



6.3 Maximum Peak Power Output

6.3.1 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ TEST RECEIVER	ESMI	846839/018 848926/005	Dec. 03, 2000
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

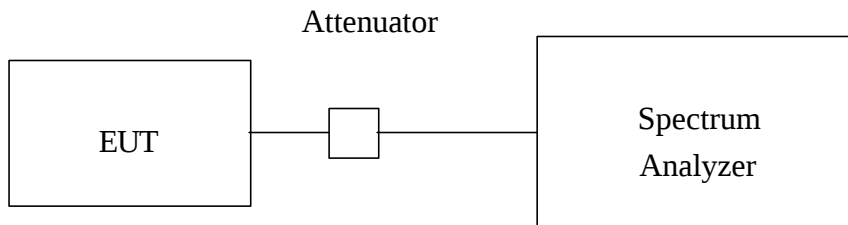
The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMAS document NIS81.

6.3.2 Test Procedures

1. The transmitter output was connected coupled to the spectrum analyzer through an attenuator.
2. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 3 MHz RBW and 3 MHz VBW.
3. The span of the spectrum analyzer should be larger than 6dB BandWidth.
4. Use Peak Search to read the peak power after Maximum Hold function is activated.
5. Shift the marker to +/- 3MHz and +/- 6MHz, and record the reading.
6. The Maximum Peak Output Power is the linear summation of the 5 readings in (4) and (5).

Alternatively, power meter is acceptable to be used in this measurement. But the average function of power meter will make the measured result smaller than that of the procedures mentioned above.

6.3.3 Test Setup



6.3.4 EUT Operating Condition

The software provided by the customer enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

6.3.5 Climate Condition

The temperature and related humidity: 26 °C and 78%

6.3.6 Test Result

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	13.71	30	PASS
6	2437	13.30	30	PASS
11	2462	13.53	30	PASS



6.4 RF Exposure

6.4.1 Test Instrument

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP SPECTRUM ANALYZER	8593E	3926A04191	Mar. 03, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A
FULLY ANECHOIC CHAUSTR	N/A	N/A	July 01, 2000

6.4.2 Classification

This device is connected with PC through USB connector, and it is not fixed inside the PC. It is very easy to re-locate the device. And warning statement for keeping at least 20cm separation between antenna and user has been printed in users manual. So, this device is classified as Mobile Device.



6.4.3 RF exposure limit

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
300-1500	...	...	F/300	6
1500-100,000	...	...	5	6
(B)Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	6
1500-100,000	...	...	1.0	30

F = Frequency in MHz

The limit of MPE is reached in a very short distance away from the antenna. Please see the calculation we followed to prove the limited harmfulness of the radiation in this product.

6.4.4 Calculation Procedures

Friis transmission formula : $P_d = (P_{out} * G) / (4 * \pi * r^2)$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

The limit of MPE here is 1.0 mW/cm² which makes $P_d=1.0$. If the Gain of the antenna and the total output power to the antenna, P_{out} , is known, then the Allowance Minimum Distance r can be calculated.

Ref. : David K. Cheng, *Field and Wave Electromagnetics*, Second Edition,
Page 640, Eq. (11-133).



6.4.5 RF Exposure Distances

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER TO ANTENNA (mW)	MINIMUM ALLOWABLE DISTANCE (r) FROM SKIN (Centi-Meter)
1	2412	23.50	1.54
6	2437	23.18	1.46
11	2462	22.54	1.50

The minimum allowable distance is very close to the enclosure of the antenna and also very far away from the human being under normal use condition. Statement of 20cm separation requirement has been printed in the Users Manual.



6.5 Radiated Emission Measurement

6.5.1 Test instruments

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8590L	3544A01176	Apr 18, 2001
HP Preamplifier	8447D	2944A08485	Oct. 23, 2001
HP Preamplifier	8449B	3008A01201	Dec. 14, 2000
HP Preamplifier	8347A	3307A01088	Sep. 09, 2001
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Aug. 3, 2001
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 25, 2000
CHASE BILOG Antenna	CBL6112A	2221	Aug. 4, 2001
SCHWARZBECK Horn Antenna	BBHA9120-D	D130	Jul. 09, 2001
SCHWARZBECK Horn Antenna	BBHA9170	123	Jan. 31, 2001
EMCO Turn Table	1060	1115	N/A
SHOSHIN Tower	AP-4701	A6Y005	N/A
Open Field Test Site	Site 5	ADT-R05	Aug. 29, 2001

