

Figure 29. Conducted Spurious: Channel B Plan 2 1GHz – 2.9GHz

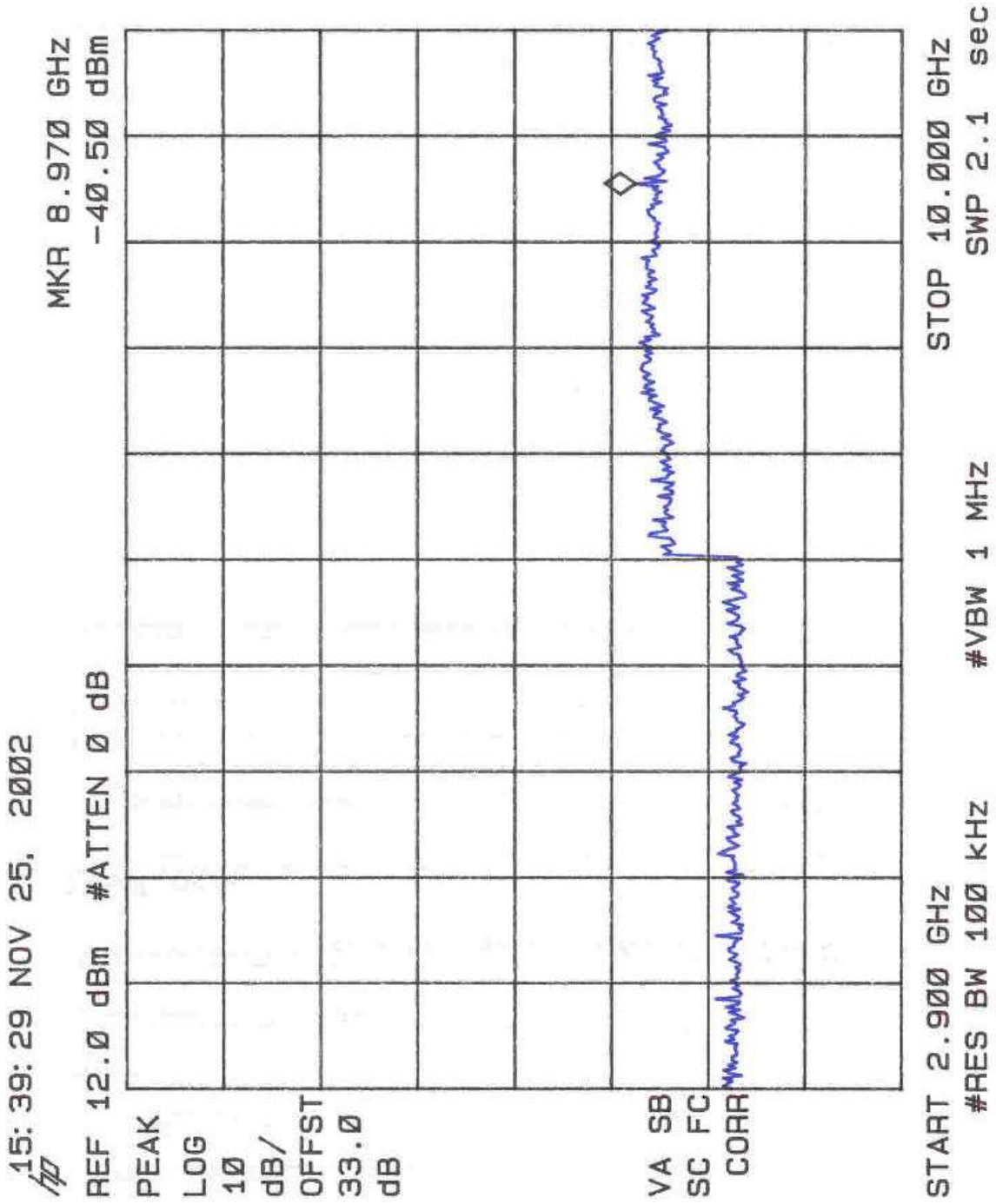


Figure 30. Conducted Spurious: Channel B Plan 2 2.9GHz – 10GHz

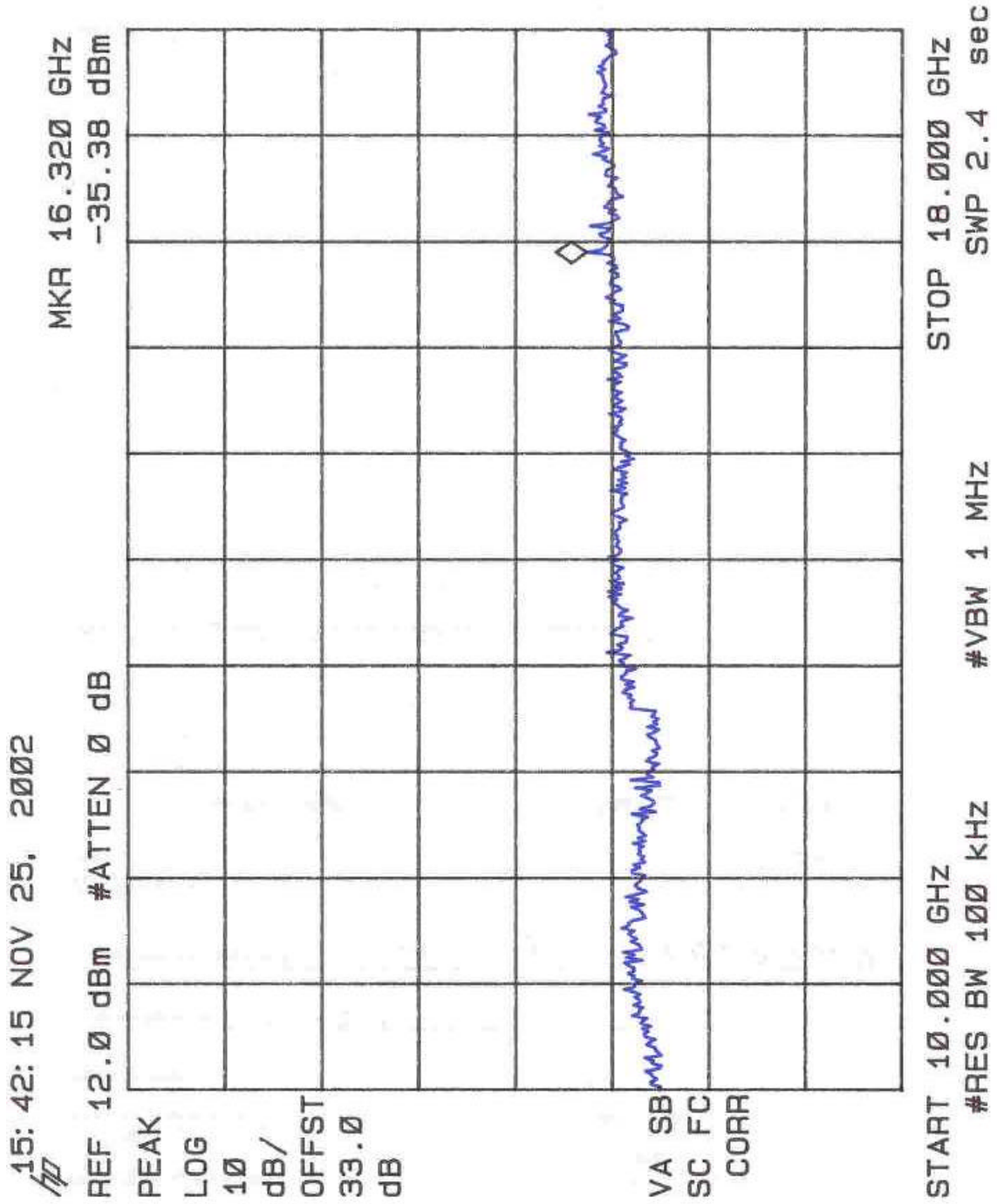


Figure 31. Conducted Spurious: Channel B Plan 2 10GHz – 18GHz

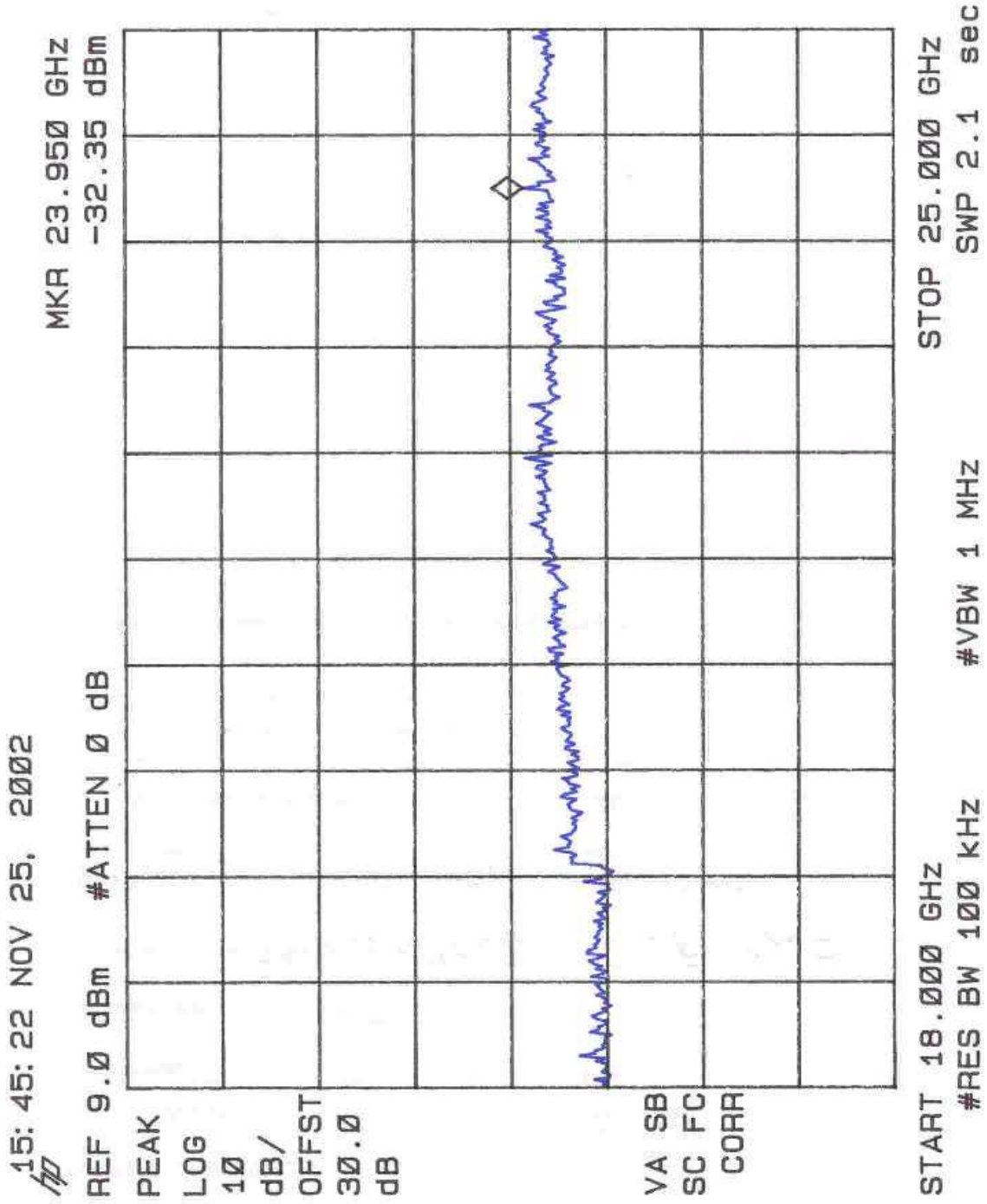


Figure 32. Conducted Spurious: Channel B Plan 2 18GHz – 25GHz

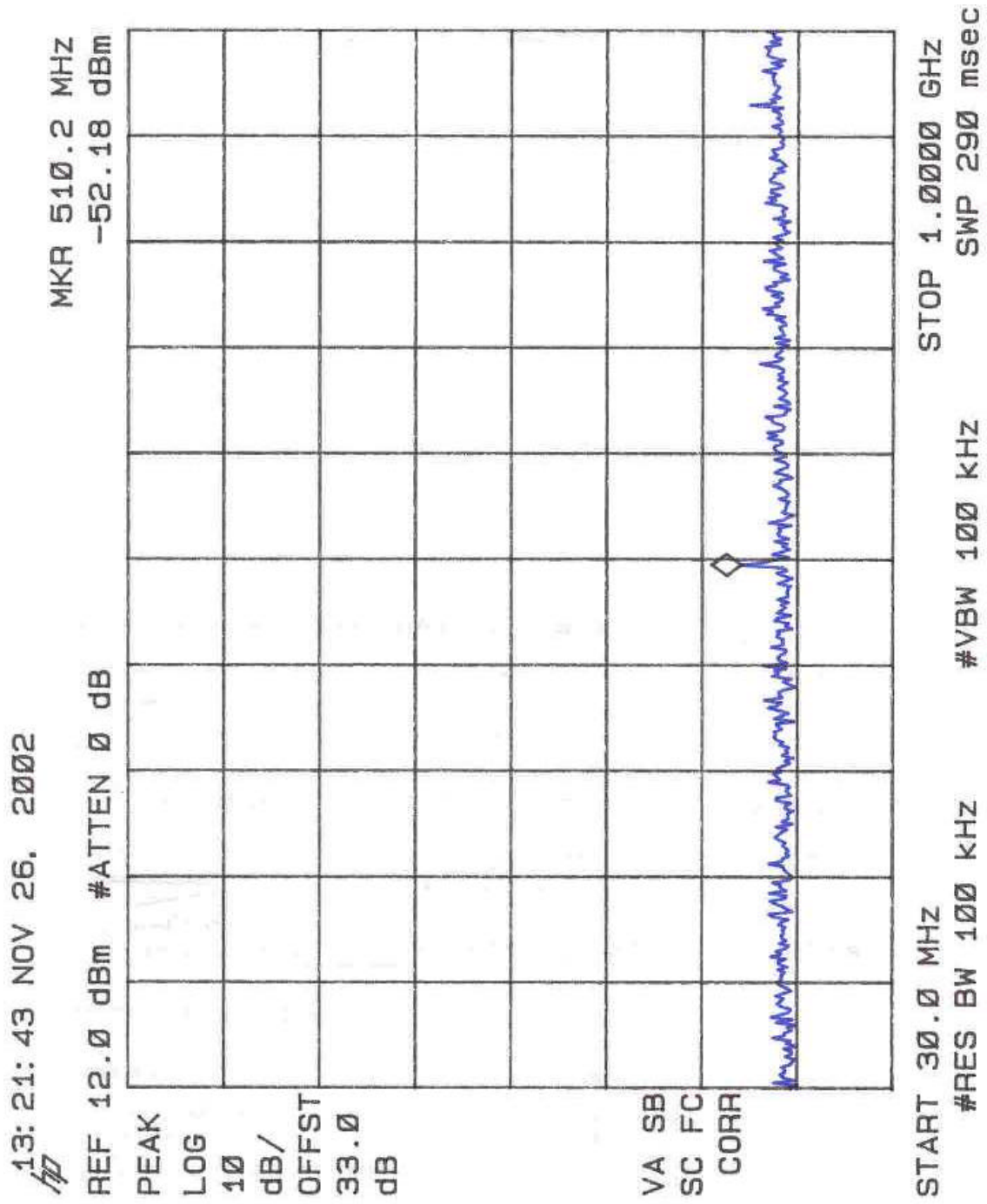


Figure 33. Conducted Spurious: Channel B Plan 3 30MHz – 1GHz

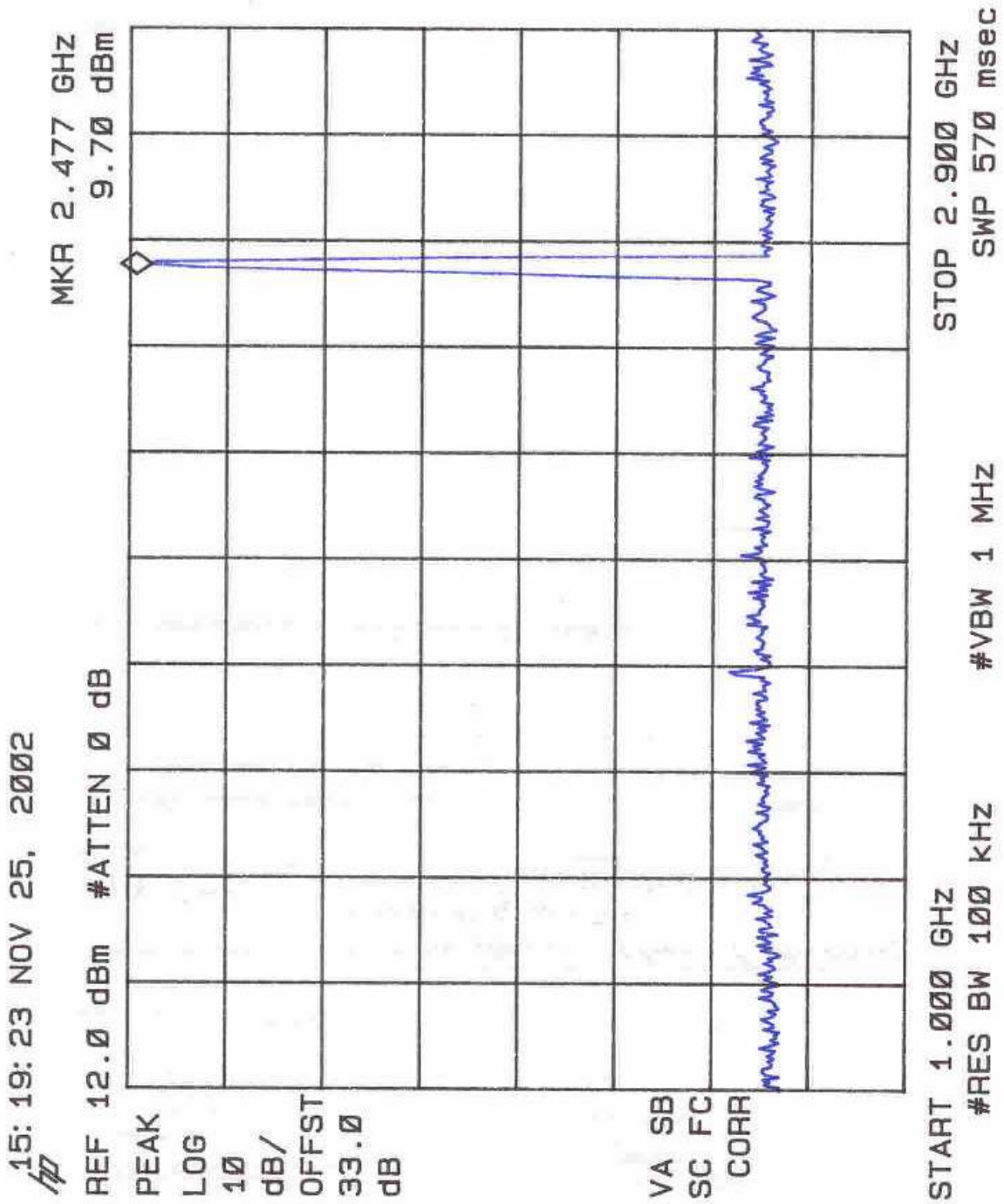


Figure 34. Conducted Spurious: Channel B Plan 3 1GHz – 2.9GHz

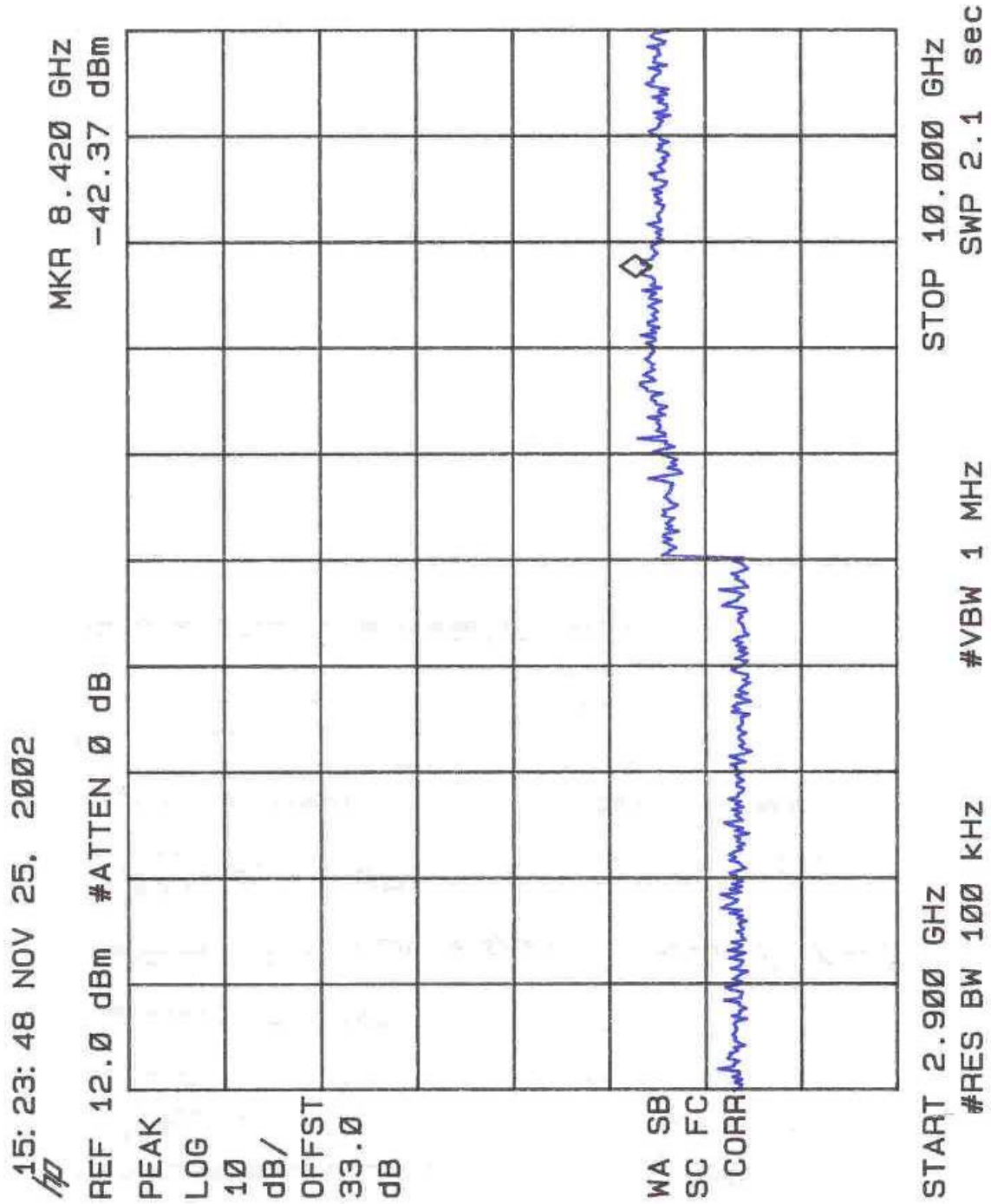


Figure 35. Conducted Spurious: Channel B Plan 3 2.9GHz – 10GHz

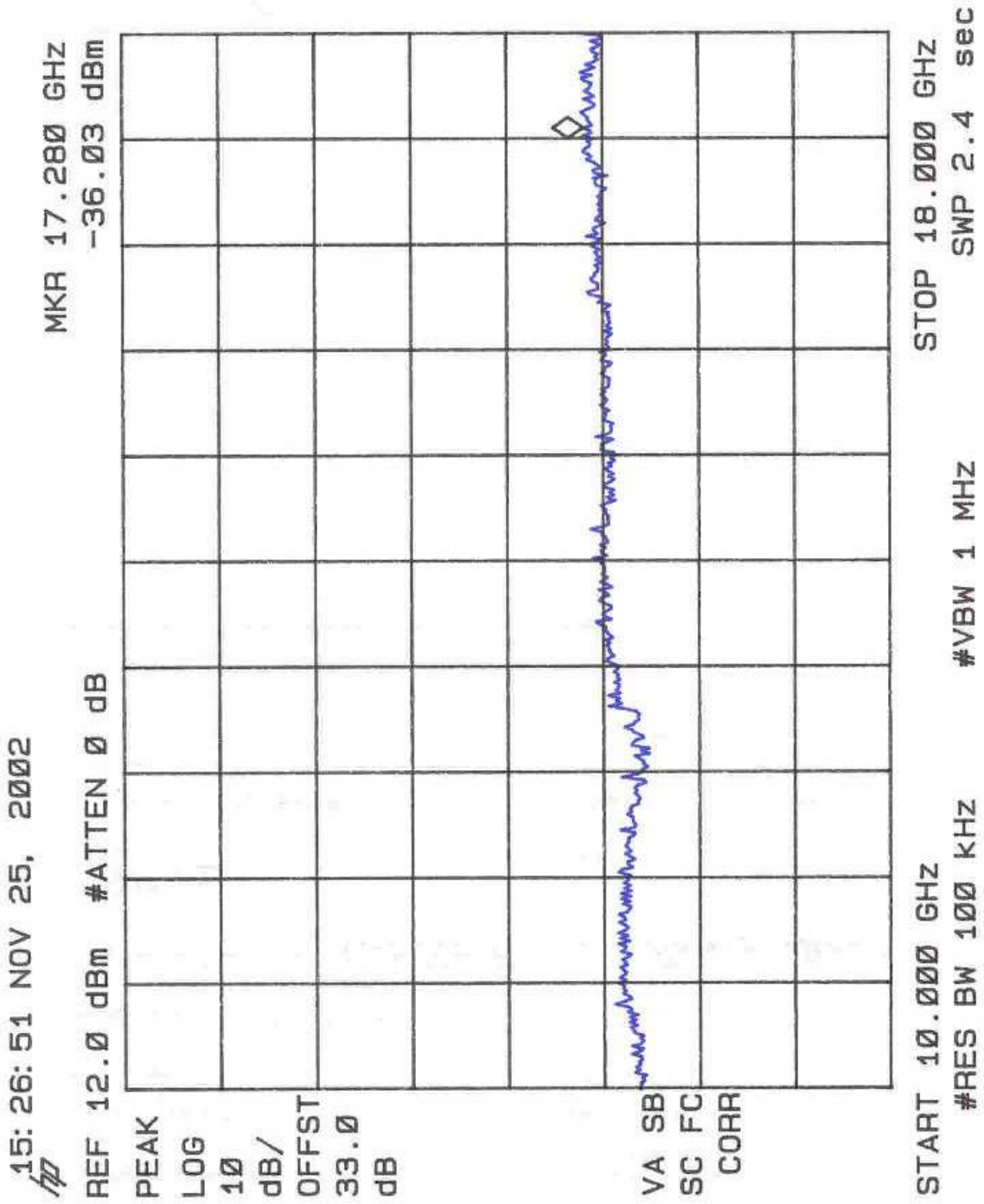


Figure 36. Conducted Spurious: Channel B Plan 3 10GHz – 18GHz

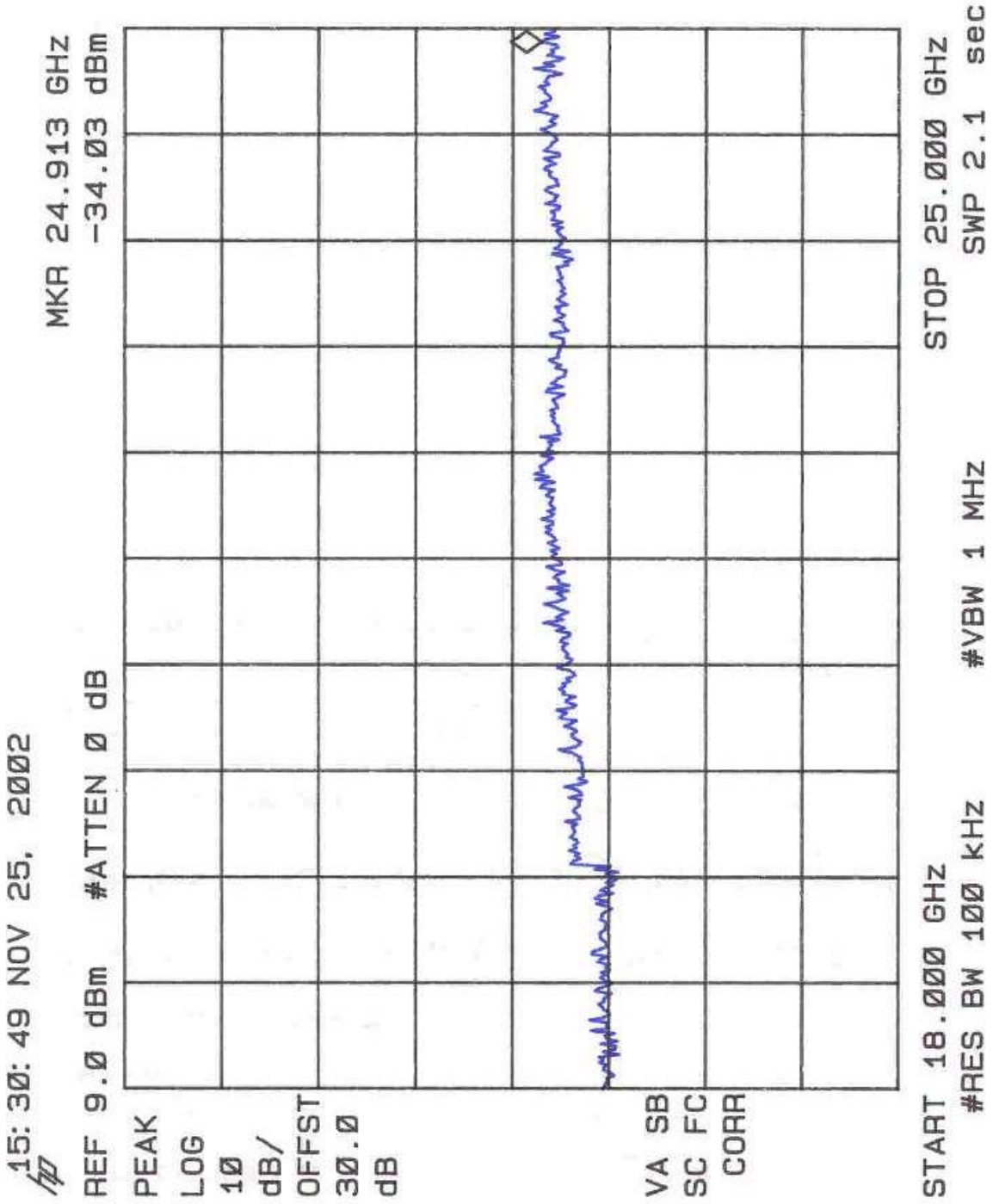


Figure 37. Conducted Spurious: Channel B Plan 3 18GHz – 25GHz

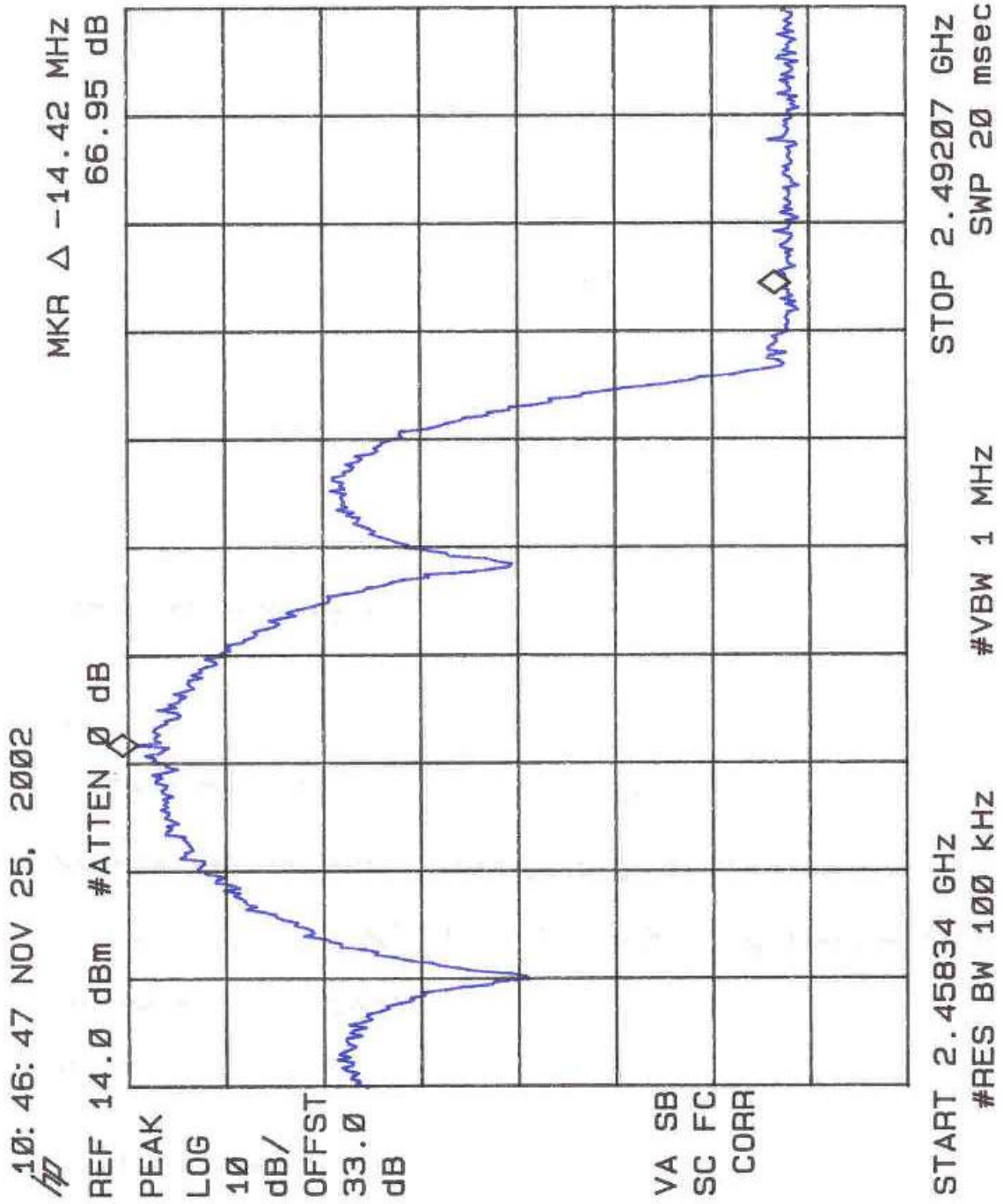


Figure 38. Conducted Spurious Emissions - Band Edge Plot – Channel B Plan 3

