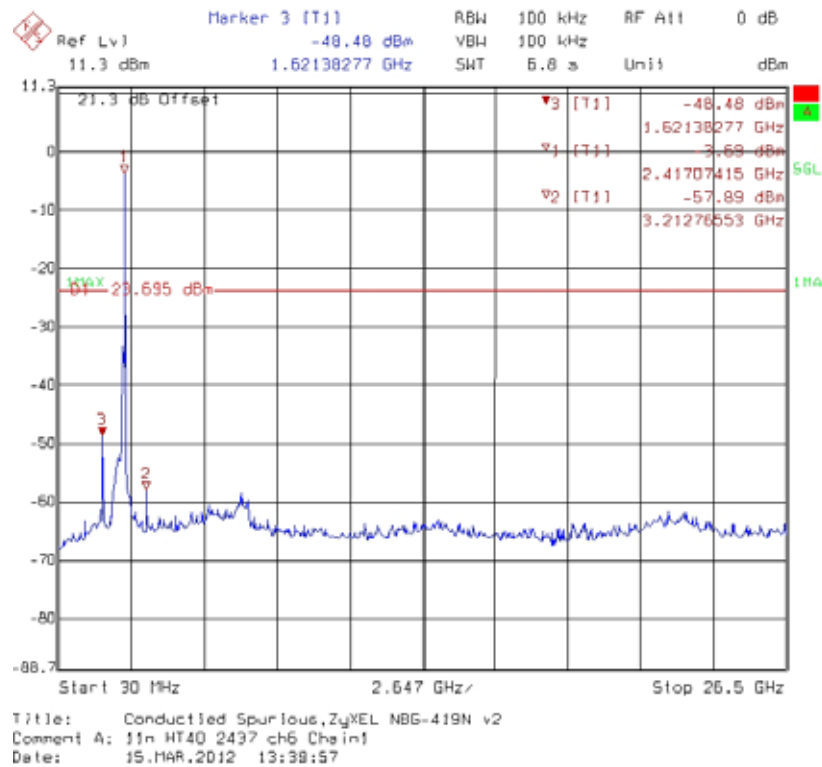
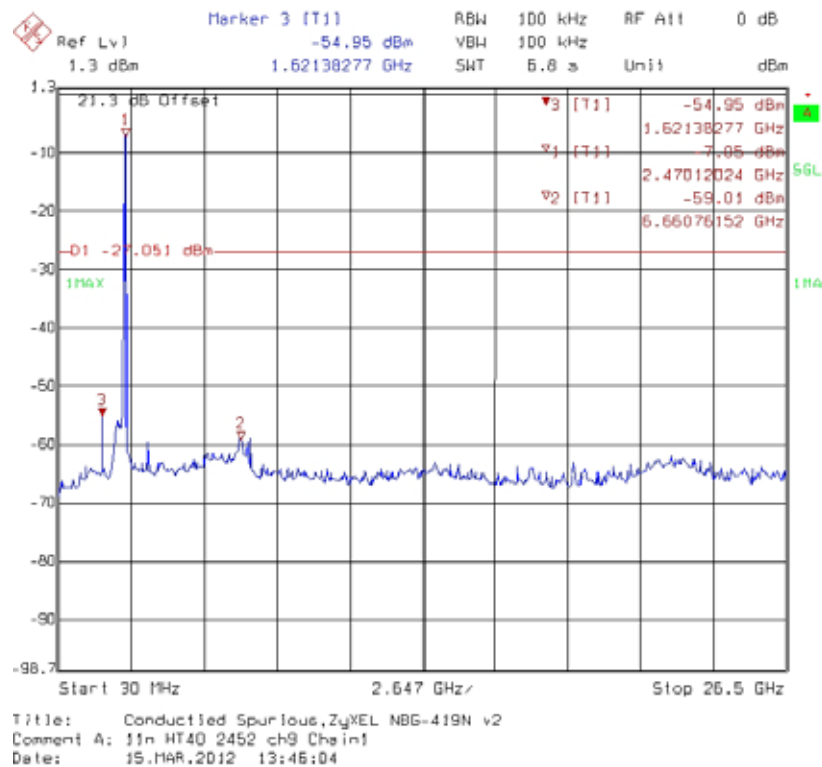


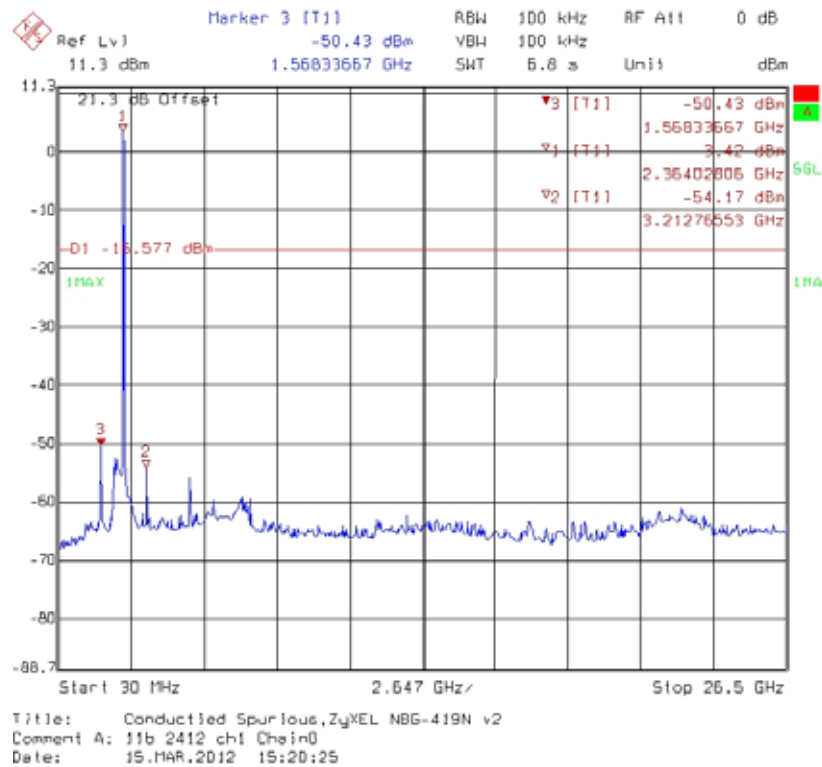
SAYTEC 2 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT40 mode channel 6



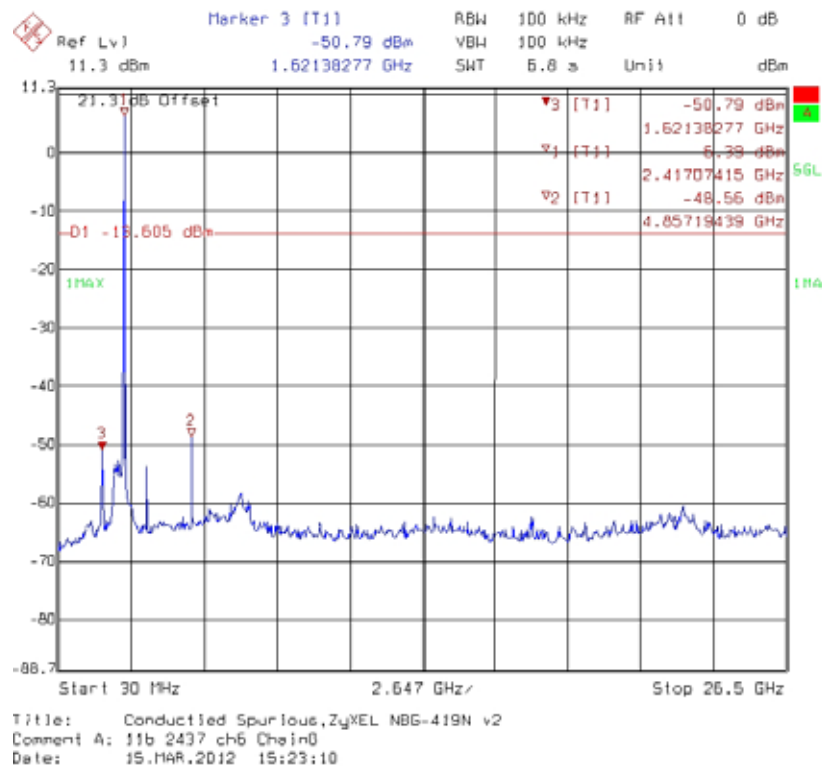
SAYTEC 2 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT40 mode channel 9



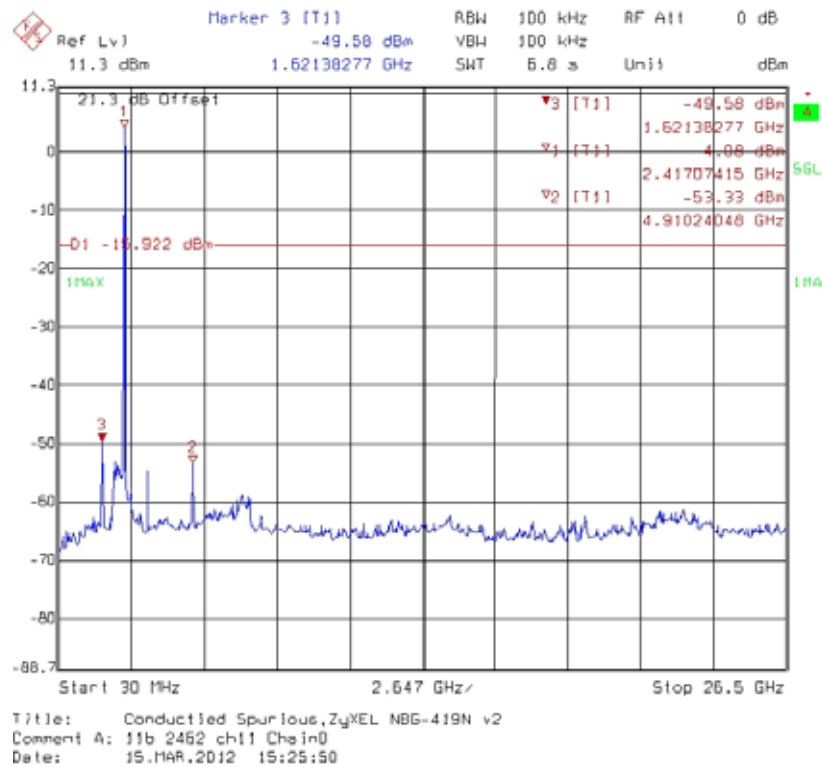
Invax 5 dBi Antenna: Conducted spurious @ 802.11b mode channel 1



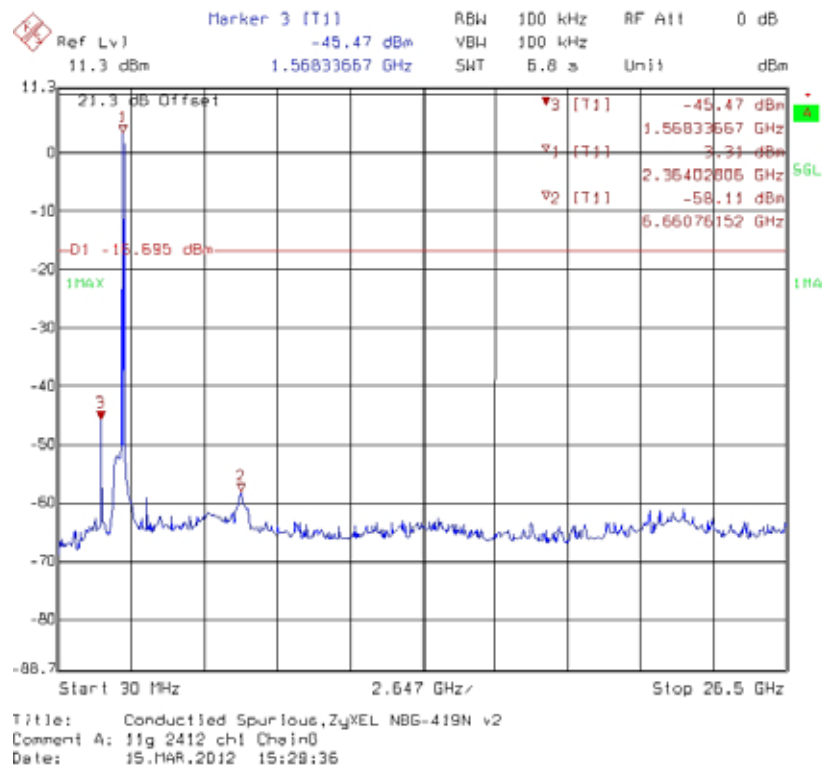
Invax 5 dBi Antenna: Conducted spurious @ 802.11b mode channel 6



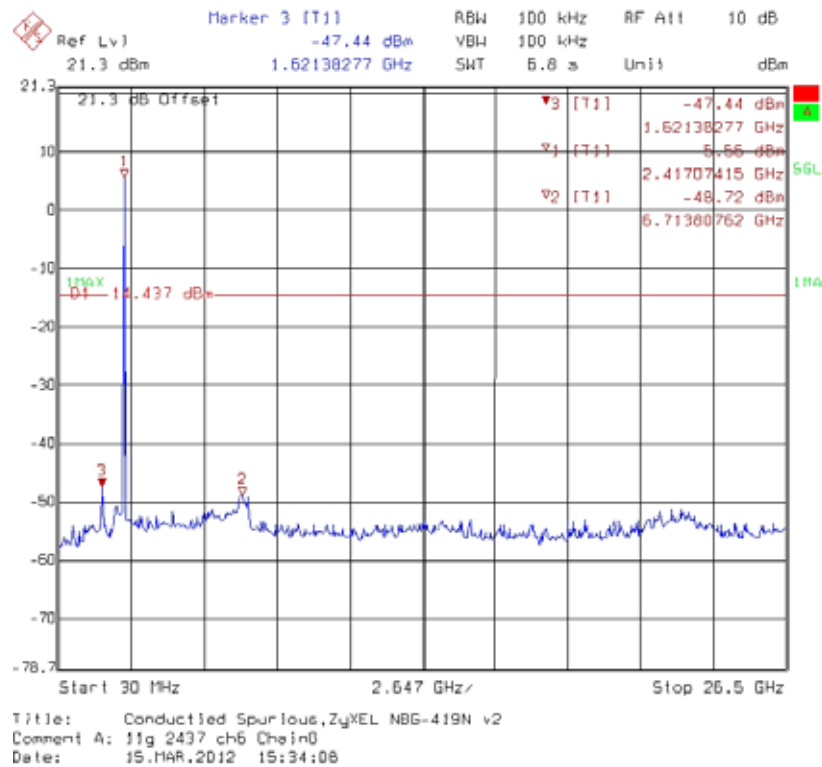
Invax 5 dBi Antenna: Conducted spurious @ 802.11b mode channel 11



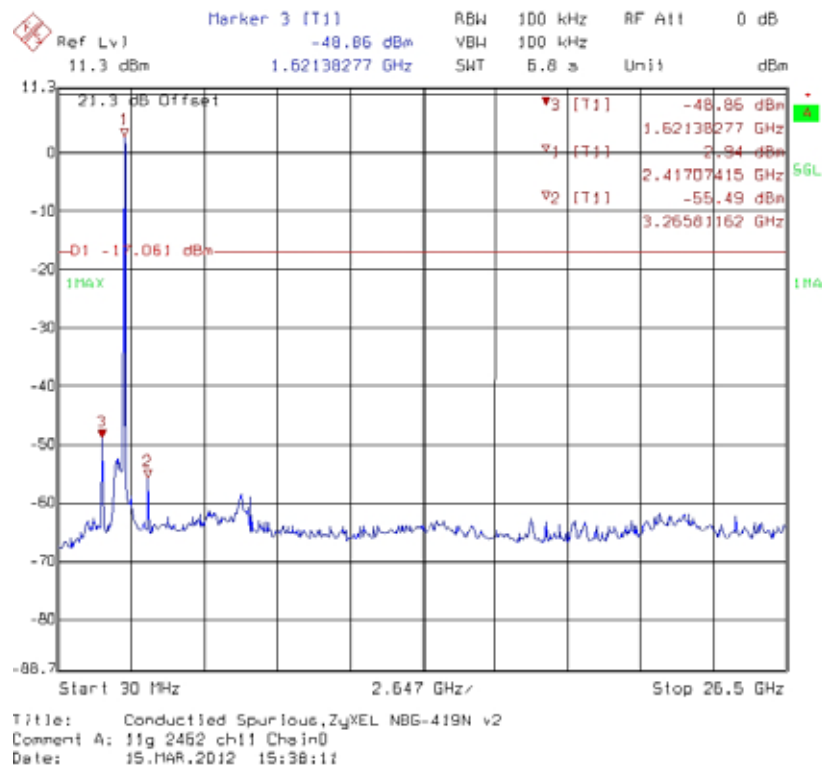
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11g mode channel 1



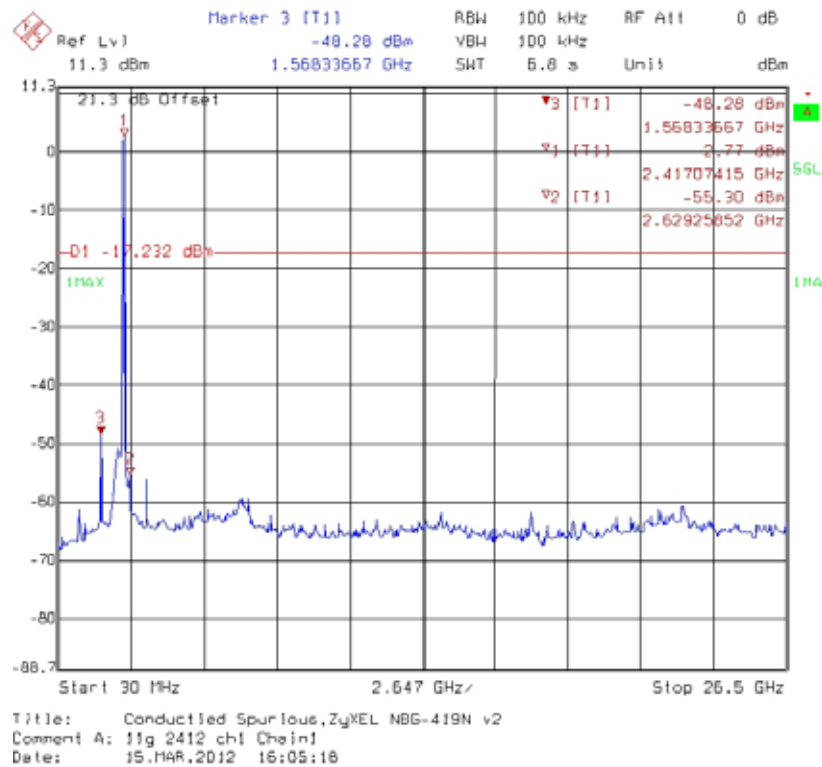
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11g mode channel 6



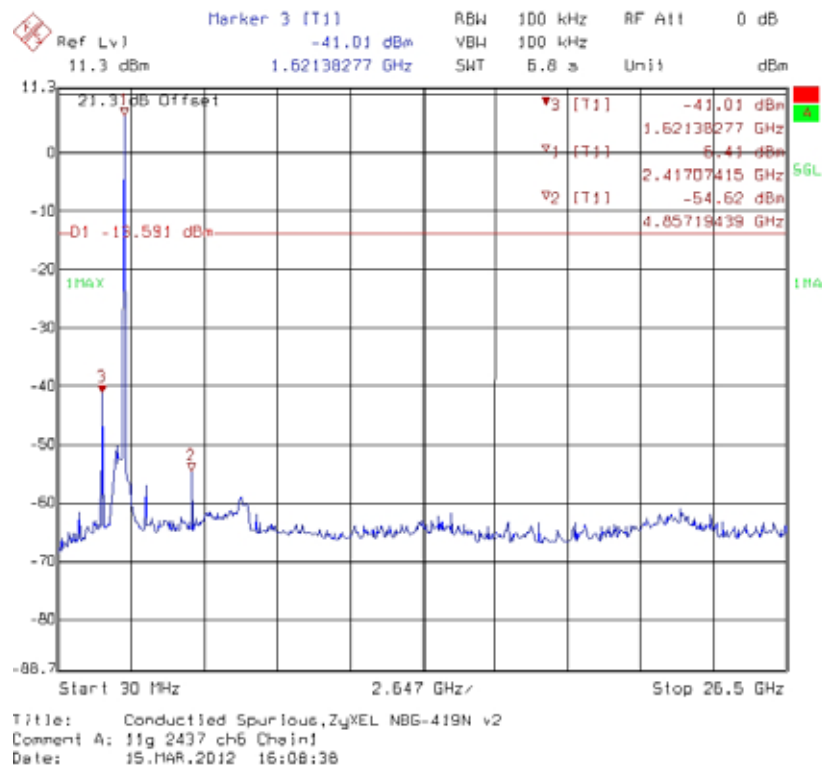
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11g mode channel 11



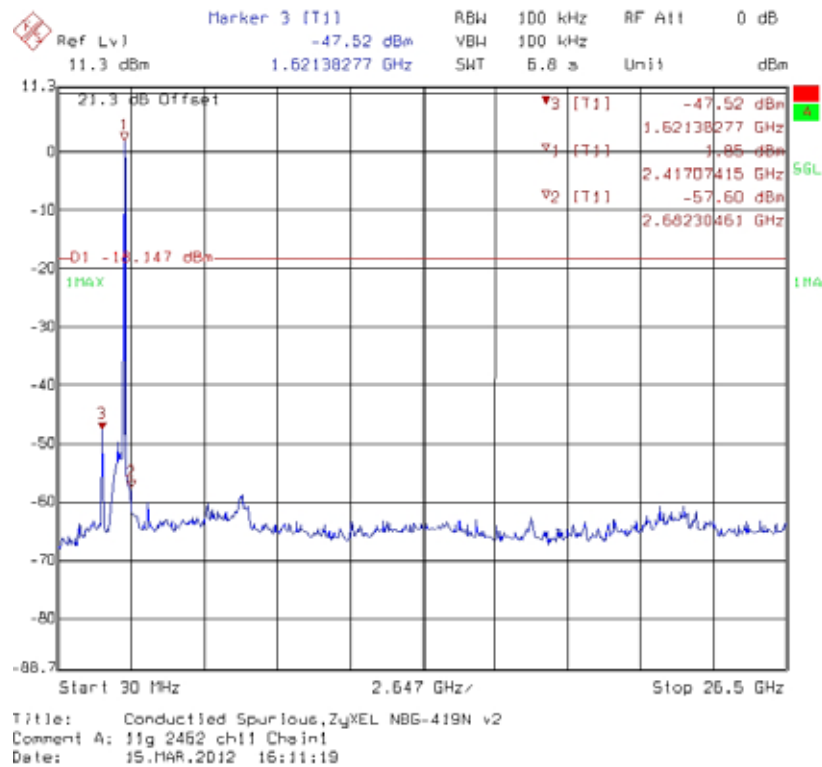
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11g mode channel 1



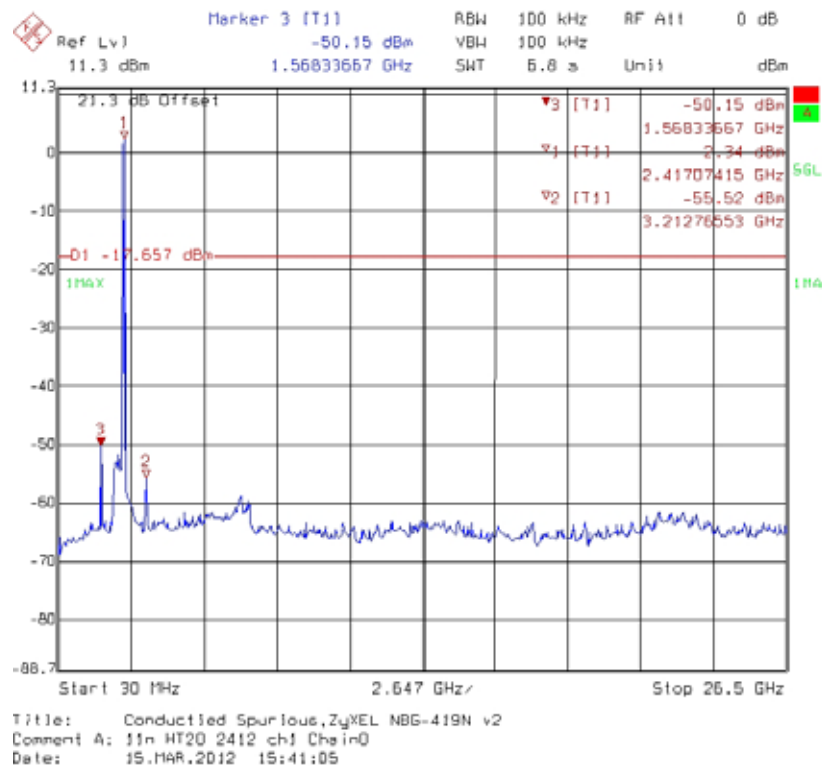
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11g mode channel 6



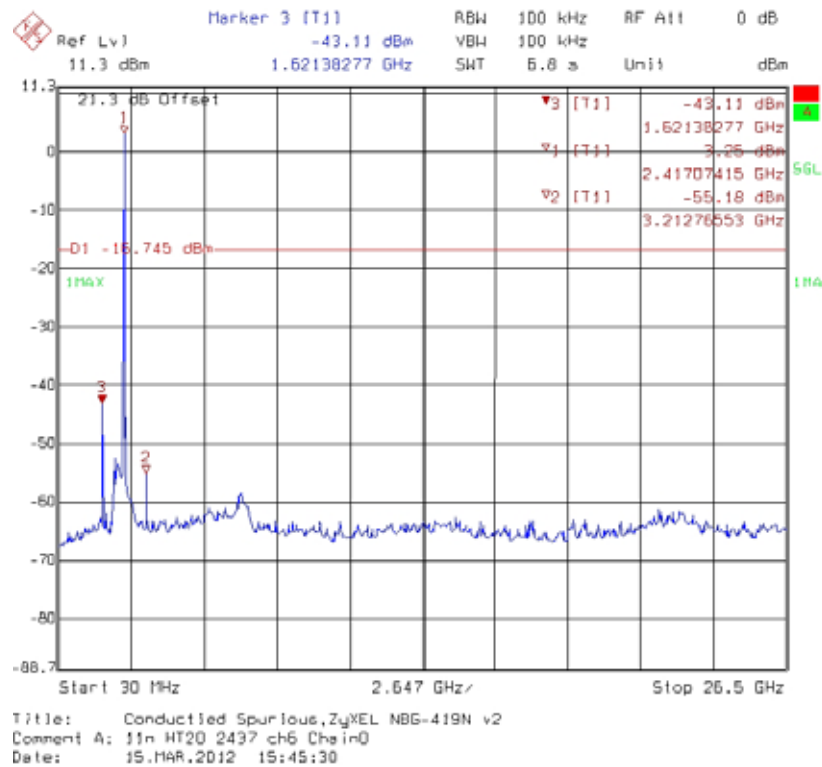
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11g mode channel 11



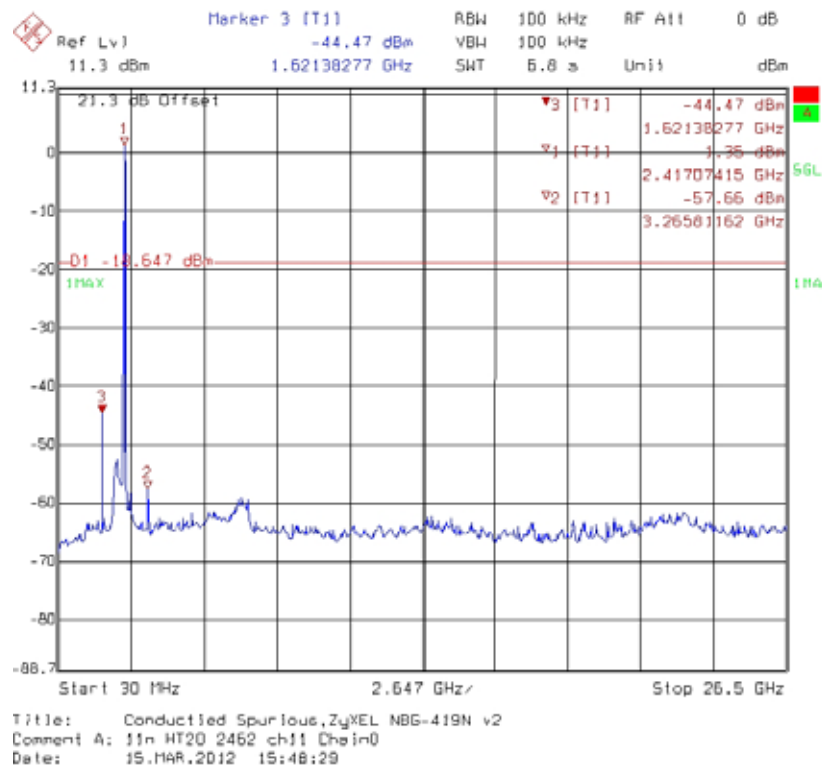
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT20 mode channel 1



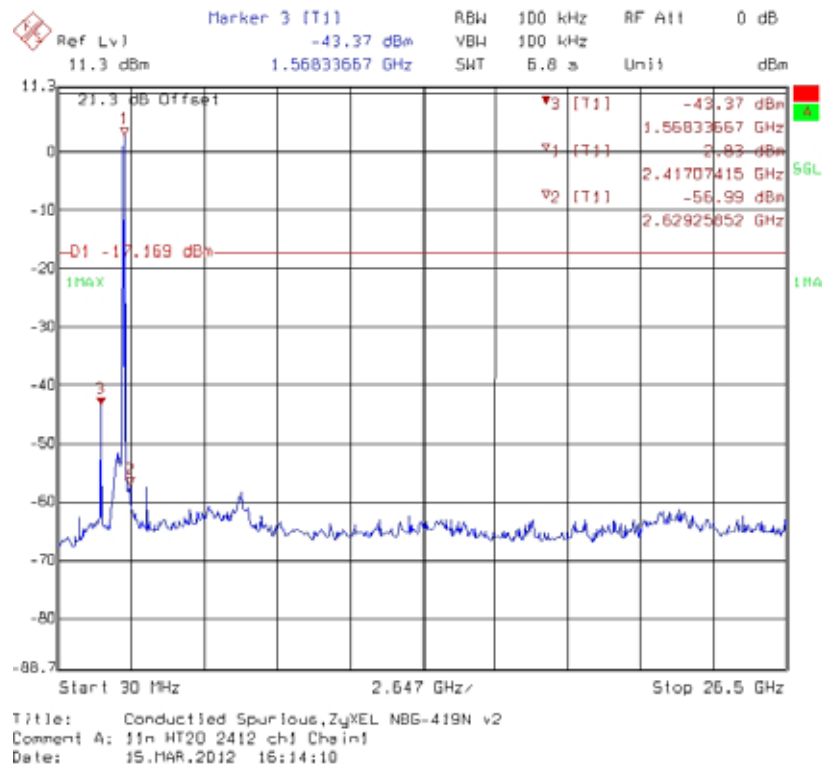
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT20 mode channel 6