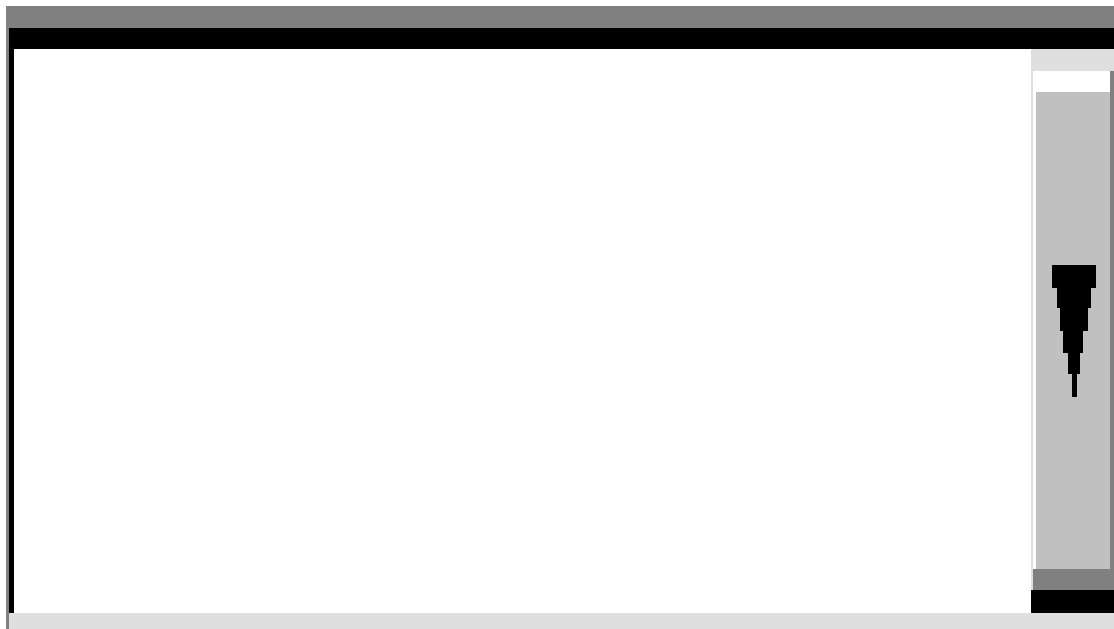
The measurement uncertainty is less than +/- 3dB, which is calculated as per NAMAS document NIS81.



