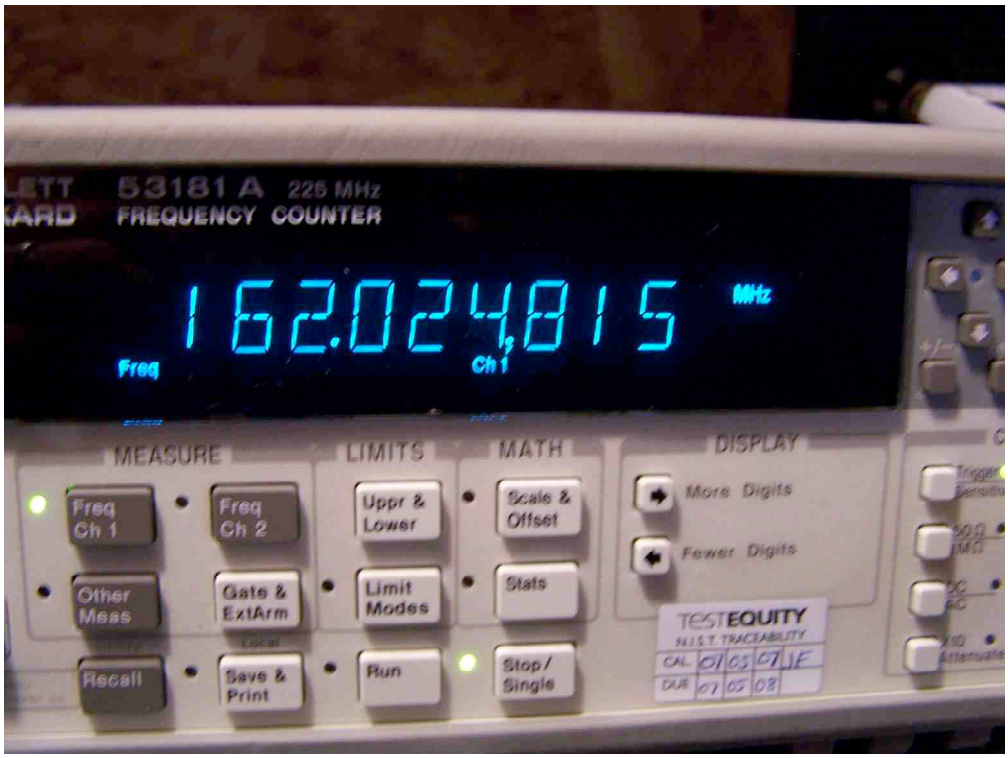
X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

4. Frequency Tolerance - Low Voltage.

Frequency: 162.025 MHz

Specification: ±10 ppm (±1620 Hz) 10.8 V

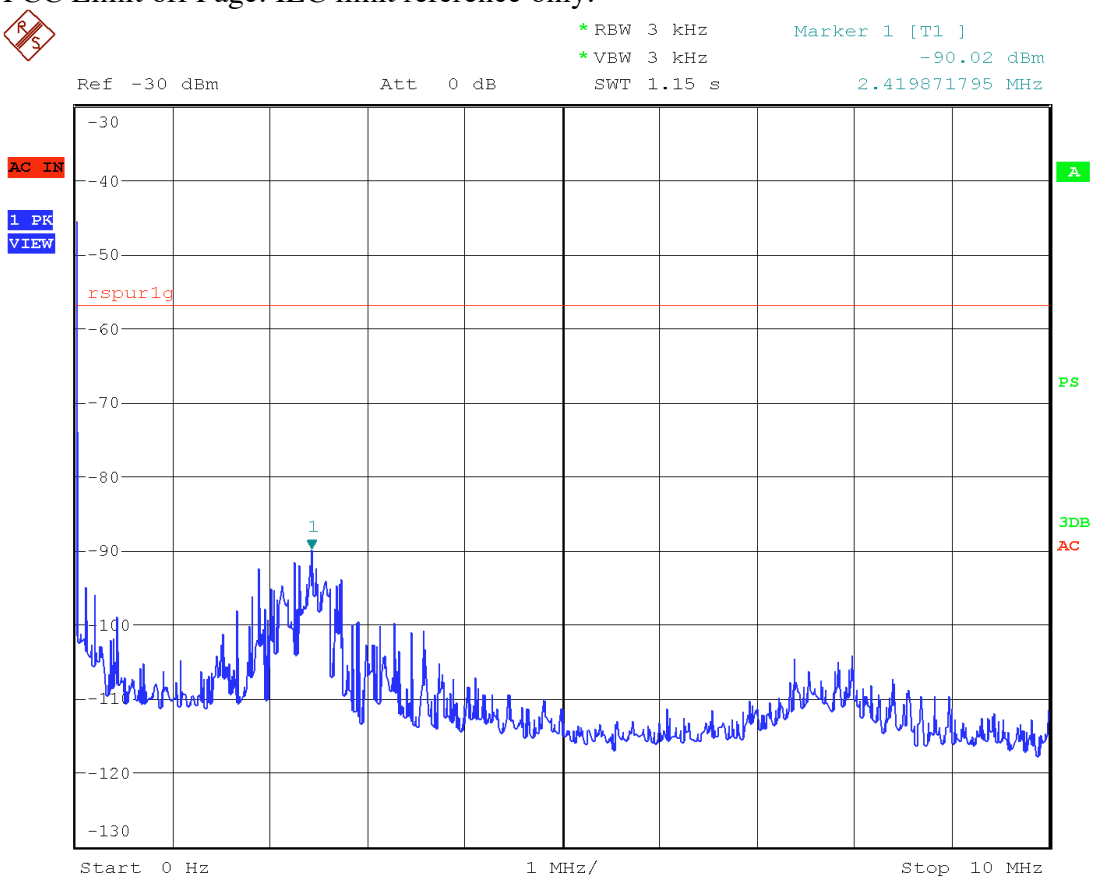


X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 1.