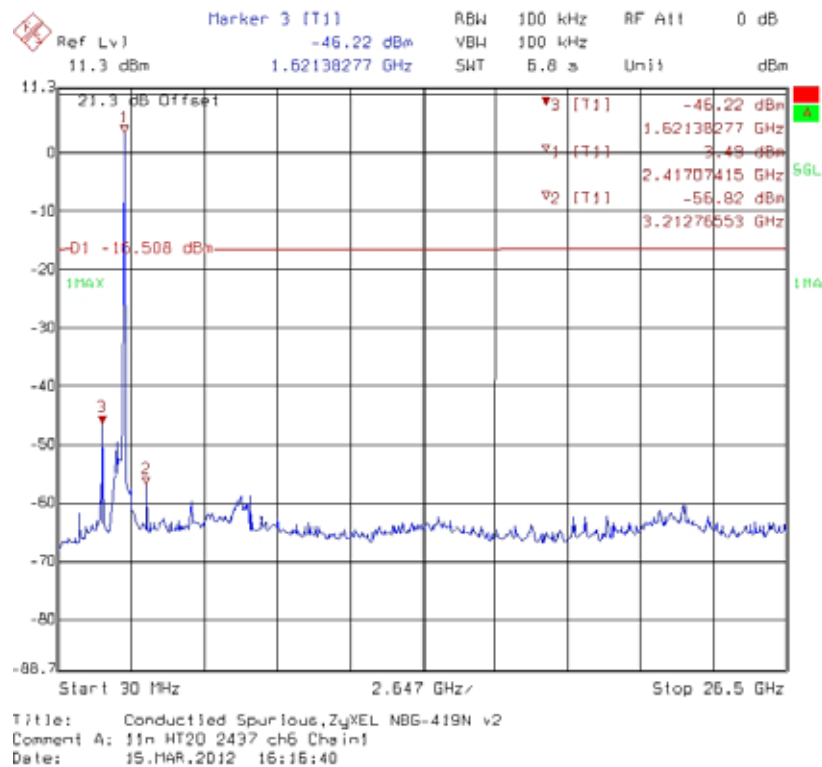
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT20 mode channel 11



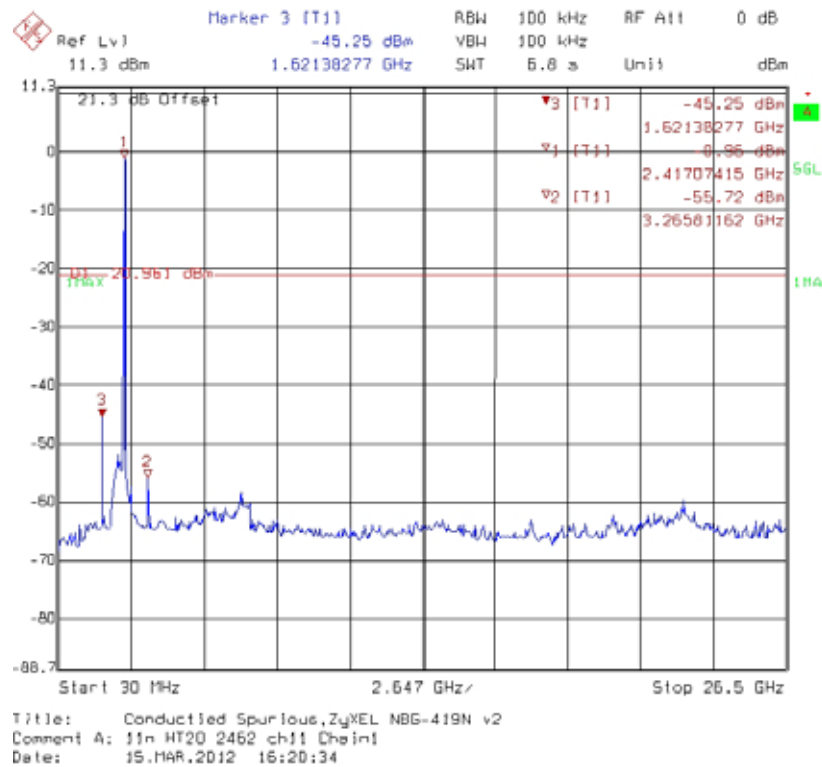
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT20 mode channel 1



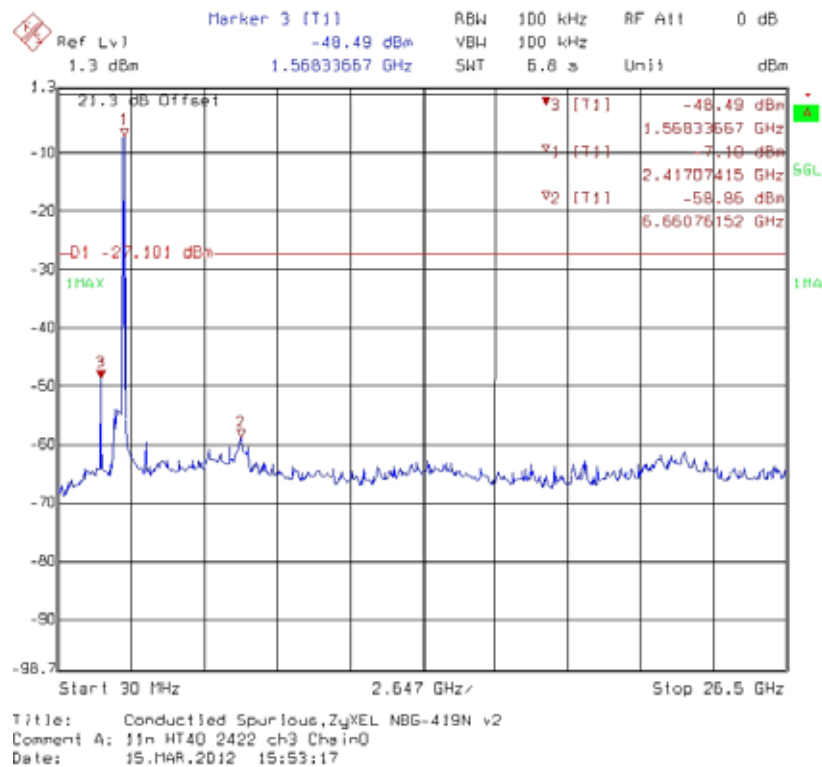
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT20 mode channel 6



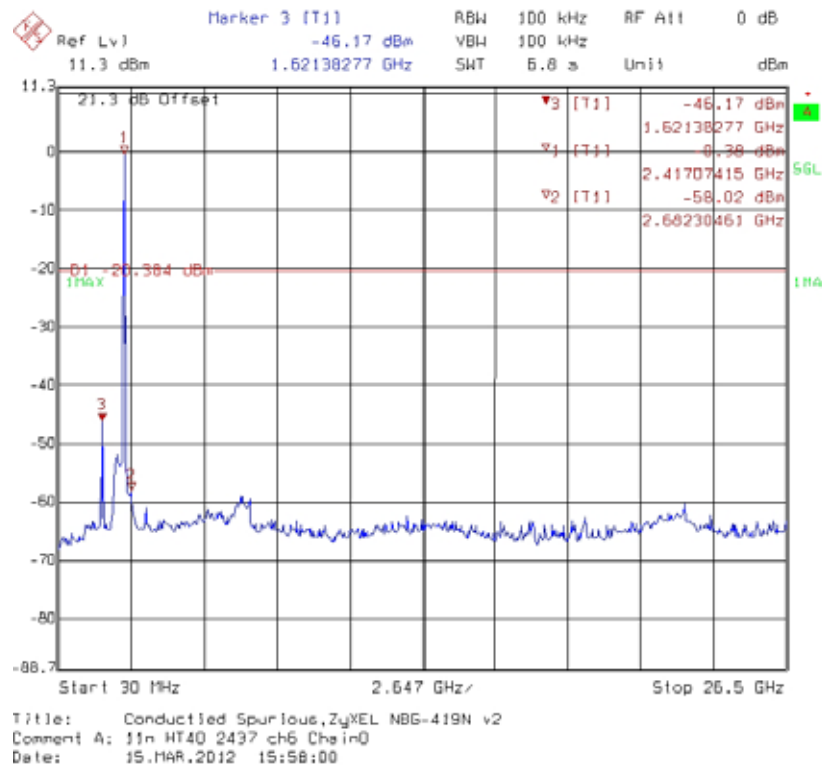
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT20 mode channel 11



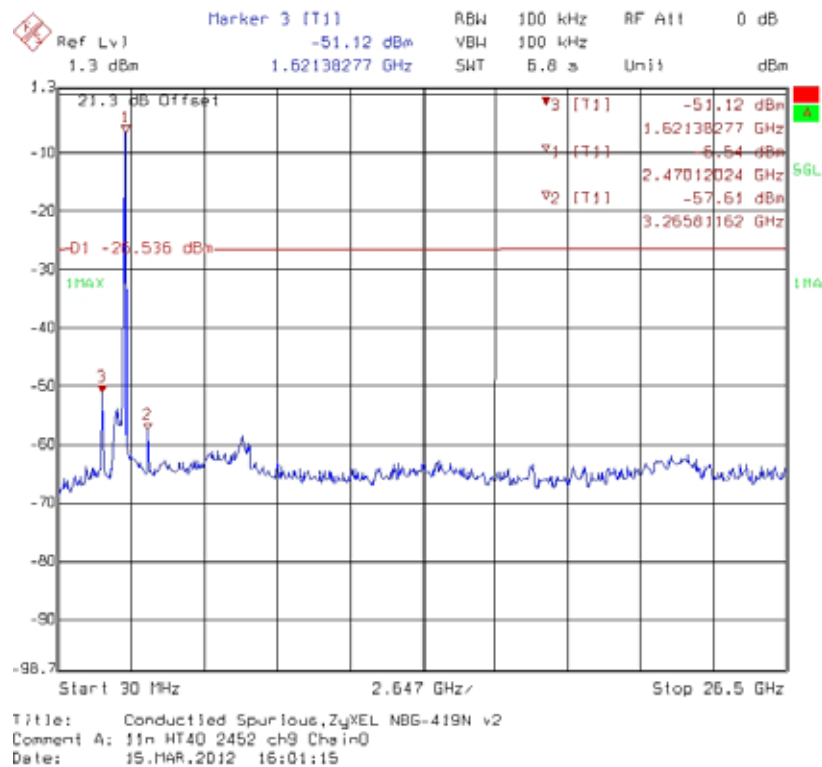
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT40 mode channel 3



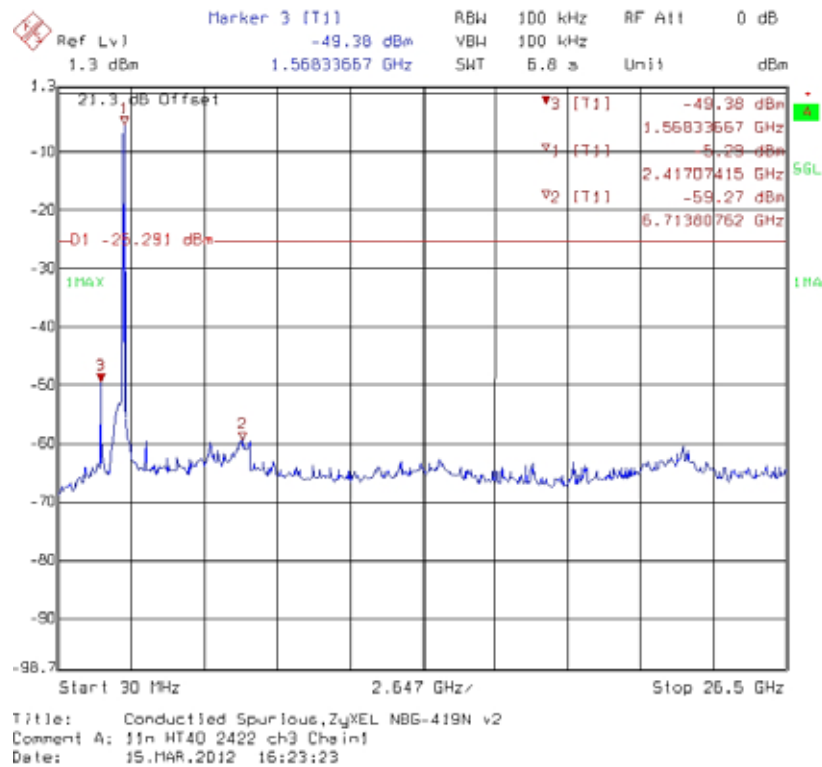
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT40 mode channel 6



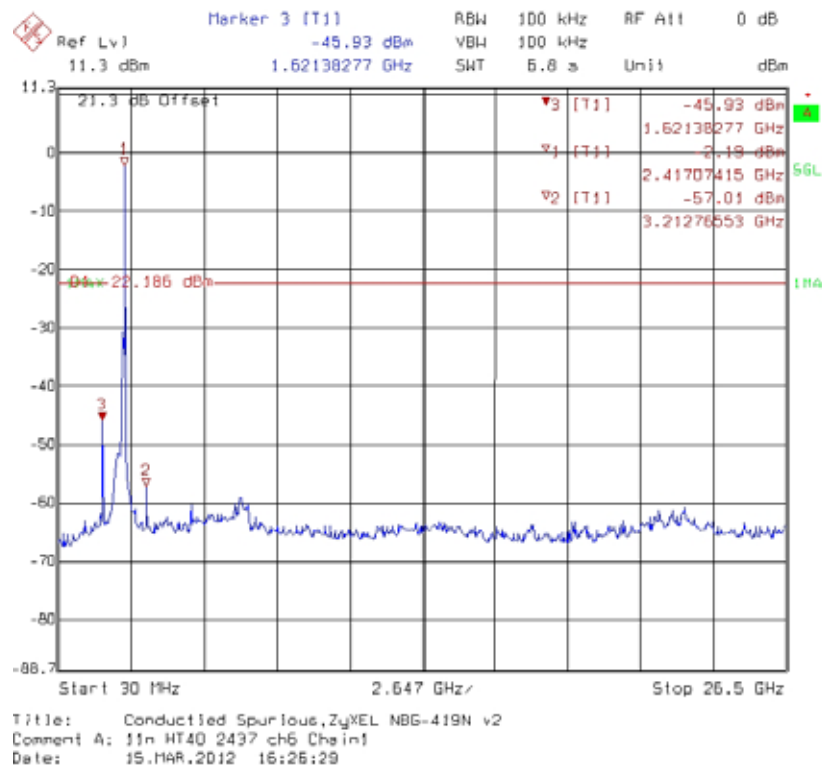
Invax 5 dBi Antenna: Chain 0: Conducted spurious @ 802.11n HT40 mode channel 9



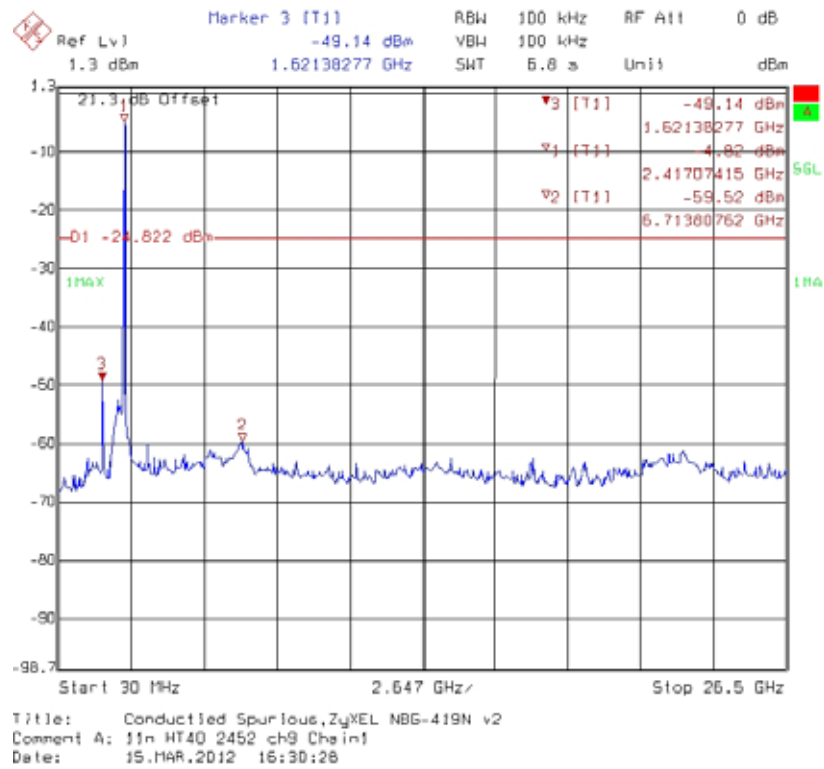
Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT40 mode channel 3



Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT40 mode channel 6



Invax 5 dBi Antenna: Chain 1: Conducted spurious @ 802.11n HT40 mode channel 9



8. Radiated Spurious Emission

Name of Test	Radiated Spurious Emission
Base Standard	FCC 15.247(d), 15.209, 15.205

Test Result: Complies
Measurement Data: See Tables below

Method of Measurement:

Reference FCC document: KDB558074, ANSI C63.4

The frequency range from 30 MHz to 1000 MHz using Bilog Antenna.

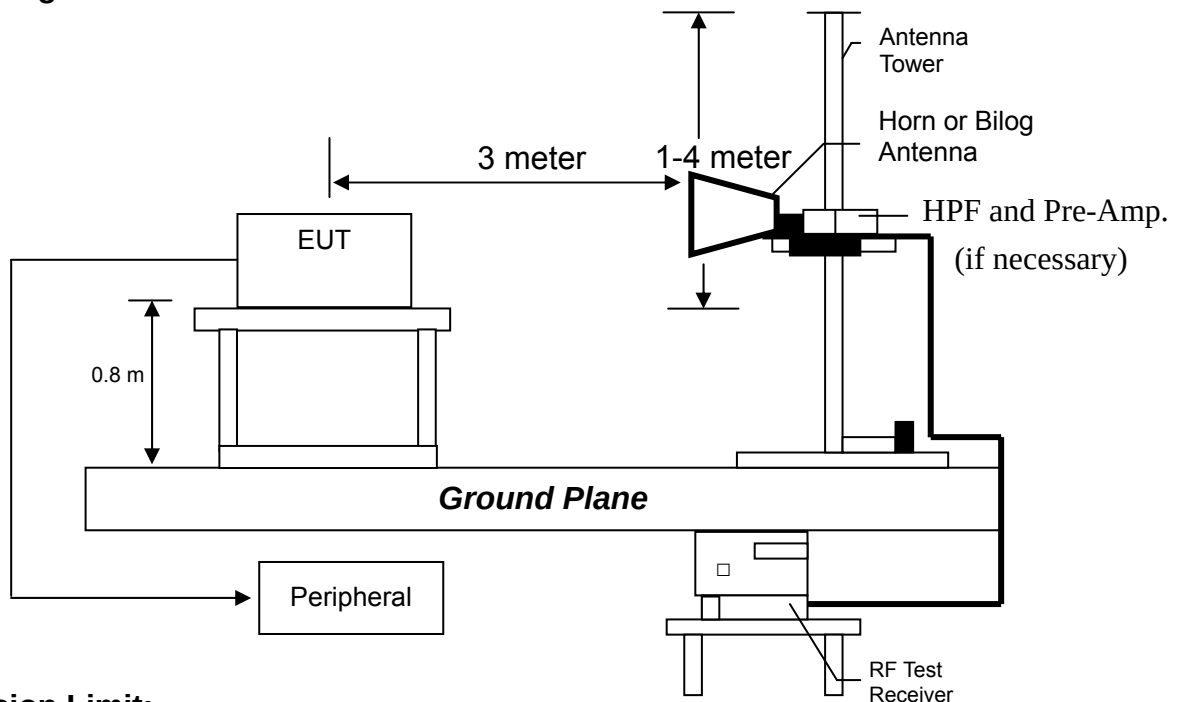
The frequency range over 1 GHz using Horn Antenna.

Radiated emissions were investigated cover the frequency range from 30 MHz to 1000 MHz using a receiver RBW of 120 kHz record QP reading, and the frequency over 1 GHz using a spectrum analyzer RBW of 1 MHz and 10 Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/VBW) recorded also on the report.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter. The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent 3 meters reading using inverse scaling with distance.

The EUT configuration please refer to the "Spurious set-up photo.pdf".

Test Diagram:



Emission Limit:

The spurious Emission shall test through the 10th harmonic. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Frequency (MHz)	Limits (dBμV/m@ 3 meter)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

- Note:**
- (1) The EUT was tested while in a continuous transmit mode and the worst case data rates are 11 Mbps data rate for 802.11b mode, 54 Mbps data rate for 802.11g mode, 150 Mbps data rate for 802.11n HT20 mode and 150 Mbps data rate for 802.11n HT40 mode. The EUT was tuned to a low, middle and high channel.
 - (2) The EUT operating at 2.4 GHz ISM band. Frequency Range scanned from 30 MHz to 25 GHz.

Measurement results: frequencies equal to or less than 1 GHz

The test was performed on EUT under 802.11b, 802.11g, 802.11n HT20 and 802.11n HT40 continuously transmitting mode. The worst case occurred at 802.11n HT20 Tx channel 6.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Worst Case : 802.11n HT20 Tx at channel 6

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	61.04	QP	12.23	20.61	32.84	40.00	-7.16
V	125.06	QP	9.47	26.29	35.75	43.50	-7.75
V	384.05	QP	16.40	21.37	37.77	46.00	-8.23
V	450.01	QP	17.68	16.66	34.34	46.00	-11.66
V	499.48	QP	18.43	21.35	39.77	46.00	-6.23
V	511.12	QP	18.56	16.39	34.94	46.00	-11.06
H	256.01	QP	12.64	18.44	31.08	46.00	-14.92
H	378.23	QP	16.74	20.42	37.16	46.00	-8.84
H	384.05	QP	16.74	22.65	39.39	46.00	-6.61
H	448.07	QP	18.12	22.68	40.80	46.00	-5.20
H	499.48	QP	18.64	21.94	40.58	46.00	-5.42
H	512.09	QP	18.77	15.98	34.75	46.00	-11.25

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Worst Case : 802.11n HT20 Tx at channel 6

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	94.02	QP	7.38	25.25	32.62	43.50	-10.88
V	125.06	QP	9.47	26.09	35.55	43.50	-7.95
V	384.05	QP	16.40	20.01	36.41	46.00	-9.59
V	447.10	QP	17.64	18.09	35.73	46.00	-10.27
V	499.48	QP	18.43	20.92	39.34	46.00	-6.66
V	512.09	QP	18.56	16.44	34.99	46.00	-11.01
H	256.01	QP	12.64	18.64	31.28	46.00	-14.72
H	351.07	QP	15.48	18.05	33.52	46.00	-12.48
H	384.05	QP	16.74	22.82	39.56	46.00	-6.44
H	450.01	QP	18.16	20.97	39.13	46.00	-6.87
H	499.48	QP	18.64	22.78	41.42	46.00	-4.58
H	511.12	QP	18.77	17.00	35.77	46.00	-10.23

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Worst Case : 802.11n HT20 Tx at channel 6

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	125.06	QP	9.47	25.45	34.91	43.50	-8.59
V	191.99	QP	12.00	20.16	32.16	43.50	-11.34
V	256.01	QP	12.36	22.73	35.09	46.00	-10.91
V	384.05	QP	16.40	18.76	35.16	46.00	-10.84
V	448.07	QP	17.64	17.66	35.30	46.00	-10.70
V	499.48	QP	18.43	24.74	43.16	46.00	-2.84
H	125.06	QP	11.62	14.07	25.68	43.50	-17.82
H	256.01	QP	12.64	27.68	40.32	46.00	-5.68
H	384.05	QP	16.74	21.28	38.02	46.00	-7.98
H	417.03	QP	16.81	14.93	31.74	46.00	-14.26
H	499.48	QP	18.64	20.46	39.10	46.00	-6.90
H	749.74	QP	22.95	13.44	36.39	46.00	-9.61

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

Measurement results: frequency above 1GHz

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11b Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	45.56	48.00	54	-6.00
4824	PK	V	35.1	38.54	61.20	64.64	74	-9.36
4824	AV	V	35.1	38.54	49.89	53.33	54	-0.67
7236	PK	V	33.0	44.60	45.89	57.49	74	-16.51
7236	AV	V	33.0	44.60	39.99	51.59	54	-2.41
3210	PK	H	33.8	36.24	40.77	43.21	54	-10.79
4824	PK	H	35.1	38.54	55.49	58.93	74	-15.07
4824	AV	H	35.1	38.54	45.39	48.83	54	-5.17
7236	PK	H	33.0	44.60	37.23	48.83	54	-5.17

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11b Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	45.24	47.68	54	-6.32
4874	PK	V	35.1	38.54	61.13	64.57	74	-9.43
4874	AV	V	35.1	38.54	49.80	53.24	54	-0.76
7311	PK	V	33.0	44.60	52.37	63.97	74	-10.03
7311	AV	V	33.0	44.60	41.51	53.11	54	-0.89
3240	PK	H	33.8	36.24	41.63	44.07	54	-9.93
4874	PK	H	35.1	38.54	56.01	59.45	74	-14.55
4874	AV	H	35.1	38.54	41.95	45.39	54	-8.61
7311	PK	H	33.0	44.60	47.19	58.79	74	-15.21
7311	AV	H	33.0	44.60	37.97	49.57	54	-4.43

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11b Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.21	47.65	54	-6.35
4924	PK	V	35.1	38.54	58.67	62.11	74	-11.89
4924	AV	V	35.1	38.54	49.81	53.25	54	-0.75
7386	PK	V	33.0	44.60	46.64	58.24	74	-15.76
7386	AV	V	33.0	44.60	39.27	50.87	54	-3.13
3270	PK	H	33.8	36.24	41.09	43.53	54	-10.47
4924	PK	H	35.1	38.54	54.84	58.28	74	-15.72
4924	AV	H	35.1	38.54	45.02	48.46	54	-5.54
7386	PK	H	33.0	44.60	39.46	51.06	54	-2.94

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	43.24	45.68	54	-8.32
4824	PK	V	35.1	38.54	66.16	69.60	74	-4.40
4824	AV	V	35.1	38.54	48.89	52.33	54	-1.67
7236	PK	V	33.0	44.60	48.80	60.40	74	-13.60
7236	AV	V	33.0	44.60	38.67	50.27	54	-3.73
3210	PK	H	33.8	36.24	39.79	42.23	54	-11.77
4824	PK	H	35.1	38.54	61.65	65.09	74	-8.91
4824	AV	H	35.1	38.54	46.96	50.40	54	-3.60
7236	PK	H	33.0	44.60	44.81	56.41	74	-17.59
7236	AV	H	33.0	44.60	34.81	46.41	54	-7.59

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	42.73	45.17	54	-8.83
4874	PK	V	35.1	38.54	64.51	67.95	74	-6.05
4874	AV	V	35.1	38.54	49.54	52.98	54	-1.02
7311	PK	V	33.0	44.60	51.20	62.80	74	-11.20
7311	AV	V	33.0	44.60	39.50	51.10	54	-2.90
12185	PK	V	31.6	50.87	36.65	55.92	74	-18.08
12185	AV	V	31.6	50.87	28.83	48.10	54	-5.90
3240	PK	H	33.8	36.24	40.70	43.14	54	-10.86
4874	PK	H	35.1	38.54	62.24	65.68	74	-8.32
4874	AV	H	35.1	38.54	47.38	50.82	54	-3.18
7311	PK	H	33.0	44.60	48.39	59.99	74	-14.01
7311	AV	H	33.0	44.60	36.38	47.98	54	-6.02

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.24	47.68	54	-6.32
4924	PK	V	35.1	38.54	55.82	59.26	74	-14.74
4924	AV	V	35.1	38.54	47.93	51.37	54	-2.63
7386	PK	V	33.0	44.60	42.50	54.10	74	-19.90
7386	AV	V	33.0	44.60	35.51	47.11	54	-6.89
3270	PK	H	33.8	36.24	40.26	42.70	54	-11.30
4924	PK	H	35.1	38.54	55.32	58.76	74	-15.24
4924	AV	H	35.1	38.54	44.80	48.24	54	-5.76
7386	PK	H	33.0	44.60	40.60	52.20	74	-21.80

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	47.13	49.57	54	-4.43
4824	PK	V	35.1	38.54	60.73	64.17	74	-9.83
4824	AV	V	35.1	38.54	47.79	51.23	54	-2.77
7236	PK	V	33.0	44.60	51.52	63.12	74	-10.88
7236	AV	V	33.0	44.60	37.62	49.22	54	-4.78
3210	PK	H	33.8	36.24	41.69	44.13	54	-9.87
4824	PK	H	35.1	38.54	57.39	60.83	74	-13.17
4824	AV	H	35.1	38.54	46.08	49.52	54	-4.48
7236	PK	H	33.0	44.60	45.90	57.50	74	-16.50
7236	AV	H	33.0	44.60	31.31	42.91	54	-11.09

