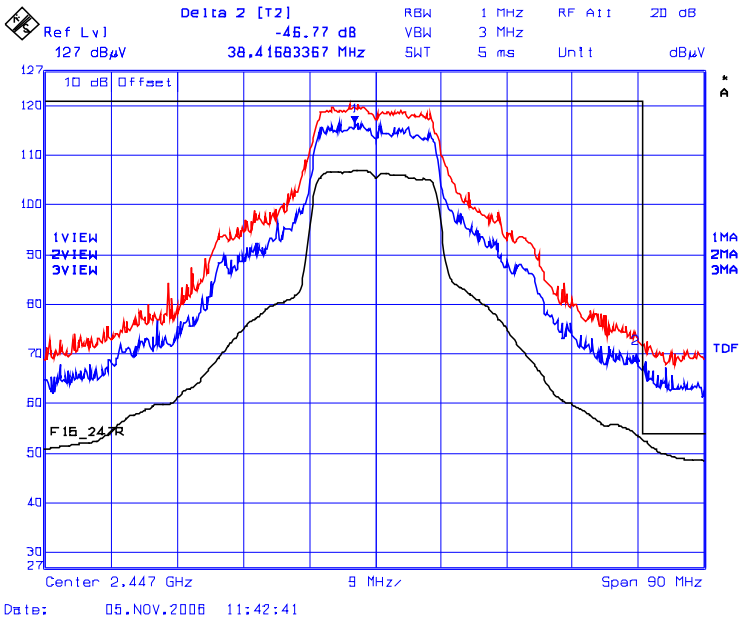
Plot 5.2.4.1.9.14 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2442 MHz, Power Setting: 20.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



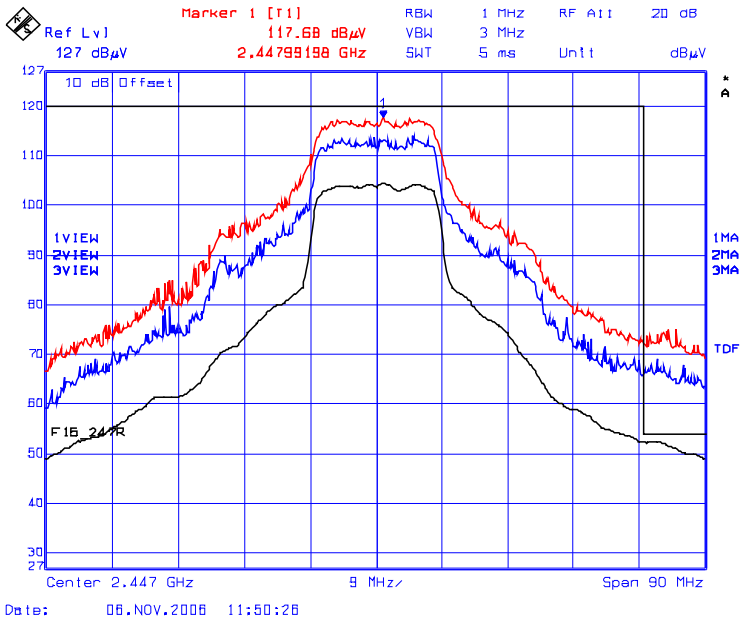
Plot 5.2.4.1.9.15a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2447 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 120.01 dBµV/m – 46.77 dB = 73.24 dBµV/m < Limit (74 dBµV/m)



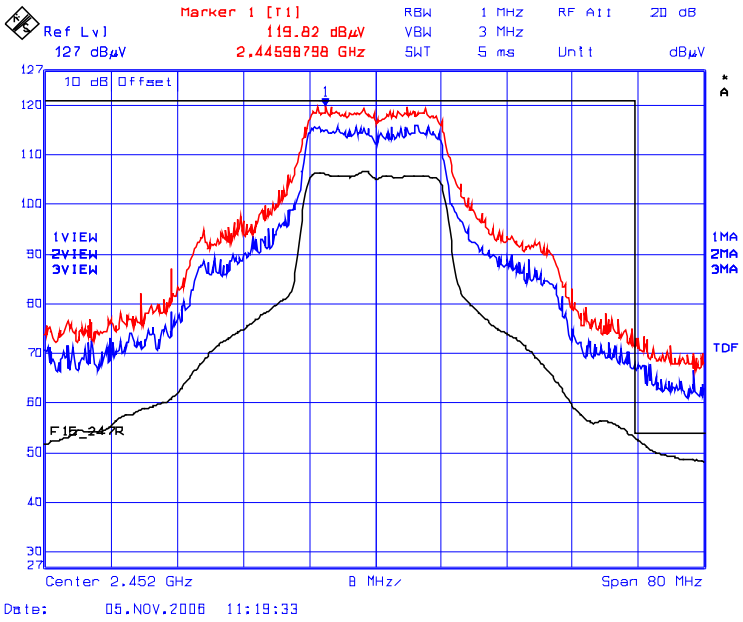
Plot 5.2.4.1.9.15b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 46.77 dB