4.5 Radiated Spurious Emissions: (FCC Part §15.247(c))

Radiated emissions that fall in the restricted bands must comply with the general emissions limits in 15.209(a).

The emissions were measured using the following resolution bandwidths:

Frequency Range	Resolution Bandwidth	Video Bandwidth
30MHz-1000 MHz	120kHz	>30 kHz
>1000 MHz	1 MHz	<30 Hz

Harmonic and Spurious emissions that were identified as coming from the EUT were checked in Peak and in Average Mode. It was verified that the peak-to-average ratio did not exceed 20dB.

Peak measurements and average measurements are made. All emissions were determined to have a peak-to-average ratio of less than 20 dB.

4.5.1 Test Procedure

The EUT was placed on motorized turntable for radiated testing on a 3-meter open field test site. The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. Receiving antennas were mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna was varied between 1 and 4 meters. The peripherals were placed on the table in accordance with ANSI C63.4-1992. Cables were varied in position to produce maximum emissions. Both the horizontal and vertical field components were measured.

The EUT was tested in the following configurations and modes:

Antenna	Channel
Dish	A (3 bands) & B (3 bands)

Emissions were scanned up to 40GHz.

The following is a sample calculation used in the data tables for calculating the final field strength of spurious emissions and comparing these levels to the specified limits.

Sample Calculation:

Spectrum Analyzer Voltage (SA Level): V dBμV

Antenna Factor (Ant Corr): AFdB/m

Cable Loss Correction (Cable Corr): CCdB

Amplifier Gain: GdB

Electric Field (Corr Level): $Ed_{\mu V/m} = V_{dB\mu V} + AF_{dB/m} + CC_{dB} - G_{dB}$

To convert to linear units: $E_{\mu V/m} = \text{antilog}(Ed_{\mu V/m}/20)$

Table 6: Radiated Emission Test Data-Dish Antenna—Channel A – Plan 1

CLIENT: Adtran DATE: 11/26/02
 TESTER: James Ritter JOB #: 7327
EUT Information: EUT: Tracer 4106
 CONFIGURATION: Transmit at 2416 MHz
 CLOCKS: 1.544MHz, 12 MHz, 51.536 MHz,280 MHz

Test Requirements:
 TEST STANDARD: FCC Part 15
 DISTANCE: 3m
 CLASS: B

Test Equipment/Limit:

ANTENNA: A_00007 LIMIT: LFCC_3m_Class_B
 CABLE: CSITE2_3m AMPLIFIER (dB) None

HF done on Site 1 antenna asset 425 analyzer HP8593 Asset # 00074 and amplifier 00066

*Note: Below 1Ghz Antenna A00007 was used with no amplifier

From1-18 GHz antenna asset A00004 used with amp asset 0066

From18-26 GHz antenna asset 00210 used with 00066 amp and Spectrum analyzer HP8564E Asset # 00067

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
Quasi-Peak											
73.73	H	90.0	4.0	11.6	6.6	2.0	0.0	20.2	10.2	100.0	-19.8
115.90	H	0.0	4.0	18.4	10.8	2.4	0.0	31.5	37.8	150.0	-12.0
117.97	H	30.0	3.8	18.8	11.0	2.4	0.0	32.2	40.8	150.0	-11.3
120.30	H	10.0	4.0	17.2	11.2	2.5	0.0	30.9	34.9	150.0	-12.7
257.68	H	0.0	2.0	16.8	12.4	3.5	0.0	32.7	43.3	200.0	-13.3
610.09	H	125.0	3.0	8.4	18.1	5.9	0.0	32.4	41.8	200.0	-13.6b
979.20	H	180.0	2.3	9.3	22.7	7.8	0.0	39.8	98.1	500.0	-14.1
HF Peak											
1031.23	H	280.0	1.0	54.9	24.7	2.2	36.4	45.4	185.4	5000.0	-28.6