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	46.42	48.86	54	-5.14
4874	PK	V	35.1	38.54	57.63	61.07	74	-12.93
4874	AV	V	35.1	38.54	48.89	52.33	54	-1.67
7311	PK	V	33.0	44.60	44.91	56.51	74	-17.49
7311	AV	V	33.0	44.60	38.15	49.75	54	-4.25
3240	PK	H	33.8	36.24	41.50	43.94	54	-10.06
4874	PK	H	35.1	38.54	61.82	65.26	74	-8.74
4874	AV	H	35.1	38.54	44.81	48.25	54	-5.75
7311	PK	H	33.0	44.60	48.24	59.84	74	-14.16
7311	AV	H	33.0	44.60	33.45	45.05	54	-8.95

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.80	48.24	54	-5.76
4924	PK	V	35.1	38.54	63.20	66.64	74	-7.36
4924	AV	V	35.1	38.54	48.70	52.14	54	-1.86
7386	PK	V	33.0	44.60	47.64	59.24	74	-14.76
7386	AV	V	33.0	44.60	36.57	48.17	54	-5.83
3270	PK	H	33.8	36.24	41.09	43.53	54	-10.47
4924	PK	H	35.1	38.54	58.27	61.71	74	-12.29
4924	AV	H	35.1	38.54	44.99	48.43	54	-5.57
7386	PK	H	33.0	44.60	43.59	55.19	74	-18.81
7386	AV	H	33.0	44.60	32.18	43.78	54	-10.22

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT20 Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	48.07	50.51	54	-3.49
4824	PK	V	35.1	38.54	64.75	68.19	74	-5.81
4824	AV	V	35.1	38.54	64.75	53.11	54	-0.89
7236	PK	V	33.0	44.60	41.51	63.00	74	-11.00
7236	AV	V	33.0	44.60	51.40	51.38	54	-2.62
3210	PK	H	33.8	36.24	60.56	46.59	54	-7.41
4824	PK	H	35.1	38.54	47.94	65.73	74	-8.27
4824	AV	H	35.1	38.54	62.29	50.08	54	-3.92
7236	PK	H	33.0	44.60	38.48	58.15	74	-15.85
7236	AV	H	33.0	44.60	46.55	46.36	54	-7.64

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	55.71	49.86	54	-4.14
4874	PK	V	35.1	38.54	42.92	67.14	74	-6.86
4874	AV	V	35.1	38.54	49.77	53.21	54	-0.79
7311	PK	V	33.0	44.60	55.53	67.13	74	-6.87
7311	AV	V	33.0	44.60	41.07	52.67	54	-1.33
3240	PK	H	33.8	36.24	44.38	46.82	54	-7.18
4874	PK	H	35.1	38.54	62.45	65.89	74	-8.11
4874	AV	H	35.1	38.54	45.40	48.84	54	-5.16
7311	PK	H	33.0	44.60	47.68	59.28	74	-14.72
7311	AV	H	33.0	44.60	33.61	45.21	54	-8.79

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT20 Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	47.09	49.53	74	-24.47
4924	PK	V	35.1	38.54	60.27	63.71	74	-10.29
4924	AV	V	35.1	38.54	49.31	52.75	54	-1.25
7386	PK	V	33.0	44.60	51.53	63.13	74	-10.87
7386	AV	V	33.0	44.60	40.31	51.91	54	-2.09
3270	PK	H	33.8	36.24	42.48	44.92	54	-9.08
4924	PK	H	35.1	38.54	57.87	61.31	74	-12.69
4924	AV	H	35.1	38.54	43.99	47.43	54	-6.57
7386	PK	H	33.0	44.60	46.49	58.09	74	-15.91
7386	AV	H	33.0	44.60	31.66	43.26	54	-10.74

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT40 Tx at channel 3

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	47.35	49.79	54	-4.21
4844	PK	V	35.1	38.54	58.31	61.75	74	-12.25
4844	AV	V	35.1	38.54	48.14	51.58	54	-2.42
7266	PK	V	33.0	44.60	36.98	48.58	54	-5.42
3210	PK	H	33.8	36.24	41.54	43.98	54	-10.02
4844	PK	H	35.1	38.54	52.04	55.48	74	-18.52
4844	AV	H	35.1	38.54	43.43	46.87	54	-7.13

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT40 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	47.02	49.46	54	-4.54
4874	PK	V	35.1	38.54	62.79	66.23	74	-7.77
4874	AV	V	35.1	38.54	44.95	48.39	54	-5.61
7311	PK	V	33.0	44.60	47.49	59.09	74	-14.91
7311	AV	V	33.0	44.60	41.73	53.33	54	-0.67
3240	PK	H	33.8	36.24	44.84	47.28	54	-6.72
4874	PK	H	35.1	38.54	60.31	63.75	74	-10.25
4874	AV	H	35.1	38.54	43.65	47.09	54	-6.91
7311	PK	H	33.0	44.60	40.98	52.58	54	-1.42

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 2 dBi
Test Condition : 802.11n HT40 Tx at channel 9

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.14	47.58	54	-6.42
4904	PK	V	35.1	38.54	55.28	58.72	74	-15.28
4904	AV	V	35.1	38.54	46.97	50.41	54	-3.59
7356	PK	V	33.0	44.60	36.53	48.13	54	-5.87
3270	PK	H	33.8	36.24	43.43	45.87	54	-8.13
4904	PK	H	35.1	38.54	51.94	55.38	74	-18.62
4904	AV	H	35.1	38.54	38.37	41.81	54	-12.19

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11b Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	44.18	46.62	54	-7.38
4824	PK	V	35.1	38.54	61.29	64.73	74	-9.27
4824	AV	V	35.1	38.54	49.60	53.04	54	-0.96
7236	PK	V	33.0	44.60	45.17	56.77	74	-17.23
7236	AV	V	33.0	44.60	34.46	46.06	54	-7.94
3210	PK	H	33.8	36.24	41.55	43.99	54	-10.01
4824	PK	H	35.1	38.54	56.23	59.67	74	-14.33
4824	AV	H	35.1	38.54	45.09	48.53	54	-5.47
7236	PK	H	33.0	44.60	39.86	51.46	54	-2.54

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11b Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	43.47	45.91	54	-8.09
4874	PK	V	35.1	38.54	60.87	64.31	74	-9.69
4874	AV	V	35.1	38.54	49.49	52.93	54	-1.07
7311	PK	V	33.0	44.60	55.36	66.96	74	-7.04
7311	AV	V	33.0	44.60	41.75	53.35	54	-0.65
9748	PK	V	32.7	49.30	37.38	53.98	74	-20.02
9748	AV	V	32.7	49.30	27.14	43.74	54	-10.26
12185	PK	V	31.6	50.87	37.88	57.15	74	-16.85
12185	AV	V	31.6	50.87	24.64	43.91	54	-10.09
3240	PK	H	33.8	36.24	41.48	43.92	54	-10.08
4874	PK	H	35.1	38.54	56.51	59.95	74	-14.05
4874	AV	H	35.1	38.54	48.35	51.79	54	-2.21
7311	PK	H	33.0	44.60	47.45	59.05	74	-14.95
7311	AV	H	33.0	44.60	39.64	51.24	54	-2.76

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11b Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	46.19	48.63	54	-5.37
4924	PK	V	35.1	38.54	68.27	71.71	74	-2.29
4924	AV	V	35.1	38.54	49.76	53.20	54	-0.80
7386	PK	V	33.0	44.60	47.60	59.20	74	-14.80
7386	AV	V	33.0	44.60	34.22	45.82	54	-8.18
3270	PK	H	33.8	36.24	40.90	43.34	54	-10.66
4924	PK	H	35.1	38.54	49.49	52.93	54	-1.07
7386	PK	H	33.0	44.60	35.99	47.59	54	-6.41

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	44.01	46.45	54	-7.55
4824	PK	V	35.1	38.54	66.90	70.34	74	-3.66
4824	AV	V	35.1	38.54	48.72	52.16	54	-1.84
7236	PK	V	33.0	44.60	46.28	57.88	74	-16.12
7236	AV	V	33.0	44.60	37.64	49.24	54	-4.76
12060	PK	V	31.6	50.87	37.22	56.49	74	-17.51
12060	AV	V	31.6	50.87	28.34	47.61	54	-6.39
3210	PK	H	33.8	36.24	40.93	43.37	54	-10.63
4824	PK	H	35.1	38.54	61.98	65.42	74	-8.58
4824	AV	H	35.1	38.54	48.14	51.58	54	-2.42
7236	PK	H	33.0	44.60	44.20	55.80	74	-18.20
7236	AV	H	33.0	44.60	33.74	45.34	54	-8.66

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	44.34	46.78	54	-7.22
4874	PK	V	35.1	38.54	63.92	67.36	74	-6.64
4874	AV	V	35.1	38.54	47.65	51.09	54	-2.91
7311	PK	V	33.0	44.60	53.14	64.74	74	-9.26
7311	AV	V	33.0	44.60	38.35	49.95	54	-4.05
9748	PK	V	32.7	49.30	35.43	52.03	54	-1.97
12185	PK	V	31.6	50.87	38.45	57.72	74	-16.28
12185	AV	V	31.6	50.87	27.54	46.81	54	-7.19
3240	PK	H	33.8	36.24	41.59	44.03	54	-9.97
4874	PK	H	35.1	38.54	62.26	65.70	74	-8.30
4874	AV	H	35.1	38.54	47.63	51.07	54	-2.93
7311	PK	H	33.0	44.60	48.27	59.87	74	-14.13
7311	AV	H	33.0	44.60	35.88	47.48	54	-6.52

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 0: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	44.15	46.59	54	-7.41
4924	PK	V	35.1	38.54	54.02	57.46	74	-16.54
4924	AV	V	35.1	38.54	44.52	47.96	54	-6.04
7386	PK	V	33.0	44.60	48.14	59.74	74	-14.26
7386	AV	V	33.0	44.60	37.06	48.66	54	-5.34
3270	PK	H	33.8	36.24	40.72	43.16	54	-10.84
4924	PK	H	35.1	38.54	55.58	59.02	74	-14.98
4924	AV	H	35.1	38.54	44.05	47.49	54	-6.51
7386	PK	H	33.0	44.60	40.76	52.36	74	-21.64

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	47.43	49.87	54	-4.13
4824	PK	V	35.1	38.54	62.30	65.74	74	-8.26
4824	AV	V	35.1	38.54	47.94	51.38	54	-2.62
7236	PK	V	33.0	44.60	45.87	57.47	74	-16.53
7236	AV	V	33.0	44.60	35.78	47.38	54	-6.62
3210	PK	H	33.8	36.24	42.59	45.03	54	-8.97
4824	PK	H	35.1	38.54	58.93	62.37	74	-11.63
4824	AV	H	35.1	38.54	46.78	50.22	54	-3.78
7236	PK	H	33.0	44.60	42.97	54.57	74	-19.43
7236	AV	H	33.0	44.60	36.36	47.96	54	-6.04

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	44.99	47.43	54	-6.57
4874	PK	V	35.1	38.54	64.17	67.61	74	-6.39
4874	AV	V	35.1	38.54	49.43	52.87	54	-1.13
7311	PK	V	33.0	44.60	52.96	64.56	74	-9.44
7311	AV	V	33.0	44.60	39.26	50.86	54	-3.14
12185	PK	V	31.6	50.87	36.21	55.48	74	-18.52
12185	AV	V	31.6	50.87	25.14	44.41	54	-9.59
3240	PK	H	33.8	36.24	41.46	43.90	54	-10.10
4874	PK	H	35.1	38.54	63.74	67.18	74	-6.82
4874	AV	H	35.1	38.54	48.43	51.87	54	-2.13
7311	PK	H	33.0	44.60	46.67	58.27	74	-15.73
7311	AV	H	33.0	44.60	33.46	45.06	54	-8.94
12185	PK	H	31.6	50.87	33.69	52.96	74	-21.04

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : Chain 1: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.65	48.09	54	-5.91
4924	PK	V	35.1	38.54	62.01	65.45	74	-8.55
4924	AV	V	35.1	38.54	48.93	52.37	54	-1.63
7386	PK	V	33.0	44.60	46.51	58.11	74	-15.89
7386	AV	V	33.0	44.60	36.23	47.83	54	-6.17
3270	PK	H	33.8	36.24	41.14	43.58	54	-10.42
4924	PK	H	35.1	38.54	60.01	63.45	74	-10.55
4924	AV	H	35.1	38.54	45.93	49.37	54	-4.63
7386	PK	H	33.0	44.60	44.00	55.60	74	-18.40
7386	AV	H	33.0	44.60	35.06	46.66	54	-7.34

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT20 Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	48.61	51.05	54	-2.95
4824	PK	V	35.1	38.54	67.02	70.46	74	-3.54
4824	AV	V	35.1	38.54	67.02	53.14	54	-0.86
7236	PK	V	33.0	44.60	41.54	61.67	74	-12.33
7236	AV	V	33.0	44.60	50.07	49.71	54	-4.29
12060	PK	V	31.6	50.87	30.44	53.97	74	-20.03
12060	AV	V	31.6	50.87	34.70	44.21	54	-9.79
3210	PK	H	33.8	36.24	59.23	45.81	54	-8.19
4824	PK	H	35.1	38.54	46.27	65.98	74	-8.02
4824	AV	H	35.1	38.54	62.54	50.56	54	-3.44
7236	PK	H	33.0	44.60	38.96	61.45	74	-12.55
7236	AV	H	33.0	44.60	49.85	47.15	54	-6.85

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	59.01	49.14	54	-4.86
4874	PK	V	35.1	38.54	43.71	68.83	74	-5.17
4874	AV	V	35.1	38.54	49.32	52.76	54	-1.24
7311	PK	V	33.0	44.60	53.62	65.22	74	-8.78
7311	AV	V	33.0	44.60	39.64	51.24	54	-2.76
12185	PK	V	31.6	50.87	33.52	52.79	54	-1.21
3240	PK	H	33.8	36.24	43.78	46.22	54	-7.78
4874	PK	H	35.1	38.54	62.45	65.89	74	-8.11
4874	AV	H	35.1	38.54	47.33	50.77	54	-3.23
7311	PK	H	33.0	44.60	50.58	62.18	74	-11.82
7311	AV	H	33.0	44.60	38.14	49.74	54	-4.26

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT20 Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	46.06	48.50	54	-5.50
4924	PK	V	35.1	38.54	60.28	63.72	74	-10.28
4924	AV	V	35.1	38.54	47.77	51.21	54	-2.79
7386	PK	V	33.0	44.60	47.43	59.03	74	-14.97
7386	AV	V	33.0	44.60	35.79	47.39	54	-6.61
3270	PK	H	33.8	36.24	43.61	46.05	54	-7.95
4924	PK	H	35.1	38.54	60.22	63.66	74	-10.34
4924	AV	H	35.1	38.54	45.73	49.17	54	-4.83
7386	PK	H	33.0	44.60	46.04	57.64	74	-16.36
7386	AV	H	33.0	44.60	34.30	45.90	54	-8.10

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT40 Tx at channel 3

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	47.87	50.31	54	-3.69
4844	PK	V	35.1	38.54	56.96	60.40	74	-13.60
4844	AV	V	35.1	38.54	46.68	50.12	54	-3.88
7266	PK	V	33.0	44.60	34.36	45.96	54	-8.04
3210	PK	H	33.8	36.24	44.13	46.57	54	-7.43
4844	PK	H	35.1	38.54	51.91	55.35	74	-18.65
4844	AV	H	35.1	38.54	40.58	44.02	54	-9.98

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT40 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	49.54	51.98	54	-2.02
4874	PK	V	35.1	38.54	62.33	65.77	74	-8.23
4874	AV	V	35.1	38.54	46.70	50.14	54	-3.86
7311	PK	V	33.0	44.60	43.67	55.27	74	-18.73
7311	AV	V	33.0	44.60	35.71	47.31	54	-6.69
3240	PK	H	33.8	36.24	43.71	46.15	54	-7.85
4874	PK	H	35.1	38.54	58.63	62.07	74	-11.93
4874	AV	H	35.1	38.54	46.02	49.46	54	-4.54
7311	PK	H	33.0	44.60	40.16	51.76	54	-2.24

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : SAYTEC 2 dBi
Test Condition : 802.11n HT40 Tx at channel 9

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.56	48.00	54	-6.00
4904	PK	V	35.1	38.54	52.94	56.38	74	-17.62
4904	AV	V	35.1	38.54	43.73	47.17	54	-6.83
3270	PK	H	33.8	36.24	44.55	46.99	54	-7.01
4904	PK	H	35.1	38.54	50.78	54.22	74	-19.78
4904	AV	H	35.1	38.54	42.25	45.69	54	-8.31

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11b Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	45.56	48.00	54	-6.00
4824	PK	V	35.1	38.54	61.72	65.16	74	-8.84
4824	AV	V	35.1	38.54	50.04	53.48	54	-0.52
7236	PK	V	33.0	44.60	36.83	48.43	54	-5.57
3210	PK	H	33.8	36.24	42.09	44.53	54	-9.47
4824	PK	H	35.1	38.54	56.32	59.76	74	-14.24
4824	AV	H	35.1	38.54	47.19	50.63	54	-3.37
7236	PK	H	33.0	44.60	41.53	53.13	74	-20.87
7236	AV	H	33.0	44.60	32.56	44.16	54	-9.84

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11b Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	45.41	47.85	54	-6.15
4874	PK	V	35.1	38.54	61.31	64.75	74	-9.25
4874	AV	V	35.1	38.54	50.10	53.54	54	-0.46
7311	PK	V	33.0	44.60	48.14	59.74	74	-14.26
7311	AV	V	33.0	44.60	38.11	49.71	54	-4.29
3240	PK	H	33.8	36.24	42.44	44.88	54	-9.12
4874	PK	H	35.1	38.54	56.72	60.16	74	-13.84
4874	AV	H	35.1	38.54	45.29	48.73	54	-5.27
7311	PK	H	33.0	44.60	48.75	60.35	74	-13.65
7311	AV	H	33.0	44.60	36.74	48.34	54	-5.66

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11b Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	44.92	47.36	54	-6.64
4924	PK	V	35.1	38.54	55.48	58.92	74	-15.08
4924	AV	V	35.1	38.54	48.09	51.53	54	-2.47
7386	PK	V	33.0	44.60	42.29	53.89	74	-20.11
7386	AV	V	33.0	44.60	37.45	49.05	54	-4.95
3270	PK	H	33.8	36.24	42.53	44.97	54	-9.03
4924	PK	H	35.1	38.54	56.68	60.12	74	-13.88
4924	AV	H	35.1	38.54	44.77	48.21	54	-5.79
7386	PK	H	33.0	44.60	45.01	56.61	74	-17.39
7386	AV	H	33.0	44.60	34.49	46.09	54	-7.91

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 0: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	45.10	47.54	54	-6.46
4824	PK	V	35.1	38.54	65.04	68.48	74	-5.52
4824	AV	V	35.1	38.54	49.00	52.44	54	-1.56
7236	PK	V	33.0	44.60	43.61	55.21	74	-18.79
7236	AV	V	33.0	44.60	37.21	48.81	54	-5.19
12060	PK	V	31.6	50.87	36.61	55.88	74	-18.12
12060	AV	V	31.6	50.87	28.08	47.35	54	-6.65
3210	PK	H	33.8	36.24	41.92	44.36	54	-9.64
4824	PK	H	35.1	38.54	61.08	64.52	74	-9.48
4824	AV	H	35.1	38.54	38.09	41.53	54	-12.47
7236	PK	H	33.0	44.60	45.10	56.70	74	-17.30
7236	AV	H	33.0	44.60	28.24	39.84	54	-14.16

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 0: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	45.08	47.52	54	-6.48
4874	PK	V	35.1	38.54	65.47	68.91	74	-5.09
4874	AV	V	35.1	38.54	49.81	53.25	54	-0.75
7311	PK	V	33.0	44.60	49.76	61.36	74	-12.64
7311	AV	V	33.0	44.60	39.79	51.39	54	-2.61
12185	PK	V	31.6	50.87	38.13	57.40	74	-16.60
12185	AV	V	31.6	50.87	30.84	50.11	54	-3.89
3240	PK	H	33.8	36.24	43.23	45.67	54	-8.33
4874	PK	H	35.1	38.54	61.39	64.83	74	-9.17
4874	AV	H	35.1	38.54	40.91	44.35	54	-9.65
7311	PK	H	33.0	44.60	51.58	63.18	74	-10.82
7311	AV	H	33.0	44.60	32.51	44.11	54	-9.89

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 0: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	45.01	47.45	54	-6.55
4924	PK	V	35.1	38.54	60.18	63.62	74	-10.38
4924	AV	V	35.1	38.54	49.43	52.87	54	-1.13
7386	PK	V	33.0	44.60	41.18	52.78	54	-1.22
3270	PK	H	33.8	36.24	40.78	43.22	54	-10.78
4924	PK	H	35.1	38.54	55.89	59.33	74	-14.67
4924	AV	H	35.1	38.54	37.73	41.17	54	-12.83
7386	PK	H	33.0	44.60	43.68	55.28	74	-18.72
7386	AV	H	33.0	44.60	26.75	38.35	54	-15.65

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 1: 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	45.09	47.53	54	-6.47
4824	PK	V	35.1	38.54	63.89	67.33	74	-6.67
4824	AV	V	35.1	38.54	49.48	52.92	54	-1.08
7236	PK	V	33.0	44.60	43.99	55.59	74	-18.41
7236	AV	V	33.0	44.60	36.51	48.11	54	-5.89
3210	PK	H	33.8	36.24	41.32	43.76	54	-10.24
4824	PK	H	35.1	38.54	58.67	62.11	74	-11.89
4824	AV	H	35.1	38.54	42.38	45.82	54	-8.18
7236	PK	H	33.0	44.60	40.73	52.33	54	-1.67

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 1: 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	45.93	48.37	54	-5.63
4874	PK	V	35.1	38.54	66.58	70.02	74	-3.98
4874	AV	V	35.1	38.54	49.79	53.23	54	-0.77
7311	PK	V	33.0	44.60	52.30	63.90	74	-10.10
7311	AV	V	33.0	44.60	38.64	50.24	54	-3.76
12185	PK	V	31.6	50.87	34.59	53.86	74	-20.14
12185	AV	V	31.6	50.87	28.94	48.21	54	-5.79
3240	PK	H	33.8	36.24	42.24	44.68	54	-9.32
4874	PK	H	35.1	38.54	59.40	62.84	74	-11.16
4874	AV	H	35.1	38.54	38.39	41.83	54	-12.17
7311	PK	H	33.0	44.60	51.04	62.64	74	-11.36
7311	AV	H	33.0	44.60	31.02	42.62	54	-11.38

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : Chain 1: 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	44.98	47.42	54	-6.58
4924	PK	V	35.1	38.54	63.30	66.74	74	-7.26
4924	AV	V	35.1	38.54	49.17	52.61	54	-1.39
7386	PK	V	33.0	44.60	43.18	54.78	74	-19.22
7386	AV	V	33.0	44.60	36.67	48.27	54	-5.73
3270	PK	H	33.8	36.24	43.16	45.60	74	-28.40
4924	PK	H	35.1	38.54	56.09	59.53	74	-14.47
4924	AV	H	35.1	38.54	37.75	41.19	54	-12.81
7386	PK	H	33.0	44.60	42.79	54.39	74	-19.61
7386	AV	H	33.0	44.60	26.87	38.47	54	-15.53

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT20 Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	48.27	50.71	54	-3.29
4824	PK	V	35.1	38.54	65.89	69.33	74	-4.67
4824	AV	V	35.1	38.54	65.89	53.21	54	-0.79
7236	PK	V	33.0	44.60	41.61	58.43	74	-15.57
7236	AV	V	33.0	44.60	46.83	49.82	54	-4.18
3210	PK	H	33.8	36.24	55.99	48.55	54	-5.45
4824	PK	H	35.1	38.54	46.38	67.93	74	-6.07
4824	AV	H	35.1	38.54	64.49	48.79	54	-5.21
7236	PK	H	33.0	44.60	37.19	59.90	74	-14.10
7236	AV	H	33.0	44.60	48.30	44.01	54	-9.99

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	57.46	49.46	54	-4.54
4874	PK	V	35.1	38.54	40.57	68.93	74	-5.07
4874	AV	V	35.1	38.54	49.83	53.27	54	-0.73
7311	PK	V	33.0	44.60	49.86	61.46	74	-12.54
7311	AV	V	33.0	44.60	37.71	49.31	54	-4.69
3240	PK	H	33.8	36.24	46.20	48.64	54	-5.36
4874	PK	H	35.1	38.54	61.56	65.00	74	-9.00
4874	AV	H	35.1	38.54	44.69	48.13	54	-5.87
7311	PK	H	33.0	44.60	50.54	62.14	74	-11.86
7311	AV	H	33.0	44.60	33.28	44.88	54	-9.12

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT20 Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	47.44	49.88	74	-24.12
4924	PK	V	35.1	38.54	61.83	65.27	74	-8.73
4924	AV	V	35.1	38.54	49.03	52.47	54	-1.53
7386	PK	V	33.0	44.60	42.70	54.30	74	-19.70
7386	AV	V	33.0	44.60	35.67	47.27	54	-6.73
3270	PK	H	33.8	36.24	47.02	49.46	54	-4.54
4924	PK	H	35.1	38.54	59.11	62.55	74	-11.45
4924	AV	H	35.1	38.54	45.31	48.75	54	-5.25
7386	PK	H	33.0	44.60	44.88	56.48	74	-17.52
7386	AV	H	33.0	44.60	29.42	41.02	54	-12.98

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT40 Tx at channel 3

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210	PK	V	33.8	36.24	45.86	48.30	54	-5.70
4844	PK	V	35.1	38.54	57.10	60.54	74	-13.46
4844	AV	V	35.1	38.54	48.70	52.14	54	-1.86
7266	PK	V	33.0	44.60	35.60	47.20	54	-6.80
3210	PK	H	33.8	36.24	45.54	47.98	54	-6.02
4844	PK	H	35.1	38.54	53.56	57.00	74	-17.00
4844	AV	H	35.1	38.54	41.71	45.15	54	-8.85

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT40 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240	PK	V	33.8	36.24	47.03	49.47	54	-4.53
4874	PK	V	35.1	38.54	64.00	67.44	74	-6.56
4874	AV	V	35.1	38.54	49.71	53.15	54	-0.85
7311	PK	V	33.0	44.60	43.38	54.98	74	-19.02
7311	AV	V	33.0	44.60	36.54	48.14	54	-5.86
3240	PK	H	33.8	36.24	44.58	47.02	54	-6.98
4874	PK	H	35.1	38.54	60.08	63.52	74	-10.48
4874	AV	H	35.1	38.54	41.70	45.14	54	-8.86
7311	PK	H	33.0	44.60	43.14	54.74	74	-19.26
7311	AV	H	33.0	44.60	28.75	40.35	54	-13.65

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

EUT : NBG-419N v2
Antenna : Invax 5 dBi
Test Condition : 802.11n HT40 Tx at channel 9

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270	PK	V	33.8	36.24	48.23	50.67	54	-3.33
4904	PK	V	35.1	38.54	56.50	59.94	74	-14.06
4904	AV	V	35.1	38.54	44.38	47.82	54	-6.18
7356	PK	V	33.0	44.60	37.29	48.89	54	-5.11
3270	PK	H	33.8	36.24	45.70	48.14	54	-5.86
4904	PK	H	35.1	38.54	54.66	58.10	74	-15.90
4904	AV	H	35.1	38.54	39.56	43.00	54	-11.00

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1 GHz to 25 GHz. The data value listed above which is higher than the system noise floor.

9. Emission on Band Edge

Name of Test	Emission Band Edge
Base Standard	FCC 15.247(d)

Test Result: Complies
Measurement Data: See Tables & plots below

Method of Measurement:

Reference FCC document: KDB558074, ANSI C63.4

The frequency range from 30 MHz to 1000 MHz using Bilog Antenna.

The frequency range over 1 GHz using Horn Antenna.

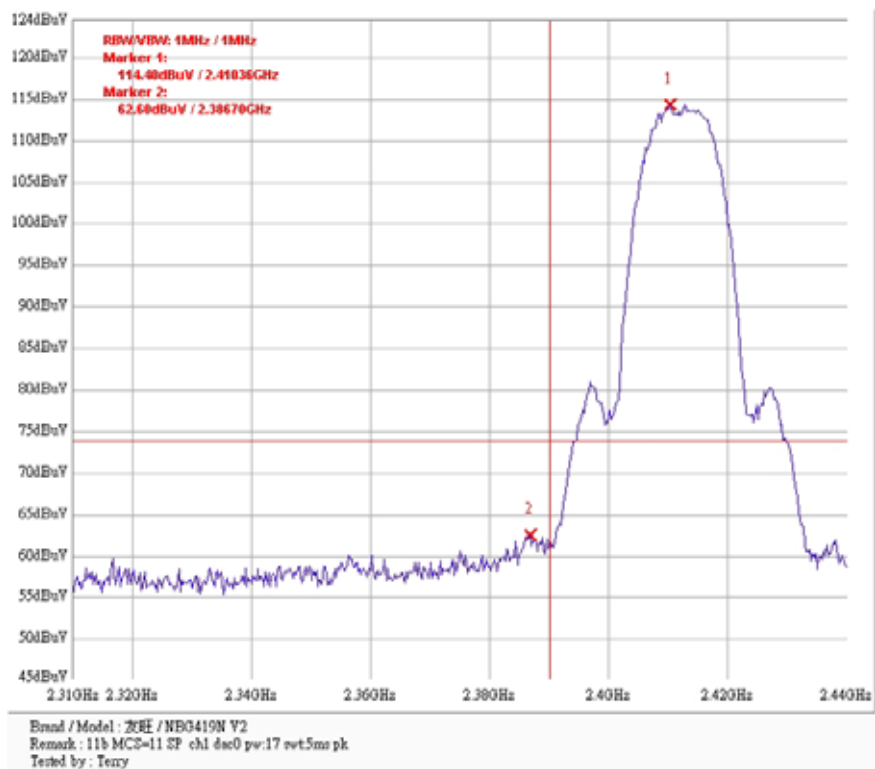
Radiated emissions were investigated cover the frequency range from 30 MHz to 1000 MHz using a receiver RBW of 120 kHz record QP reading, and the frequency over 1 GHz using a spectrum analyzer RBW of 1 MHz and 10 Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/VBW) recorded also on the report.

