FCC Part 74 Subpart H

EMI TEST REPORT

of

E.U.T. : Wireless Micropone TX

FCC ID. : NTMEJ-801TS

MODEL : EJ-801TS

Working Frequency : 740-806MHz

for

APPLICANT : EJ Electronics Co., Ltd.
ADDRESS : 4F, No. 11, Lane 125, Sec. 1, Kuo Kuang Road,
Ta Li City, Taichung Hsien, Taiwan, R.O.C.

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN
NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG
TAIPEI HSIEN, TAIWAN, R.O.C.

Tel:(02)226023052, 26023054
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Report Number : ET91R-06-035-03

TEST REPORT CIRTIFICATION

Applicant : EJ Electronics Co., Ltd..
4F, No. 11, Lane 125, Sec. 1, Kuo Kuang Road, Ta Li City,
Taichung Hsien, Taiwan, R.O.C.

Manufacturer : EJ Electronics Co., Ltd..
4F, No. 11, Lane 125, Sec. 1, Kuo Kuang Road, Ta Li City,
Taichung Hsien, Taiwan, R.O.C.

Description of EUT :

a) Type of EUT	: Wireless Micropone TX
b) Trade Name	: OKAYO
c) Model No.	: EJ-801TS
d) FCC ID	: NTMEJ-801TS
e) Working Frequency	: 740-806MHz
f) Power Supply	: DC 3V Batteries

Regulation Applied : FCC Rules and Regulations Part 74 Subpart H (2001)

I HEREBY CERTIFY THAT; The data shown in this report were made in accordance with the procedures given in ANSI C63.4 and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Issued Date : Oct. 10, 2002

Test Engineer : S. S. Liou
(S. S. Liou)

Approve & Authorized Signer : Will Yauo
Will Yauo, Manager
EMC Dept. II of ELECTRONICS
TESTING CENTER, TAIWAN

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1. GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Wireless Micropone TX
b) Trade Name : OKAYO
c) Model No. : EJ-801TS
d) FCC ID : NTMEJ-801TS
e) Working Frequency : 740-806MHz
f) Power Supply : DC 3V Batteries

1.2 Characteristics of Device:

The EUT is a frequency modulation Wireless Microphone with following features: Operation Frequency Range:740-806MHz. Type of Modualtion: FM, 172KF3E. This Wireless Microphone operates within UHF band with PLL synthesized. There are 16 channel available and channel used can be selected from a DIP switch.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in chapter 13 of ANSI C63.4. and section 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, and 2.1055 of Part 2 of CFR 47

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No. 34, Lin 5, Ding Fu Tsun, Linkou Hsiang, Taipei Hsien, Taiwan, R.O.C.

This site has been fully described in a report submitted to your office, and accepted in a letter dated Feb. 10, 2000.

2. REQUIREMENTS OF PROVISIONS

2.1 Definition

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Frequencies Available

According to sec. 74.802 of Part 74, the following frequencies are available for low power auxiliary station :

Frequencies (MHz)

26.100-26.480	455.000-456.000
54.000-72.000	470.000-488.000
76.000-88.000	488.000-494.000
161.625-161.775	614.000-806.000
174.000-216.000	450.000-451.000
944.000-952.000	

2.3 Requirements for Radio Equipment on Certification

(1) RF Output Power
For transmitters, the power output shall be measured at the RF output terminals.

(2) Modulation Characteristics
For Voice Modulated Communication Equipment, a curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.

(3) Occupied Bandwidth
For radiotelephone transmitter, other than single sideband or indenpent sideband transmitter, when modulateed by a 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation.

(4) Spurious Emissions at Antenna Terminals
The radio frequency voltage or power generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminal when properly loaded with a suitable artificial antenna.

(5) Field Strength of Spurious Emissions

Measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal condition of installation and operation.

(6) Frequencies Tolerance

a) The frequency stability shall be measured with variation of ambient temperature.
b) The frequency stability shall be measured with variation of primary supply voltage.

2.4 Labeling Requirement

Each equipment for which a type acceptance application is filed on or after May 1,1981, shall bear an identification plate or label pursuant to § 2.925（Identification of equipment） and § 2.926（FCC identifier）.

3. OUTPUT POWER MEASUREMENT

3.1 Provision Applicable

According to § 74.861(e)(1)(ii), the output power shall not exceed 250 milliwatts.

3.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power as measured in chapter 3.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 °, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.
7. Repeat step 6 until all frequencies need to be measured were complete.
8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