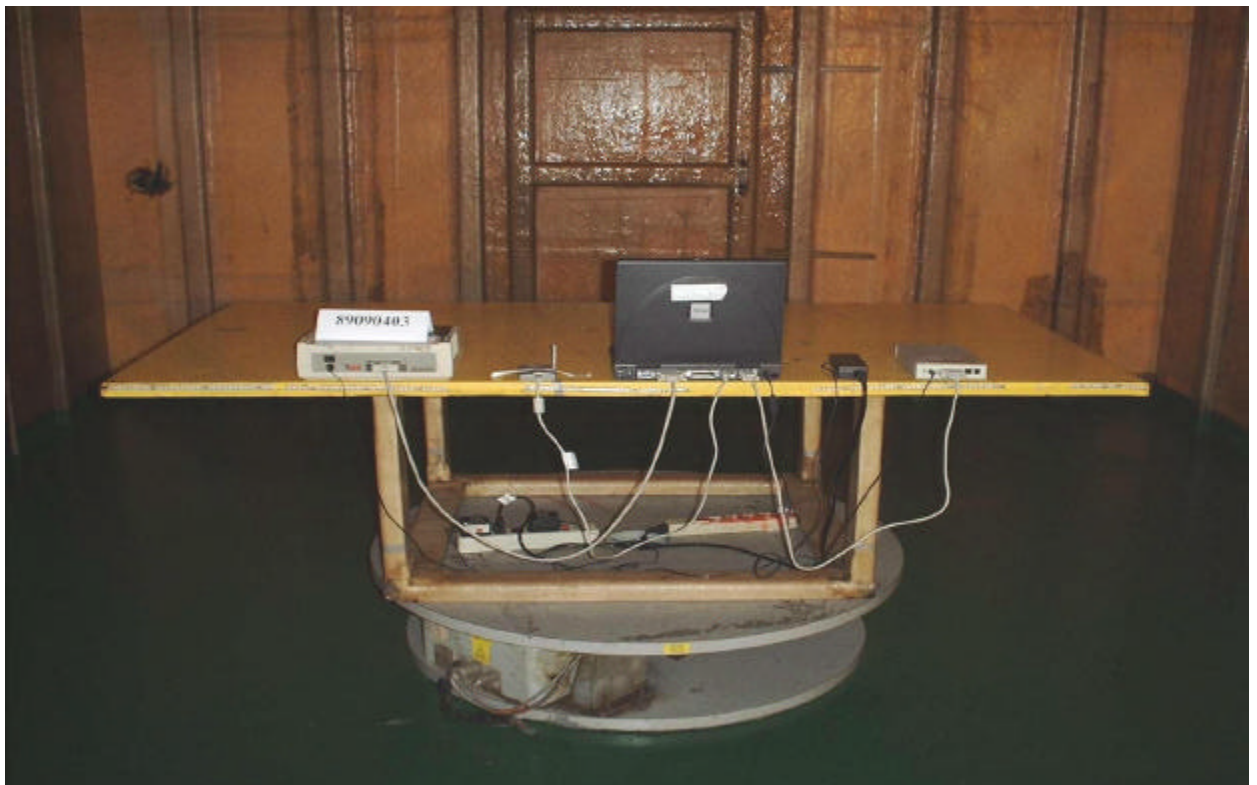
6.5.2 Test Procedures

- a. The EUT was placed on the turn table 0.8 meter above ground in 3 meter open area test site.
- b. Set the resolution bandwidth to 120KHz in the test receiver and select Peak function to scan the frequency below 1 GHz.
- c. Shift the interference-receiving antenna located in antenna tower upwards and downwards between 1 and 4 meters above ground and find out the local peak emission on frequency domain.
- d. Locate the interference-receiving antenna at the position where the local peak reach the maximum emission.
- e. Rotate the turn table and stop at the angle where the measurement device has maximum reading
- f. Shift the interference-receiving antenna again to detect the maximum emission of the local peak
- g. If the reading of the local peak under Peak function is lower than limit by 6dB, then Quasi Peak detection is not needed and this reading should be recorded. And if it is higher than Peak limit, then the test is fail. Others, switch the receiver to Quasi Peak function, set the resolution bandwidth to 100kHz and repeat the procedures C ~ F. If the reading is lower than limit, this reading should be recorded, otherwise, the test is fail.
- h. Set the resolution and video bandwidth of the spectrum analyzer to 1MHz and repeat procedures C ~ F for frequency band from 1 GHz to 10 times carrier frequency.
- i. If the reading for the local peak is lower than the Average limit, no further testing is needed in this local peak and this reading should be recorded. If it is higher than Average limit but lower than Peak limit, then set the resolution bandwidth to 1MHz and video bandwidth to 300Hz. Repeat procedures C ~ F. If the maximum reading is lower than Average limit, then this reading should be recorded. If it is higher, then the test is fail.

6.5.3 Test Setup



6.5.4 Photograph of Test Setup





6.5.5 EUT Operating Condition

1. Place the EUT on the testing table.
2. Connect USB cable to EUT.
3. Power on.
4. The software provided by the customer enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

6.5.6 Climate Condition

The temperature and related humidity: 25 and 65%

6.5.7 Test Results

CHANNEL:1 ANTENNA POLARITY: Vertical		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
359.71	17.5	18.1	35.6	46.0	-10.4	140	192
384.04	18.3	13.1	31.4	46.0	-14.6	131	188
408.08	18.9	17.3	36.2	46.0	-9.8	134	8
432.06	19.1	21.0	40.1	46.0	-5.9	121	344
480.07	20.1	13.3	33.4	46.0	-12.6	103	19
528.06	20.7	22.6	43.3	46.0	-27.0	100	362
612.10	21.3	14.2	35.5	46.0	-10.5	101	-2
616.03	21.3	9.7	31.0	46.0	-15.0	169	19
660.02	21.6	6.6	28.2	46.0	-17.8	102	308
748.13	23.0	18.3	41.3	46.0	-4.7	105	183
768.14	23.1	11.2	34.3	46.0	-11.7	100	201
816.14	23.4	13.9	37.3	46.0	-8.7	100	196

Remarks: 1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247



CHANNEL:1 ANTENNA POLARITY: Horizontal		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
132.00	13.5	12.0	25.5	43.5	-18.0	105	70
264.00	14.9	16.7	31.6	46.0	-14.4	100	307
288.04	15.4	15.7	31.1	46.0	-14.9	100	279
336.04	16.7	20.9	37.6	46.0	-8.4	109	31
352.00	17.2	13.4	30.6	46.0	-15.4	100	362
384.04	18.3	21.2	39.5	46.0	-6.5	105	169
432.07	19.1	16.9	36.0	46.0	-10.0	107	318
440.00	19.2	12.5	31.7	46.0	-14.3	109	249
484.00	20.2	12.1	32.3	46.0	-13.7	100	249
528.05	20.7	14.8	35.5	46.0	-10.5	104	199
616.01	21.3	10.5	31.8	46.0	-14.2	167	34
660.01	21.6	6.1	27.7	46.0	-18.3	163	234
748.13	23.0	16.0	39.0	46.0	-7.0	136	193