Specification: <30 MHz: -4 dBm

FCC Limit off Page: IEC limit reference only.



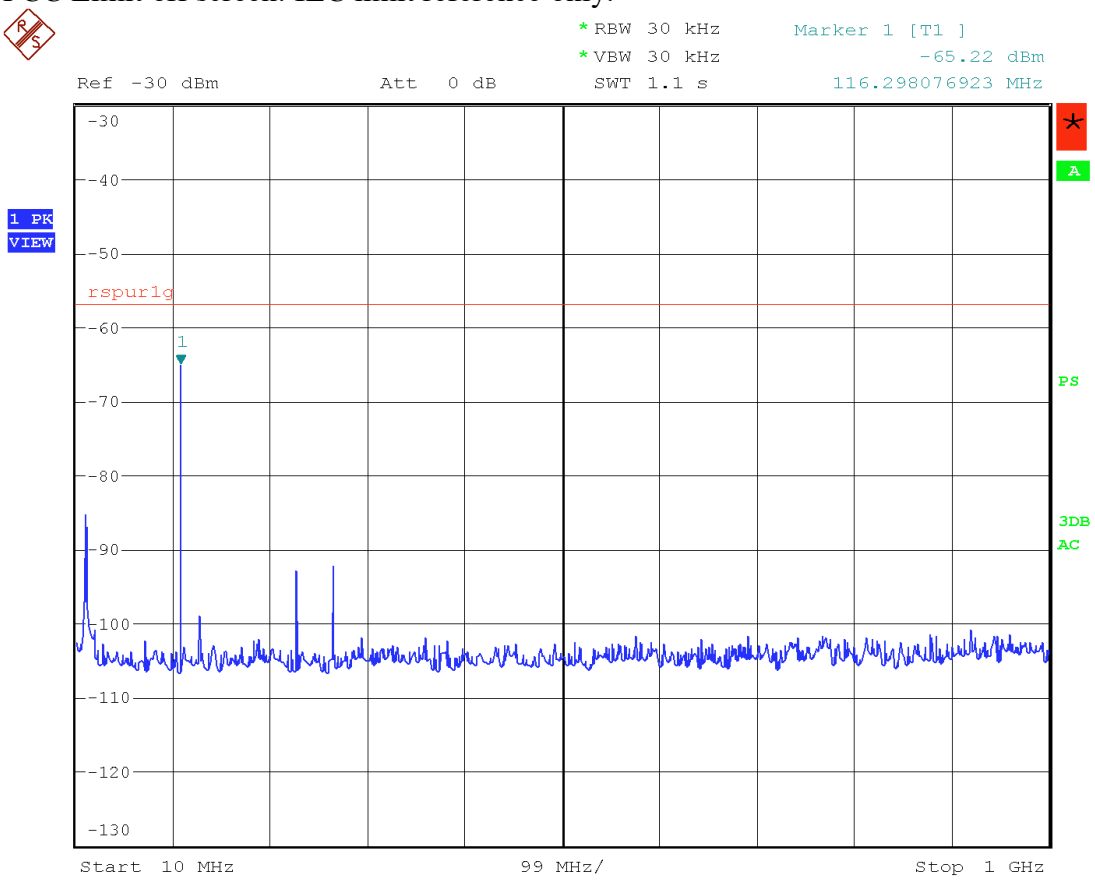
Date: 14.MAR.2008 19:13:35

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 1.

Specification: <30 MHz: -4 dBm
30 – 100 MHz: 6 dBm
100 – 300 MHz: 16 dBm
>300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