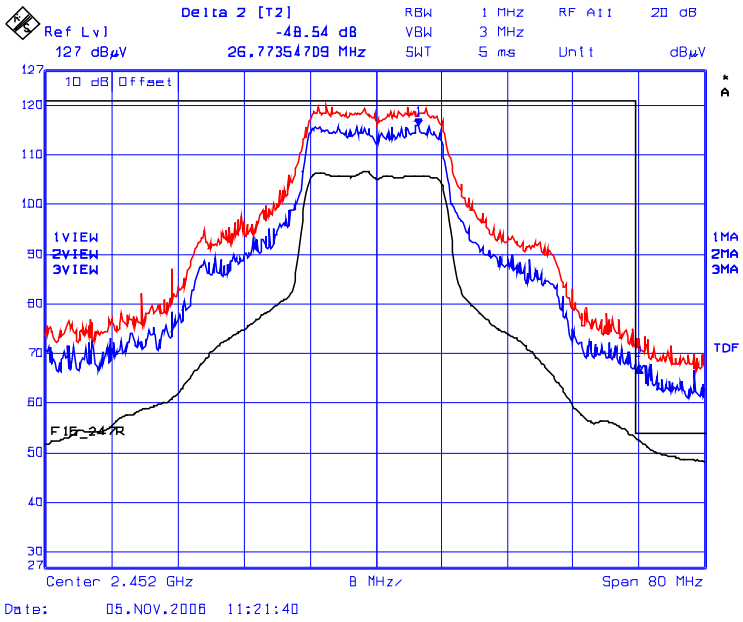
Plot 5.2.4.1.9.16 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2447 MHz, Power Setting: 19.0dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



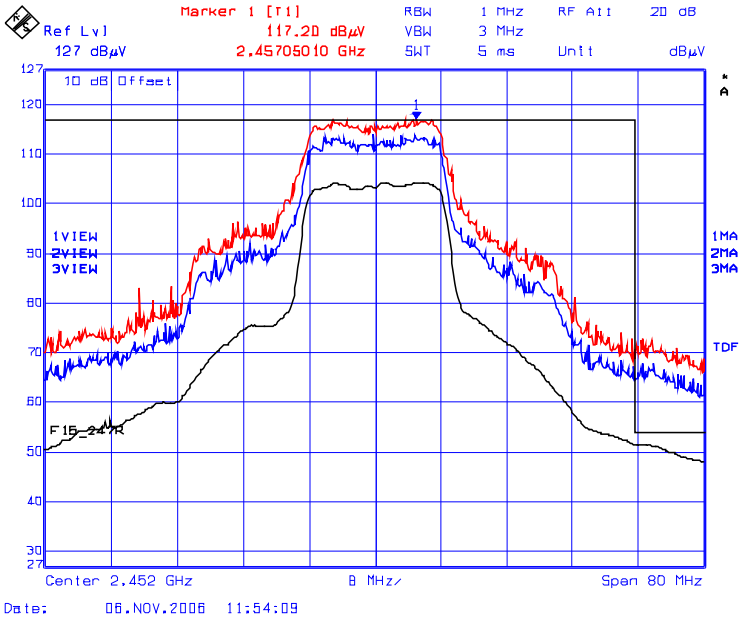
Plot 5.2.4.1.9.17a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.82 dBµV/m – 48.54 dB = 71.28 dBµV/m < Limit (74 dBµV/m)