1721.18	H	290.0	1.0	59.1	27.6	2.4	35.7	53.4	466.6	5000.0	-20.6
2315.90	H	180.0	1.0	51.0	29.2	2.9	35.6	47.5	236.9	5000.0	-26.5
4272.20	H	190.0	1.0	48.2	31.9	3.9	35.6	48.4	262.9	5000.0	-25.6
4632.30	H	190.0	1.0	49.8	32.8	4.0	35.8	50.8	346.8	5000.0	-23.2
4832.00	H	0.0	1.0	42.6	33.3	4.1	35.9	44.0	158.9	5000.0	-30.0a
12080.00	H	0.0	1.0	43.5	41.2	6.6	35.7	55.6	601.1	5000.0	-18.4a
14496.00	H	0.0	1.0	46.0	39.8	7.5	34.8	58.5	837.9	5000.0	-15.5a
19328.00	H	0.0	1.0	40.3	39.9	2.4	35.4	47.3	230.5	5000.0	-26.7a
24000.00	H	0.0	1.0	45.8	40.5	2.5	34.2	54.6	539.5	5000.0	-19.3a
Avg											
1031.23	H	290.0	1.0	34.6	24.7	2.2	36.4	25.0	17.8	500.0	-28.9
1721.18	H	290.0	1.0	41.3	27.6	2.4	35.7	35.6	60.5	500.0	-18.4
2315.90	H	180.0	1.0	44.6	29.2	2.9	35.6	41.1	113.4	500.0	-12.9
4272.20	H	190.0	1.0	42.2	31.9	3.9	35.6	42.4	131.8	500.0	-11.6
4632.30	H	190.0	1.0	46.0	32.8	4.0	35.8	47.0	224.4	500.0	-7.0
4832.00	H	0.0	1.0	31.5	33.3	4.1	35.9	32.9	44.3	500.0	-21.1
12080.00	H	0.0	1.0	33.9	41.2	6.6	35.7	46.0	199.0	500.0	-8.0a
14496.00	H	0.0	1.0	34.4	39.8	7.5	34.8	46.9	220.4	500.0	-7.1a