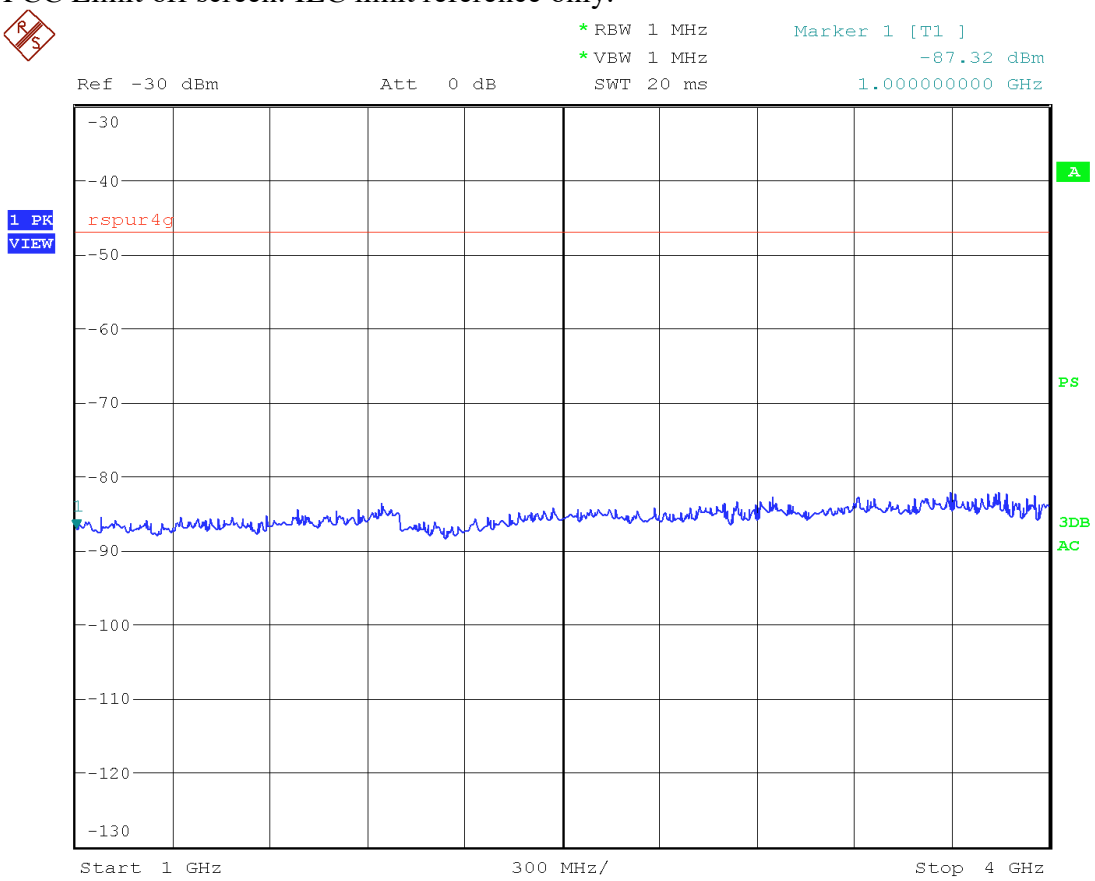
Date: 14.MAR.2008 19:14:45

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 1.

Specification: >300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



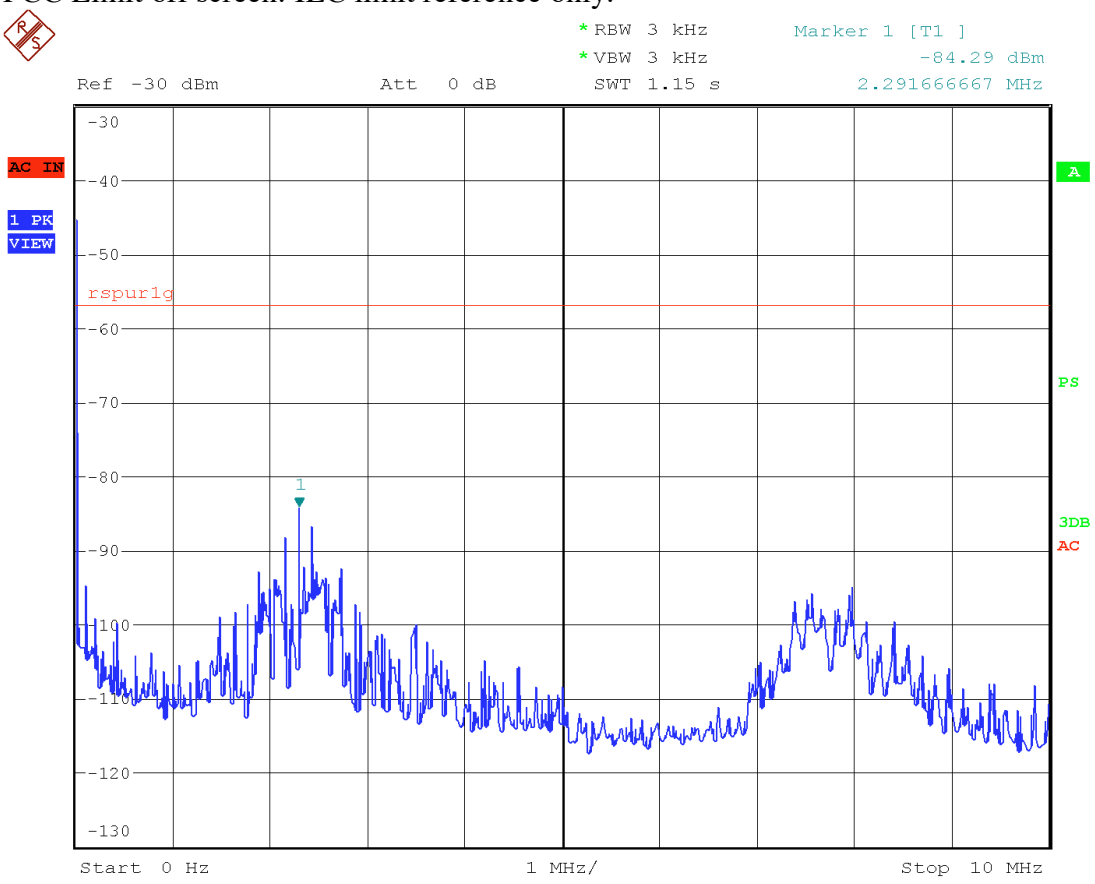
Date: 14.MAR.2008 19:15:41

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 2.

Specification: <30 MHz: -4 dBm

FCC Limit off screen: IEC limit reference only.