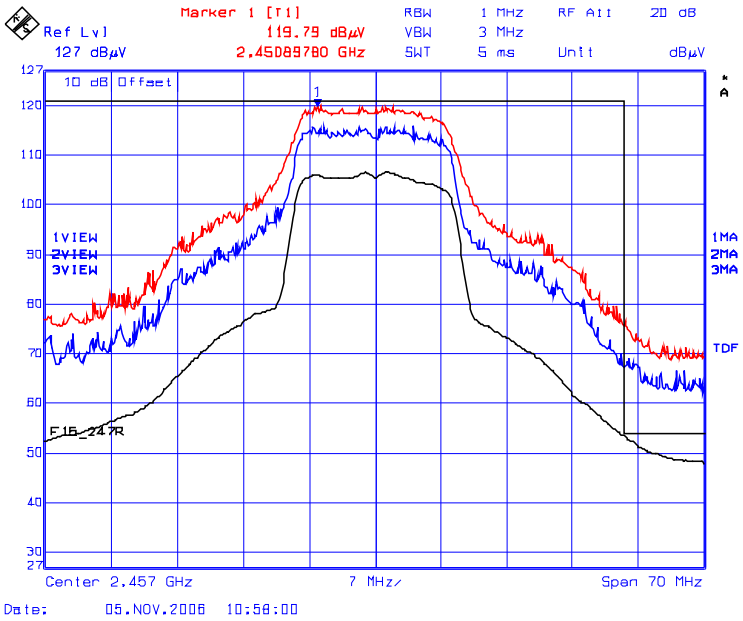
Plot 5.2.4.1.9.17b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 48.54 dB



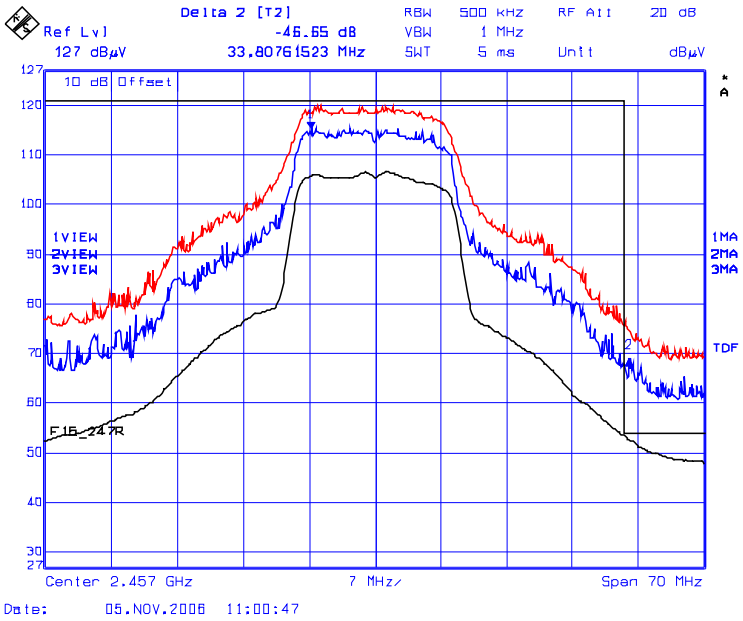
Plot 5.2.4.1.9.18 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2452 MHz, Power Setting: 18.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



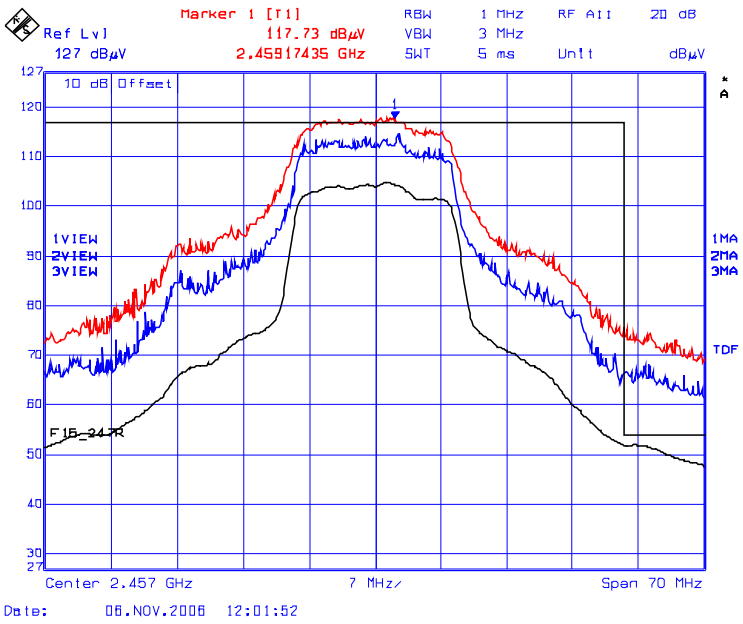
Plot 5.2.4.1.9.19a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2457 MHz, Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 119.79 dBµV/m – 46.65 dB = 73.14 dBµV/m < Limit (74 dBµV/m)