Figure 2 : Frequencies measured below 1 GHz configuration

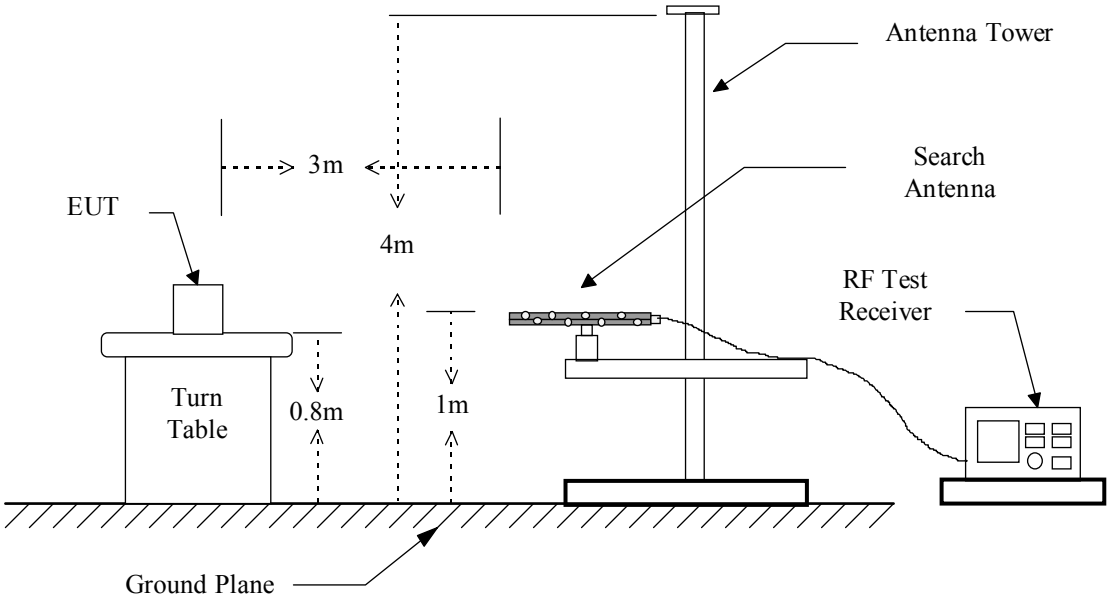
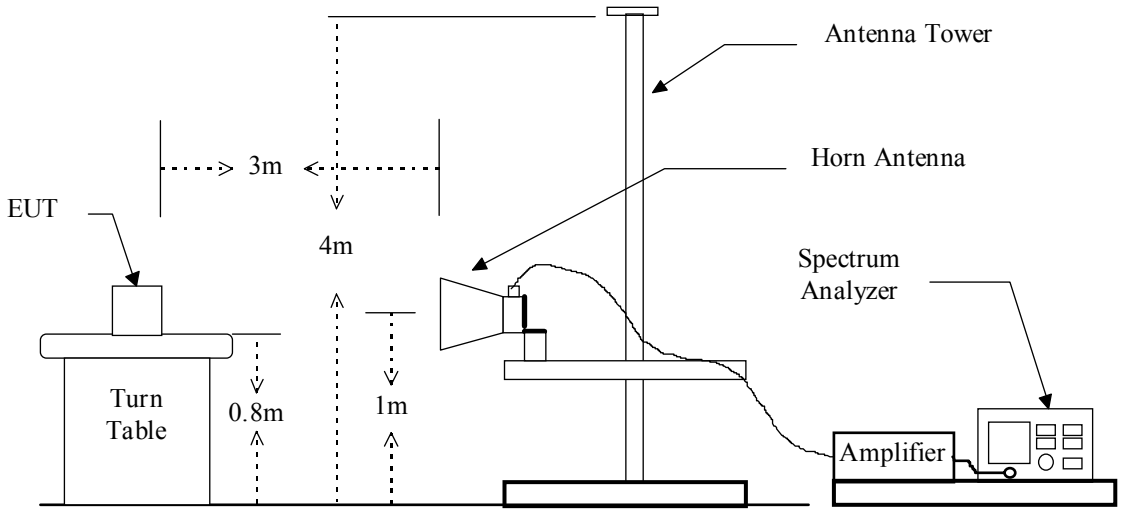


Figure 1 : Frequencies measured above 1 GHz configuration



3.3 Test Data

A. Channel Low (ERP)

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 23 ℃
Humidity : 65 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
740.100	76.5	6.6	1.5	---	5.1	3.24	250.0

B. Channel Mid (ERP)

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 23 ℃
Humidity : 65 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
751.600	75.9	6.0	1.5	---	4.5	2.82	250.0

C. Channel High (ERP)

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 23 ℃
Humidity : 65 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
805.300	75.4	6.2	2.1	---	4.1	2.57	250.0

Note: For measured frequency below 1GHz, a tuned dipole antenna is used.

3.3 Result Calculation

Result calculation is as following :

Result = SG Reading − Cable Loss + Antenna Gain Corrected

Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

$$mW = \log^{-1}[\frac{Result(dBm)}{10}]$$

3.4 Test Equipment

Equipment	Manufacturer	Model No.	Next Cal. Date
EMI Test Receiver	R&S	ESBI	05/25/2003
Plotter	HP	7440A	N/A

4. MODULATION CHARACTERISTICS

4.1 Provisions Applicable

According to § 2.1047 (a), for Voice Modulated Communication Equipment, the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be measured.

4.2 Measurement Method

A) Frequency response of audio circuits

1. Position the EUT as shown in figure 3.

2. Vary the modulating frequency from 100 Hz to 5000 Hz with varying the input voltage from 0V to maximum permitted input voltage, and observe the change in output.

B) Modulation Limit

1. Position the EUT as shown in figure 3, adjust the audio input frequency to 100 Hz and the input level from 0V to maximum permitted input voltage with recording each carrier frequency deviation responding to respective input level.

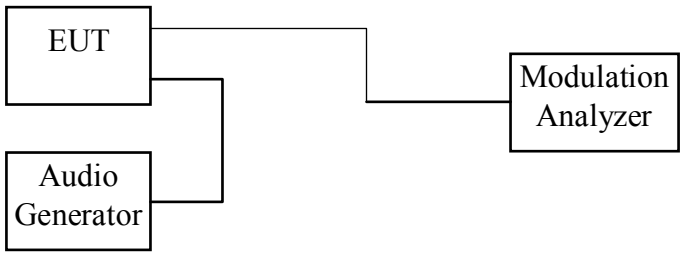
2. Repeat step 1 with changing the input frequency for 200, 500, 1000, 3000, and 5000 Hz in sequence.

C) Frequency response of all circuits

1. Position the EUT as shown in figure 3.

2. Vary the modulating frequency from 100 Hz to 15000 Hz with constant input voltage (derived from 5.4(a) of this test report), and observe the change in output.