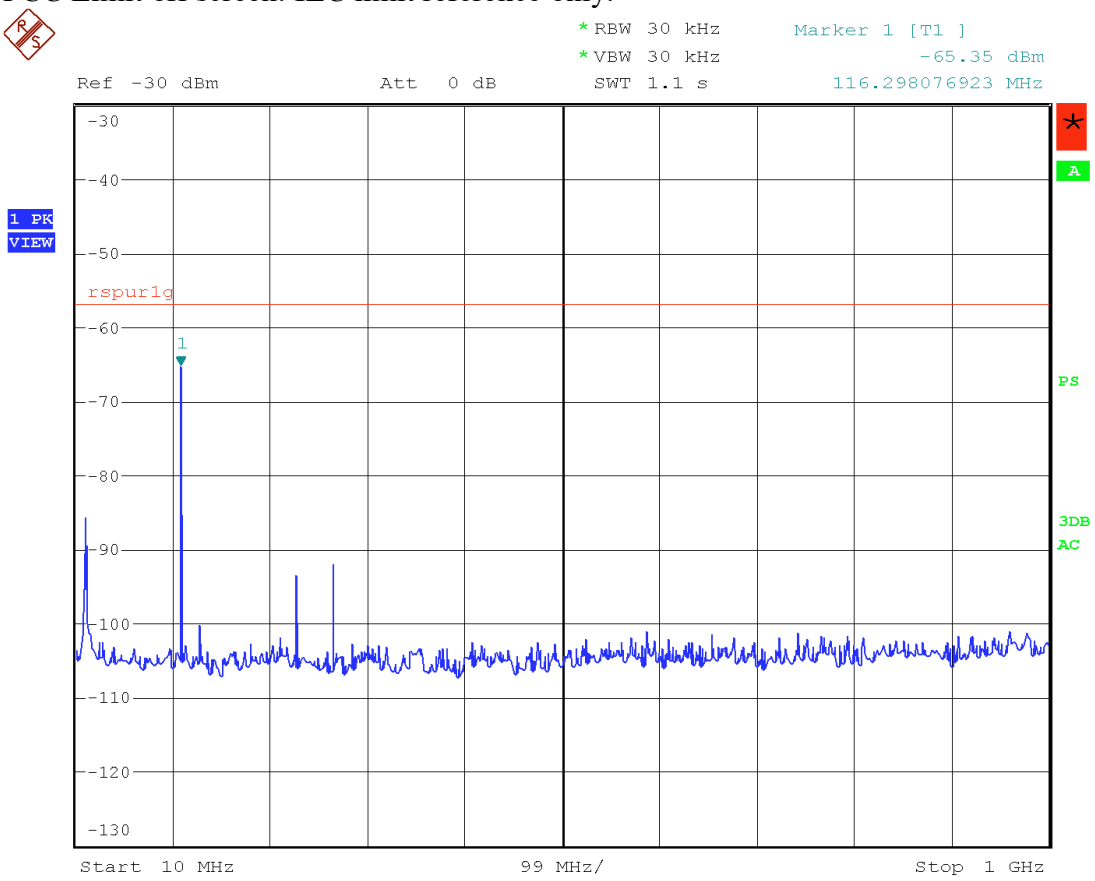
Date: 14.MAR.2008 19:18:03

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 2.

Specification: <30 MHz: -4 dBm
30 – 100 MHz: 6 dBm
100 – 300 MHz: 16 dBm
>300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