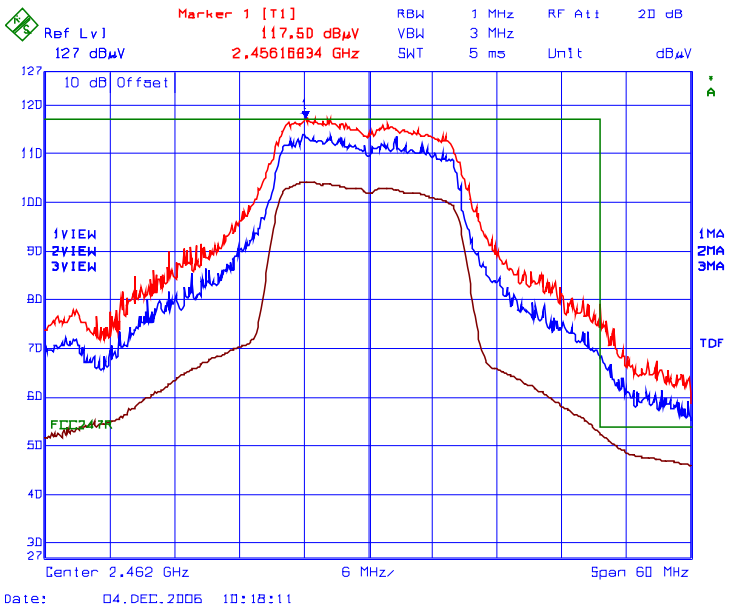
Plot 5.2.4.1.9.19b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 46.65 dB



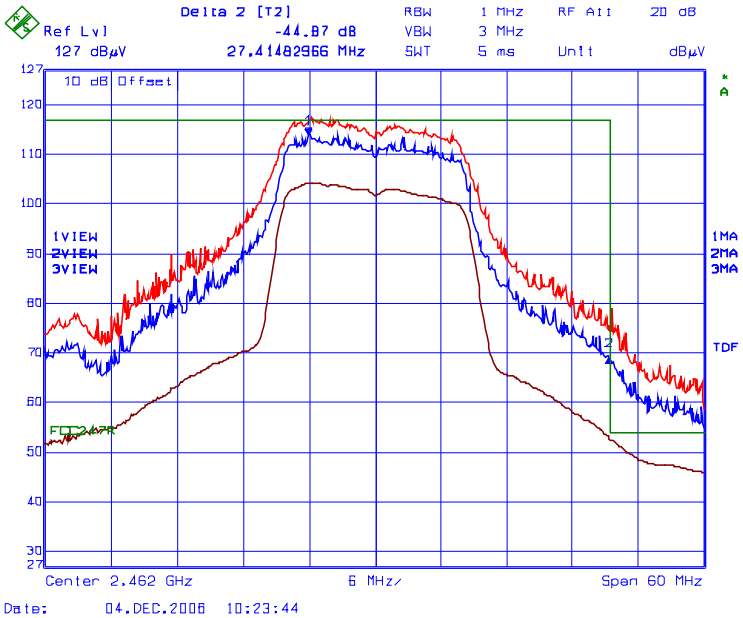
Plot 5.2.4.1.9.20 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2457 MHz, Power Setting: 17.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz



Plot 5.2.4.1.9.21a Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Frequency: 2462 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Band-Edge Level at 2483.5 MHz: 117.50 dBµV/m – 44.87 dB = 72.63 dBµV/m < Limit (74dBµV/m)



Plot 5.2.4.1.9.21b Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Horizontal Polarization
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz
Delta (Peak to Band-Edge) = 44.87 dB



Plot 5.2.4.1.9.22 Upper Band-Edge Transmitter Radiated Emissions @ 3 Meters, Vertical Polarization
Frequency: 2462 MHz, Power Setting: 15.5dBm
Trace 1: RBW = 1 MHz, VBW = 3 MHz; Trace 2: RBW = 500 kHz, VBW = 1 MHz; Trace 3: RBW = 1 MHz, VBW = 10 Hz