- Remarks:** 1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247



CHANNEL:6 ANTENNA POLARITY: Vertical		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
132.02	13.5	18.2	31.7	43.5	-11.8	102	118
336.05	16.7	14.4	31.1	46.0	-14.9	144	220
359.69	17.5	18.0	35.5	46.0	-10.5	126	183
384.05	18.3	13.5	31.8	46.0	-14.2	128	89
408.08	18.9	17.6	36.5	46.0	-9.5	133	7
432.07	19.1	22.4	41.5	46.0	-4.5	122	362
480.08	20.1	14.2	34.3	46.0	-11.7	115	353
528.07	20.7	22.7	43.4	46.0	-2.6	100	362
612.11	21.3	12.9	34.2	46.0	-11.8	100	-2
616.02	21.3	9.4	30.7	46.0	-15.3	100	5
748.14	23.0	17.5	40.5	46.0	-5.5	104	180
768.12	23.1	10.8	33.9	46.0	-12.1	108	197
816.14	23.4	16.4	39.8	46.0	-6.2	105	187

- Remarks:** 1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247



CHANNEL:6 ANTENNA POLARITY: Horizontal		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
132.15	13.5	11.0	24.5	43.5	-19.0	122	287
264.01	14.9	20.8	35.7	46.0	-10.3	100	321
288.05	15.4	15.7	31.1	46.0	-14.9	111	106
336.05	16.7	20.1	36.8	46.0	-9.2	117	168
352.02	17.2	16.6	33.8	46.0	-12.2	103	362
384.05	18.3	20.4	38.7	46.0	-7.3	117	157
432.07	19.1	15.9	35.0	46.0	-11.0	100	115
440.02	19.2	14.4	33.6	46.0	-12.4	100	336
484.02	20.2	12.8	33.0	46.0	-13.0	100	239
528.03	20.7	13.4	34.1	46.0	-11.9	124	239
616.01	21.3	13.1	34.4	46.0	-11.6	106	263
660.01	21.6	5.2	26.8	46.0	-19.2	135	30
748.13	23.0	18.5	41.5	46.0	-4.5	114	360

- Remarks:**
1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
 2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. The limit value is defined as per 15.247

CHANNEL:11 ANTENNA POLARITY: Vertical		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
132.01	13.5	18.3	31.8	43.5	-11.7	101	120
288.04	15.4	11.4	26.8	46.0	-19.2	132	205
336.04	16.7	16.7	33.4	46.0	-12.6	127	222
359.68	17.5	17.1	34.6	46.0	-11.4	134	190
384.05	18.3	14.0	32.3	46.0	-13.7	102	1
408.07	18.9	16.6	35.5	46.0	-10.5	153	14
432.04	19.1	20.3	39.4	46.0	-6.6	114	356
480.06	20.1	13.6	33.7	46.0	-12.3	107	23
528.08	20.7	22.2	42.9	46.0	-3.1	101	14
612.10	21.3	13.8	35.1	46.0	-10.9	112	355
616.03	21.3	9.4	30.7	46.0	-15.3	128	332
748.13	23.0	16.7	39.7	46.0	-6.3	107	225
768.13	23.1	10.7	33.8	46.0	-12.2	103	214
816.14	23.4	13.6	37.0	46.0	-9.0	114	329

- Remarks:** 1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247

CHANNEL:11 ANTENNA POLARITY: Horizontal		Detector Function : Quasi-Peak		6dB Bandwidth : 120 kHz.		Distance : 3 M Frequency Range : 30 – 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
132.00	13.5	12.6	26.1	43.5	-17.4	136	321
288.04	15.4	16.2	31.6	46.0	-14.4	101	319
336.05	16.7	20.3	37.0	46.0	-9.0	103	192
352.00	17.2	18.1	35.3	46.0	-10.7	110	187
384.05	18.3	20.3	38.6	46.0	-7.4	100	194
432.05	19.1	18.1	37.2	46.0	-8.8	100	324
440.00	19.2	15.3	34.5	46.0	-11.5	112	232
483.99	20.2	10.2	30.4	46.0	-15.6	100	81
528.08	20.7	13.8	34.5	46.0	-11.5	100	206
616.00	21.3	9.0	30.3	46.0	-15.7	100	234
660.00	21.6	6.7	28.3	46.0	-17.7	142	59
748.13	23.0	17.9	40.9	46.0	-5.1	134	254