Figure 3 : Modulation characteristic measurement configuration

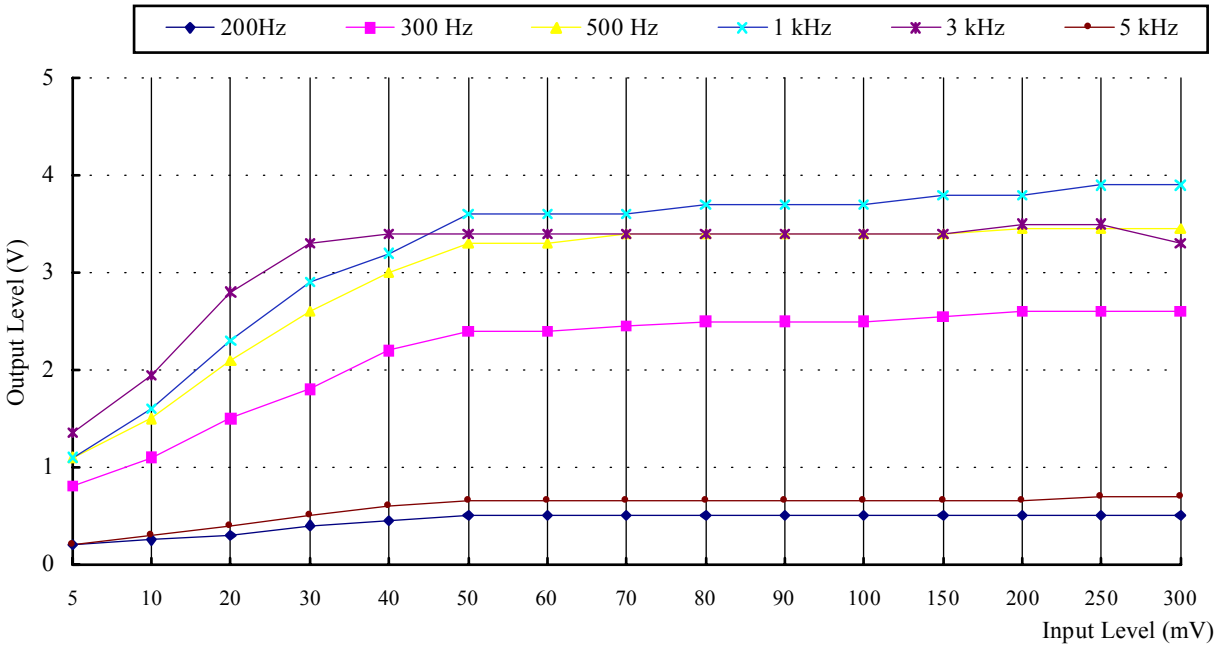


4.3 Measurement Instrument

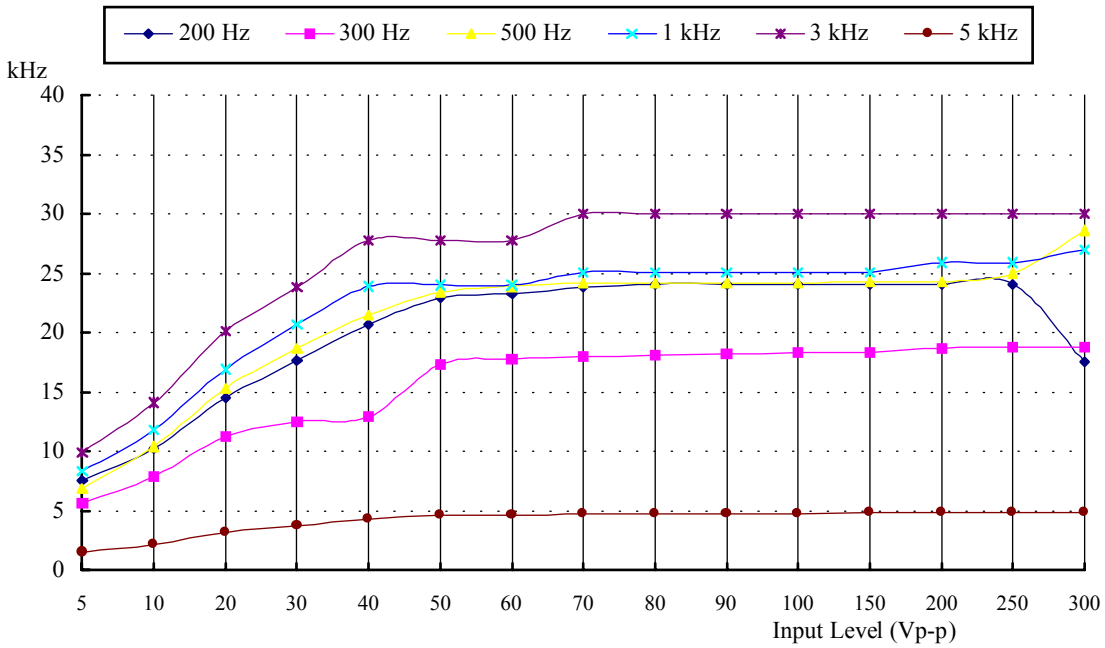
Equipment	Manufacturer	Model No.	Next Cal. Date
Modulation Analyzer	Hewlett-Packard	8901A	12/01/2002
Multifunction Synthesizer	Hewlett-Packard	8904A	11/24/2002
Oscillscope	Lecroy	9350A	12/01/2002