Invax 2 dBi Antenna					
Channel	Measurement Freq. Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
Test Mode: 802.11b mode					
1 (lowest)	2310-2390	PK	62.60	74	-11.40
		AV	51.96	54	-2.04
11 (highest)	2483.5-2500	PK	64.36	74	-9.64
		AV	53.54	54	-0.46
Test Mode: Chain 0: 802.11g mode					
1 (lowest)	2310-2390	PK	72.59	74	-1.41
		AV	49.84	54	-4.16
11 (highest)	2483.5-2500	PK	73.31	74	-0.69
		AV	50.69	54	-3.31
Test Mode: Chain 1: 802.11g mode					
1 (lowest)	2310-2390	PK	72.85	74	-1.15
		AV	50.95	54	-3.05
11 (highest)	2483.5-2500	PK	73.17	74	-0.83
		AV	49.70	54	-4.30
Test Mode: 802.11n HT20 mode					
1 (lowest)	2310-2390	PK	72.93	74	-1.07
		AV	53.15	54	-0.85
11 (highest)	2483.5-2500	PK	73.27	74	-0.73
		AV	52.48	54	-1.52
Test Mode: 802.11n HT40 mode					
3 (lowest)	2310-2390	PK	73.28	74	-0.72
		AV	53.65	54	-0.35
9 (highest)	2483.5-2500	PK	70.83	74	-3.17
		AV	53.51	54	-0.49

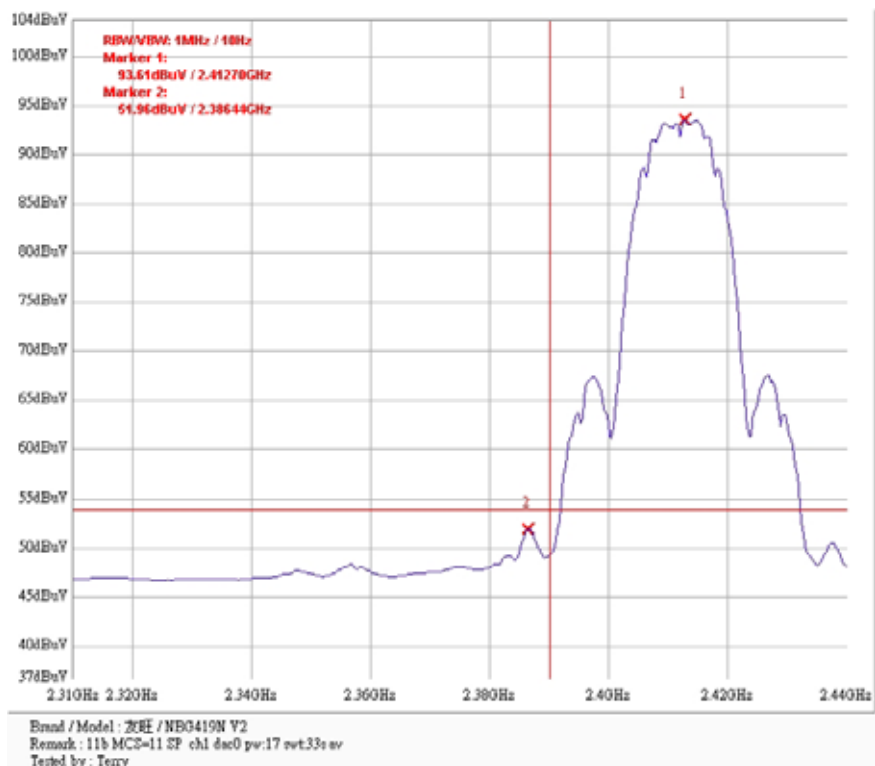
SAYTEC 2 dBi Antenna					
Channel	Measurement Freq. Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
Test Mode: 802.11b mode					
1 (lowest)	2310-2390	PK	64.22	74	-9.78
		AV	52.34	54	-1.66
11 (highest)	2483.5-2500	PK	64.39	74	-9.61
		AV	53.54	54	-0.46
Test Mode: Chain 0: 802.11g mode					
1 (lowest)	2310-2390	PK	73.08	74	-0.92
		AV	48.75	54	-5.25
11 (highest)	2483.5-2500	PK	73.39	74	-0.61
		AV	50.39	54	-3.61
Test Mode: Chain 1: 802.11g mode					
1 (lowest)	2310-2390	PK	72.35	74	-1.65
		AV	49.72	54	-4.28
11 (highest)	2483.5-2500	PK	72.46	74	-1.54
		AV	48.85	54	-5.15
Test Mode: 802.11n HT20 mode					
1 (lowest)	2310-2390	PK	71.02	74	-2.98
		AV	52.37	54	-1.63
11 (highest)	2483.5-2500	PK	73.50	74	-0.50
		AV	51.61	54	-2.39
Test Mode: 802.11n HT40 mode					
3 (lowest)	2310-2390	PK	73.24	74	-0.76
		AV	53.68	54	-0.32
9 (highest)	2483.5-2500	PK	72.91	74	-1.09
		AV	53.55	54	-0.45

Invax 5 dBi Antenna					
Channel	Measurement Freq. Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
Test Mode: 802.11b mode					
1 (lowest)	2310-2390	PK	64.49	74	-9.51
		AV	53.38	54	-0.62
11 (highest)	2483.5-2500	PK	65.25	74	-8.75
		AV	53.39	54	-0.61
Test Mode: Chain 0: 802.11g mode					
1 (lowest)	2310-2390	PK	73.09	74	-0.91
		AV	50.50	54	-3.50
11 (highest)	2483.5-2500	PK	72.98	74	-1.02
		AV	51.12	54	-2.88
Test Mode: Chain 1: 802.11g mode					
1 (lowest)	2310-2390	PK	70.30	74	-3.70
		AV	49.29	54	-4.71
11 (highest)	2483.5-2500	PK	72.82	74	-1.18
		AV	48.45	54	-5.55
Test Mode: 802.11n HT20 mode					
1 (lowest)	2310-2390	PK	72.01	74	-1.99
		AV	51.10	54	-2.90
11 (highest)	2483.5-2500	PK	73.39	74	-0.61
		AV	50.90	54	-3.10
Test Mode: 802.11n HT40 mode					
3 (lowest)	2310-2390	PK	71.63	74	-2.37
		AV	52.96	54	-1.04
9 (highest)	2483.5-2500	PK	72.87	74	-1.13
		AV	52.75	54	-1.25

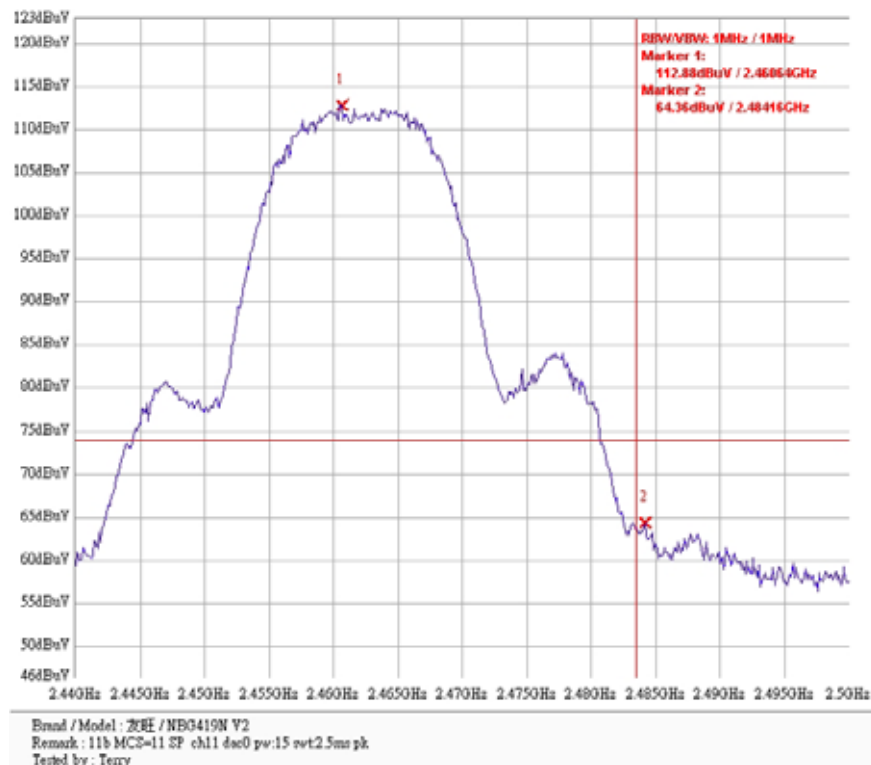
Invax 2 dBi Antenna: Band edge @ 802.11b mode channel 1 (PK)



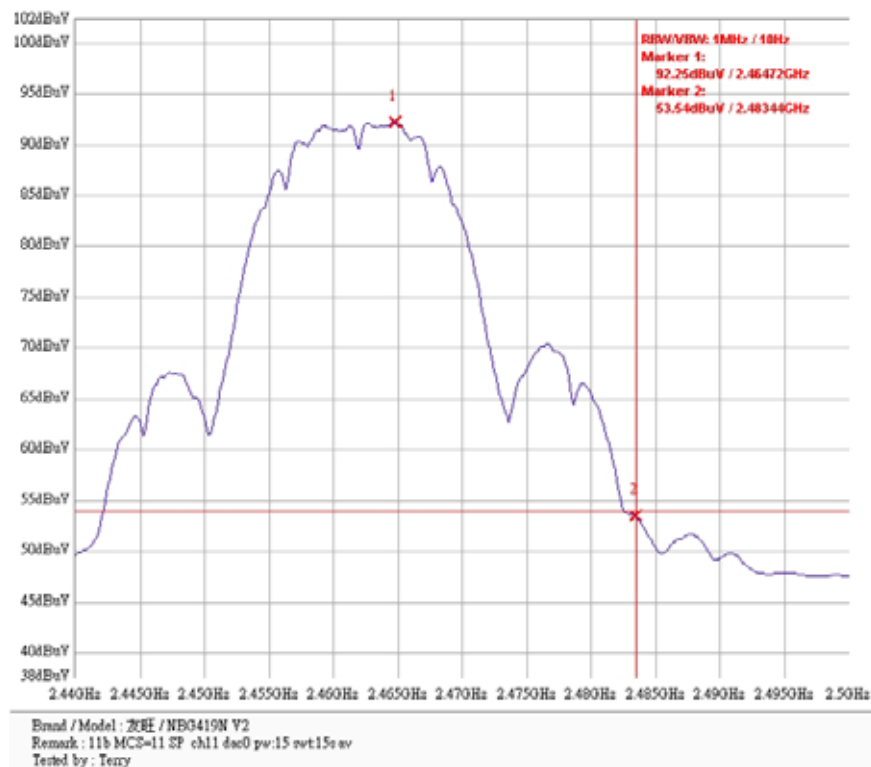
Invax 2 dBi Antenna: Band edge @ 802.11b mode channel 1 (AV)



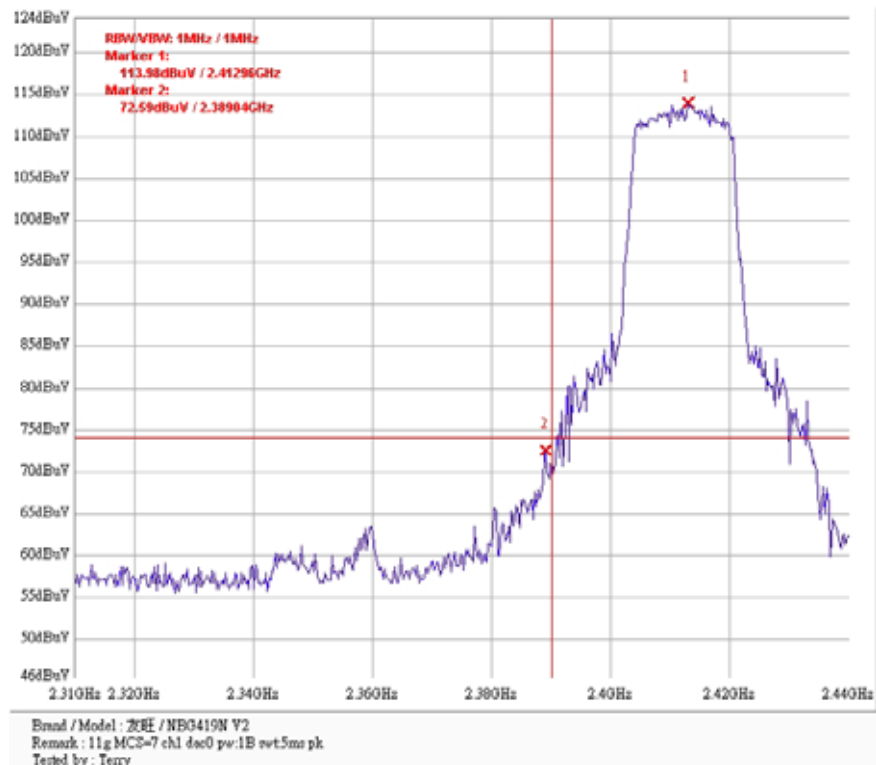
Invax 2 dBi Antenna: Band edge @ 802.11b mode channel 11 (PK)



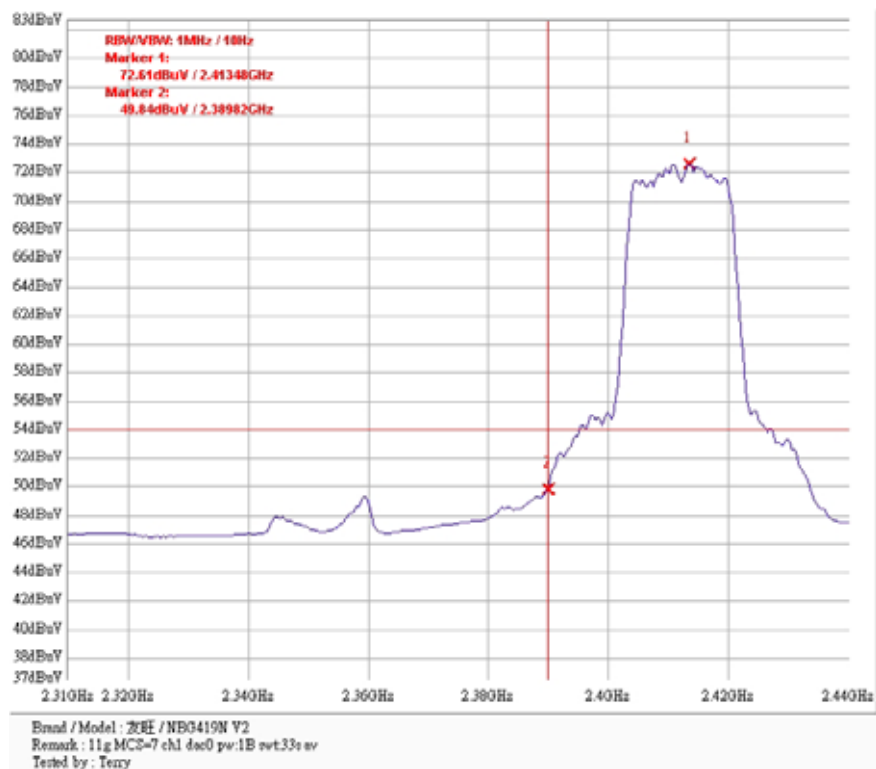
Invax 2 dBi Antenna: Band edge @ 802.11b mode channel 11 (AV)



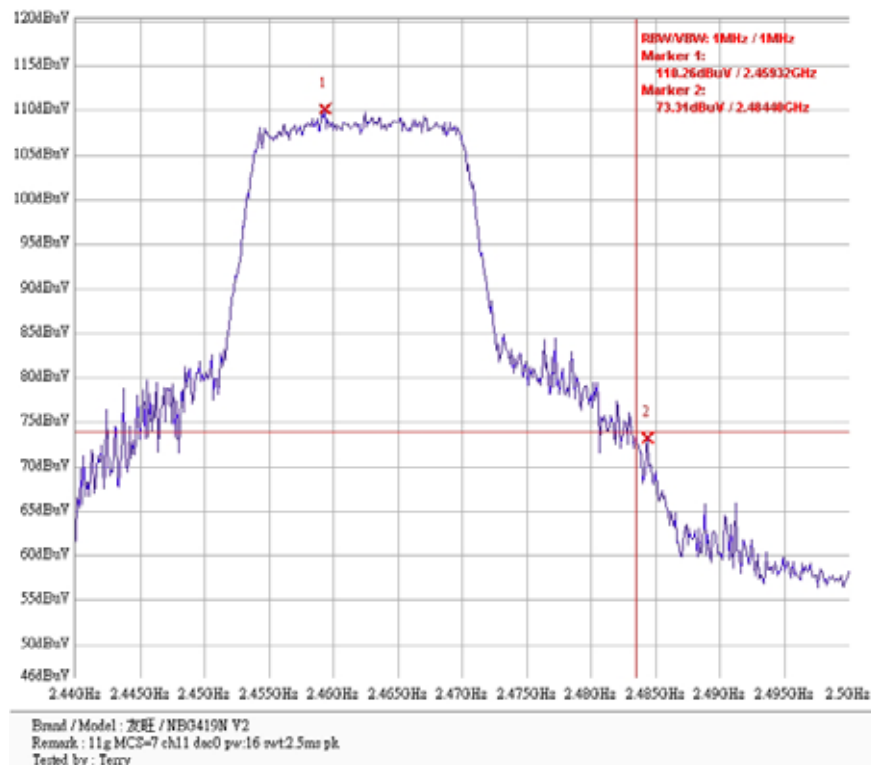
Invax 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (PK)



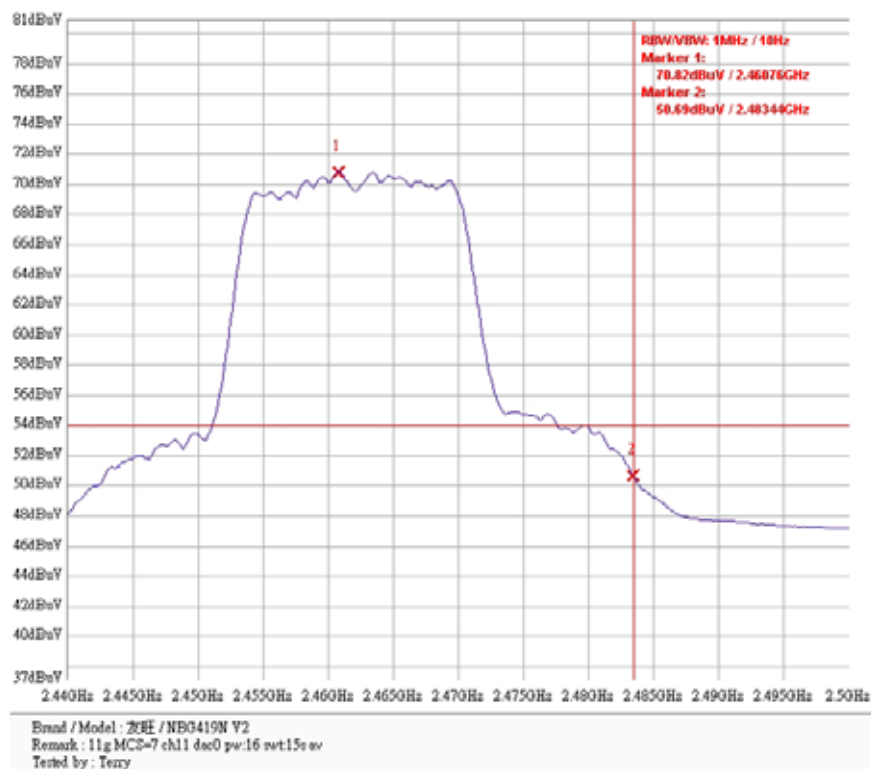
Invax 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (AV)



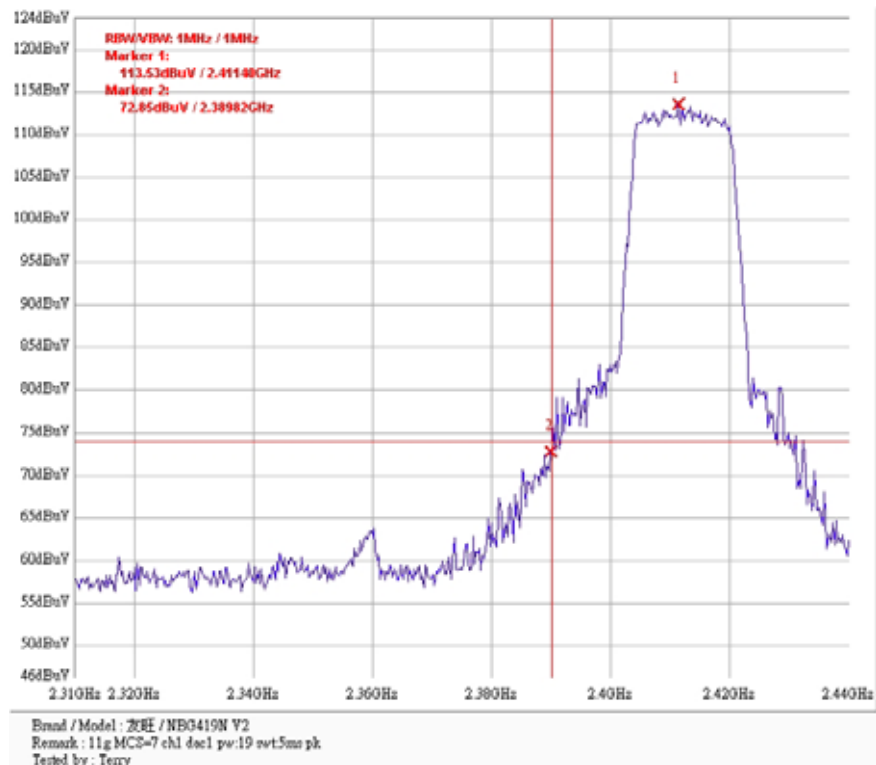
Invax 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (PK)



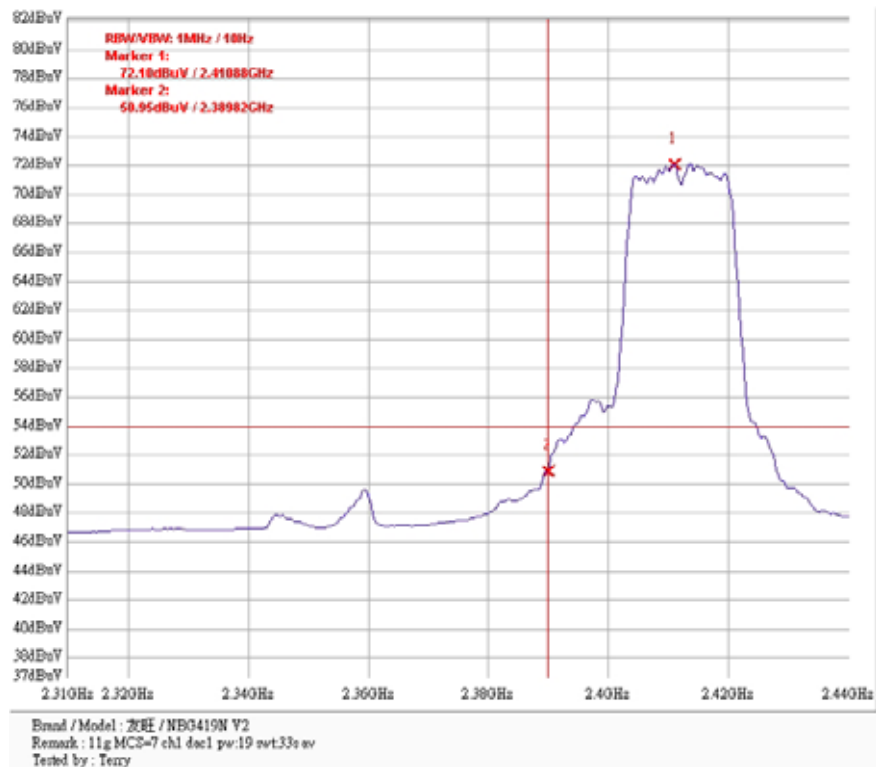
Invax 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (AV)



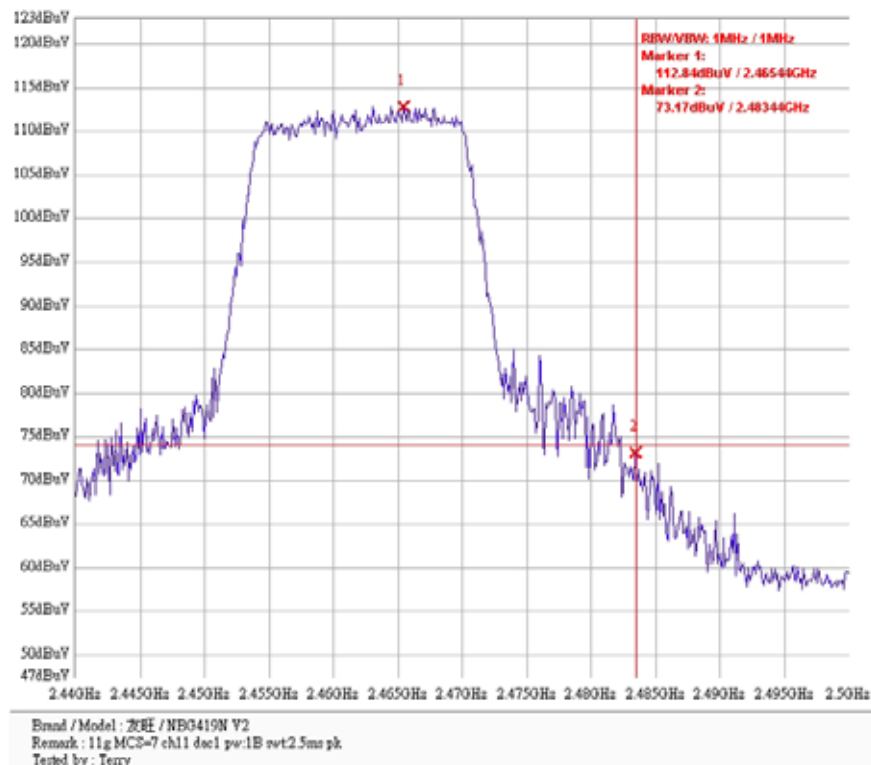
Invax 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (PK)



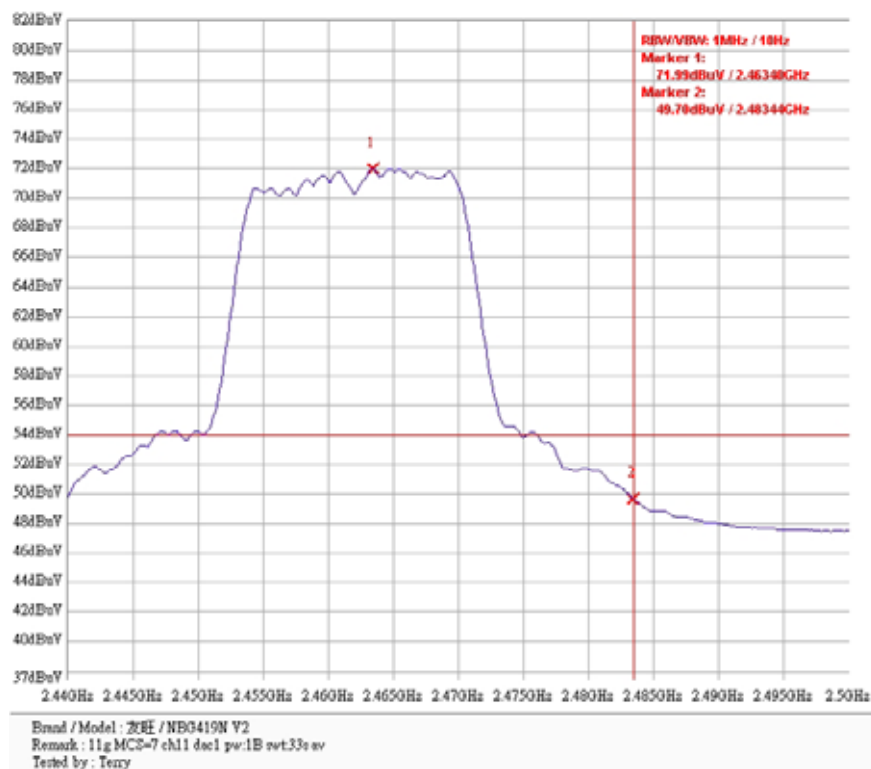
Invax 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (AV)



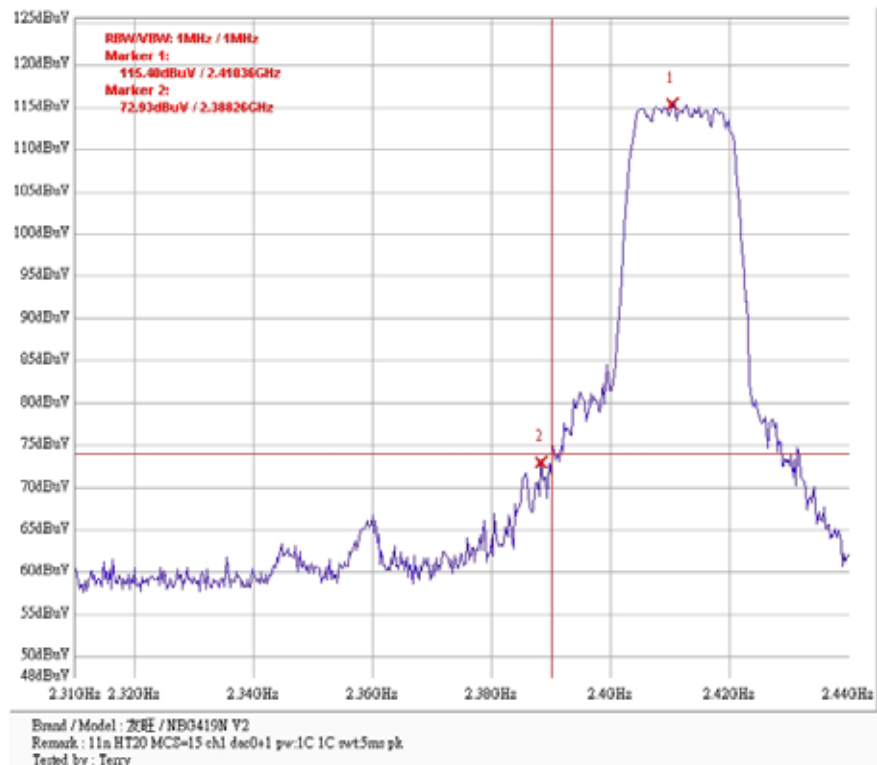
Invax 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (PK)