- Remarks:** 1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247

Channel 1 ANTENNA POLARITY: Vertical		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2038.00	34.5	16.9	-	51.4	-	74.0	54.0	-22.6	-	111	327
*2412.00	36.1	65.5	58.2	101.6	94.3	-	-	-	-	110	350
4076.00	43.1	13.1	5.2	56.2	48.3	74.0	54.0	-17.8	-5.7	120	67
4824.00	43.8	9.5	-	53.3	-	74.0	54.0	-20.7	-	120	191
7236.00	39.7	-	-	-	-	74.0	54.0	-	-	-	-

Channel 1 ANTENNA POLARITY: Horizontal		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2038.00	34.5	15.4	-	49.9	-	74.0	54.0	-24.1	-	111	240
*2412.00	36.1	61.8	54.1	97.9	90.2	-	-	-	-	110	49
4076.00	43.1	12.9	4.7	56.0	47.8	74.0	54.0	-18.0	-6.2	100	70
4824.00	43.8	8.9	-	52.7	-	74.0	54.0	-21.3	-	116	262
7236.00	39.7	-	-	-	-	74.0	54.0	-	-	-	-

- Remarks:**
1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
 2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. The limit value is defined as per 15.247
 6. " * " : Fundamental Frequency

Channel 6 ANTENNA POLARITY: Vertical		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2063.00	34.8	16.3	-	51.1	-	74.0	54.0	-22.9	-	106	324
*2437.00	36.3	64.8	57.0	101.1	93.3	-	-	-	-	110	26
4126.22	42.7	14.0	6.0	56.7	48.7	74.0	54.0	-17.3	-5.3	109	76
4874.00	43.6	10.6	2.3	54.2	43.6	74.0	54.0	-19.8	-8.1	111	151
7311.00	39.7	-	-	-	-	74.0	54.0	-	-	-	-

Channel 6 ANTENNA POLARITY: Horizontal		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2063.10	34.8	16.5	-	51.3	-	74.0	54.0	-22.7	-	100	243
*2437.00	36.3	60.5	52.4	96.8	88.7	-	-	-	-	113	75
4126.08	42.7	10.8	-	53.5	-	74.0	54.0	-20.5	-	101	184
4874.00	43.8	9.9	-	53.7	-	74.0	54.0	-20.3	-	101	6
7311.00	39.7	-	-	-	-	74.0	54.0	-	-	-	-

- Remarks:**
1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
 2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. The limit value is defined as per 15.247
 6. " * " : Fundamental Frequency

Channel 11 ANTENNA POLARITY: Vertical		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2088.00	35.1	17.5	-	52.6	-	74.0	54.0	-21.4	-	103	323
*2462.00	36.4	61.4	53.2	97.8	89.6	-	-	-	-	100	248
4175.77	42.7	13.7	5.6	56.4	48.3	74.0	54.0	-17.6	-5.7	102	61
4923.64	43.4	12.6	4.2	56.0	43.4	74.0	54.0	-18.0	-6.4	102	362
7386.00	39.7	-	-	-	-	74.0	54.0	-	-	-	-

Channel 11 ANTENNA POLARITY: Horizontal		Detector Function : Peak Average				6dB Bandwidth : 1 MHz.				Distance : 3 M Frequency Range : Above 1000 MHz.	
Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)		Antenna Height (cm)	Table Angle (Degree)
		P.K.	A.V.	P.K.	A.V.	P.K.	A.V.	P.K.	A.V.		
2088.04	35.1	16.4	-	51.5	-	74.0	54.0	-22.5	-	100	243
*2462.00	36.4	57.8	49.2	94.2	85.6	-	-	-	-	112	76
4176.22	42.7	11.8	-	54.5	-	74.0	54.0	-19.5	-7.8	118	350
4924.00	43.4	11.5	-	54.9	-	74.0	54.0	-19.1	-7.1	118	52
7386.00	-	-	-	-	-	74.0	54.0-	-	-	-	-

- Remarks:**
1. Emission level (dBuV/m) = Correction Factor (dB) + Reading value (dBuV).
 2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. The limit value is defined as per 15.247
 6. " * " : Fundamental Frequency