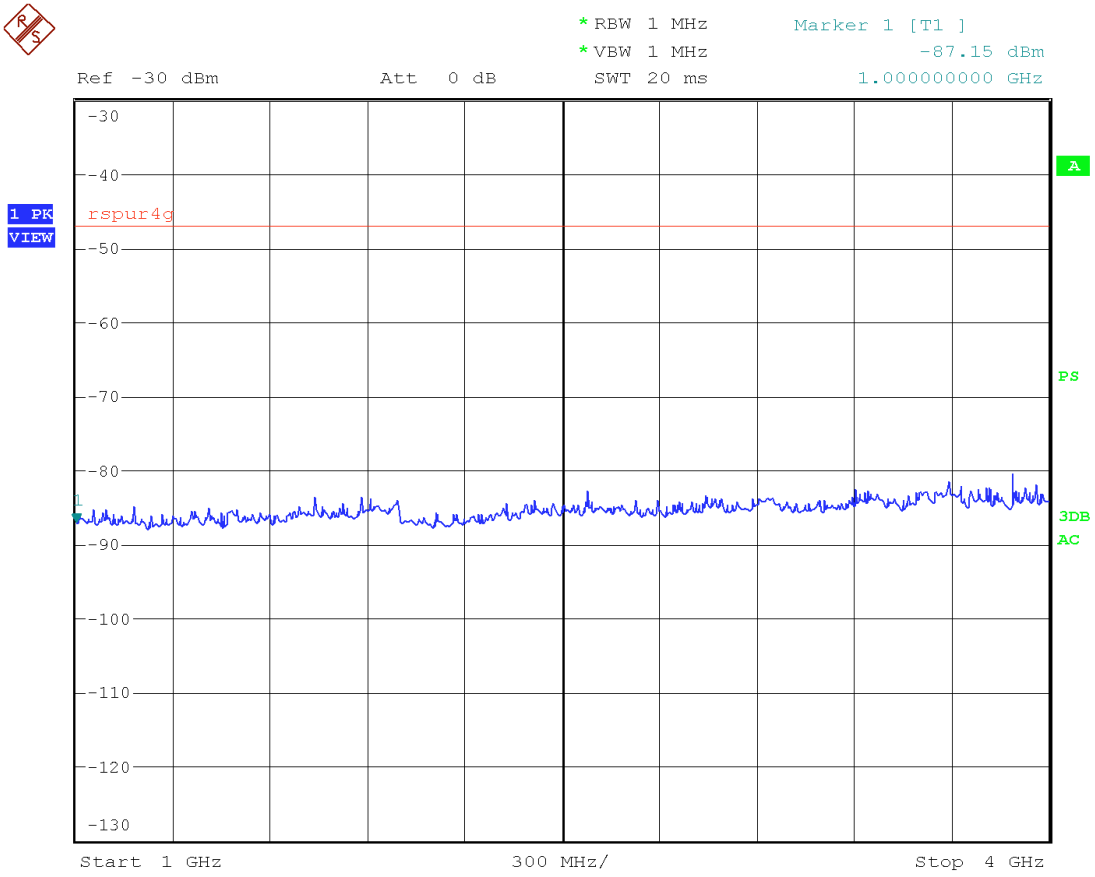
Date: 14.MAR.2008 19:17:22

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious - Receiver 2.

Specification: >300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



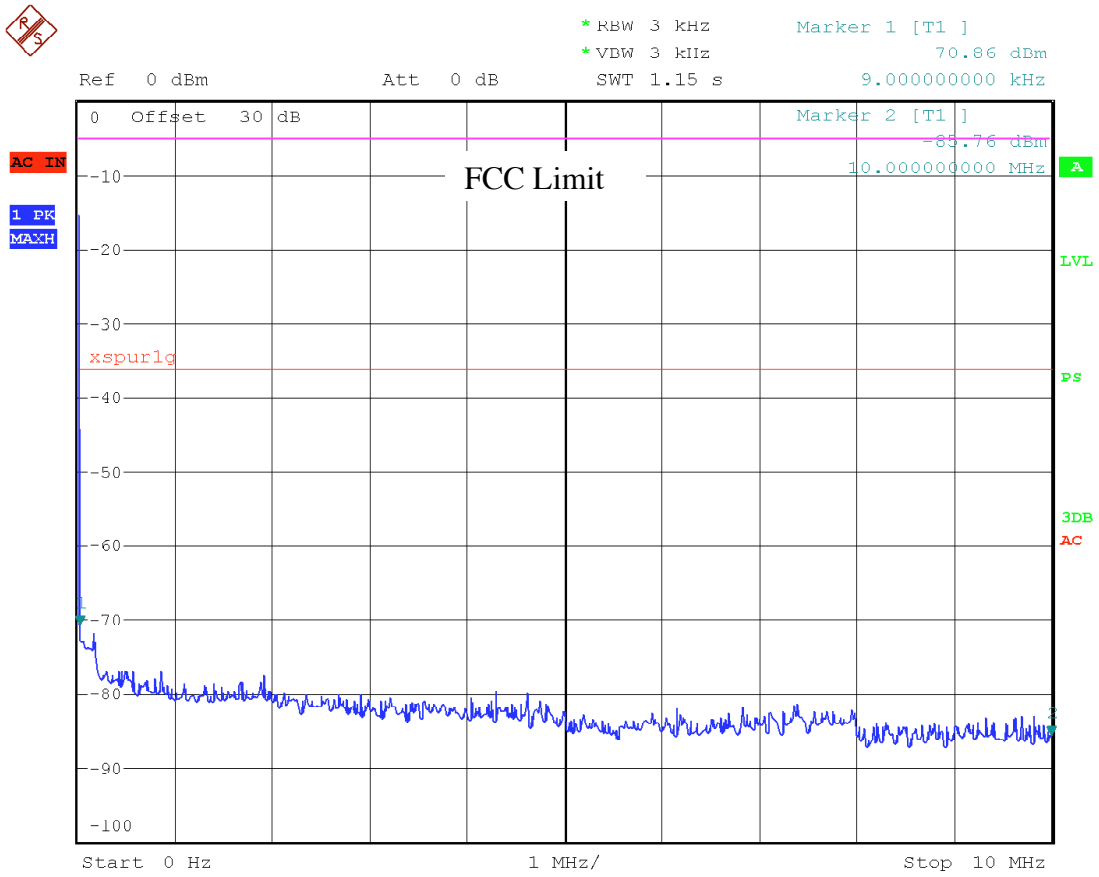
Date: 14.MAR.2008 19:16:33

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious Transmitter.

Specification: <30 MHz: -4 dBm

IEC limit reference only.