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
19328.00	H	0.0	1.0	28.8	39.9	2.4	35.4	35.8	61.3	500.0	-18.2a
24000.00	H	0.0	1.0	35.0	40.5	2.5	34.2	43.8	155.6	500.0	-10.1a
Quasi Peak											
73.73	V	270.0	1.0	8.1	6.6	2.0	0.0	16.7	6.9	100.0	-23.3
115.90	V	270.0	1.5	10.5	10.8	2.4	0.0	23.6	15.2	150.0	-19.9
117.97	V	185.0	1.3	11.0	11.0	2.4	0.0	24.4	16.6	150.0	-19.1
120.30	V	180.0	1.3	6.7	11.2	2.5	0.0	20.4	10.4	150.0	-23.2
257.68	V	180.0	2.4	16.3	12.4	3.5	0.0	32.2	40.9	200.0	-13.8
610.09	V	245.0	2.0	7.3	18.1	5.9	0.0	31.3	36.8	200.0	-14.7b
979.20	V	165.0	2.0	14.2	22.7	7.8	0.0	44.7	172.4	500.0	-9.2
HF Peak											
1041.70	V	0.0	1.0	67.0	24.7	2.2	36.4	57.5	753.2	5000.0	-16.4
1721.18	V	0.0	1.0	70.5	27.6	2.4	35.7	64.8	1743.5	5000.0	-9.2
2315.90	V	350.0	1.0	53.8	29.2	2.9	35.6	50.3	326.6	5000.0	-23.7
3267.00	V	0.0	1.0	51.7	30.6	3.5	35.6	50.2	323.9	5000.0	-23.8
4272.20	V	190.0	1.0	50.5	31.9	3.9	35.6	50.7	343.5	5000.0	-23.3
4632.30	V	180.0	1.0	51.9	32.8	4.0	35.8	52.9	441.1	5000.0	-21.1
12080.00	V	0.0	1.0	44.2	41.2	6.6	35.7	56.3	651.5	5000.0	-17.7a
14496.00	V	0.0	1.0	44.0	39.8	7.5	34.8	56.5	665.6	5000.0	-17.5a
19328.00	V	0.0	1.0	40.3	39.9	2.4	35.4	47.3	230.5	5000.0	-26.7a
24000.00	V	0.0	1.0	45.8	40.5	2.5	34.2	54.6	539.5	5000.0	-19.3a
Avg											
1041.70	V	0.0	1.0	47.2	24.7	2.2	36.4	37.7	77.1	500.0	-16.2
1721.18	V	0.0	1.0	51.2	27.6	2.4	35.7	45.5	189.0	500.0	-8.5
2315.90	V	350.0	1.0	44.5	29.2	2.9	35.6	41.0	112.1	500.0	-13.0
3267.00	V	350.0	1.0	35.9	30.6	3.5	35.6	34.4	52.5	500.0	-19.6
4272.20	V	190.0	1.0	47.1	31.9	3.9	35.6	47.3	231.7	500.0	-6.7
4632.30	V	180.0	1.0	48.3	32.8	4.0	35.8	49.3	291.8	500.0	-4.7
12080.00	V	0.0	1.0	33.0	41.2	6.6	35.7	45.1	179.7	500.0	-8.9a
14496.00	V	0.0	1.0	34.2	39.8	7.5	34.8	46.7	215.1	500.0	-7.3a
19328.00	V	0.0	1.0	28.8	39.9	2.4	35.4	35.8	61.3	500.0	-18.2a
24000.00	V	0.0	1.0	35.0	40.5	2.5	34.2	43.8	155.6	500.0	-10.1a

a = Ambient

b = Broadband

Channel A - Plan 3

CLIENT: Adtran
 TESTER: James Ritter

DATE: 11/26/02
 JOB #: 7327

EUT Information:

EUT: Tracer 4106
 CONFIGURATION: Transmit at 2428 MHz
 CLOCKS: 1.544MHz, 12 MHz,
 51.536 MHz,280 MHz

Test Requirements:

TEST STANDARD: FCC Part 15
 DISTANCE: 3m
 CLASS: B

Test Equipment/Limit:

ANTENNA: A_00007 LIMIT: LFCC_3m_Class_B
 CABLE: CSITE2_3m AMPLIFIER (dB) None

HF done on Site 1 antenna asset 425 analyzer HP8593 Asset # 00074 and amplifier 00066

*Note Below 1Ghz Antenna A00007 Used with no amplifier
 from1-18 GHz antenna asset A00004 used with amp asset 0066

from18-26 GHz antenna asset 00210 used with 00066 amp and Spectrum analyzer HP8564E Asset # 00067

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
Quasi Peak											
73.73	H	100.0	3.8	11.8	6.6	2.0	0.0	20.4	10.5	100.0	-19.6
115.90	H	10.0	3.5	17.2	10.8	2.4	0.0	30.3	32.9	150.0	-13.2
117.97	H	10.0	3.5	18.3	11.0	2.4	0.0	31.7	38.4	150.0	-11.8
120.30	H	90.0	3.5	16.7	11.2	2.5	0.0	30.4	33.0	150.0	-13.2
979.20	H	125.0	3.0	9.7	22.7	7.8	0.0	40.2	102.7	500.0	-13.7
HF Peak											
2328.20	H	190.0	1.0	49.3	29.2	2.9	35.6	45.8	195.9	5000.0	-28.1
4296.30	H	170.0	1.0	46.1	31.9	3.9	35.6	46.4	208.5	5000.0	-27.6
4656.30	H	180.0	1.0	46.2	32.9	4.0	35.8	47.3	230.5	5000.0	-26.7
4856.00	H	0.0	1.0	43.6	33.4	4.1	36.0	45.0	178.2	5000.0	-29.0a
7284.00	H	0.0	1.0	44.8	38.0	5.0	35.9	51.9	393.4	5000.0	-22.1a
12140.00	H	0.0	1.0	45.3	41.2	6.6	35.7	57.4	740.7	5000.0	-16.6a
24000.00	H	0.0	1.0	45.6	40.5	2.5	34.2	54.4	527.2	5000.0	-19.5a
Avg											
2328.20	H	190.0	1.0	44.5	29.2	2.9	35.6	41.0	112.1	500.0	-13.0
4296.30	H	170.0	1.0	37.7	31.9	3.9	35.6	38.0	79.0	500.0	-16.0
4656.30	H	180.0	1.0	38.8	32.9	4.0	35.8	39.9	98.8	500.0	-14.1
4856.00	H	0.0	1.0	32.6	33.4	4.1	36.0	34.1	50.6	500.0	-19.9a
7284.00	H	0.0	1.0	34.6	38.0	5.0	35.9	41.7	121.6	500.0	-12.3a
12140.00	H	0.0	1.0	35.3	41.2	6.6	35.7	47.4	234.2	500.0	-6.6a
24000.00	H	0.0	1.0	34.2	40.5	2.5	34.2	43.0	141.4	500.0	-11.0a
Quasi Peak											
73.73	V	180.0	2.0	12.3	6.6	2.0	0.0	20.9	11.1	100.0	-19.1
115.90	V	90.0	2.0	10.9	10.8	2.4	0.0	24.0	15.9	150.0	-19.5
117.95	V	300.0	2.6	11.5	11.0	2.4	0.0	24.9	17.5	150.0	-18.6
120.30	V	180.0	1.4	11.1	11.2	2.5	0.0	24.8	17.3	150.0	-18.8