6.6 Power Spectral Density Measurement

6.6.1 Test Instruments

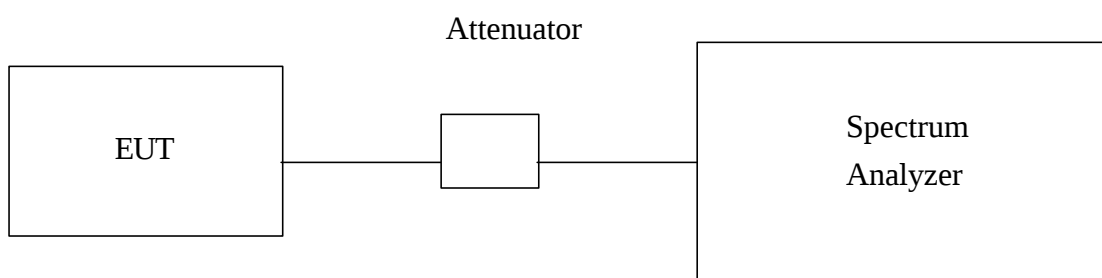
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ TEST RECEIVER	ESMI	846839/018 848926/005	Dec. 03, 2000
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMAS document NIS81.

6.6.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded. The longer sweep time is allowed for the detection of the maximum radiation through each 3KHz filter.

6.6.3 Test Setup



6.6.4 EUT Operating Condition

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.



6.6.5 Climate Condition

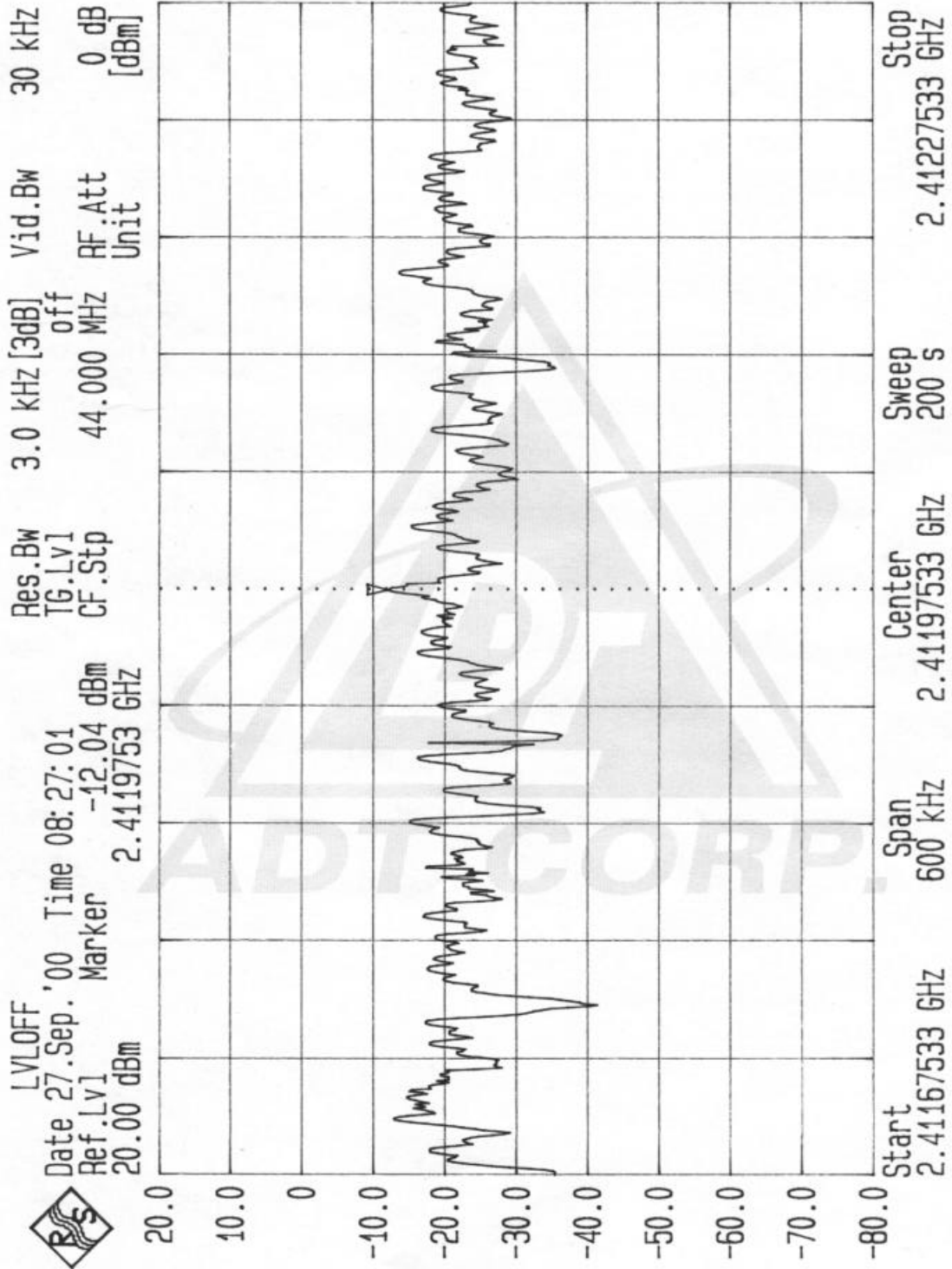
The temperature and related humidity: 27 and 68%