4.4 Measurement Result

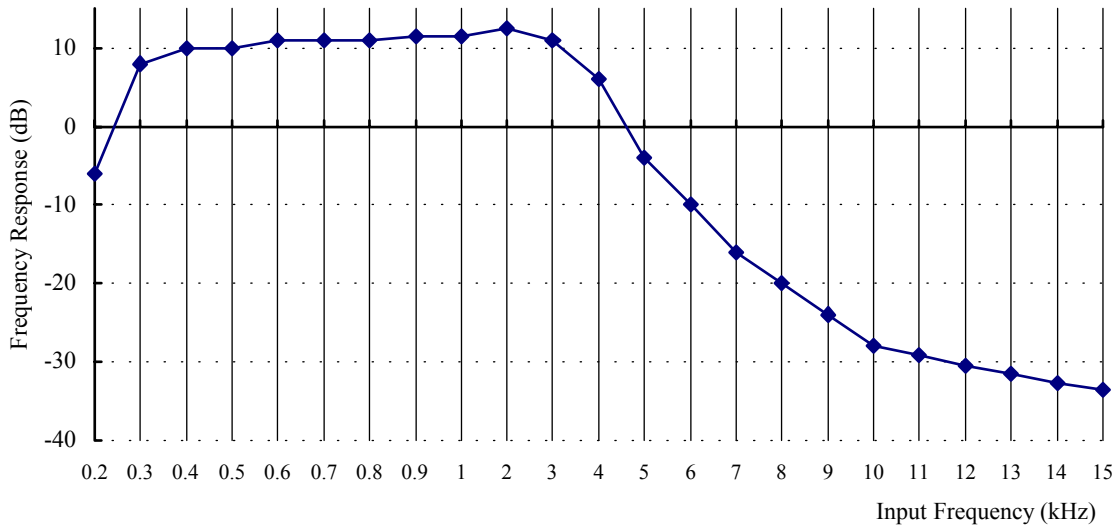
A). Frequency response



B). Modulation Limit



C). Frequency response of all circuits



5. OCCUPIED BANDWIDTH OF EMISSION

5.1 Provisions Applicable

According to § 2.1049 (c)(1), For radiotelephone transmitter, other than single sideband or indenpent sideband transmitter, when modulateed by a 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation.
According to § 74.861(e)(5), the frequency emission bandwidth shall not exceed 200 kHz.

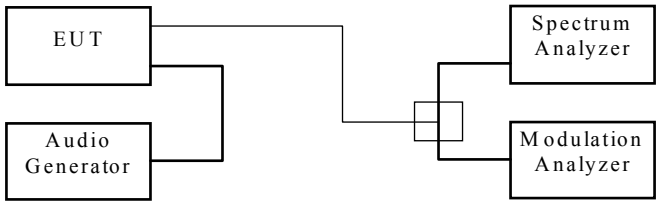
5.2 Measurement Method

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

2. Position the EUT as shown in figure 4, and Install new batteries in the EUT. Turn on the EUT ant set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

3. Apply a 2.5 kHz modulation signal to EUT and measure the frequencies of the modulated signal from the EUT where it is the specified number of dB below the reference level set in step 2. This is the occupied bandwidth specified.

Figure 4 : Occupied bandwidth measurement configuration



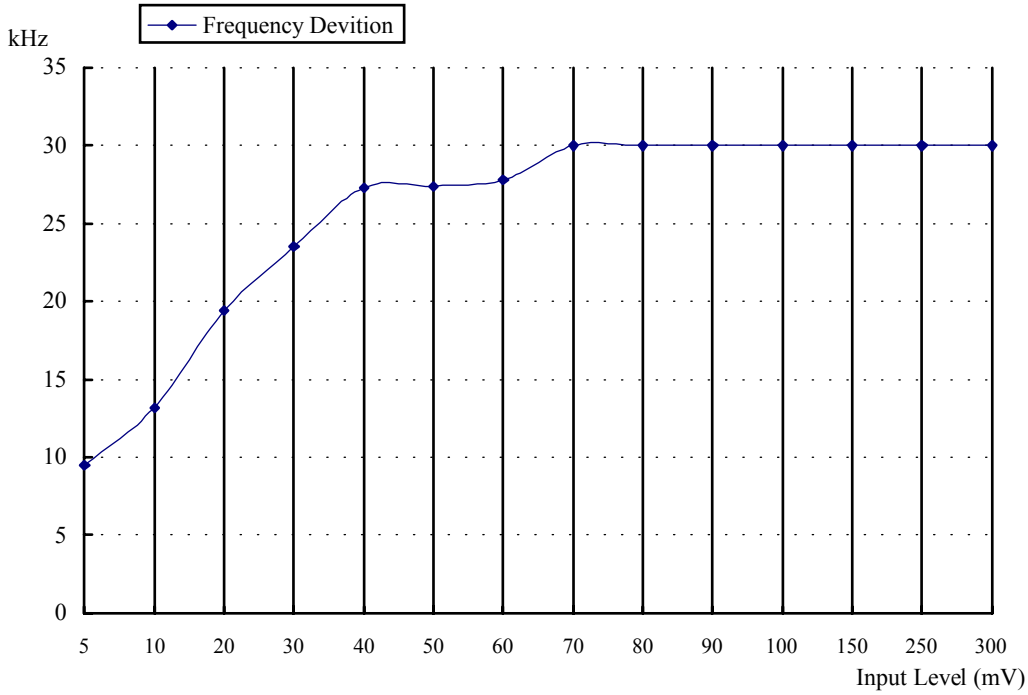
5.3 Occupied Bandwidth Test Equipment

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	R&S	ESBI	05/25/2003
Modulation Analyzer	Hewlett-Packard	8901A	12/01/2002
Multifunction Synthesizer	Hewlett-Packard	8904A	11/24/2002
Plotter	Hewlett-Packard	7440A	N/A

5.4 Bandwidth Measured

5.4.1 Input Level Derived

Input Audio Frequency : 2.5 kHz, Sine Wave



The Level input to produce 50% modulation is 90 mV, therefore the magnitude 16 dB greater than it is 567.9 mV.

5.4.2 Occupied Bandwidth Plotted

The Channel Low 26 dB Bandwidth is 106.8KHz.
The Channel Mid 26 dB Bandwidth is 106.8KHz.
The Channel High 26 dB Bandwidth is 106.8KHz.

Please see appendix 1 for plotted data.

6. FIELD STRENGTH OF EMISSION

6.1 Provisions Applicable

According to § 2.1053, measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal condition of installation and operation. Information submitted shall include the relative radiated power of spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from a halfwave dipole antenna.

According to § 74.861(e)(6), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the follwing sceedule:

(i) on any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB.

(ii) on any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB.

(iii) on any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth shall be attenuated below the unmodulated carrier by at least 43 plus 10 Log(output power in watts) dB.

6.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power as measured in chapter 3.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 °, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.

7. Repeat step 6 until all frequencies need to be measured were complete.
8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

6.3 Measuring Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	Hewlett-Packard	8568B	01/10/2003
Quasi Peak Detector	Hewlett-Packard	85650A	01/10/2003
Pre-selector	Hewlett-Packard	85685A	01/10/2003
Spectrum Analyzer	Hewlett-Packard	8564E	05/16/2003
Horn Antenna	EMCO	3115	05/14/2003
Log periodic Antenna	EMCO	3146	11/02/2002
Biconical Antenna	EMCO	3110B	11/02/2002
Preamplifier	Hewlett-Packard	8449B	05/10/2003
Preamplifier	Hewlett-Packard	8447D	10/14/2002

Measuring instrument setup in frequency band measured is as following :

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz

6.4 Measuring Data

A. Channel Low

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 23℃
Humidity : 65%

Unmodulated carrier output power is 5.1 dBm , or 3.24 mW (ERP).