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
979.20	V	180.0	1.3	11.6	22.7	7.8	0.0	42.1	127.8	500.0	-11.8
HF Peak											
1050.40	V	190.0	1.0	68.4	24.8	2.2	36.4	59.0	891.4	5000.0	-15.0
1480.00	V	220.0	1.0	55.8	26.8	2.3	35.9	49.0	281.5	5000.0	-25.0
2328.20	V	190.0	1.0	49.6	29.2	2.9	35.6	46.1	202.3	5000.0	-27.9
2656.40	V	200.0	1.0	74.3	29.8	3.1	35.6	71.6	3808.0	5000.0	-2.4
4296.30	V	180.0	1.0	51.5	31.9	3.9	35.6	51.8	387.0	5000.0	-22.2
4656.30	V	190.0	1.0	50.3	32.9	4.0	35.8	51.4	369.5	5000.0	-22.6
4856.00	V	0.0	1.0	42.9	33.4	4.1	36.0	44.4	165.9	5000.0	-29.6a
7284.00	V	0.0	1.0	45.0	38.0	5.0	35.9	52.1	402.5	5000.0	-21.9a
12140.00	V	0.0	1.0	45.2	41.2	6.6	35.7	57.3	732.2	5000.0	-16.7a
24000.00	V	0.0	1.0	45.6	40.5	2.5	34.2	54.4	527.2	5000.0	-19.5a
Avg											
1050.40	V	190.0	1.0	48.0	24.8	2.2	36.4	38.6	84.8	500.0	-15.4
1480.00	V	200.0	1.0	40.6	26.8	2.3	35.9	33.8	48.9	500.0	-20.2
2328.20	V	190.0	1.0	42.6	29.2	2.9	35.6	39.2	90.8	500.0	-14.8
2656.40	V	200.0	1.0	52.0	29.8	3.1	35.6	49.3	292.2	500.0	-4.7
4296.30	V	180.0	1.0	47.6	31.9	3.9	35.6	47.9	247.0	500.0	-6.1
4656.30	V	190.0	1.0	46.0	32.9	4.0	35.8	47.1	225.2	500.0	-6.9
4856.00	V	0.0	1.0	32.3	33.4	4.1	36.0	33.8	48.8	500.0	-20.2a
7284.00	V	0.0	1.0	35.2	38.0	5.0	35.9	42.3	130.3	500.0	-11.7a
12140.00	V	0.0	1.0	35.4	41.2	6.6	35.7	47.5	236.9	500.0	-6.5a
24000.00	V	0.0	1.0	34.2	40.5	2.5	34.2	43.0	141.4	500.0	-11.0a

a = ambient

Table 7: Radiated Emission Test Data-Dish Antenna—Channel B – Plan 1

CLIENT:	Adtran	DATE:	12/6/02
TESTER:	James Ritter	JOB #:	7327
<u>EUT Information:</u>		<u>Test Requirements:</u>	
EUT:	Tracer 4106	TEST STANDARD:	FCC Part 15
CONFIGURATION:	Transmit at 2456 MHz	DISTANCE:	3m
CLOCKS:	1.544MHz, 12 MHz, 51.536 MHz,280 MHz	CLASS:	B

<u>Test Equipment/Limit:</u>		LIMIT:	LFCC_3m_Class_B
ANTENNA:	A_00007	AMPLIFIER (dB)	None
CABLE:	CSITE2_3m		

HF done on Site 1 antenna asset 425 analyzer HP8593 Asset # 00074 and amplifier 00066

*Note Below 1Ghz Antenna A00007 Used with no amplifier

from1-18 GHz antenna asset A00004 used with amp asset 0066

from18-26 GHz antenna asset 00210 used with 00066 amp and Spectrum analyzer HP8564E Asset # 00067

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
peak											
73.71	H	190.0	4.0	14.9	6.6	1.7	0.0	23.2	14.5	100.0	-16.8
115.95	H	0.0	4.0	12.9	10.8	2.1	0.0	25.8	19.5	150.0	-17.7
257.60	H	0.0	4.0	12.1	12.4	3.2	0.0	27.7	24.4	200.0	-18.3
979.20	H	45.0	2.6	7.9	22.7	7.0	0.0	37.6	76.2	500.0	-16.3
HF Peak											
4552.00	H	200.0	1.0	45.2	32.6	4.0	35.8	46.1	201.1	5000.0	-27.9
4912.00	H	25.0	1.0	46.4	33.5	4.1	36.0	48.0	251.0	5000.0	-26.0a
7368.00	H	0.0	1.0	45.4	38.0	5.0	35.9	52.5	424.0	5000.0	-21.4a
12280.00	H	0.0	1.0	47.4	41.0	6.7	35.6	59.6	950.0	5000.0	-14.4a
19648.00	H	0.0	1.0	36.2	40.5	2.4	35.3	43.8	154.1	5000.0	-30.2a
22104.00	H	0.0	1.0	41.3	39.9	2.5	35.0	48.7	272.4	5000.0	-25.3a
Avg											
4552.00	H	200.0	1.0	42.3	32.6	4.0	35.8	43.1	143.7	500.0	-10.8
4912.00	H	25.0	1.0	33.2	33.5	4.1	36.0	34.7	54.5	500.0	-19.2a
7368.00	H	0.0	1.0	35.0	38.0	5.0	35.9	42.1	127.5	500.0	-11.9a
12280.00	H	0.0	1.0	35.4	41.0	6.7	35.6	47.5	238.4	500.0	-6.4a
19648.00	H	0.0	1.0	25.8	40.5	2.4	35.3	33.4	46.9	500.0	-20.6a
22104.00	H	0.0	1.0	29.3	39.9	2.5	35.0	36.7	68.2	500.0	-17.3a
peak											
73.71	V	180.0	1.0	13.2	6.6	1.7	0.0	21.5	11.9	100.0	-18.5
115.95	V	270.0	1.0	11.1	10.8	2.1	0.0	24.0	15.8	150.0	-19.5
257.60	V	20.0	1.2	14.2	12.4	3.2	0.0	29.8	31.0	200.0	-16.2
979.20	V	180.0	1.6	11.4	22.7	7.0	0.0	41.1	114.1	500.0	-12.8
HF Peak											
1593.00	V	270.0	1.0	53.8	27.2	2.4	35.8	47.6	239.4	5000.0	-26.4

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dB μ V)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dB μ V/m)	Corr. Level (μ V/m)	Limit (μ V/m)	Margin dB
4552.00	V	180.0	1.0	57.0	32.6	4.0	35.8	57.8	778.7	5000.0	-16.2
4912.00	V	0.0	1.0	50.1	33.5	4.1	36.0	51.7	383.9	5000.0	-22.3
7368.00	V	0.0	1.0	43.6	38.0	5.0	35.9	50.8	345.8	5000.0	-23.2a
12280.00	V	10.0	1.0	46.9	41.0	6.7	35.6	59.0	892.8	5000.0	-15.0a
19648.00	V	0.0	1.0	36.2	40.5	2.4	35.3	43.8	154.1	5000.0	-30.2a
22104.00	V	0.0	1.0	41.3	39.9	2.5	35.0	48.7	272.4	5000.0	-25.3a
Avg											
1593.00	V	270.0	1.0	42.7	27.2	2.4	35.8	36.4	66.4	500.0	-17.5
4552.00	V	180.0	1.0	50.6	32.6	4.0	35.8	51.4	372.7	500.0	-2.6
4912.00	V	0.0	1.0	43.6	33.5	4.1	36.0	45.2	181.6	500.0	-8.8
7368.00	V	0.0	1.0	39.4	38.0	5.0	35.9	46.5	212.5	500.0	-7.4a
12280.00	V	0.0	1.0	34.2	41.0	6.7	35.6	46.3	207.1	500.0	-7.7a
19648.00	V	0.0	1.0	25.8	40.5	2.4	35.3	33.4	46.9	500.0	-20.6a
22104.00	V	0.0	1.0	29.3	39.9	2.5	35.0	36.7	68.2	500.0	-17.3a

a = ambient

Channel B – Plan 3

CLIENT: Adtran DATE: 11/26/02
 TESTER: James Ritter JOB #: 7327

EUT Information:

EUT: Tracer 4106
 CONFIGURATION: Transmit at 2468 MHz
 CLOCKS: 1.544MHz, 12 MHz,
 51.536 MHz, 280 MHz

Test Requirements:

TEST STANDARD: FCC Part 15
 DISTANCE: 3m
 CLASS: B

Test Equipment/Limit:

ANTENNA: A_00007 LIMIT: LFCC_3m_Class_B
 CABLE: CSITE2_3m AMPLIFIER (dB) None

HF done on Site 1 antenna asset 425 analyzer HP8593 Asset # 00074 and amplifier 00066

*Note Below 1Ghz Antenna A00007 Used with no amplifier

from 1-18 GHz antenna asset A00004 used with amp asset 0066

from 18-26 GHz antenna asset 00210 used with 00066 amp and Spectrum analyzer HP8564E Asset # 00067