6.6.6 Test Result

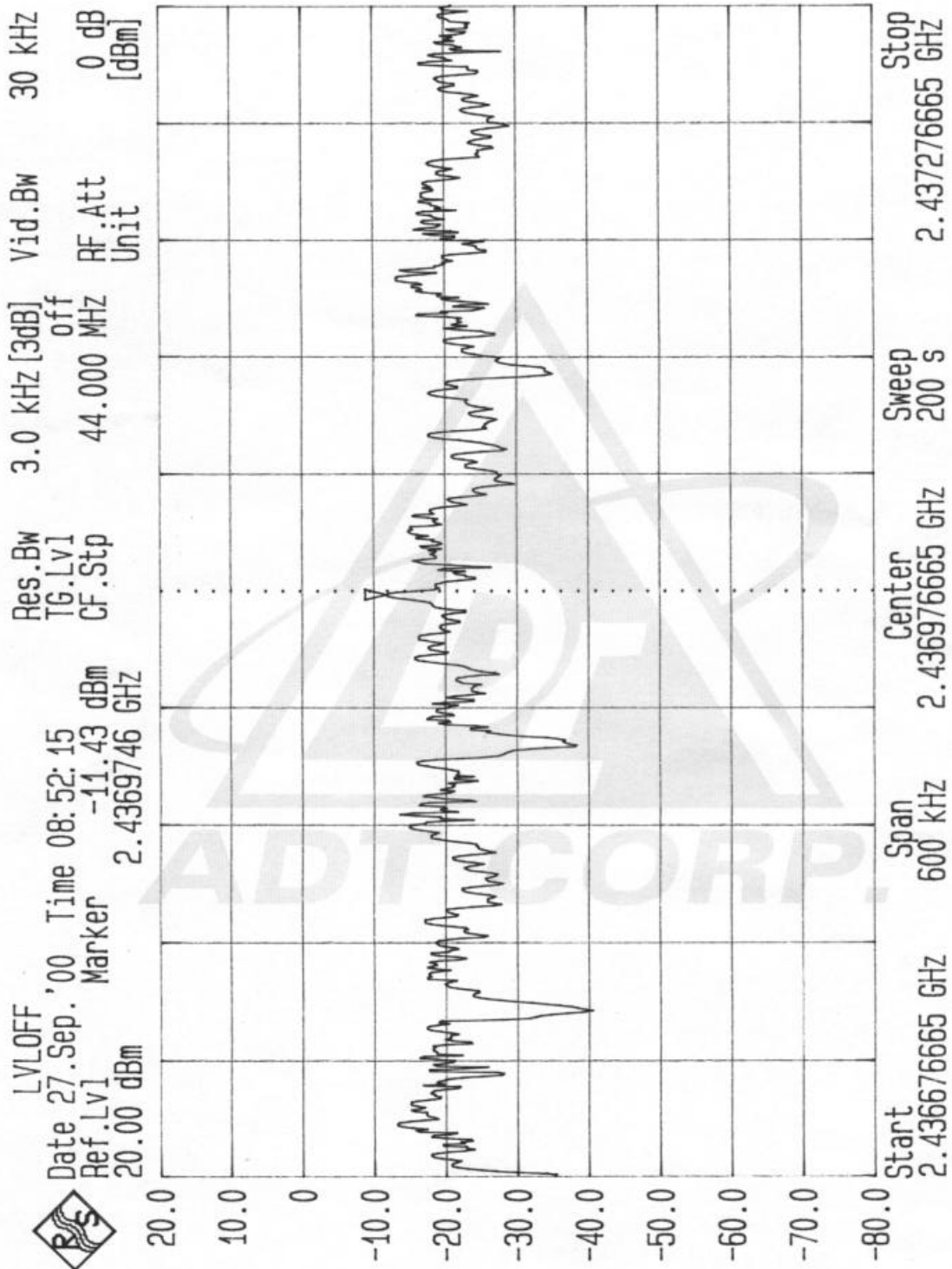
CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-12.04	8	PASS
6	2437	-11.43	8	PASS
11	2462	-12.93	8	PASS

The spectrum plots of test result are attached as below.