The limit of spurious or harmonics is calculated as following :

5.1-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Attenu-ation (dB)	Antenna Gain	Cable Loss (dB)	ERP Corrected Factor	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1480.200	70.70	45.20	-7.87	-0.37	36.00	9.10	1.33	-2.00	-38.10	-30.60	-13.0	-17.60
2220.300	71.60	69.50	-2.99	-4.25	36.00	9.38	1.75	-2.00	-33.36	-34.62	-13.0	-20.36
2960.400	66.30	65.80	-1.40	-5.20	36.00	9.70	1.75	-2.00	-31.45	-35.25	-13.0	-18.45
3700.500	61.70	65.60	-6.12	-2.12	36.00	9.62	2.16	-2.00	-36.66	-32.60	-13.0	-19.60
4440.600	---	59.90	---	-7.83	36.00	10.62	2.16	-2.00	---	-37.37	-13.0	-24.37
5180.700	57.60	55.10	-8.11	-11.54	36.00	10.90	2.16	-2.00	-37.37	-40.80	-13.0	-24.37
5920.800	56.20	58.30	-8.51	-8.57	36.00	11.70	2.58	-2.00	-37.39	-37.45	-13.0	-24.39
6660.900	55.40	55.50	-9.69	-11.26	36.00	12.10	2.58	-2.00	-38.17	-39.74	-13.0	-25.17
7401.000	---	---	---	---	---	---	---	---	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading − Cable Loss + Antenna Gain Corrected − Attenuation + ERP Corrected Factor

   Antenna Gain Corrected is used to convert radiated power to EIRP.

B. Channel Mid

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 23℃
Humidity : 65%

Unmodulated carrier output power is 4.5 dBm , or 2.82 mW (ERP).

The limit of spurious or harmonics is calculated as following :

4.5-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Attenu-ation (dB)	Antenna Gain	Cable Loss (dB)	ERP Corrected Factor	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1503.200	68.20	73.20	-10.47	-2.47	36.00	9.10	1.33	-2.00	-40.70	-32.70	-13.0	-19.70
2254.800	65.10	66.40	-9.47	-7.33	36.00	9.38	1.75	-2.00	-39.84	-37.70	-13.0	-24.70
3006.400	63.40	65.00	-4.30	-6.00	36.00	9.70	1.75	-2.00	-34.35	-36.05	-13.0	-21.35
3758.000	62.40	64.50	-5.42	-3.12	36.00	9.62	2.16	-2.00	-35.96	-33.66	-13.0	-20.66
4509.600	---	60.00	---	-6.95	36.00	10.62	2.16	-2.00	---	-36.49	-13.0	-23.49
5261.200	57.50	54.80	-8.21	-11.91	36.00	10.90	2.16	-2.00	-37.47	-41.17	-13.0	-24.47
6012.800	56.10	58.40	-8.47	-8.17	36.00	11.70	2.58	-2.00	-37.35	-37.05	-13.0	-24.05
6764.400	54.80	54.70	-10.69	-10.79	36.00	12.10	2.58	-2.00	-39.17	-39.27	-13.0	-26.17
7516.000	---	---	---	---	---	---	---	---	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading − Cable Loss + Antenna Gain Corrected − Attenuation + ERP Corrected Factor

   Antenna Gain Corrected is used to convert radiated power to EIRP.

C. Channel High

Operated mode : Normal
Test Date : Jul. 10, 2002
Temperature : 25℃
Humidity : 60%

Unmodulated carrier output power is 4.1 dBm , or 2.57 mW (ERP).

The limit of spurious or harmonics is calculated as following :

4.1-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Attenu-ation (dB)	Antenna Gain	Cable Loss (dB)	ERP Corrected Factor	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1610.600	65.50	71.60	-12.23	-5.80	36.00	9.18	1.33	-2.00	-42.38	-35.95	-13.0	-22.95
2415.900	61.20	63.90	-9.47	-9.27	36.00	9.26	1.75	-2.00	-39.96	-39.76	-13.0	-26.76
3221.200	61.40	61.90	-9.93	-7.43	36.00	9.70	1.75	-2.00	-39.98	-37.48	-13.0	-24.48
4026.500	64.90	64.20	-0.83	-2.97	36.00	9.50	2.16	-2.00	-31.49	-33.63	-13.0	-18.49
4831.800	52.40	---	-14.18	---	36.00	10.90	2.16	-2.00	-43.44	---	-13.0	-30.44
5637.100	57.00	54.30	-9.86	-10.86	36.00	11.10	2.58	-2.00	-39.34	-40.34	-13.0	-26.34
6442.400	60.40	54.80	-5.86	-11.76	36.00	12.14	2.58	-2.00	-34.30	-40.20	-13.0	-21.30
7247.700	51.20	---	-12.02	---	36.00	11.62	2.58	-2.00	-40.98	---	-13.0	-27.98
8053.000	---	---	---	---	---	---	---	---	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading − Cable Loss + Antenna Gain Corrected − Attenuation + ERP Corrected Factor

   Antenna Gain Corrected is used to convert radiated power to EIRP.

D. Emission mask plots

Please see appendix 2 for plotted data.

6.5 Radiated Measurement Photos

Please see Setup Photos in Exhibit F.

7. FREQUENCY STABILITY MEASUREMENT

7.1 Provisions Applicable

According to § 2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30℃to +50℃centigrade, and according to § 2.1055 (d)(2), the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point which is specified by the manufacturer.

According to § 74.861(e)(4), the frequency tolerance of the transmitter shall be 0.005 percent.