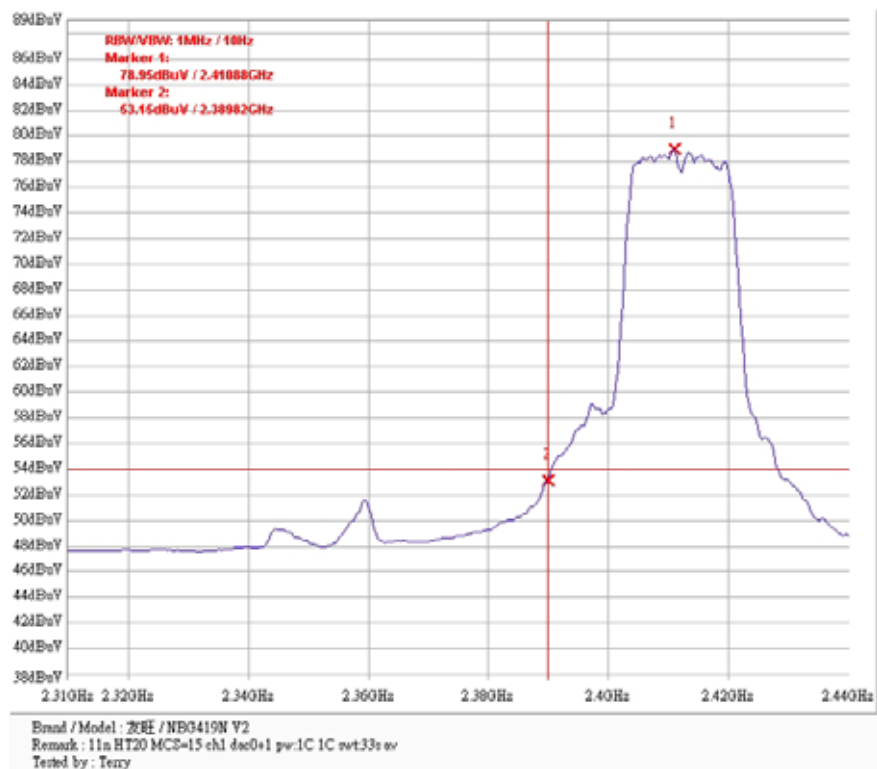
Invax 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (AV)



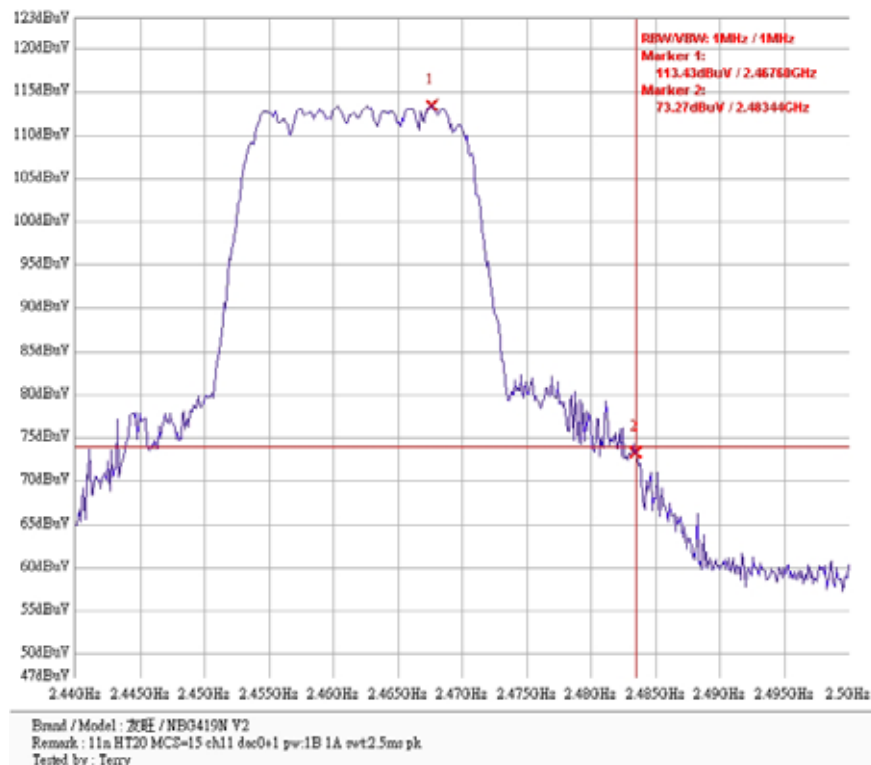
Invax 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (PK)



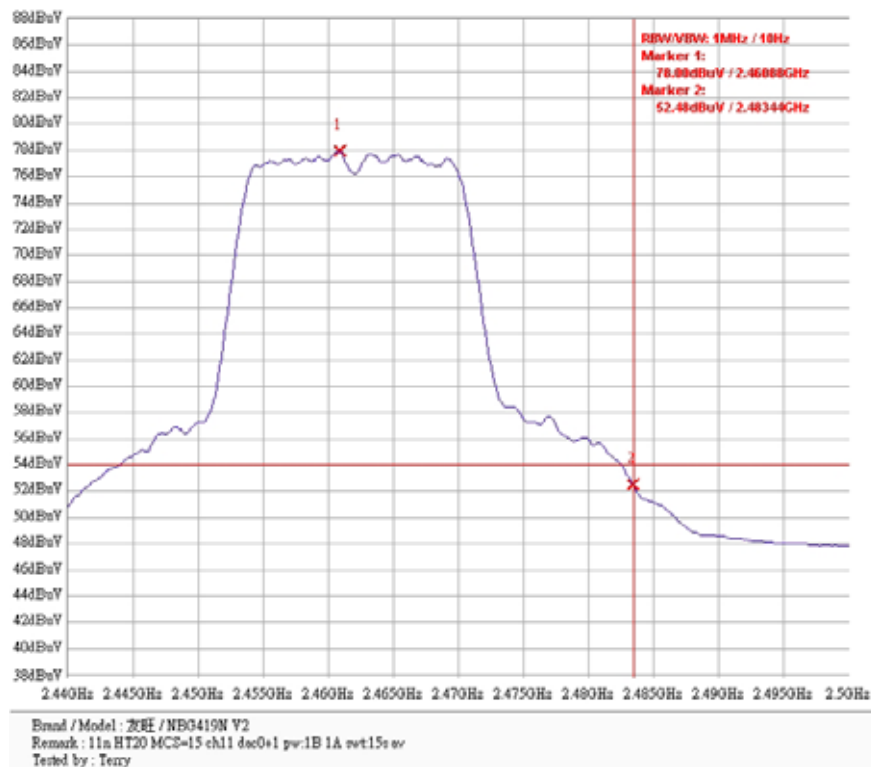
Invax 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (AV)



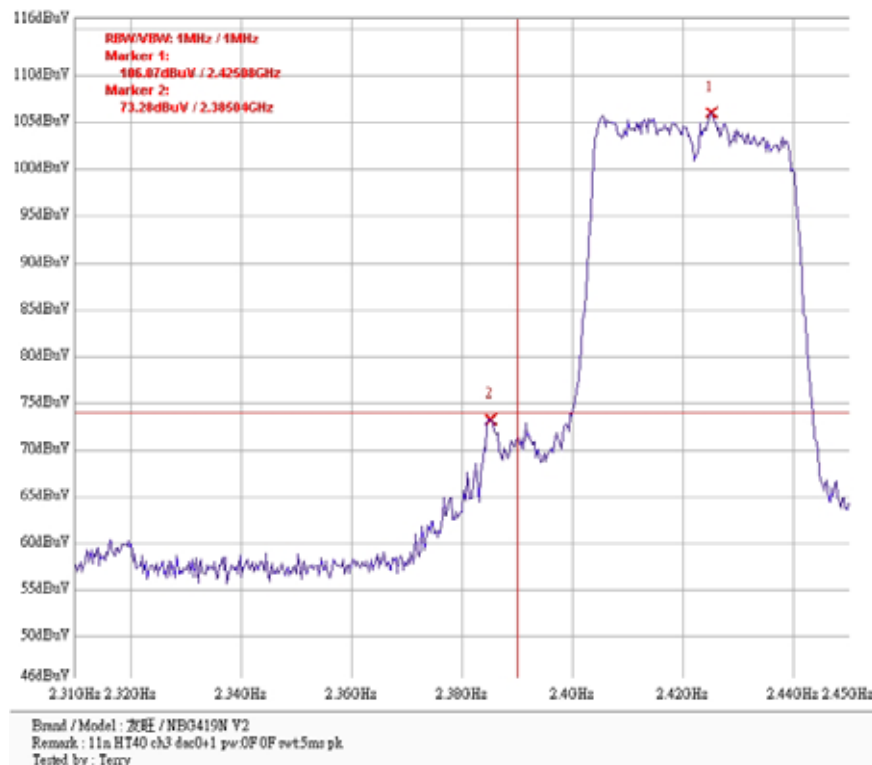
Invax 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (PK)



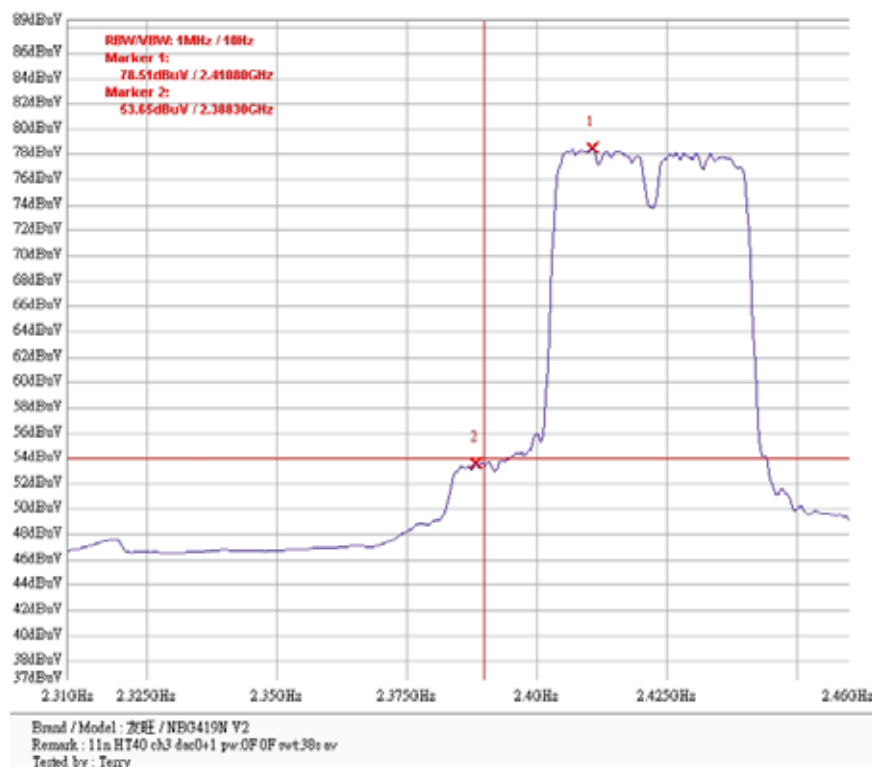
Invax 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (AV)



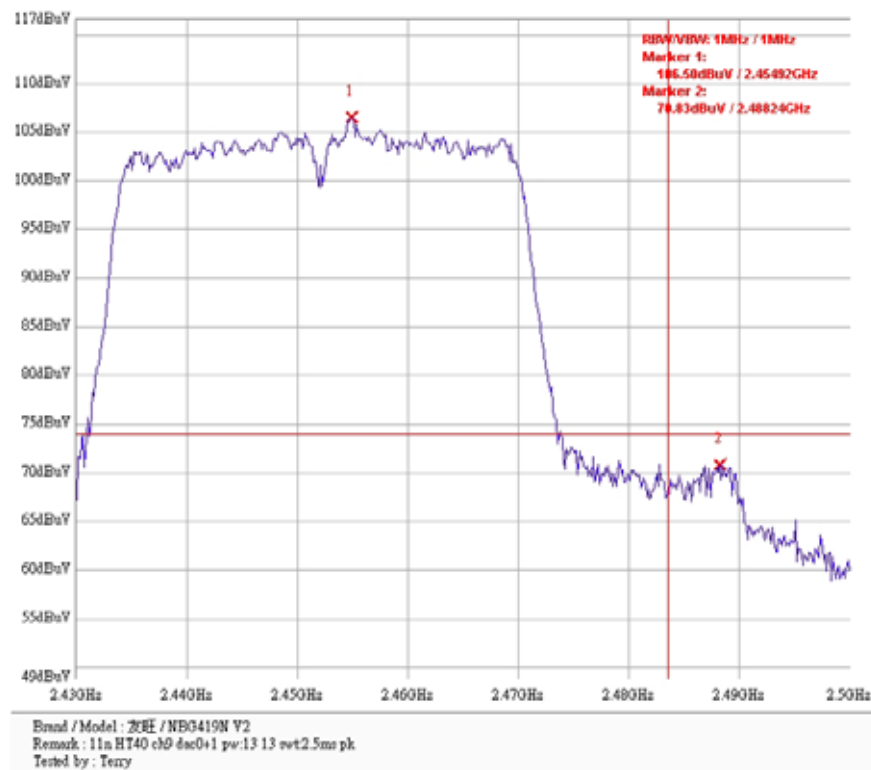
Invax 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (PK)



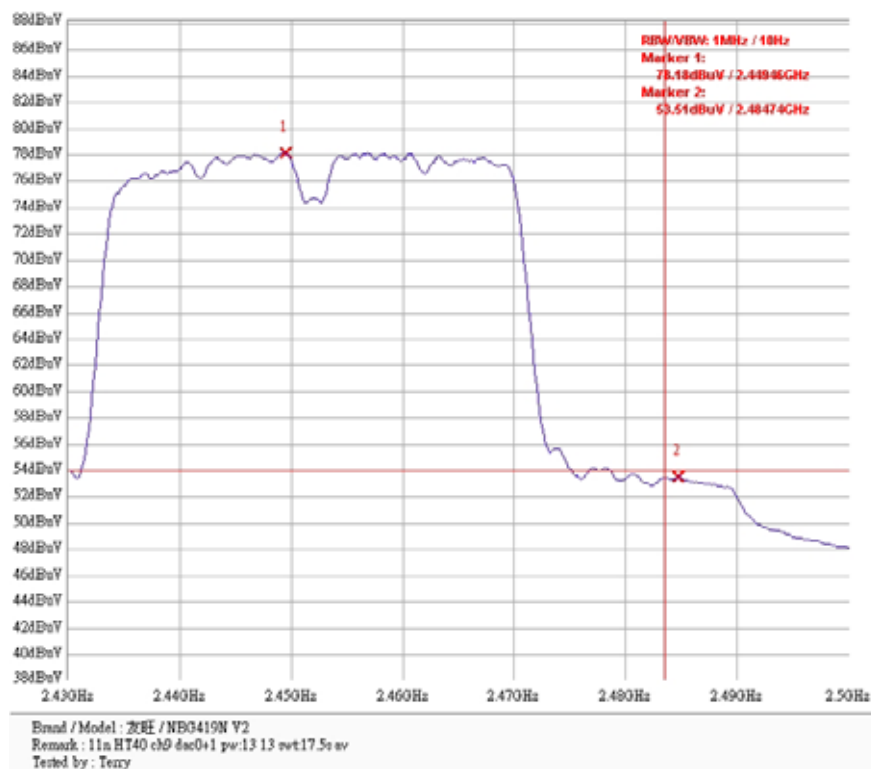
Invax 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (AV)



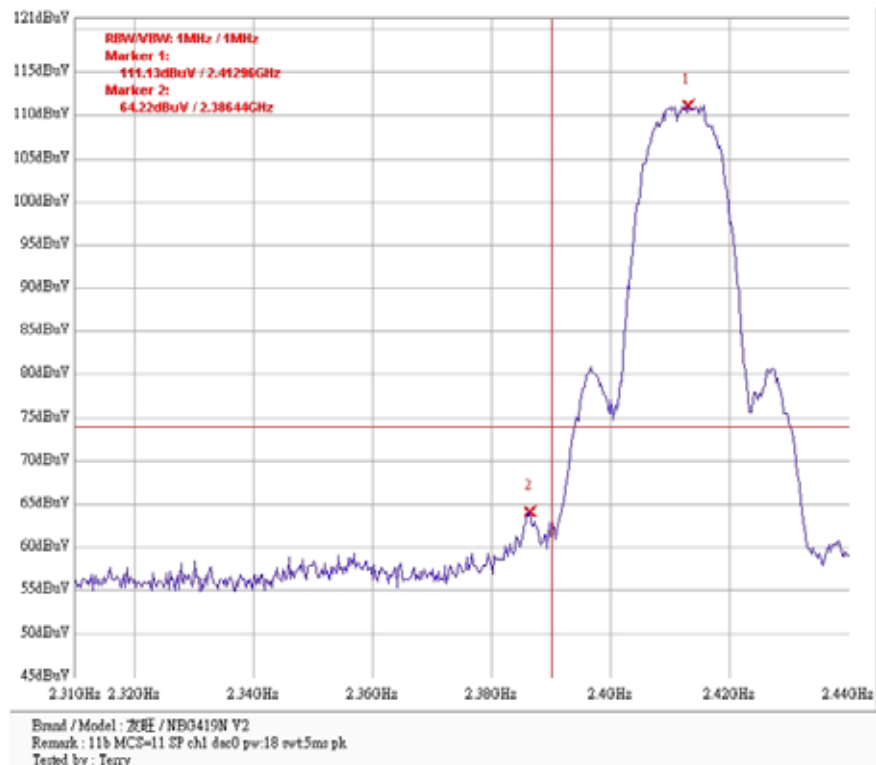
Invax 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (PK)



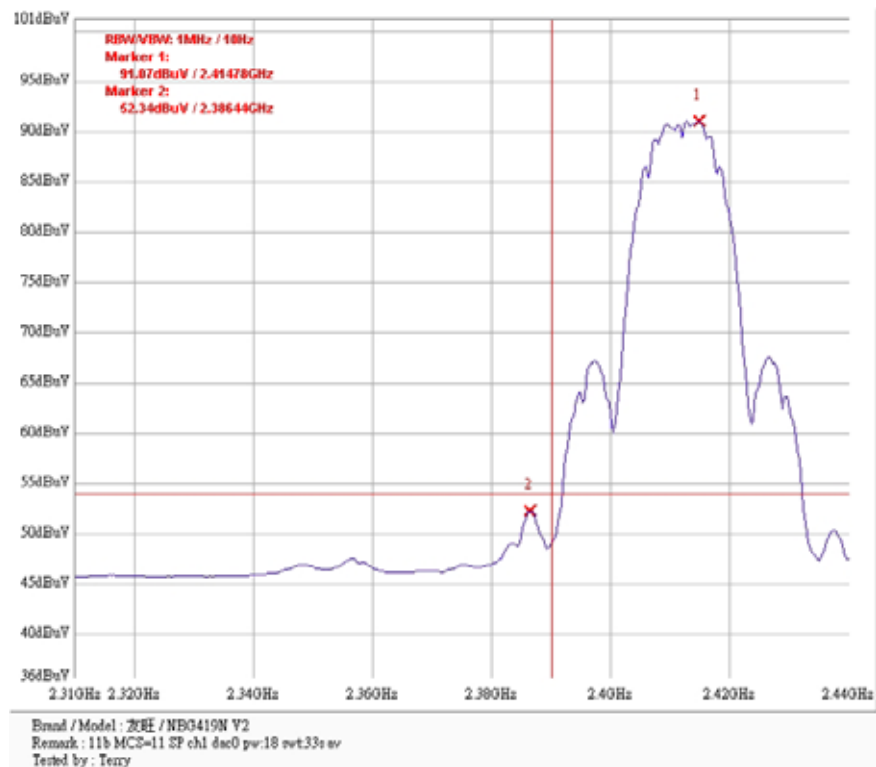
Invax 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (AV)



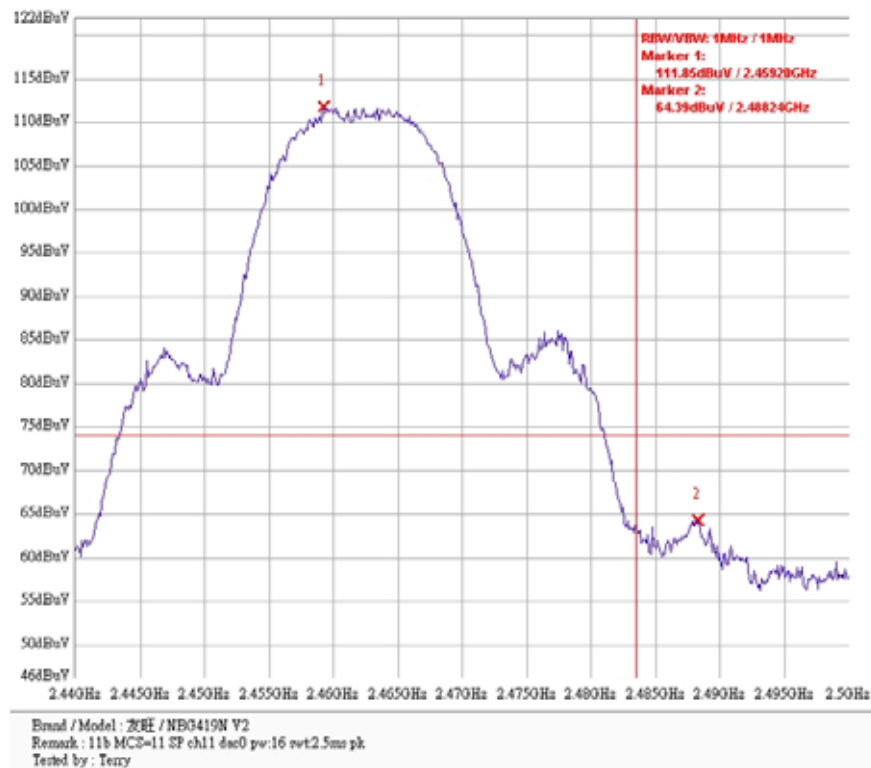
SAYTEC 2 dBi Antenna: Band edge @ 802.11b mode channel 1 (PK)



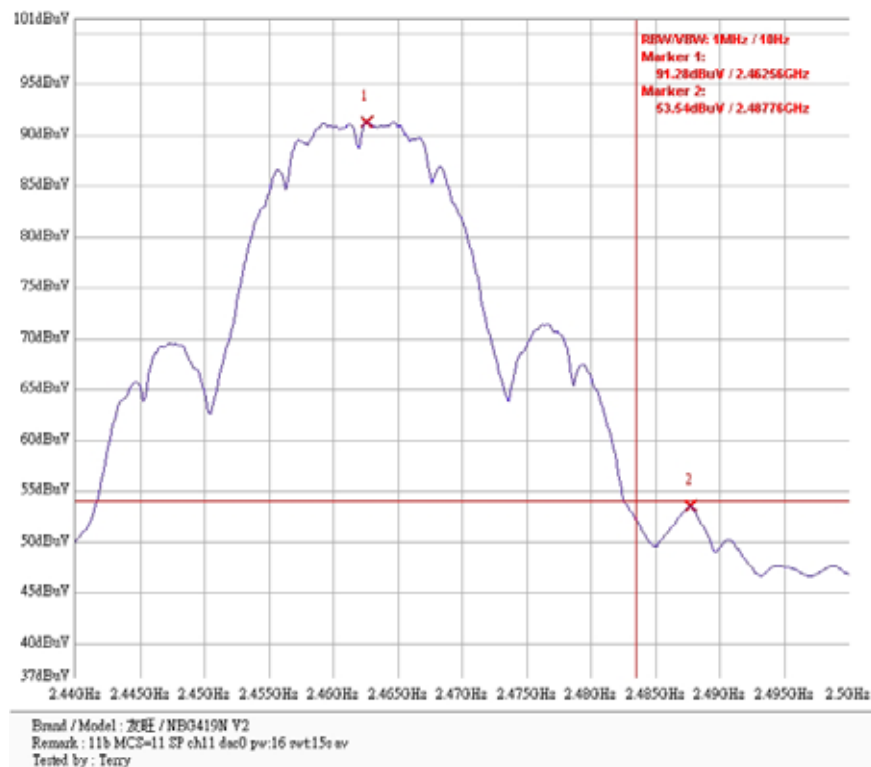
SAYTEC 2 dBi Antenna: Band edge @ 802.11b mode channel 1 (AV)



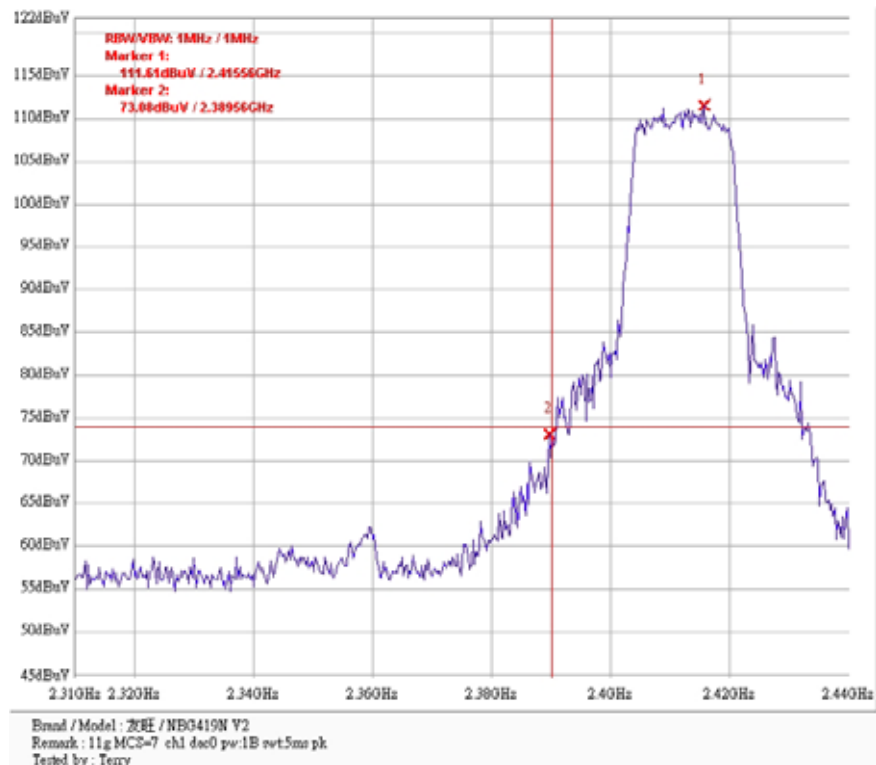
SAYTEC 2 dBi Antenna: Band edge @ 802.11b mode channel 11 (PK)



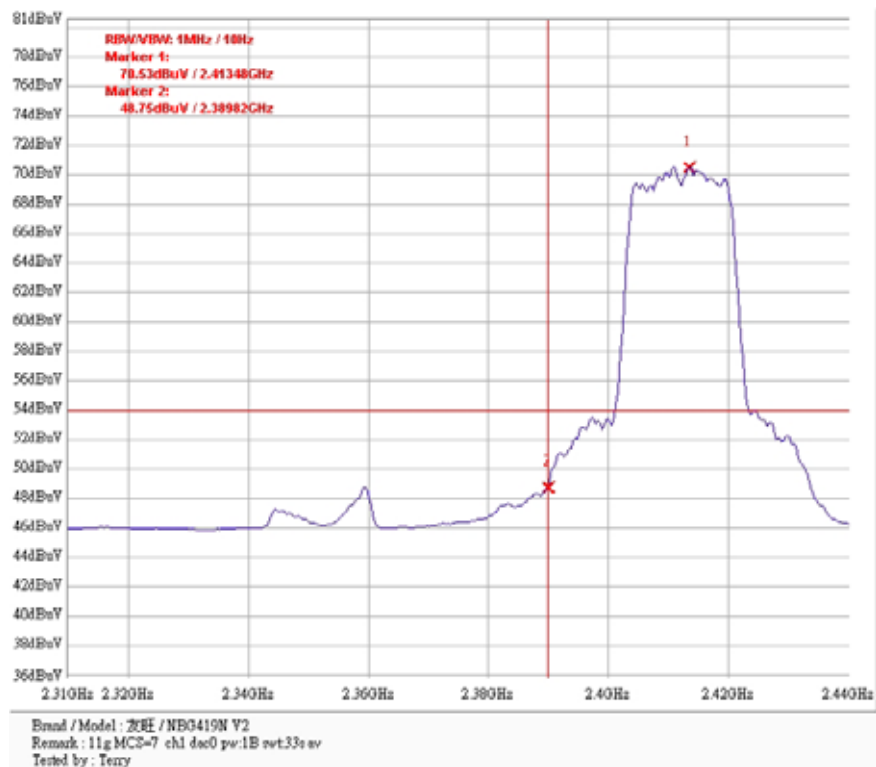
SAYTEC 2 dBi Antenna: Band edge @ 802.11b mode channel 11 (AV)