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dBµV)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dBµV/m)	Corr. Level (µV/m)	Limit (µV/m)	Margin dB
Quasi Peak											
73.71	H	270.0	4.0	18.2	6.6	2.0	0.0	26.8	21.9	100.0	-13.2
115.95	H	0.0	4.0	17.4	10.8	2.4	0.0	30.5	33.7	150.0	-13.0
117.95	H	0.0	4.0	16.1	11.0	2.4	0.0	29.5	29.8	150.0	-14.0
120.41	H	290.0	2.8	10.6	11.2	2.5	0.0	24.3	16.3	150.0	-19.3
257.68	H	350.0	2.1	19.2	12.4	3.5	0.0	35.1	57.1	200.0	-10.9
979.20	H	90.0	2.2	8.8	22.7	7.8	0.0	39.3	92.6	500.0	-14.6
HF Peak											
1608.30	H	0.0	1.0	33.4	27.2	2.4	35.8	27.2	23.0	5000.0	-46.8
3332.05	H	0.0	1.0	40.2	30.7	3.5	35.6	38.8	87.3	5000.0	-35.2b
4576.25	H	290.0	1.0	49.3	32.7	4.0	35.8	50.2	324.0	5000.0	-23.8a
4936.00	H	0.0	1.0	49.4	33.5	4.1	36.0	51.0	354.5	5000.0	-23.0a
7404.00	H	0.0	1.0	42.1	38.1	5.1	35.9	49.3	290.7	5000.0	-24.7a
12340.00	H	0.0	1.0	43.3	41.0	6.7	35.5	55.4	588.1	5000.0	-18.6a
19744.00	H	0.0	1.0	38.5	40.5	2.4	35.3	46.1	202.2	5000.0	-27.9a
22212.00	H	0.0	1.0	40.8	39.9	2.5	35.0	48.2	257.2	5000.0	-25.8a
Avg											
1608.30	H	0.0	1.0	25.1	27.2	2.4	35.8	18.9	8.8	500.0	-35.1
3332.05	H	0.0	1.0	30.3	30.7	3.5	35.6	28.9	27.9	500.0	-25.1b
4576.25	H	290.0	1.0	44.0	32.7	4.0	35.8	44.9	175.4	500.0	-9.1a
4936.00	H	0.0	1.0	32.9	33.5	4.1	36.0	34.5	53.3	500.0	-19.4a
7404.00	H	0.0	1.0	32.9	38.1	5.1	35.9	40.1	100.8	500.0	-13.9a
12340.00	H	0.0	1.0	33.3	41.0	6.7	35.5	45.4	186.6	500.0	-8.6a
19744.00	H	0.0	1.0	28.7	40.5	2.4	35.3	36.3	65.2	500.0	-17.7a
22212.00	H	0.0	1.0	32.3	39.9	2.5	35.0	39.7	96.3	500.0	-14.3a
Quasi Peak											
73.71	V	90.0	2.2	10.7	6.6	2.0	0.0	19.3	9.2	100.0	-20.7

Frequency (MHz)	Polarity H/V	Azimuth Degree	Ant. Hght (m)	SA Level (QP) (dB μ V)	Ant. Corr. (dB/m)	Cable Corr. (dB)	Amp Gain (dB)	Corr. Level (dB μ V/m)	Corr. Level (μ V/m)	Limit (μ V/m)	Margin dB
115.95	V	180.0	1.5	10.0	10.8	2.4	0.0	23.1	14.4	150.0	-20.4
117.95	V	270.0	1.5	10.5	11.0	2.4	0.0	23.9	15.6	150.0	-19.6
120.41	V	180.0	1.0	7.5	11.2	2.5	0.0	21.2	11.4	150.0	-22.4
257.68	V	180.0	2.0	10.6	12.4	3.5	0.0	26.5	21.2	200.0	-19.5
979.20	V	0.0	2.0	7.9	22.7	7.8	0.0	38.4	83.5	500.0	-15.5
HF Peak											
1608.30	V	0.0	1.0	62.0	27.2	2.7	35.8	56.2	642.3	5000.0	-17.8
2491.75	V	0.0	1.0	52.4	29.5	3.1	35.6	49.4	294.7	5000.0	-24.6b
3332.05	V	0.0	1.0	53.7	30.7	2.8	35.6	51.5	375.8	5000.0	-22.5
4576.25	V	180.0	1.0	52.4	32.7	3.8	35.8	53.0	449.1	5000.0	-20.9
4936.00	V	0.0	1.0	42.2	33.5	4.4	36.0	44.1	161.0	5000.0	-29.8a
7404.00	V	0.0	1.0	45.2	38.1	4.6	35.9	51.9	393.9	5000.0	-22.1a
12340.00	V	0.0	1.0	44.2	41.0	5.7	35.5	55.3	585.0	5000.0	-18.6a
19744.00	V	0.0	1.0	38.5	40.5	2.4	35.3	46.1	202.2	5000.0	-27.9a
22212.00	V	0.0	1.0	40.8	39.9	2.5	35.0	48.2	257.2	5000.0	-25.8a
Avg											
1608.30	V	0.0	1.0	46.4	27.2	2.7	35.8	40.6	106.6	500.0	-13.4
2491.75	V	0.0	1.0	39.2	29.5	3.1	35.6	36.2	64.3	500.0	-17.8b
3332.05	V	0.0	1.0	38.6	30.7	2.8	35.6	36.4	66.3	500.0	-17.5
4576.25	V	180.0	1.0	49.0	32.7	3.8	35.8	49.7	306.8	500.0	-4.2
4936.00	V	0.0	1.0	33.2	33.5	4.4	36.0	35.1	57.1	500.0	-18.9a
7404.00	V	0.0	1.0	33.5	38.1	4.6	35.9	40.2	102.4	500.0	-13.8a
12340.00	V	0.0	1.0	34.2	41.0	5.7	35.5	45.4	185.4	500.0	-8.6a
19744.00	V	0.0	1.0	28.7	40.5	2.4	35.3	36.3	65.2	500.0	-17.7a
22212.00	V	0.0	1.0	32.3	39.9	2.5	35.0	39.7	96.3	500.0	-14.3a

a = ambient

b = Broadband

4.6 AC Powerline Conducted Emissions: (FCC Part §15.207)

The EUT was placed on an 80 cm high 1 x 1.5 m non-conductive table above a ground plane. Power to the EUT was provided through a Solar Corporation 50 Ω /50 μ H Line Impedance Stabilization Network bonded to a 3 x 2 meter ground plane. The LISN has its AC input supplied from a filtered AC power source. Power and data cables were moved about to obtain maximum emissions.

The 50 Ω output of the LISN was connected to the input of the spectrum analyzer and the emissions in the frequency range of 150 kHz to 30 MHz was measured. The detector function was set to quasi-peak or peak, as appropriate, and the resolution bandwidth during testing was at least 9 kHz, with all post-detector filtering no less than 10 times the resolution bandwidth.

Data is recorded in Table 7.

Table 8: Conducted Emissions Test Data; 15.207

CLIENT: Adtran DATE: 12/2/02
TESTER: James Ritter JOB #: 7327
EUT: Tracer 4106
TEST STANDARD: FCC B
CLASS: CIS22_B
VOLTAGE: 120 VAC

LINE 1 - NEUTRAL

Frequency MHz	Level	Limit	Margin	Level	Limit	Margin
	QP dBuV	QP dBuV	QP dB	AVG dBuV	AVG dBuV	AVG dB
0.26	29.3	61.4	-32.1	29.3	51.4	-22.1
0.30	47.6	60.1	-12.5	46.3	50.1	-3.8
0.48	31.4	56.3	-24.9	31.4	46.3	-14.9
1.04	44.6	56.0	-11.4	43.2	46.0	-2.8
3.49	44.2	56.0	-11.8	42.2	46.0	-3.8
9.95	39.6	60.0	-20.4	39.6	50.0	-10.4
13.10	45.1	60.0	-14.9	37.5	50.0	-12.5
16.13	40.4	60.0	-19.6	40.4	50.0	-9.6

LINE 2 - PHASE

Frequency MHz	Level	Limit	Margin	Level	Limit	Margin
	QP dBuV	QP dBuV	QP dB	AVG dBuV	AVG dBuV	AVG dB
0.26	40.7	61.4	-20.7	40.7	51.4	-10.7
0.30	47.9	60.1	-12.2	47.2	50.1	-2.9
0.48	43.9	56.3	-12.4	42.7	46.3	-3.6
1.22	46.0	56.0	-10.0	43.5	46.0	-2.5
3.49	44.9	56.0	-11.1	42.9	46.0	-3.1
9.95	39.7	60.0	-20.3	39.7	50.0	-10.3
13.09	45.6	60.0	-14.4	40.8	50.0	-9.2
15.77	39.7	60.0	-20.3	39.7	50.0	-10.3