7.2 Measurement Procedure

A) Frequency stability versus environmental temperature

1. Setup the configuration per figure 5 for frequencies measured at ambient temperature if it is within 15℃to 25℃. Otherwise, an environmental chamber set for a temperature of 20℃shall be used. Install new batteries in the EUT.

2. Turn on EUT and set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. Set the temperature of chamber to 50℃. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.

4. Repeat step 2 with a 10℃decreased per stage until the lowest temperature -30℃is measured, record all measurement frequencies.

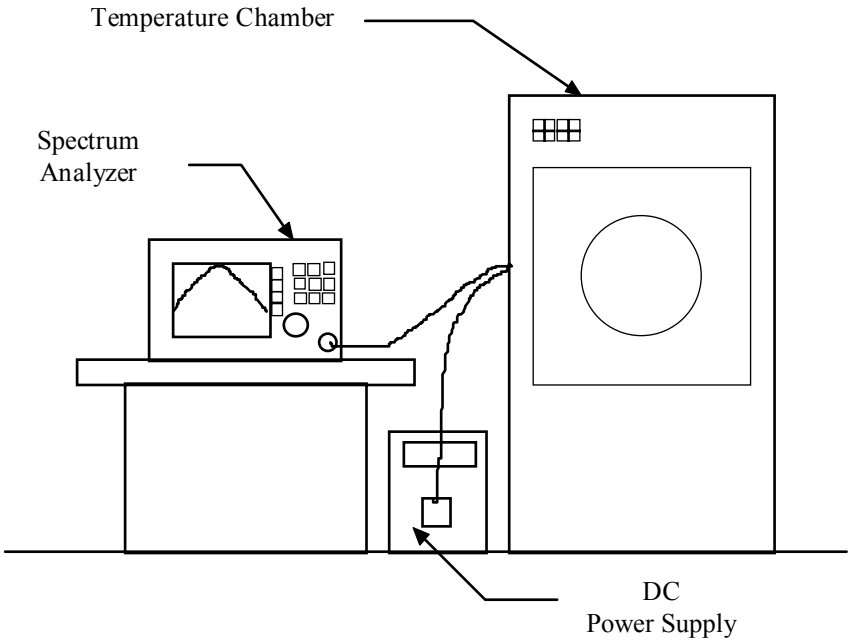
B) Frequency stability versus input voltage

1. Setup the configuration per figure 7 for frequencies measured at ambient temperature if it is within 15℃to 25℃. Otherwise, an environmental chamber set for a temperature of 20℃shall be used. Install new batteries in the EUT.

2. Set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. For battery operated only device, supply the EUT primary voltage at the battery operating end point which is specified by the manufacturer and record the frequency.

Figure 5 : Frequency stability measurement configuration



7.3 Measurement Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	HP	8564E	05/16/2003
Temperature Chamber	ACS	EOS 200T	01/17/2003

7.4 Measurement Data

A1. Frequency stability versus enviroment tempture

Reference Frequency : 740.100 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	New Batt.	740.0786	-0.00289	740.1032	0.00044	740.1141	0.00190
40	New Batt.	740.0907	-0.00125	740.1047	0.00064	740.1047	0.00064
30	New Batt.	740.1122	0.00165	740.0819	-0.00244	740.1174	0.00235
20	New Batt.	740.1107	0.00145	740.0935	-0.00088	740.0808	-0.00259
10	New Batt.	740.1008	0.00011	740.1174	0.00235	740.1181	0.00245
0	New Batt.	740.1077	0.00104	740.1143	0.00194	740.1082	0.00111
-10	New Batt.	740.1169	0.00229	740.0947	-0.00072	740.1257	0.00347
-20	New Batt.	740.0800	-0.00271	740.1238	0.00322	740.1143	0.00193

A2. Frequency stability versus end-point supplied voltage (2Vdc)

Reference Frequency : 740.100 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	End-Point	740.0783	-0.00294	740.1073	0.00099	740.0884	-0.00157

B1. Frequency stability versus enviroment tempture

Reference Frequency : 751.600 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	New Batt.	751.5949	-0.00068	751.6097	0.00129	751.5836	-0.00219
40	New Batt.	751.5803	-0.00262	751.6111	0.00147	751.5811	-0.00252
30	New Batt.	751.5792	-0.00277	751.6117	0.00156	751.5824	-0.00234
20	New Batt.	751.6167	0.00223	751.6015	0.00019	751.5907	-0.00124
10	New Batt.	751.6046	0.00061	751.6045	0.00060	751.6210	0.00279
0	New Batt.	751.5724	-0.00368	751.6082	0.00108	751.5813	-0.00249
-10	New Batt.	751.5992	-0.00011	751.6044	0.00058	751.6092	0.00122
-20	New Batt.	751.6225	0.00300	751.5853	-0.00196	751.5981	-0.00026

B2. Frequency stability versus end-point supplied voltage (2Vdc)

Reference Frequency : 751.600 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	End-Point	751.6095	0.00126	751.6111	0.00148	751.5814	-0.00248

C1. Frequency stability versus enviroment tempture

Reference Frequency : 805.300 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	New Batt.	805.3214	0.00265	805.2976	-0.00030	805.3272	0.00337
40	New Batt.	805.3296	0.00367	805.2799	-0.00250	805.3063	0.00079
30	New Batt.	805.3074	0.00091	805.3012	0.00014	805.3264	0.00328
20	New Batt.	805.2775	-0.00279	805.3298	0.00370	805.3059	0.00073
10	New Batt.	805.2986	-0.00017	805.2884	-0.00143	805.2811	-0.00234
0	New Batt.	805.2693	-0.00381	805.3019	0.00024	805.3088	0.00110
-10	New Batt.	805.3108	0.00135	805.3308	0.00382	805.2754	-0.00306
-20	New Batt.	805.2898	-0.00127	805.3116	0.00144	805.3170	0.00212

C2. Frequency stability versus end-point supplied voltage (2Vdc)

Reference Frequency : 805.300 MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	End-Point	805.2986	-0.00017	805.3114	0.00142	805.2759	-0.00299