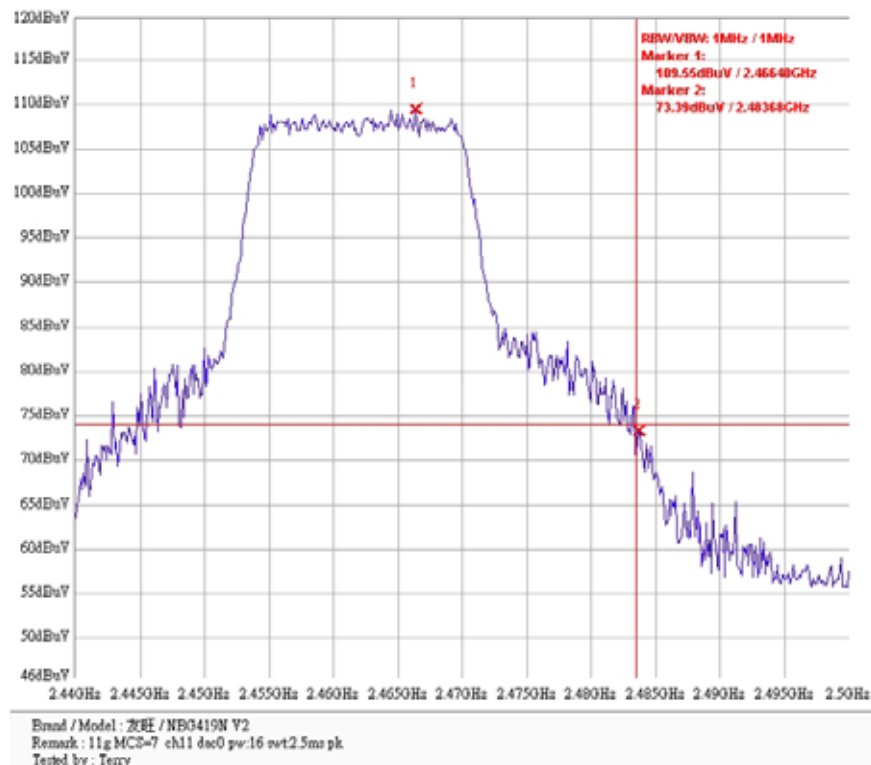
SAYTEC 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (PK)



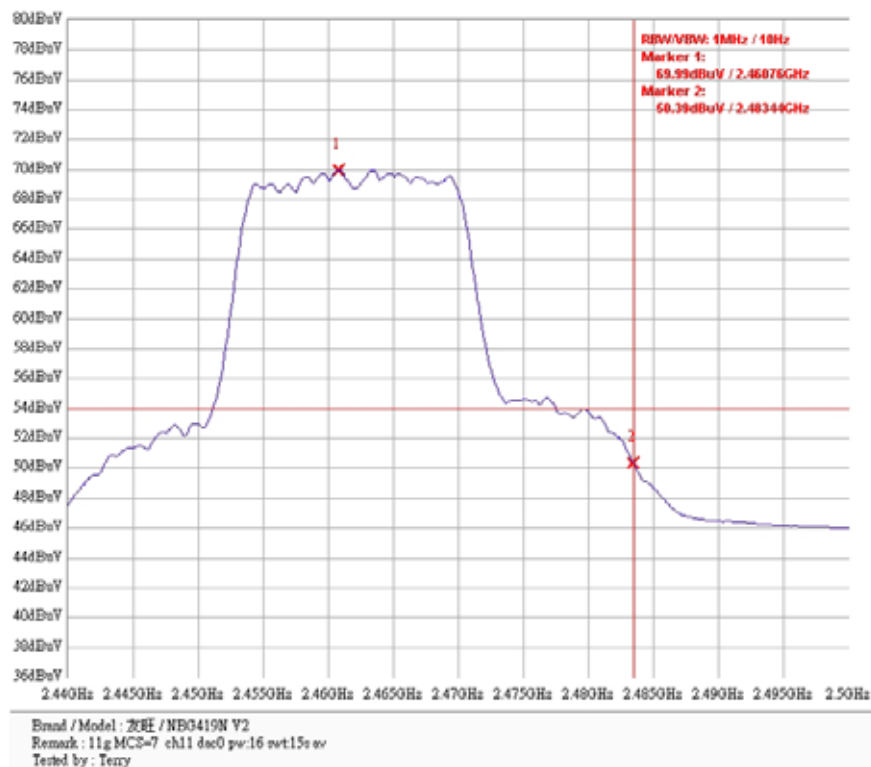
SAYTEC 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (AV)



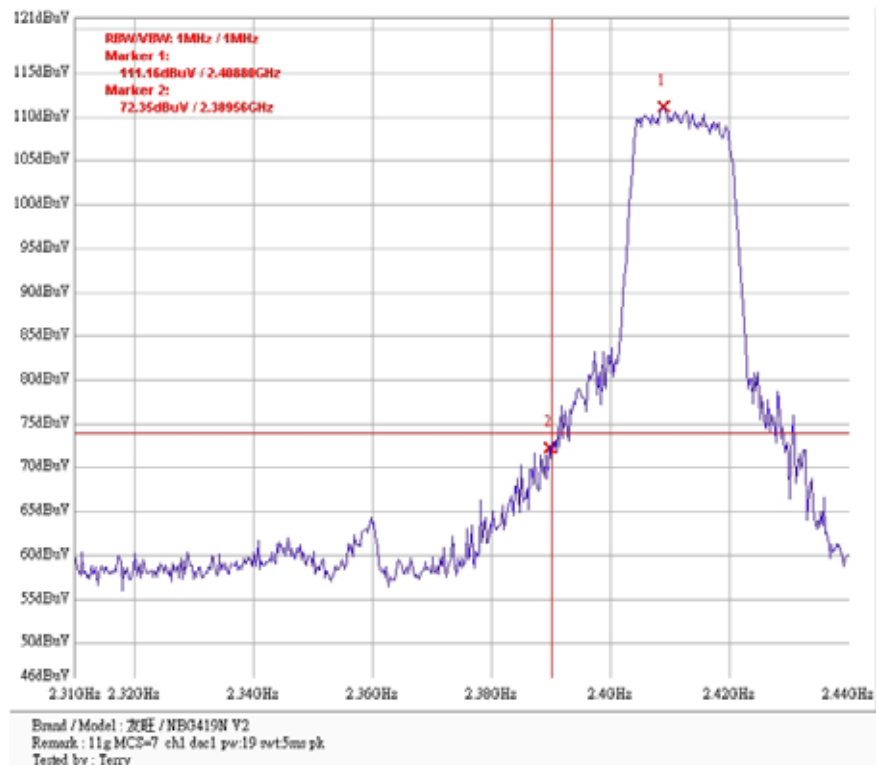
SAYTEC 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (PK)



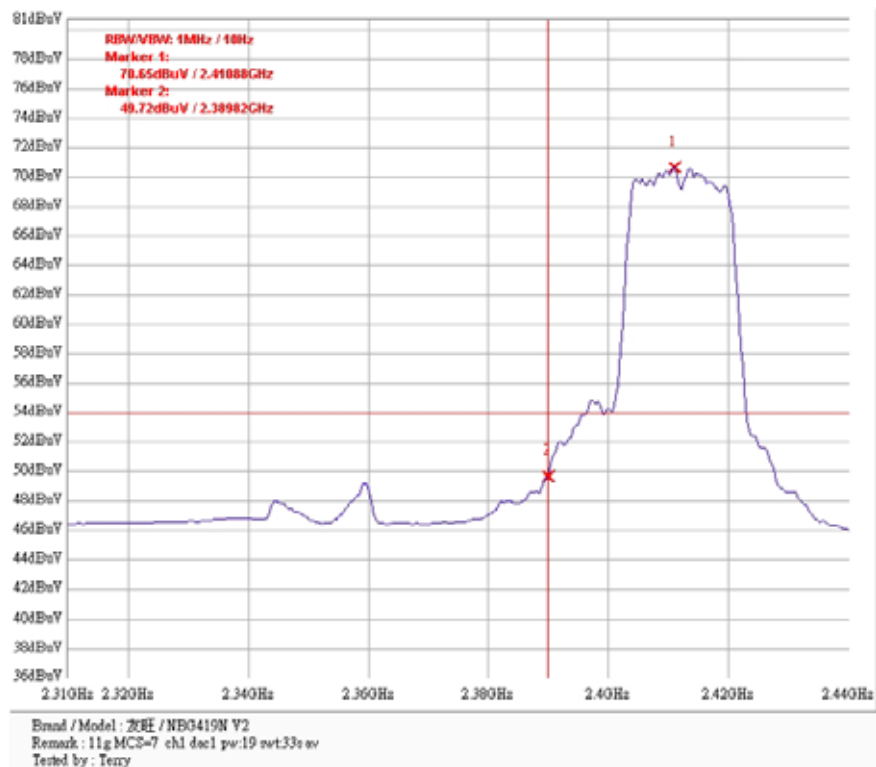
SAYTEC 2 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (AV)



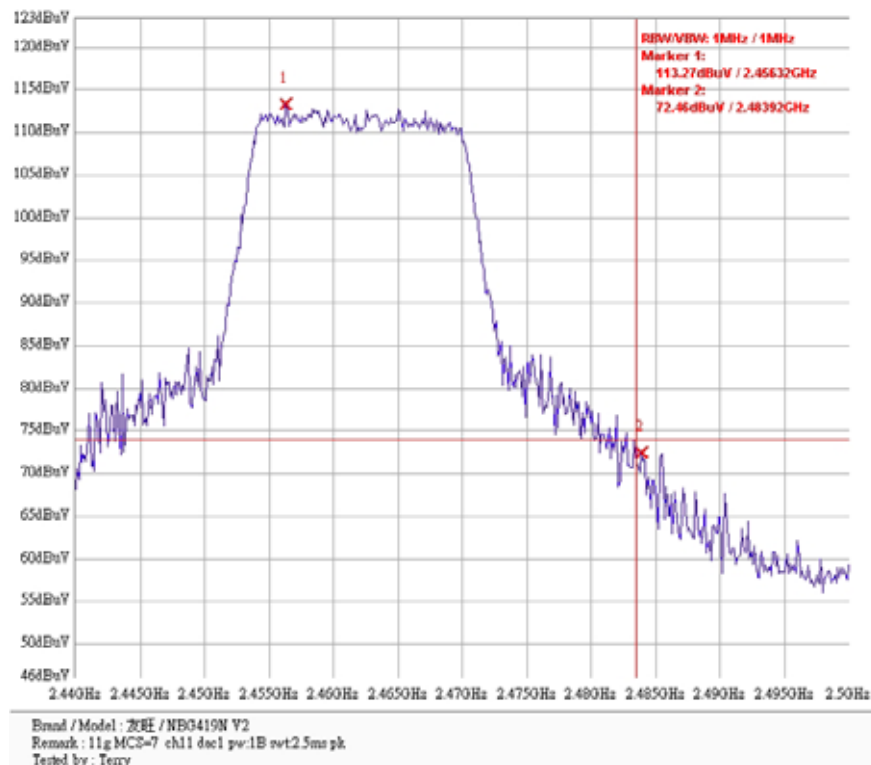
SAYTEC 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (PK)



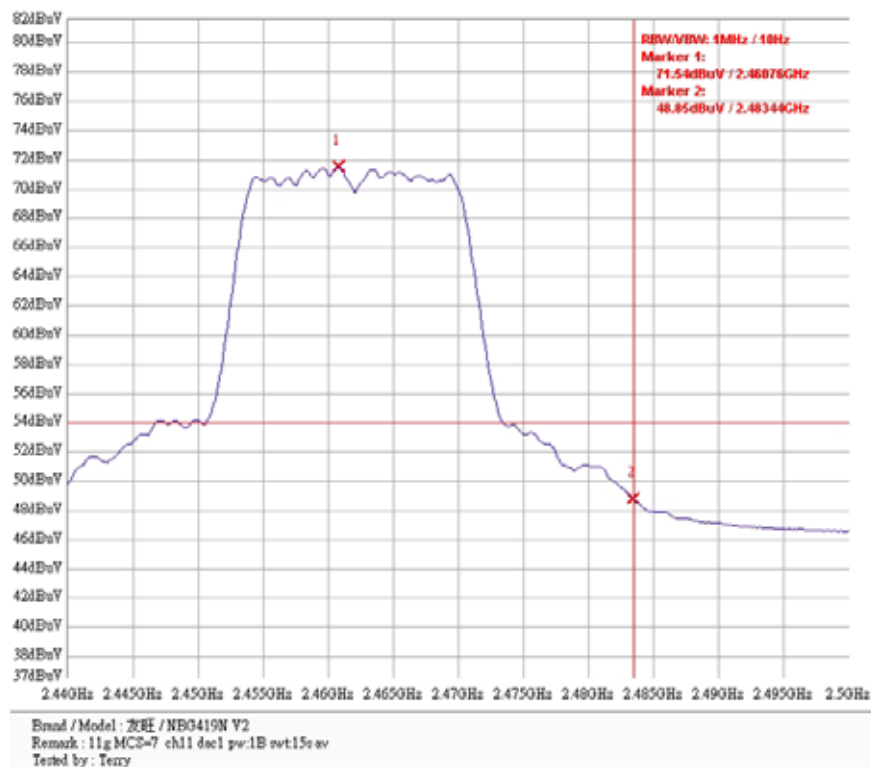
SAYTEC 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (AV)



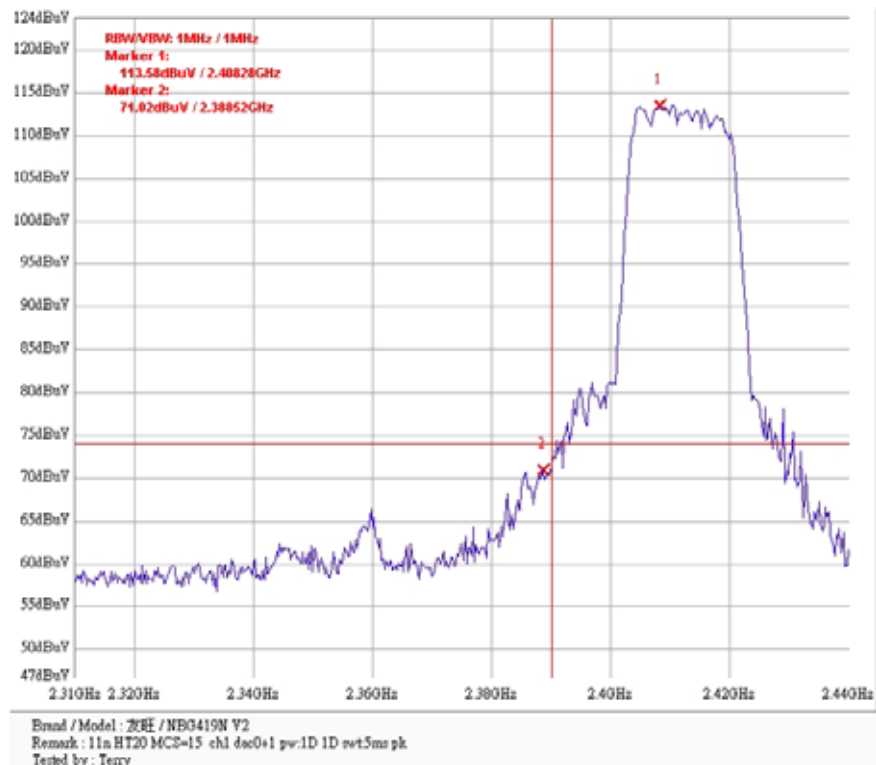
SAYTEC 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (PK)



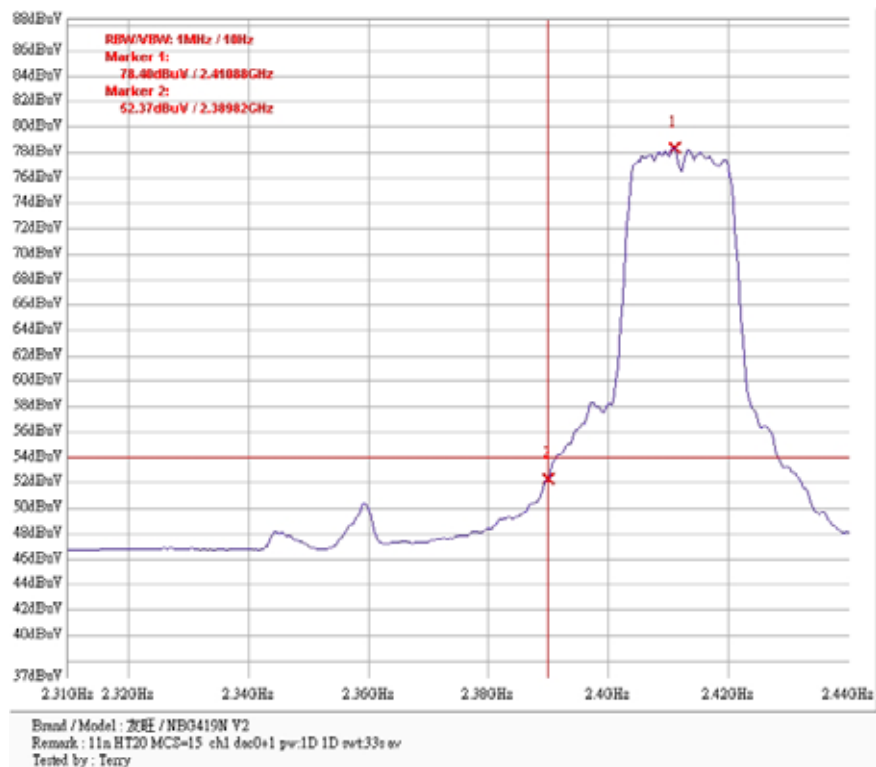
SAYTEC 2 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (AV)



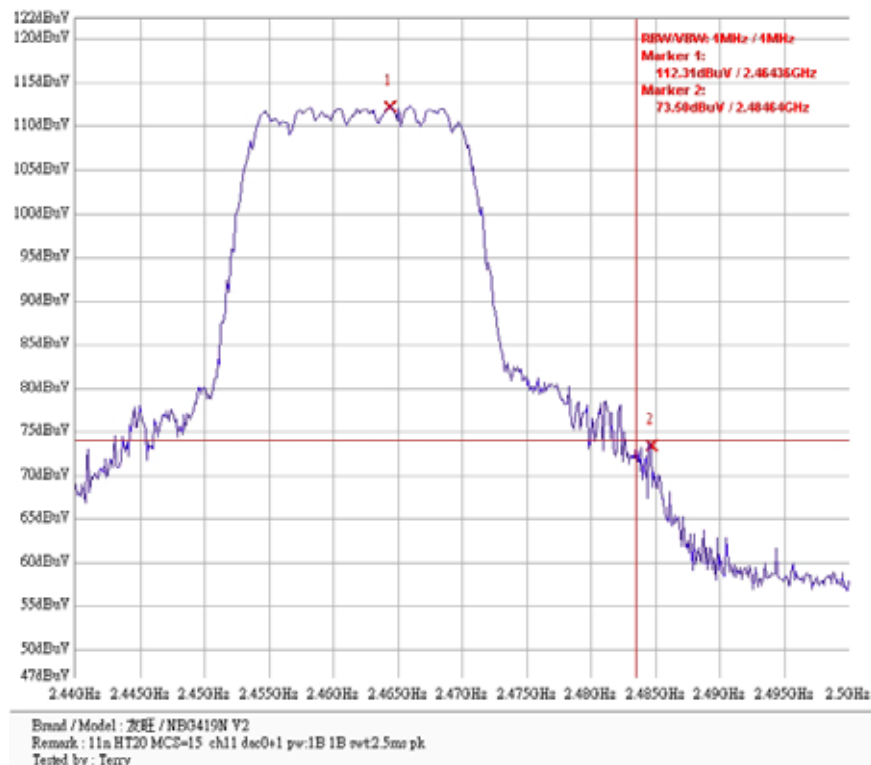
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (PK)



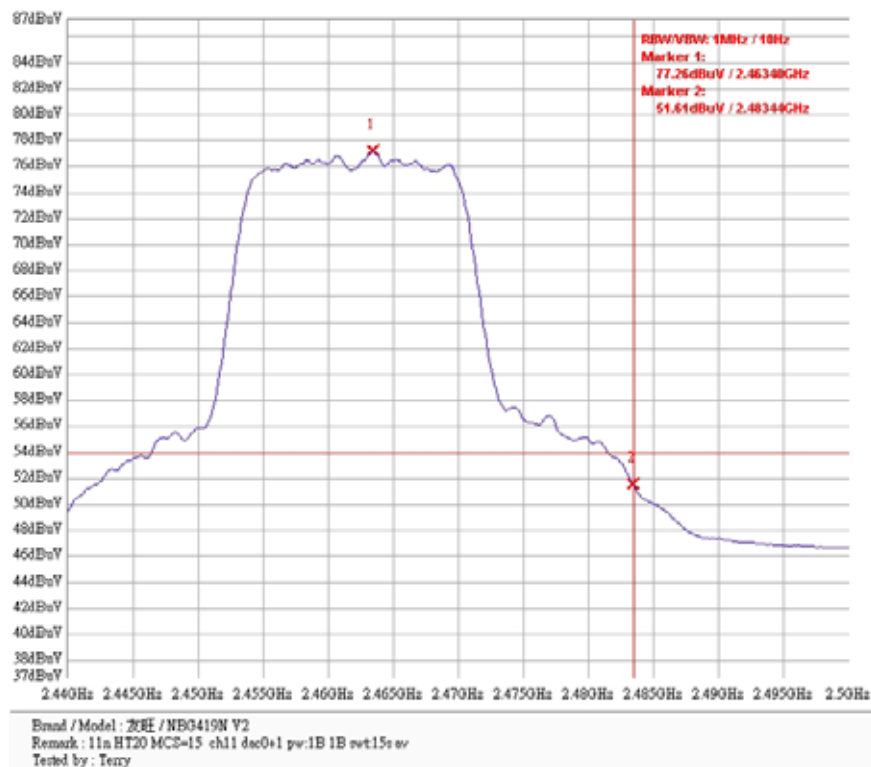
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (AV)



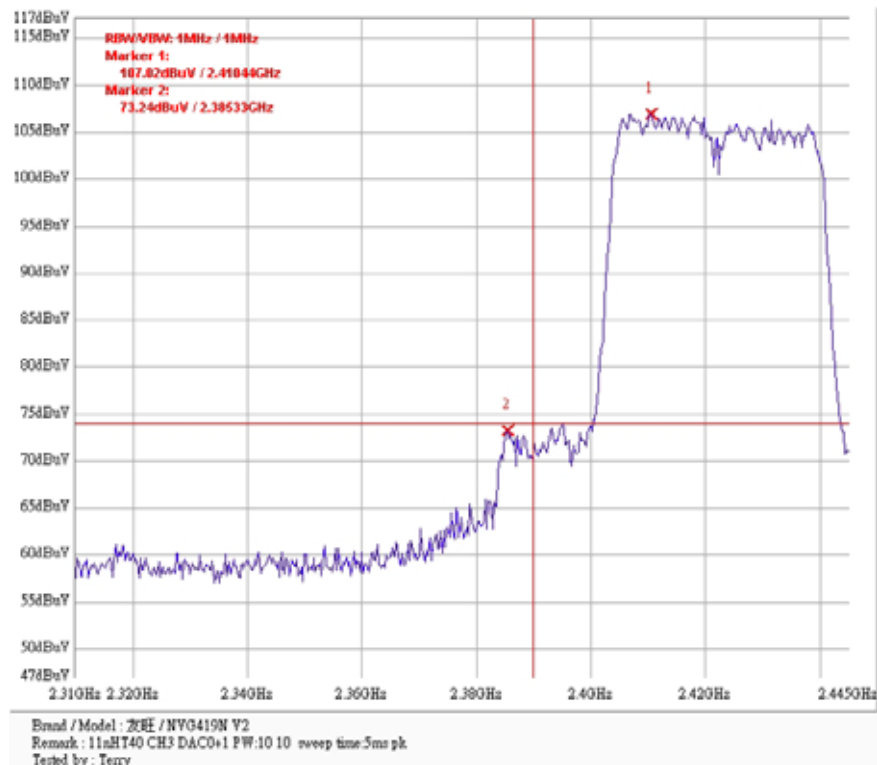
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (PK)



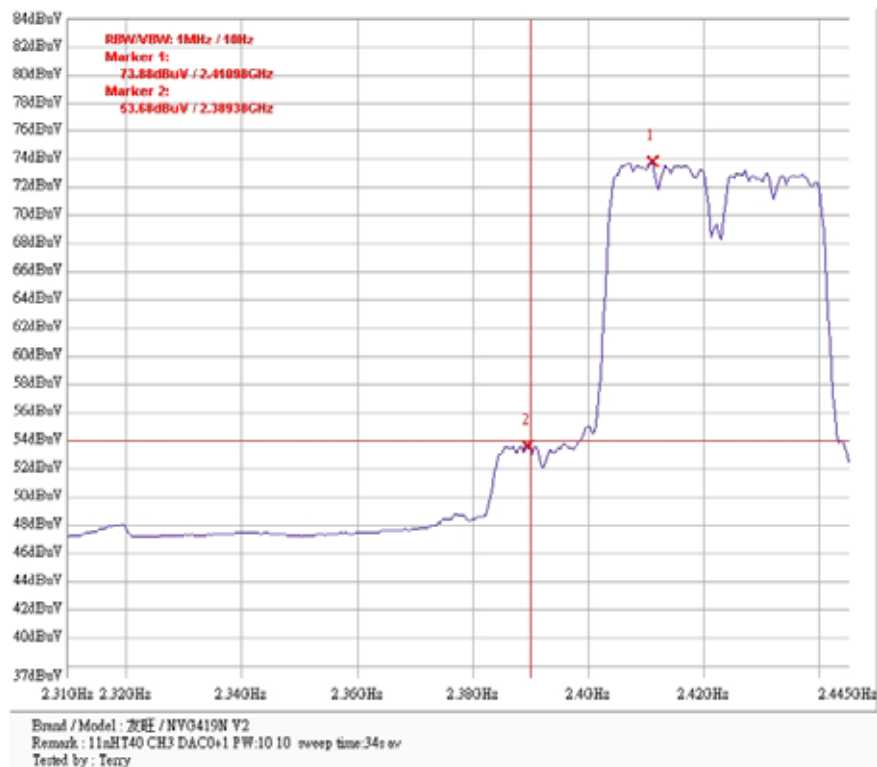
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (AV)



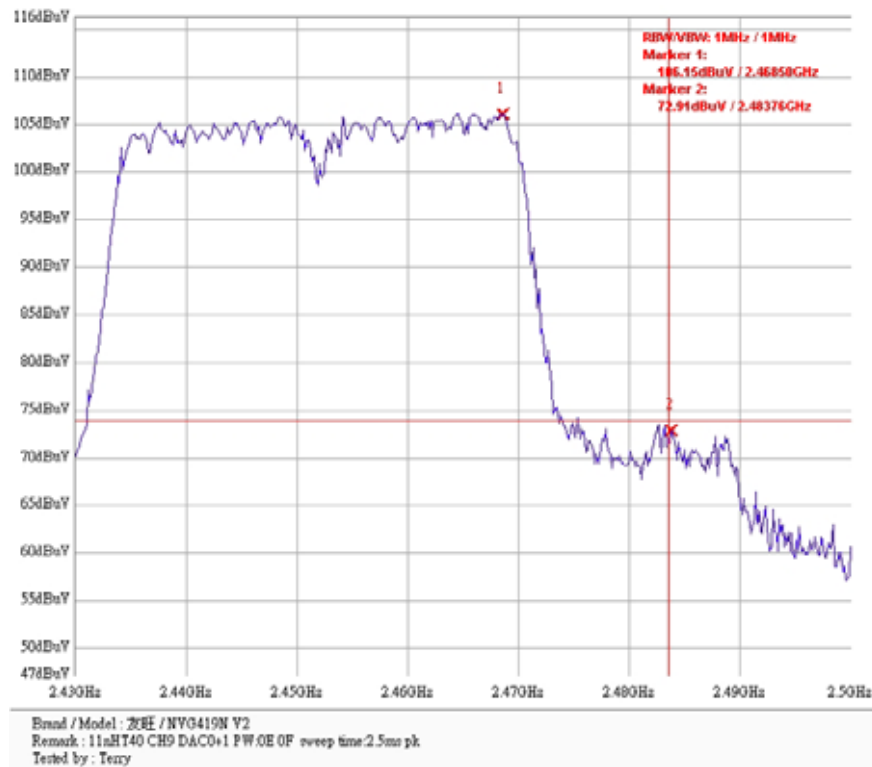
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (PK)



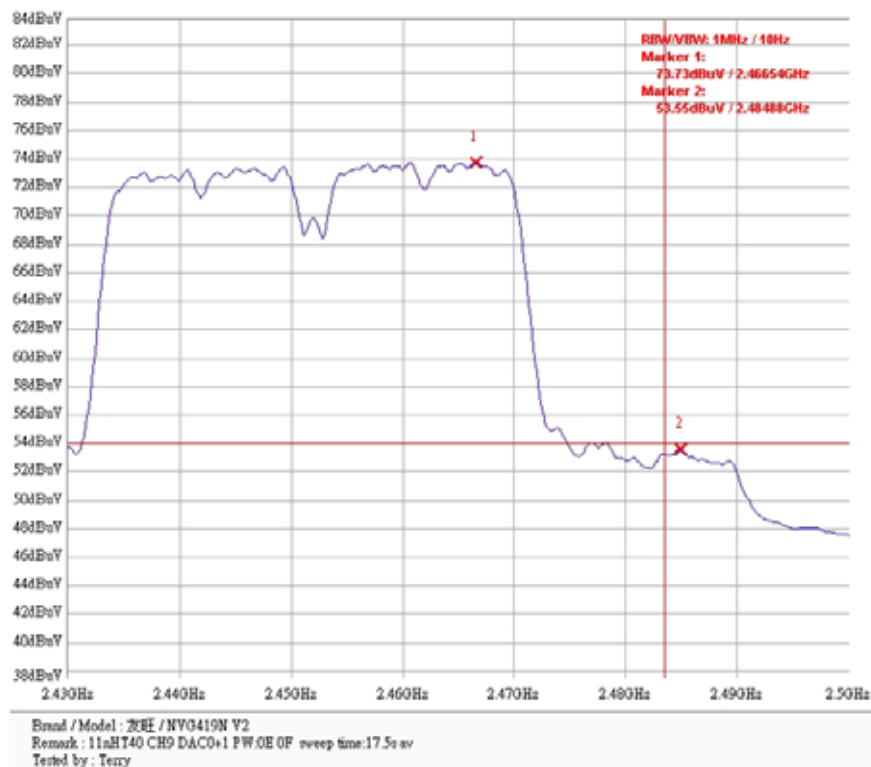
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (AV)