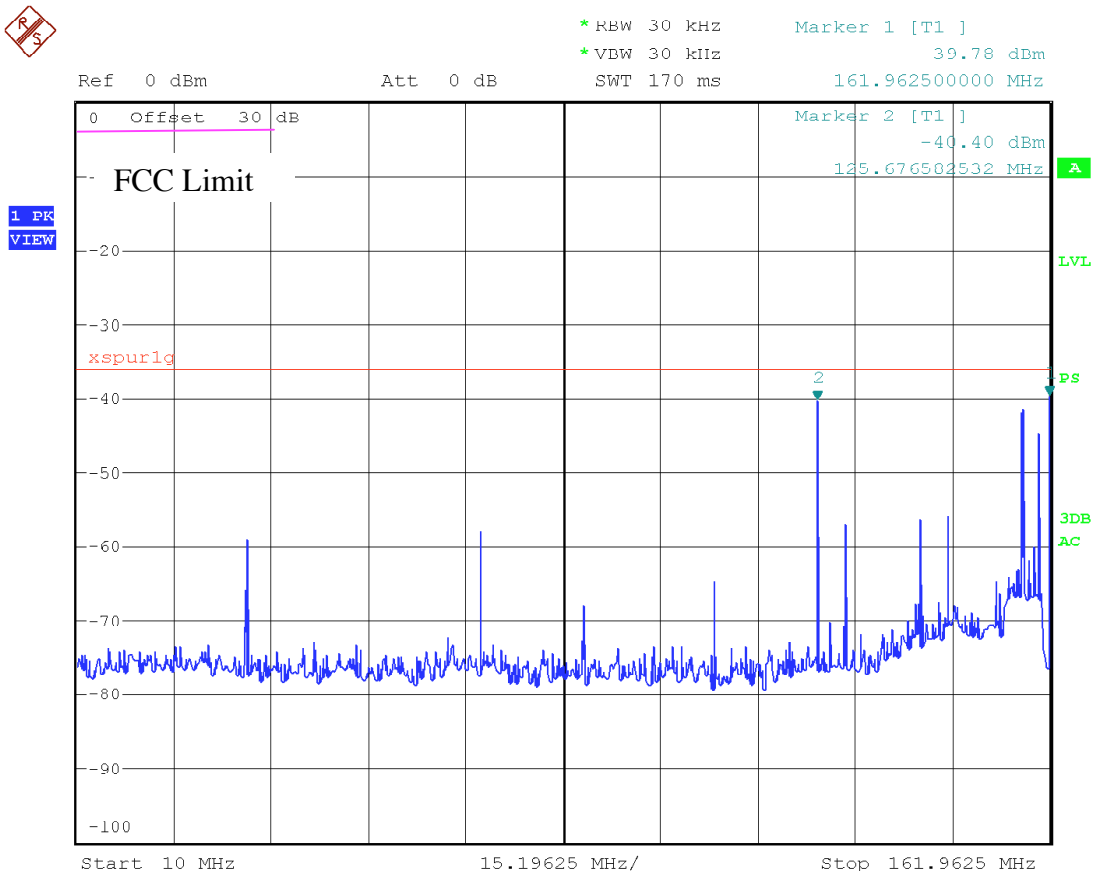
Date: 14.MAR.2008 18:38:41

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious Transmitter.

Specification: <30 MHz: -4 dBm
30 – 100 MHz: 6 dBm
100 – 300 MHz: 16 dBm

Portions of FCC Limit off screen: IEC limit reference only.



Date: 14.MAR.2008 18:37:07

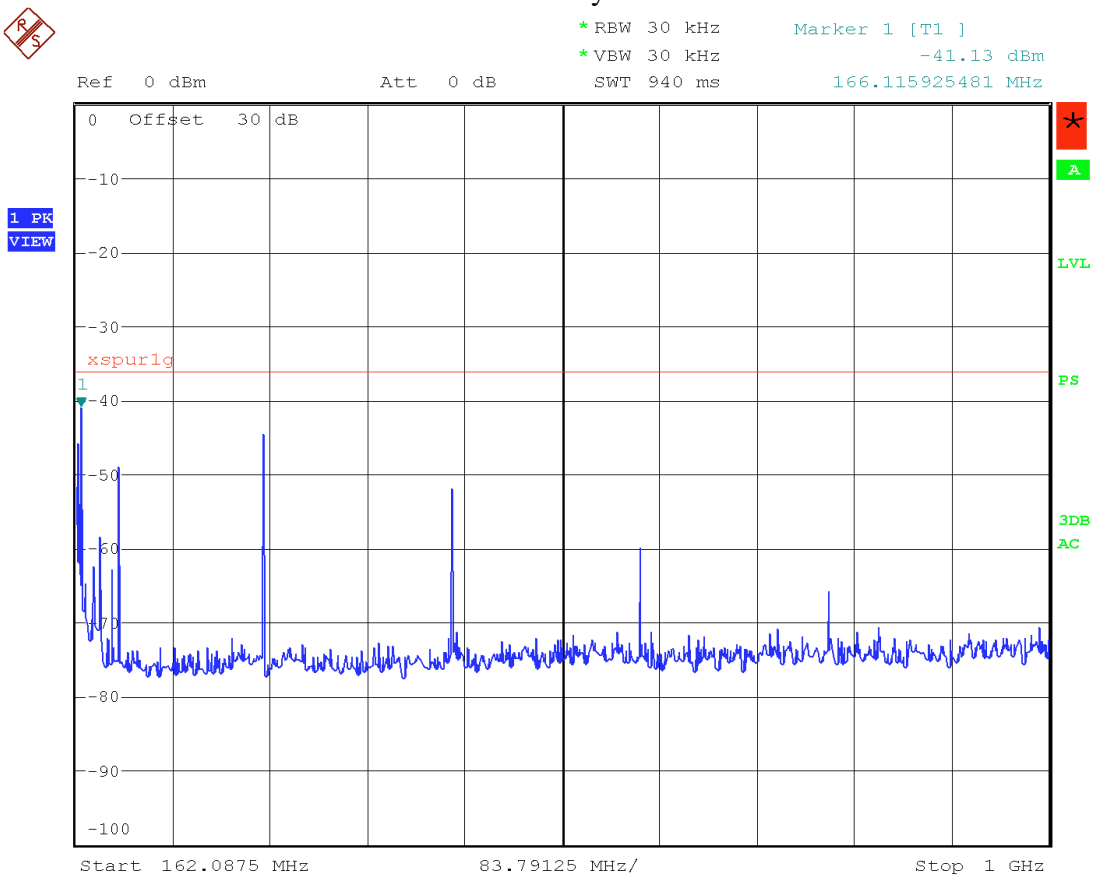
X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious Transmitter.