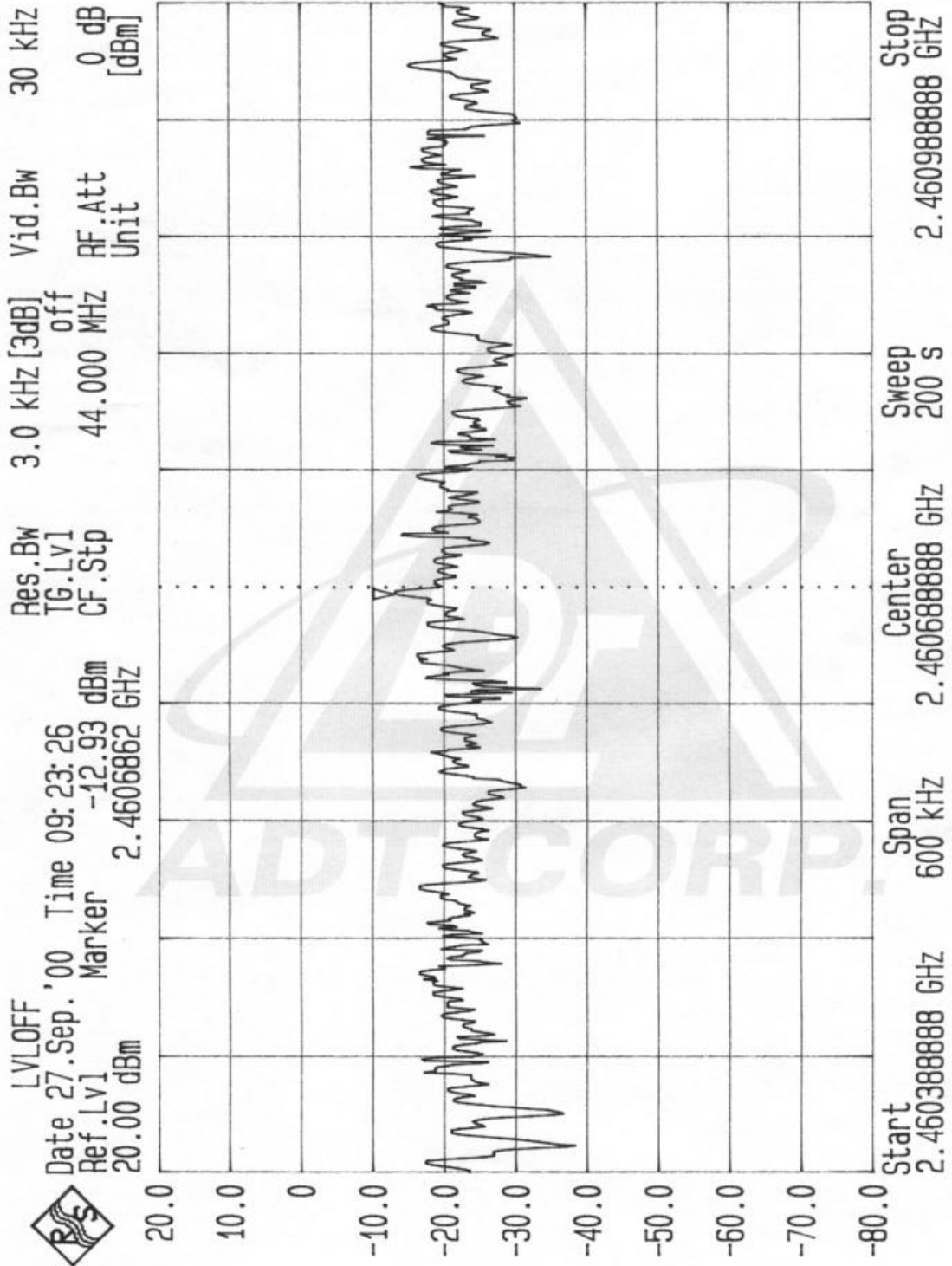
CH1



CH6



CH11



6.7 Band Edges Measurement

6.7.1 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ TEST RECEIVER	ESMI	848926/005 846839/018	Dec 03, 2000
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMAS document NIS81.

6.7.2 Test Procedure

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.

6.7.3 Test Setup





6.7.4 EUT Operating condition

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

6.7.5 Climate Condition

The temperature and related humidity: 26 Degree C and 75%RH

6.7.6 Test Results

The spectrum plots are attached below.