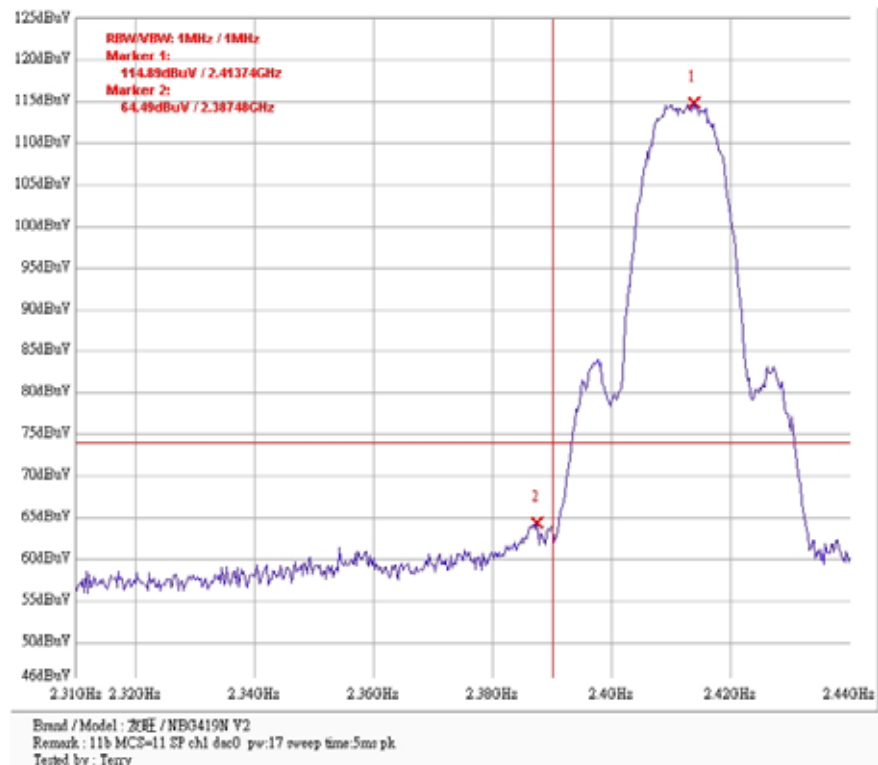
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (PK)



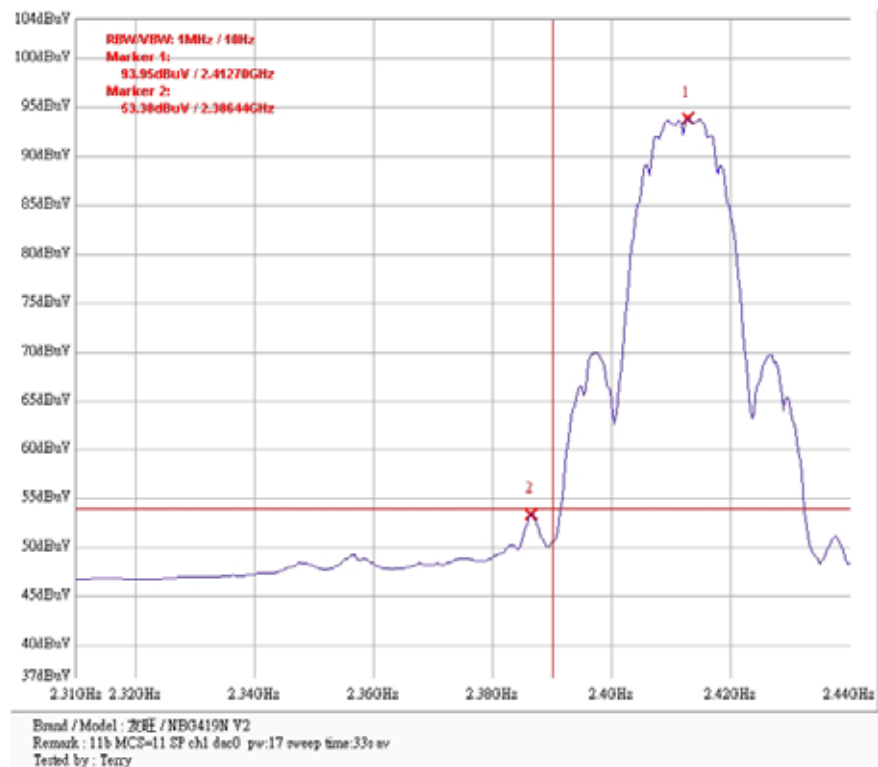
SAYTEC 2 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (AV)



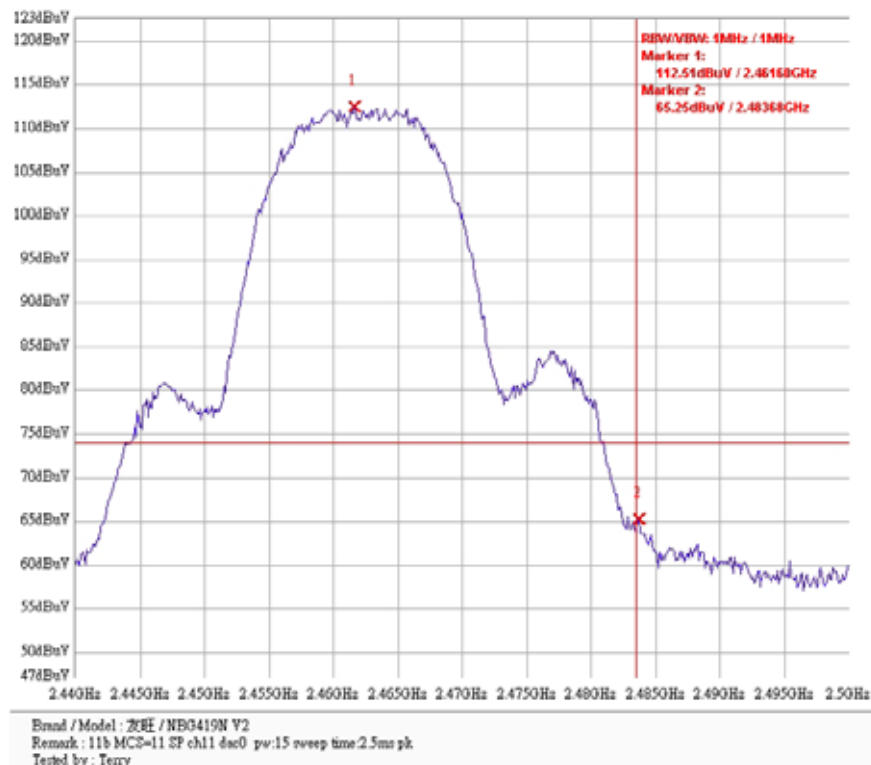
Invax 5 dBi Antenna: Band edge @ 802.11b mode channel 1 (PK)



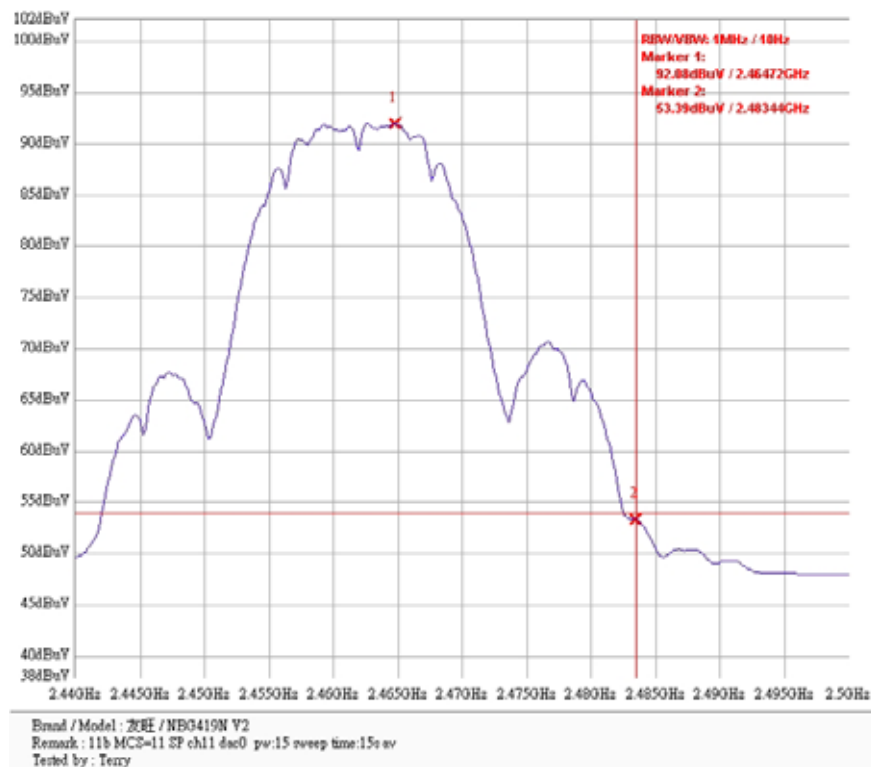
Invax 5 dBi Antenna: Band edge @ 802.11b mode channel 1 (AV)



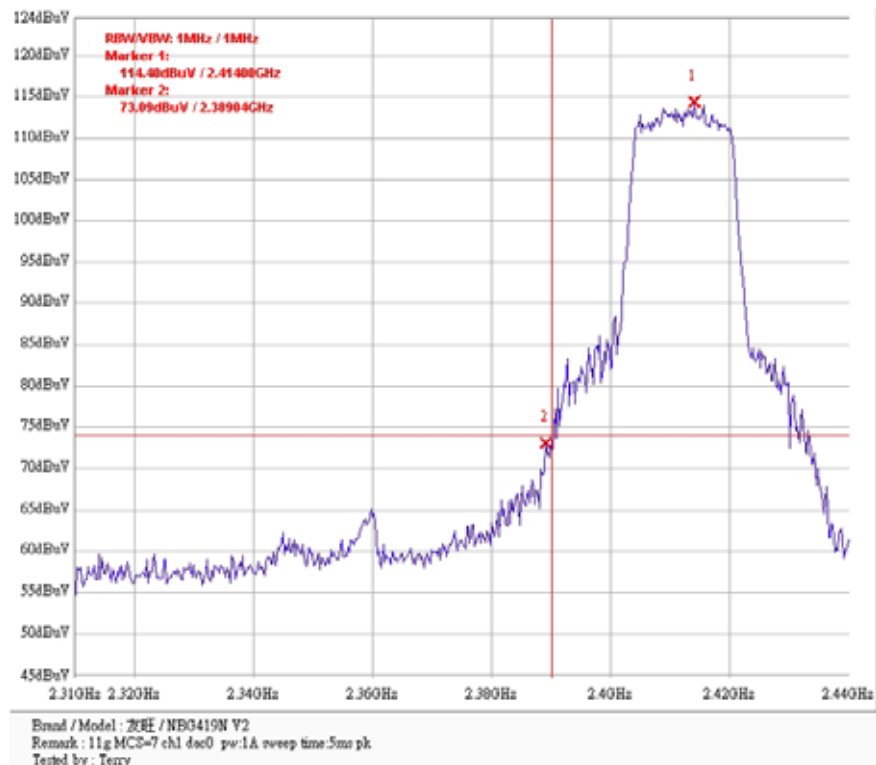
Invax 5 dBi Antenna: Band edge @ 802.11b mode channel 11 (PK)



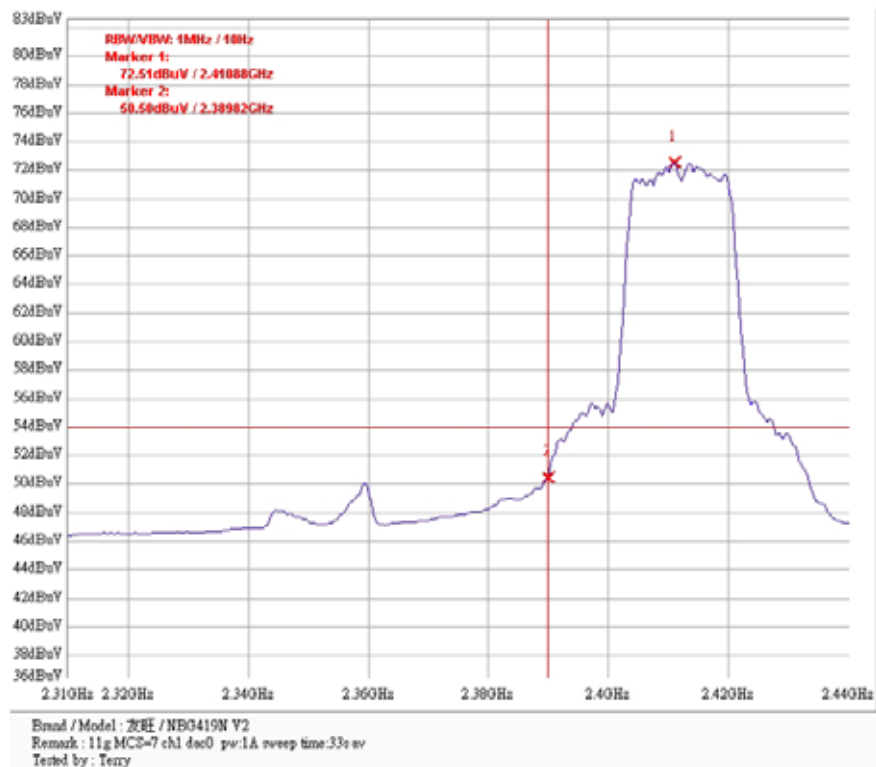
Invax 5 dBi Antenna: Band edge @ 802.11b mode channel 11 (AV)



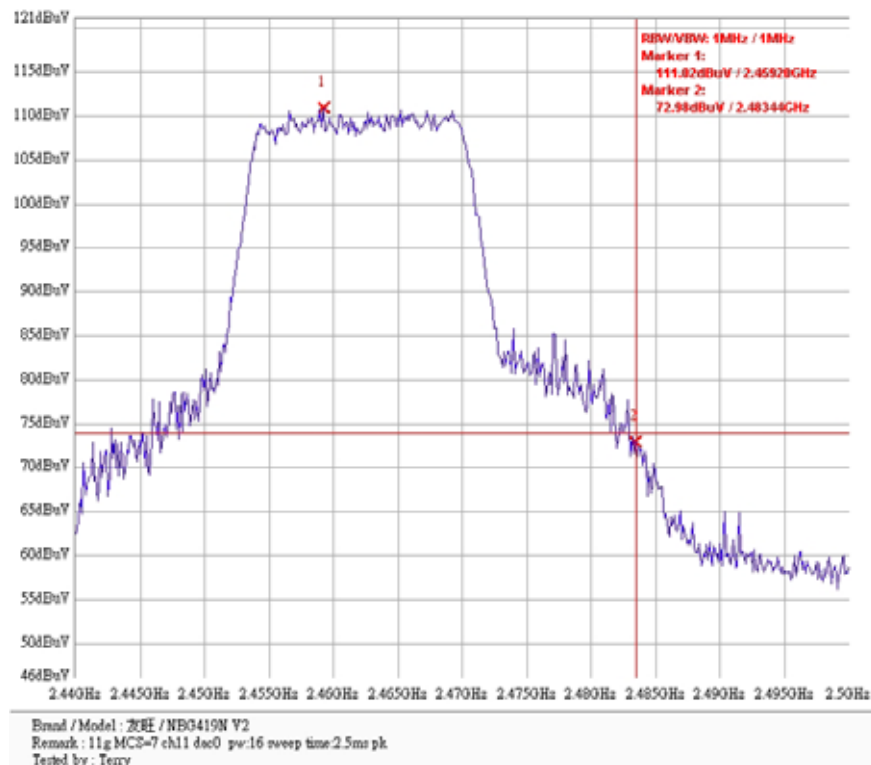
Invax 5 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (PK)



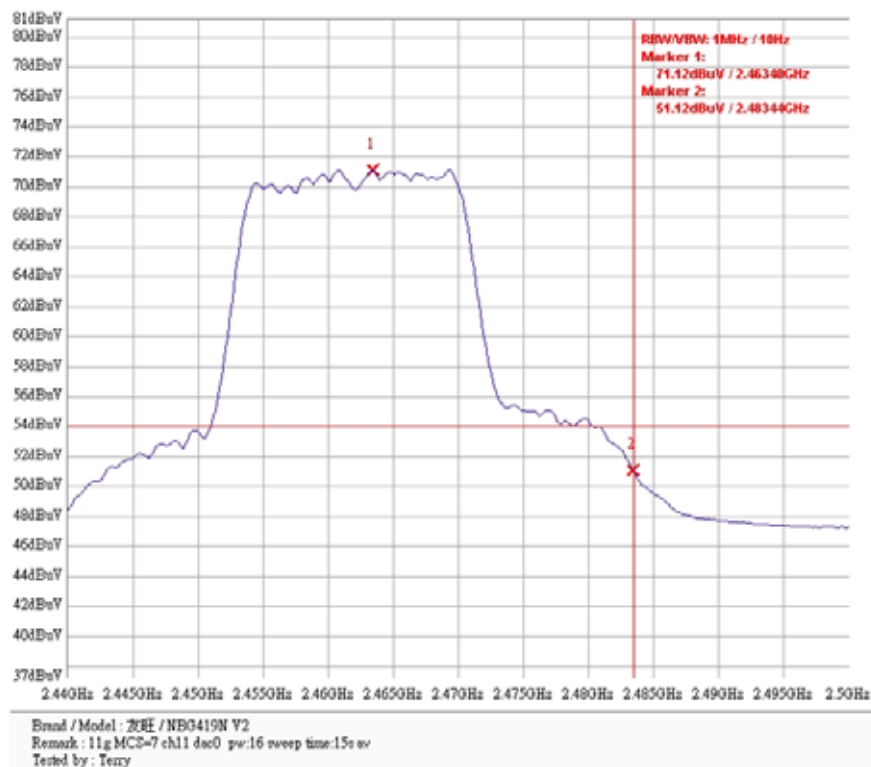
Invax 5 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 1 (AV)



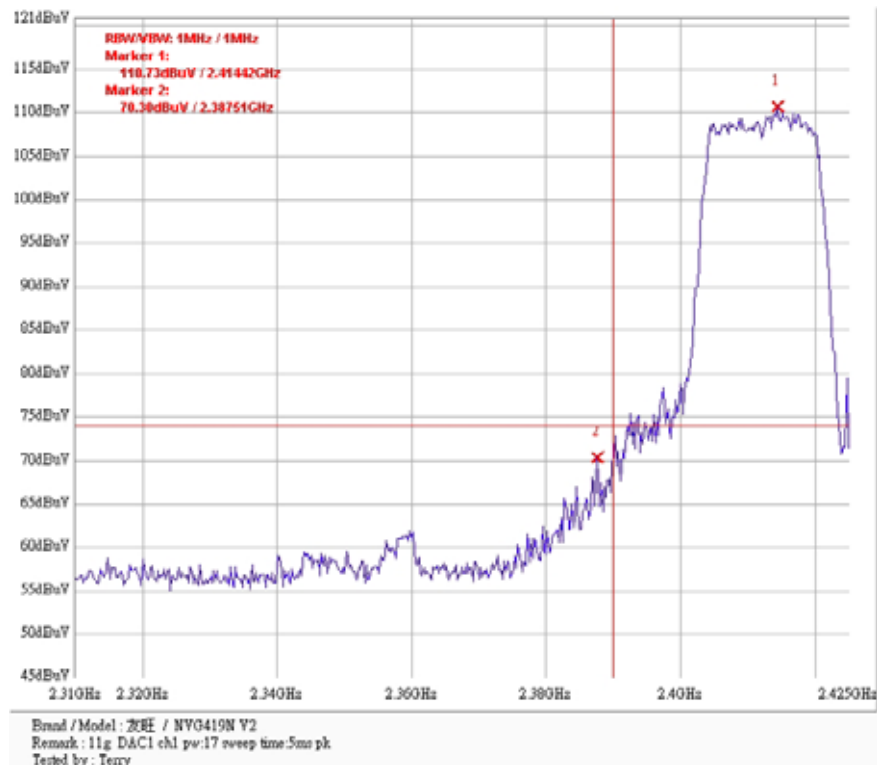
Invax 5 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (PK)



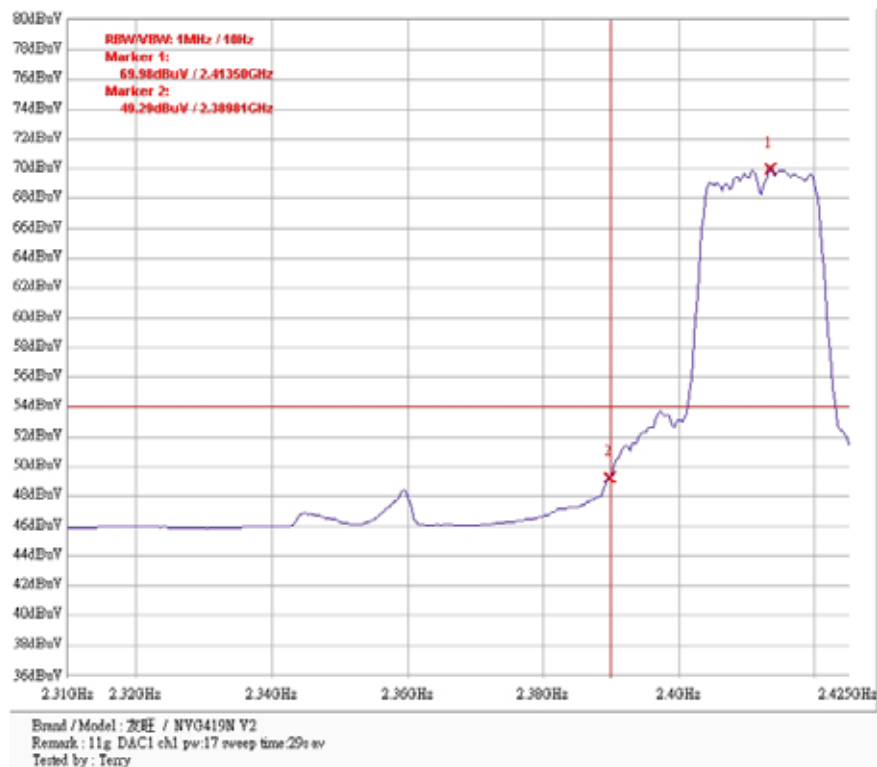
Invax 5 dBi Antenna: Chain 0: Band edge @ 802.11g mode channel 11 (AV)



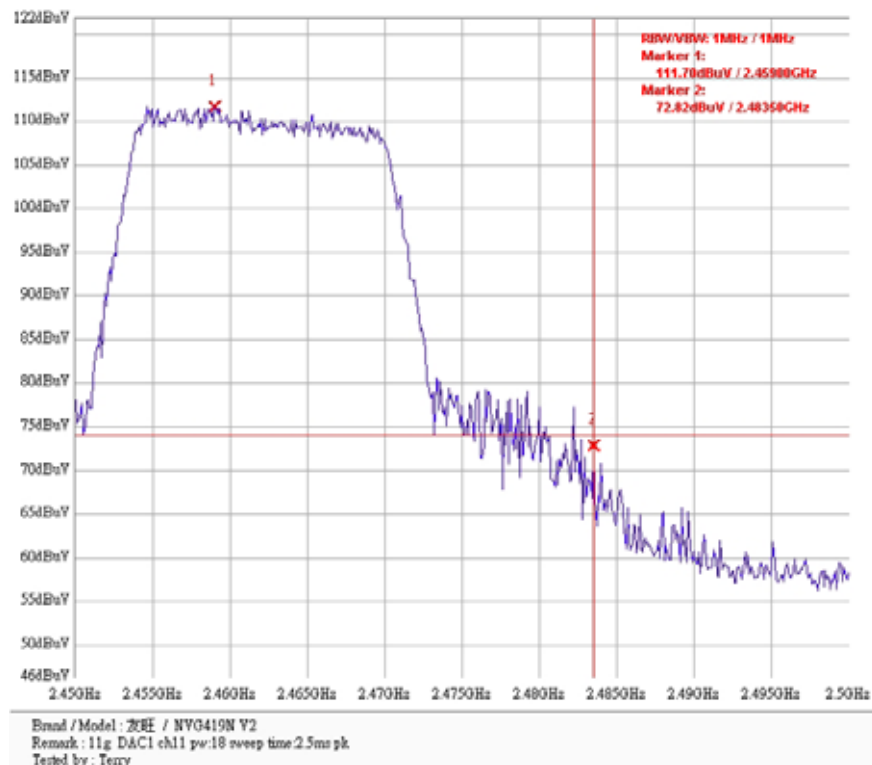
Invax 5 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (PK)



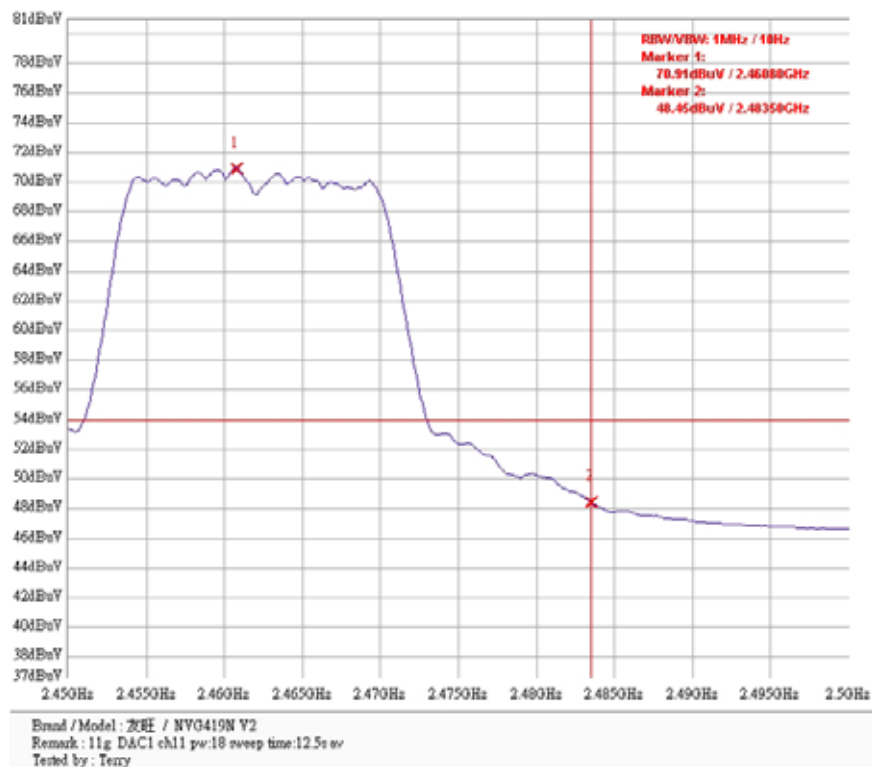
Invax 5 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 1 (AV)



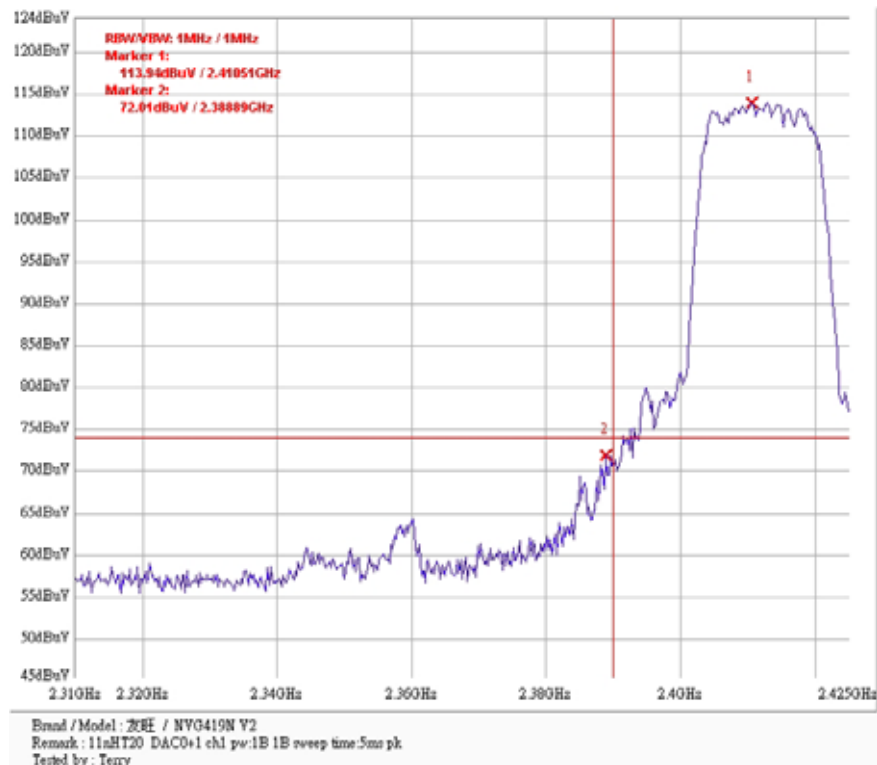
Invax 5 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (PK)



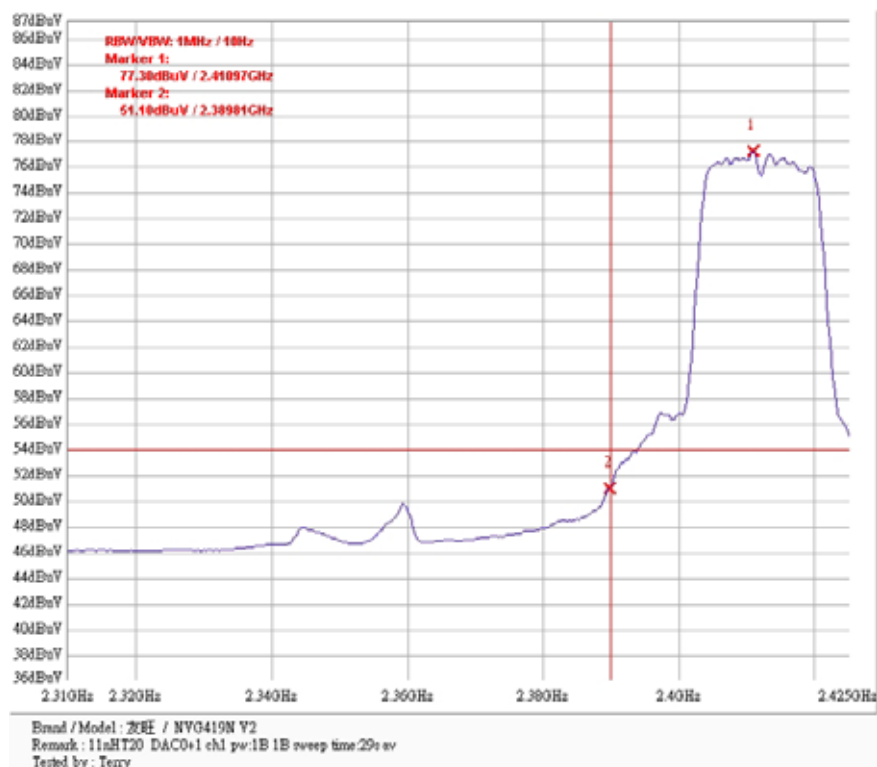
Invax 5 dBi Antenna: Chain 1: Band edge @ 802.11g mode channel 11 (AV)