Specification: 100 – 300 MHz: 16 dBm

>300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



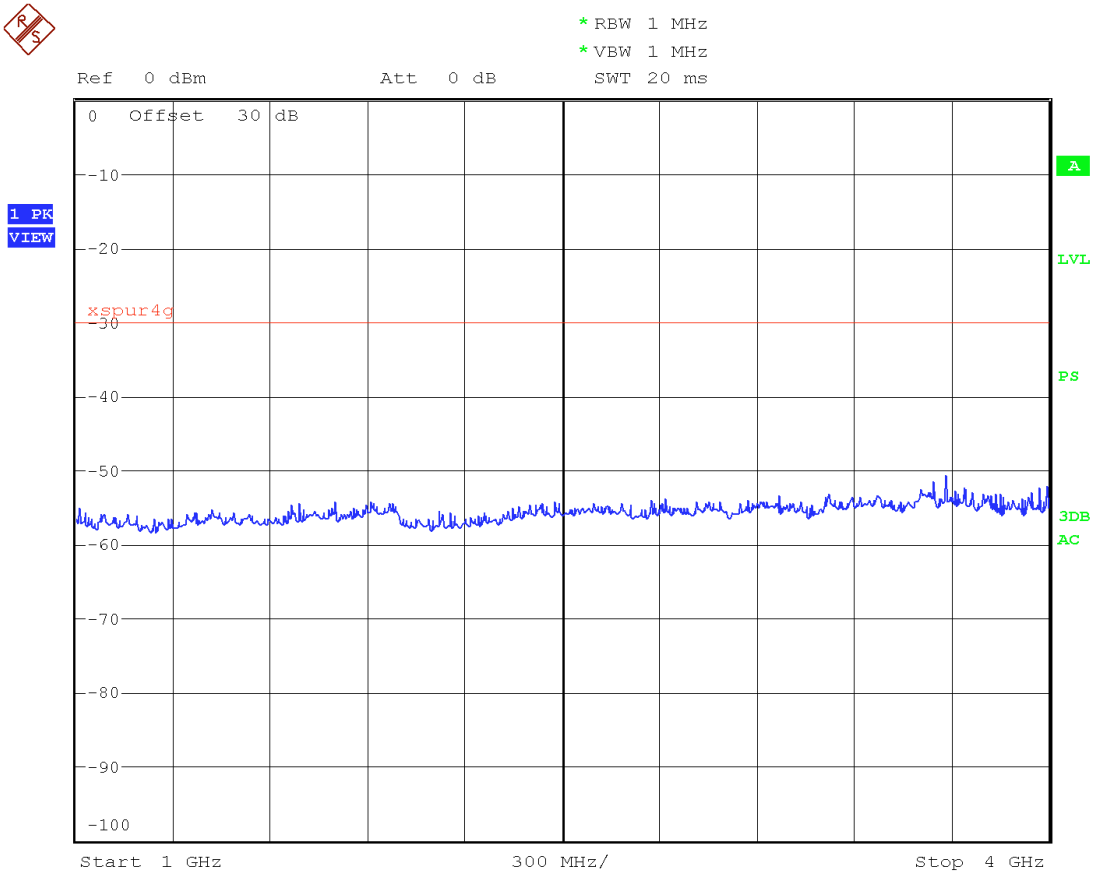
Date: 14.MAR.2008 18:35:25

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

5. Conducted Spurious Transmitter.

Specification: >300 MHz: 26 dBm

FCC Limit off screen: IEC limit reference only.



Date: 14.MAR.2008 18:30:54

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

6. Radiated Emissions.

The table below contains the spectrum analyzer output and the correction factors necessary to apply the limit to the data.
Field (dBuV/m) = Vmeas (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) - Amp Gain (dB).
Deviation (dB) = Field (dBuV/m) - Limit (dBuV/m); Negative deviation is compliant.

Freq MHz	Pol H/V	RBW kHz	VBW kHz	Vmeas dBuV	AF dB1/m	Amp dB	Cable dB	Field dBuV/m	Duty dB	Limit dBuV/m	Dev dB
1	H	9	9	32	24.2	22	1	35.2	0	49.5	-14.3
1	V	9	9	31	24.2	22	1	34.2	0	49.5	-15.3
10	H	9	9	31	20.1	22	1	30.1	0	49.5	-19.4
10	V	9	9	32	20.1	22	1	31.1	0	49.5	-18.4
30	H	120	300	40	18.6	22	1	37.6	0	40	-2.4
30	V	120	300	39	18.6	22	1	36.6	0	40	-3.4
40	H	120	300	37	18.3	22	1	34.3	0	40	-5.7
40	V	120	300	36	18.3	22	1	33.3	0	40	-6.7
50	H	120	300	39	15.1	22	2	34.1	0	40	-5.9
50	V	120	300	40	15.1	22	2	35.1	0	40	-4.9
60	H	120	300	42	11.1	22	2	33.1	0	40	-6.9
60	V	120	300	43	11.1	22	2	34.1	0	40	-5.9
70	H	120	300	43	8.1	22	2	31.1	0	40	-8.9
70	V	120	300	47	8.1	22	2	35.1	0	40	-4.9
80	H	120	300	46	9.8	22	2	35.8	0	40	-4.2
80	V	120	300	44	9.8	22	2	33.8	0	40	-6.2
90	H	120	300	45	10.9	22	2	35.9	0	43.5	-7.6
90	V	120	300	41	10.9	22	2	31.9	0	43.5	-11.6

Corrected Radiated Emissions Data and FCC Limit

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

6. Radiated Emissions Cont'd.

The table below contains the spectrum analyzer output and the correction factors necessary to apply the limit to the data.

Freq MHz	Pol H/V	RBW kHz	VBW kHz	Vmeas dBuV	AF dB1/m	Amp dB	Cable dB	Field dBuV/m	Duty dB	Limit dBuV/m	Dev dB
100	H	120	300	43.5	12.2	22	3	36.7	0	43.5	-6.8
100	V	120	300	43	12.2	22	3	36.2	0	43.5	-7.3
125	H	120	300	43.5	12.9	22	3	37.4	0	43.5	-6.1
125	V	120	300	42	12.9	22	3	35.9	0	43.5	-7.6
150	H	120	300	43.5	11.1	22	4	36.6	0	43.5	-6.9
150	V	120	300	43	11.1	22	4	36.1	0	43.5	-7.4
175	H	120	300	44	10.9	22	4	36.9	0	43.5	-6.6
175	V	120	300	45	10.9	22	4	37.9	0	43.5	-5.6
200	H	120	300	46	11.3	22	4	39.3	0	43.5	-4.2
200	V	120	300	43	11.3	22	4	36.3	0	43.5	-7.2
250	H	120	300	38	13.4	22	4	33.4	0	46	-12.6
250	V	120	300	39	13.4	22	4	34.4	0	46	-11.6
300	H	120	300	41	14.9	21	4	38.9	0	46	-7.1
300	H	120	300	41	14.9	21	4	38.9	0	46	-7.1
400	H	120	300	42	16.1	21	4	41.1	0	46	-4.9
400	V	120	300	41	16.1	21	4	40.1	0	46	-5.9
500	H	120	300	42	18.6	21	4	43.6	0	46	-2.4
500	V	120	300	43	18.6	21	4	44.6	0	46	-1.4
600	H	120	300	40	19.7	21	4	42.7	0	46	-3.3
600	V	120	300	41	19.7	21	4	43.7	0	46	-2.3
700	H	120	300	39	20.2	21	4	42.2	0	46	-3.8
700	V	120	300	38	20.2	21	4	41.2	0	46	-4.8

Corrected Radiated Emissions Data and FCC Limit

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

6. Radiated Emissions Cont'd.

The table below contains the spectrum analyzer output and the correction factors necessary to apply the limit to the data.

Freq MHz	Pol H/V	RBW kHz	VBW kHz	Vmeas dBuV	AF dB1/m	Amp dB	Cable dB	Field dBuV/m	Duty dB	Limit dBuV/m	Dev dB
800	H	120	300	38	21.5	21	6	44.5	0	46	-1.5
800	V	120	300	37	21.5	21	6	43.5	0	46	-2.5
900	H	120	300	37	21.5	21	6	44.5	0	46	-2.5
900	V	120	300	36	21.5	21	6	45.5	0	46	-3.5
959	H	120	300	35	22.4	21	7	43.4	0	46	-2.6
959	V	120	300	34	22.4	21	7	42.4	0	46	-3.6
960	H	120	300	33	22.4	21	7	41.4	0	46	-4.6
960	V	120	300	35	22.4	21	7	43.4	0	46	-2.6
1000	H	1000	1000	38	24.2	21	8	49.2	0	54	-4.8
1000	V	1000	1000	39	24.2	21	8	50.2	0	54	-3.8
1200	H	1000	1000	39	24.8	20	9	52.8	0	54	-1.2
1200	V	1000	1000	38	24.8	20	9	51.8	0	54	-2.2
1630	H	1000	1000	37	26.1	20	9	52.1	0	54	-1.9
1630	V	1000	1000	38	26.1	20	9	53.1	0	54	-0.9

Corrected Radiated Emissions Data and FCC Limit

X. Measurement Results for ATN01-311-03 FCC Tests Cont'd:

7. Exposure Evaluation.

The table below compares the measured fields to the occupational exposure limit. The unit produces no significant electric or magnetic fields that would create an exposure hazard. Above 300 MHz the power density in mW/cm^2 is related to the electric field in V/m by: $S = E^2/3770$.

Freq MHz	H-field A/m	Limit A/m	Dev A/m	E-Field V/m	Limit V/m	Dev V/m	Power (S) mW/cm^2	Limit mW/cm^2	Dev mW/cm^2
0.3	< 0.1	1.63	-1.53	< 0.1	614	-613.9			
0.5	0.1	1.63	-1.53	0.1	614	-613.9			
1	0.1	1.63	-1.53	0.1	614	-613.9			
3	0.1	1.63	-1.53	0.1	614	-613.9			
5	0.1	0.98	-0.88	0.1	368	-367.9			
10	0.1	0.49	-0.39	0.1	184	-183.9			
30	< 0.01	0.163	-0.153	0.1	61.4	-61.3			
50	0.01	0.163	-0.153	0.1	61.4	-61.3			
100	0.01	0.163	-0.153	0.1	61.4	-61.3			
156	0.01	0.163	-0.153	< 1	61.4	-60.4			
163	0.01	0.163	-0.153	< 1	61.4	-60.4			
300	0.01	0.163	-0.153	0.1	61.4	-61.3			
500							< 0.1	1.7	-1.6
600							0.1	2.0	-1.9
800							0.1	2.7	-2.6
1000							0.1	3.3	-3.2
1200							0.1	4.0	-3.9
1500							0.1	5.0	-4.9
1630							0.1	5.4	-5.3

Exposure Evaluation Results