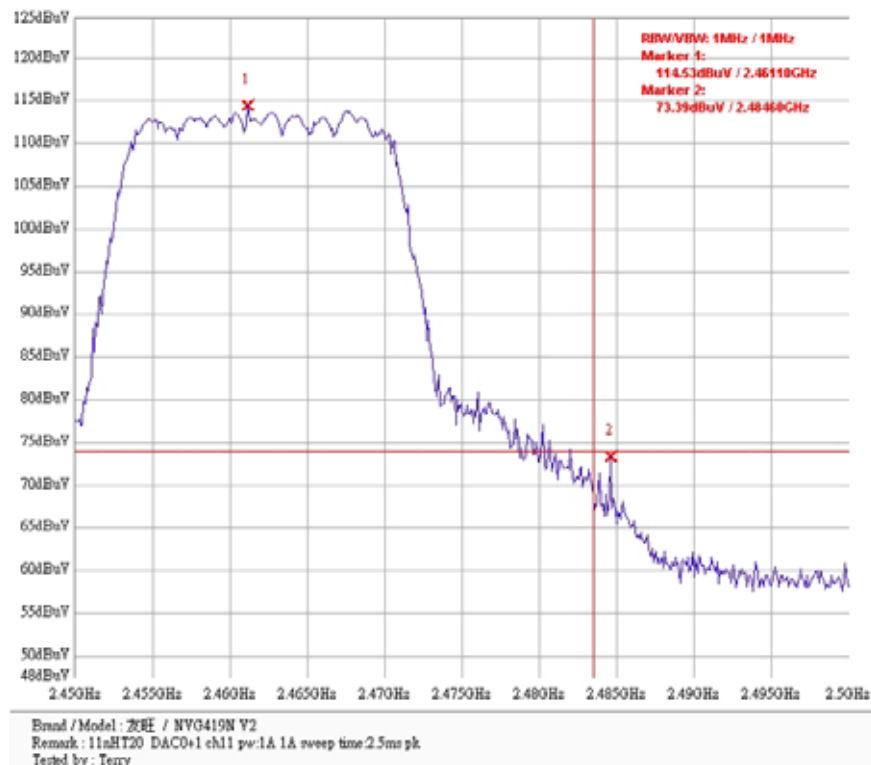
Invax 5 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (PK)



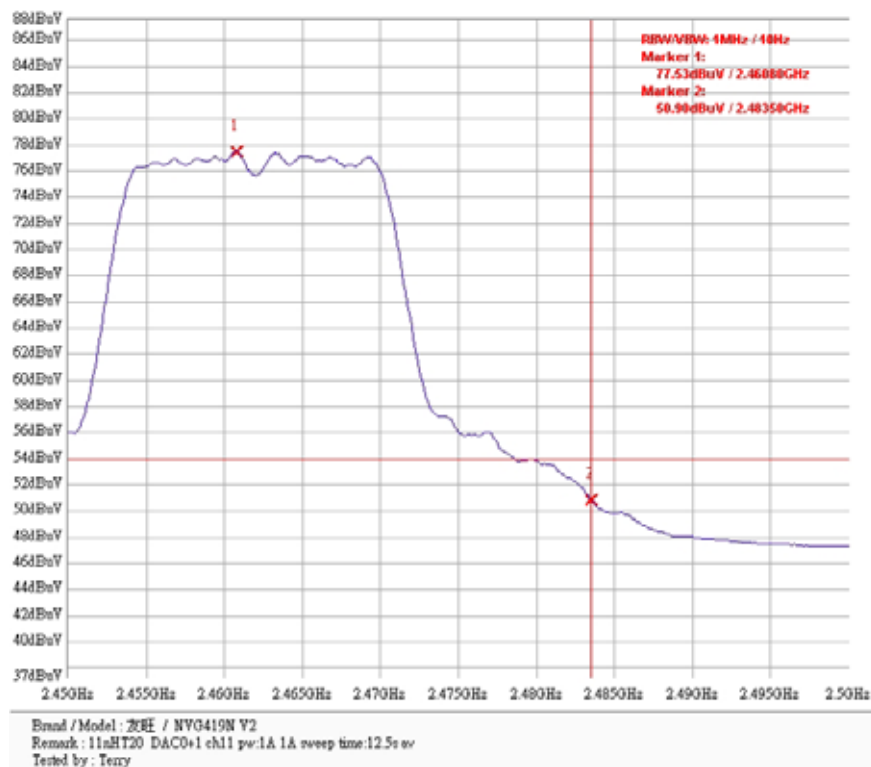
Invax 5 dBi Antenna: Band edge @ 802.11n HT20 mode channel 1 (AV)



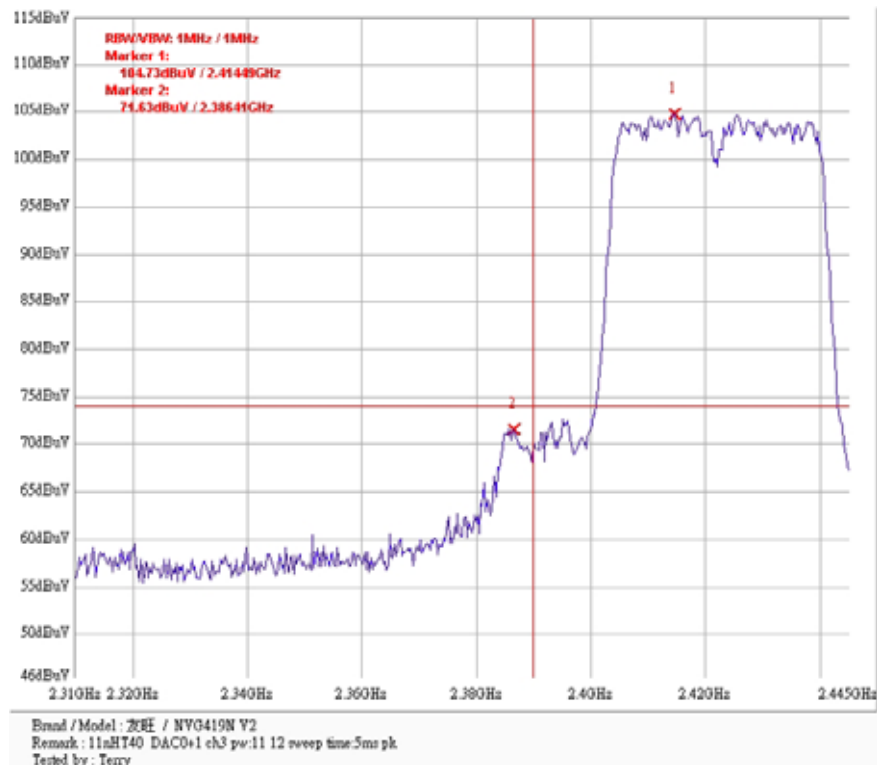
Invax 5 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (PK)



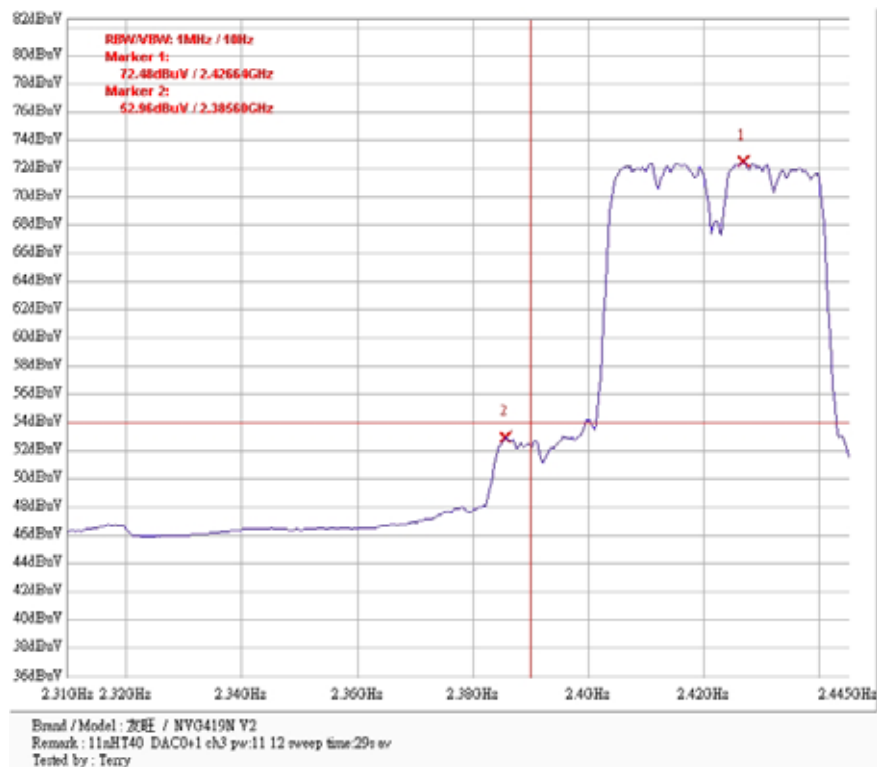
Invax 5 dBi Antenna: Band edge @ 802.11n HT20 mode channel 11 (AV)



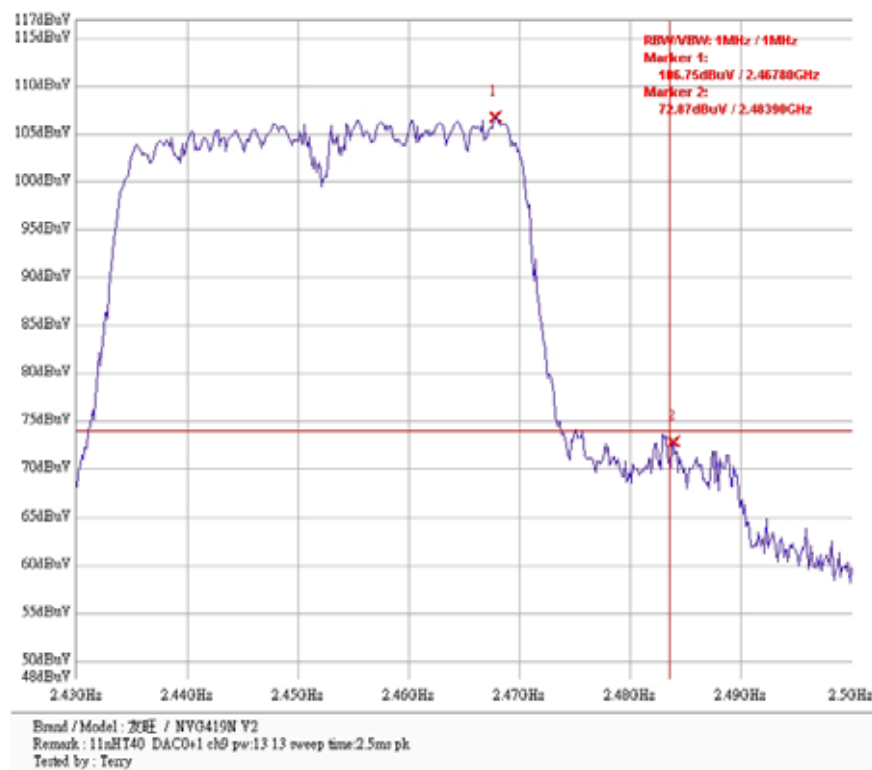
Invax 5 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (PK)



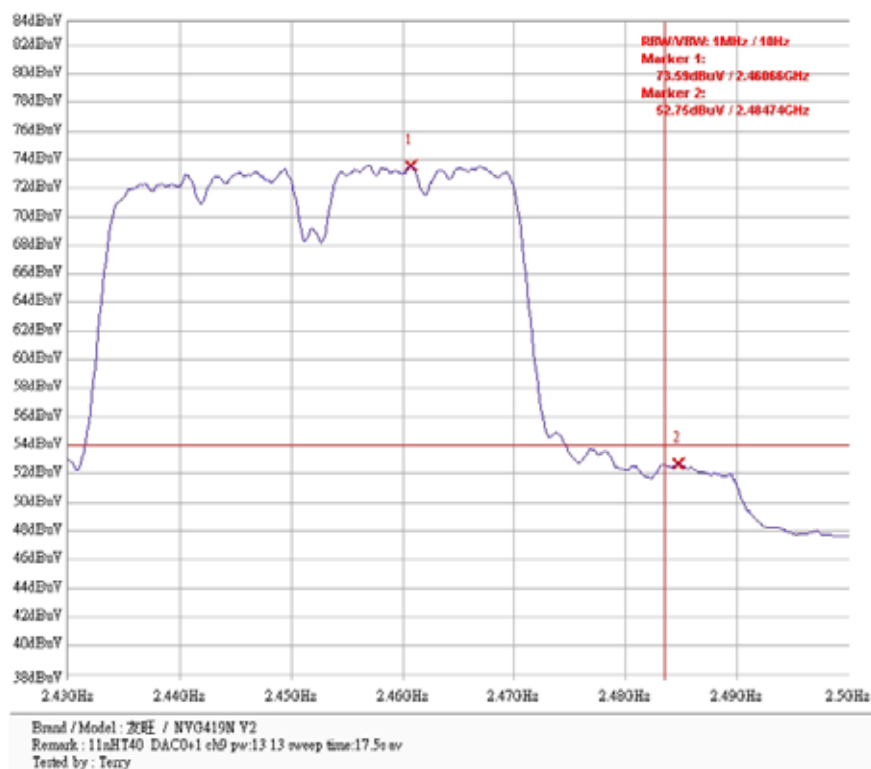
Invax 5 dBi Antenna: Band edge @ 802.11n HT40 mode channel 3 (AV)



Invax 5 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (PK)



Invax 5 dBi Antenna: Band edge @ 802.11n HT40 mode channel 9 (AV)



10. AC power line conducted emission

Name of Test	AC power line conducted emission
Base Standard	FCC 15.207

Test Result: Complies
Measurement Data: See Tables & plots below

Method of Measurement:

Reference FCC document: KDB558074, ANSI C63.4

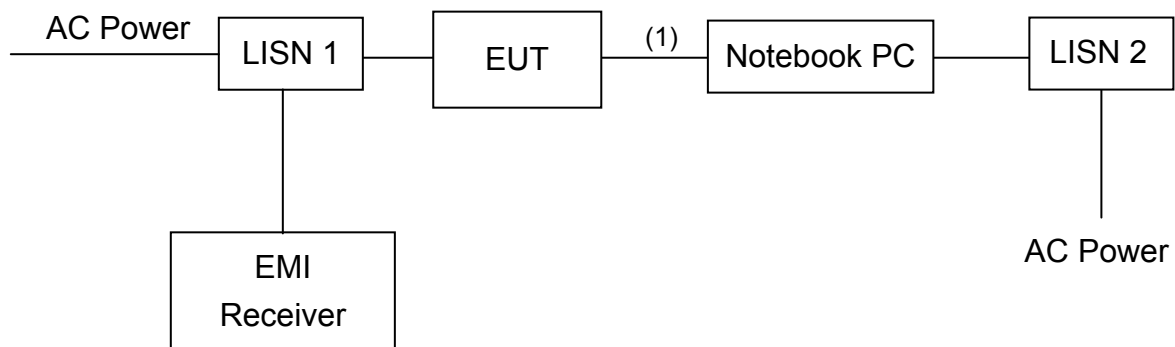
The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50 uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm/ 50 uH coupling impedance with 50 ohm termination.

Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement.

The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9 kHz.

The EUT configuration please refer to the "Conducted set-up photo.pdf".

Test Diagram:



(1) RJ-45 UTP Cat.5 10 meter

Emission Limit:

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

*Decreases with the logarithm of the frequency.

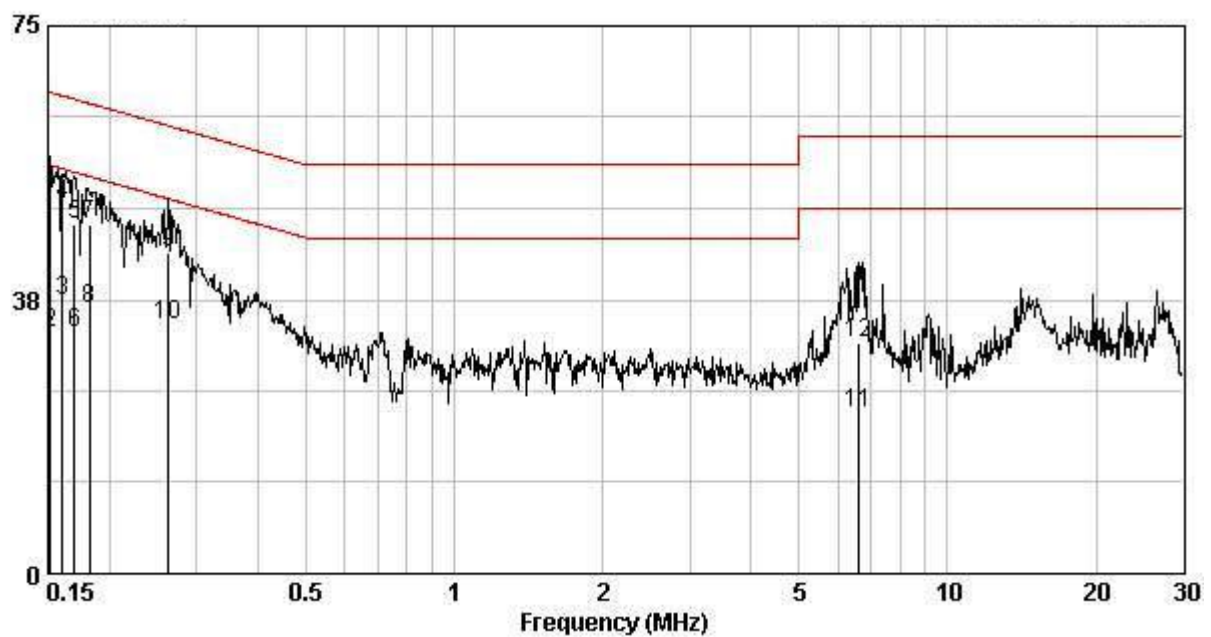
Note: The EUT was tested while in normal communication mode.

Phase : Line
EUT : NBG-419N v2
Test Condition : Continuously mode
Remark : Adapter 1

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.152	0.11	49.48	65.91	32.87	55.91	-16.43	-23.04
0.161	0.11	50.65	65.43	37.26	55.43	-14.78	-18.17
0.169	0.11	47.94	64.99	33.07	54.99	-17.05	-21.92
0.182	0.11	47.89	64.37	36.20	54.37	-16.48	-18.17
0.263	0.12	44.01	61.34	33.93	51.34	-17.32	-17.40
6.627	0.41	31.56	60.00	22.05	50.00	-28.44	-27.95

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

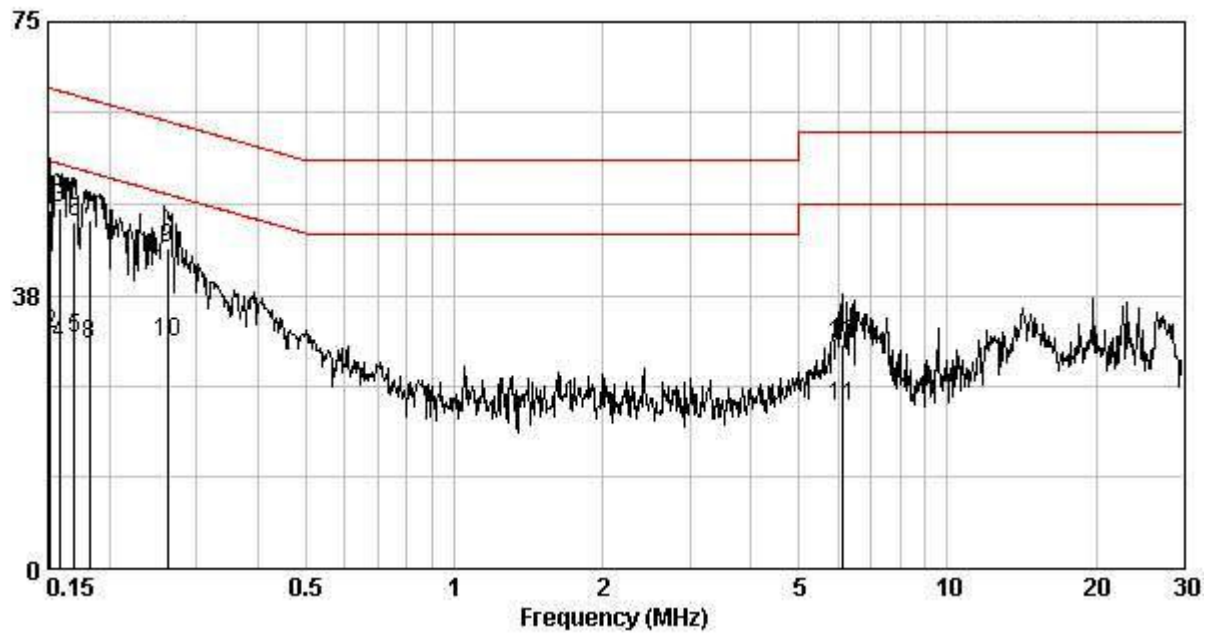


Phase : Neutral
EUT : NBG-419N v2
Test Condition : Continuously mode
Remark : Adapter 1

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.152	0.15	49.08	65.91	32.09	55.91	-16.83	-23.82
0.158	0.15	49.55	65.56	30.78	55.56	-16.01	-24.78
0.169	0.15	47.46	64.99	31.60	54.99	-17.53	-23.39
0.182	0.15	47.79	64.37	30.65	54.37	-16.58	-23.72
0.262	0.16	43.97	61.38	31.06	51.38	-17.41	-20.32
6.121	0.37	30.76	60.00	22.27	50.00	-29.24	-27.73

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

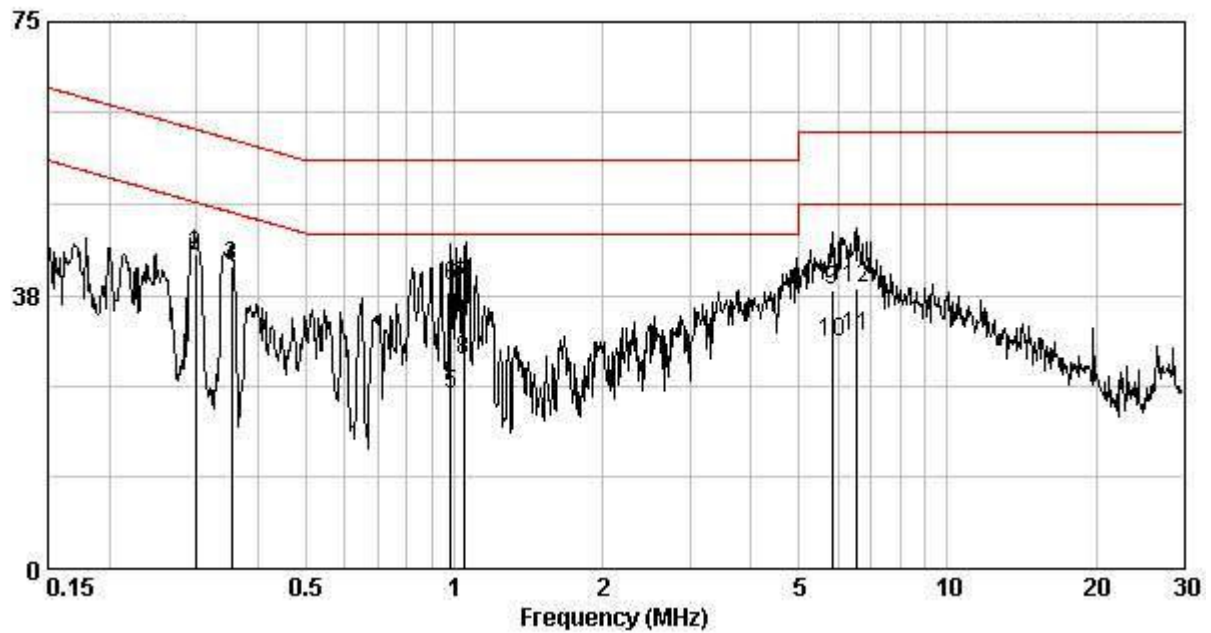


Phase : Line
EUT : NBG-419N v2
Test Condition : Continuously mode
Remark : Adapter 2

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.299	0.12	42.98	60.28	43.20	50.28	-17.29	-7.07
0.354	0.13	41.34	58.87	41.39	48.87	-17.53	-7.48
0.984	0.16	38.71	56.00	23.90	46.00	-17.29	-22.10
1.046	0.16	38.79	56.00	28.60	46.00	-17.21	-17.40
5.836	0.38	38.23	60.00	31.00	50.00	-21.77	-19.00
6.523	0.40	38.33	60.00	31.81	50.00	-21.67	-18.19

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

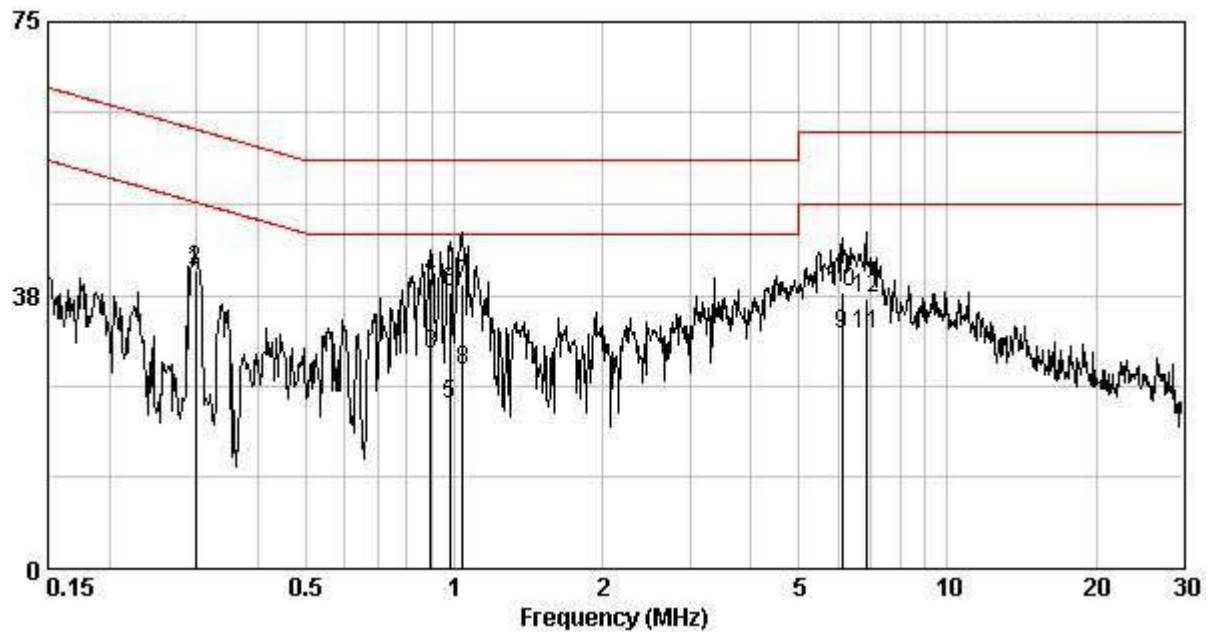


Phase : Neutral
EUT : NBG-419N v2
Test Condition : Continuously mode
Remark : Adapter 2

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.299	0.16	40.67	60.28	40.98	50.28	-19.60	-9.29
0.894	0.20	39.74	56.00	29.39	46.00	-16.26	-16.61
0.979	0.20	37.95	56.00	22.63	46.00	-18.05	-23.37
1.040	0.20	38.99	56.00	27.17	46.00	-17.01	-18.83
6.121	0.37	38.01	60.00	32.03	50.00	-21.99	-17.97
6.841	0.39	37.08	60.00	32.22	50.00	-22.92	-17.78

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)



Appendix A: Test Equipment List

Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100018	2011/12/6	2012/12/4
Spectrum Analyzer	Rohde&schwarz	FSP30	100137	2011/6/29	2012/6/28
Spectrum Analyzer	Rohde&schwarz	FSEK30	100186	2012/2/6	2013/2/5
Horn Antenna (1-18G)	Schwarzbeck	BBHA 9120 D	9120D-456	2010/8/31	2012/8/30
Horn Antenna (14-42G)	SHWARZBECK	BBHA 9170	BBHA9170159	2010/9/3	2012/9/2
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2011/7/26	2013/7/25
Pre-Amplifier	MITEQ	AFS44-00102650--42-10P-44	1495287	2011/10/27	2013/10/26
Pre-Amplifier	MITEQ	JS4-26004000--27-8A	828825	2010/9/8	2012/9/7
Power Meter	Anritsu	ML2495A	0844001	2011/10/13	2012/10/12
Power Sensor	Anritsu	MA2411B	0738452	2011/10/13	2012/10/12
Temperature&Humidity Test Chamber	TERCHY	MHU-225LRU (SA)	950838	2011/6/17	2012/6/16
Two-Line V-Network	Rohde&schwarz	ESH3-Z5	838979/014	2011/10/19	2012/10/18

Note: The above equipments are within the valid calibration period.

Measurement Uncertainty:

Measurement uncertainty was calculated in accordance with TR 100 028-1.

Parameter	Uncertainty
Radiated Emission	±5.056 dB
Conducted Emission	±2.786 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of $k=2$.