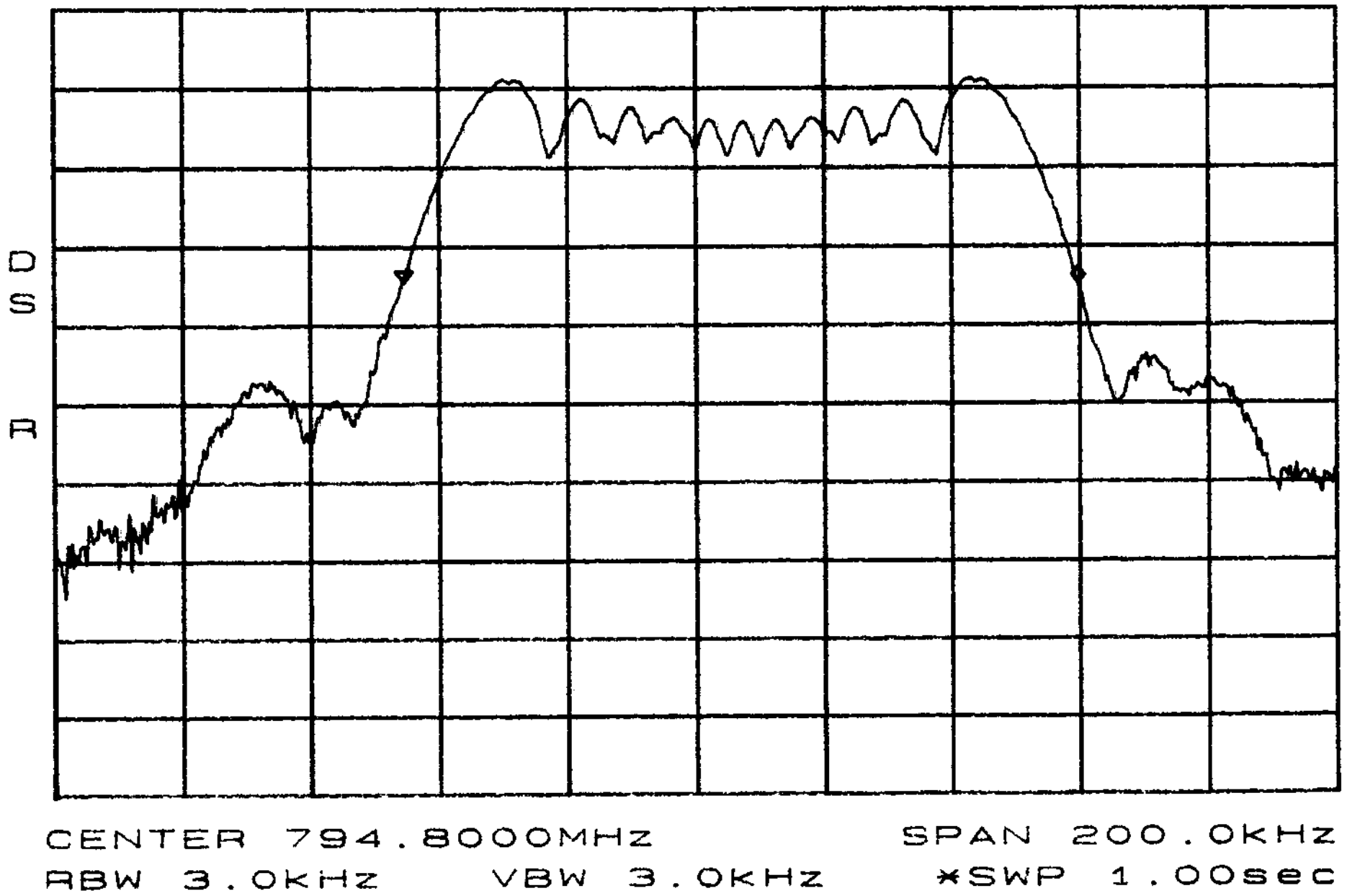
8 CONDUCTED EMISSION MEASUREMENT

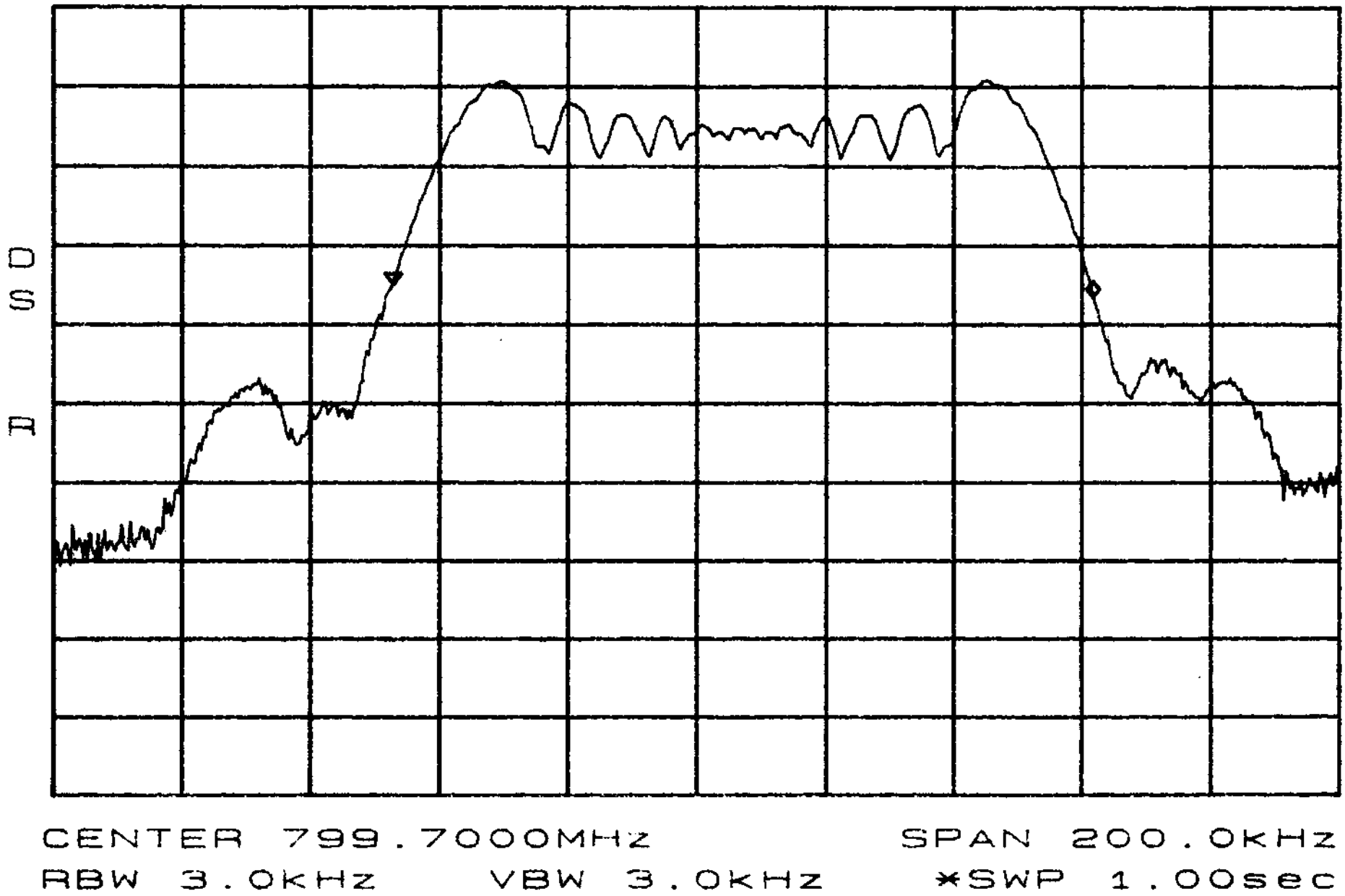
8.1 Standard Applicable

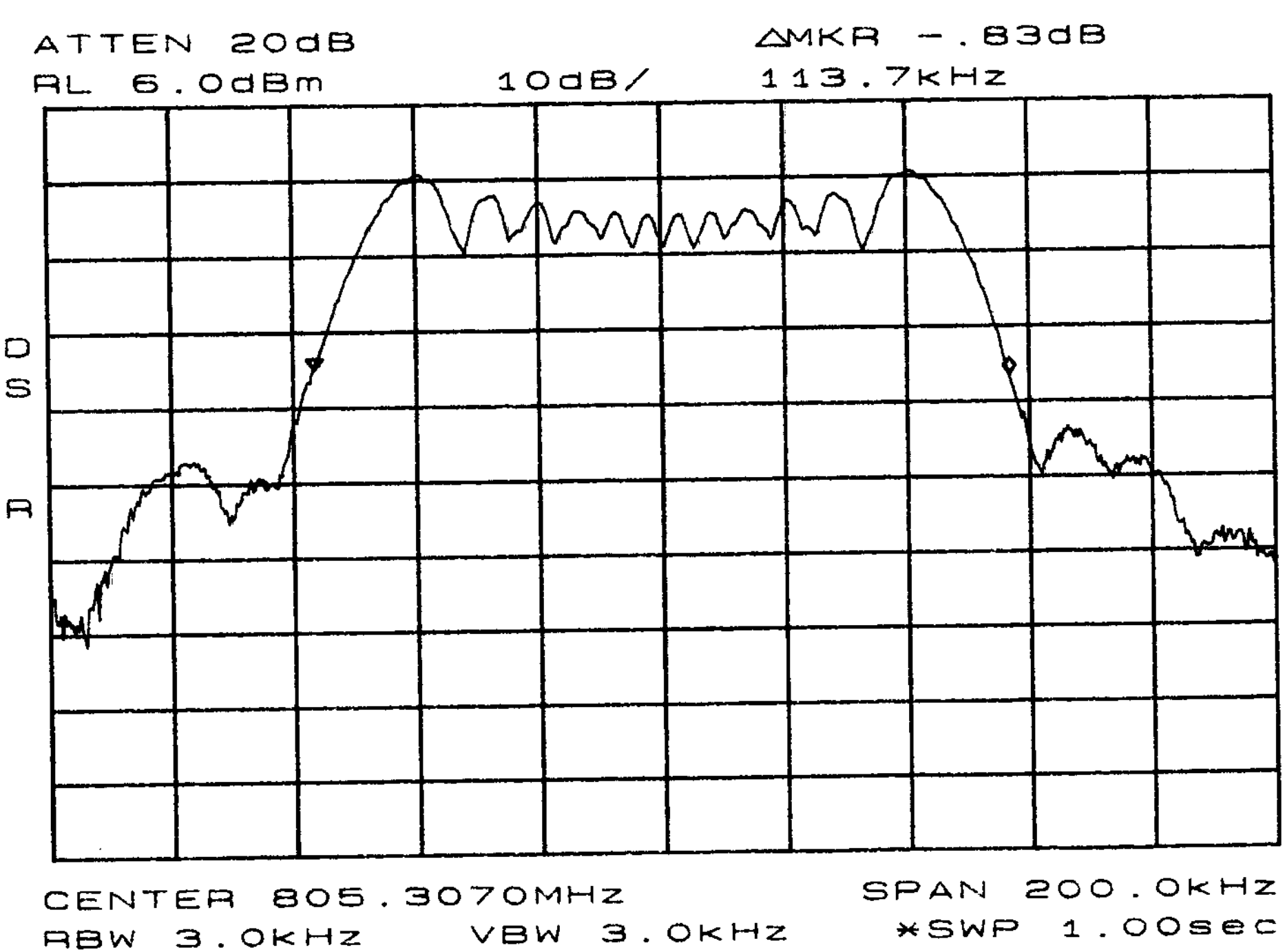
This EUT is excused from investigation of conducted emission, for it is powered by battery only. According to § 15.207 (d), measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

For intentional device, Line Conducted Emission Limits are in accordance to § 15.207(a), any emissions level shall not exceed 48 dBuV.

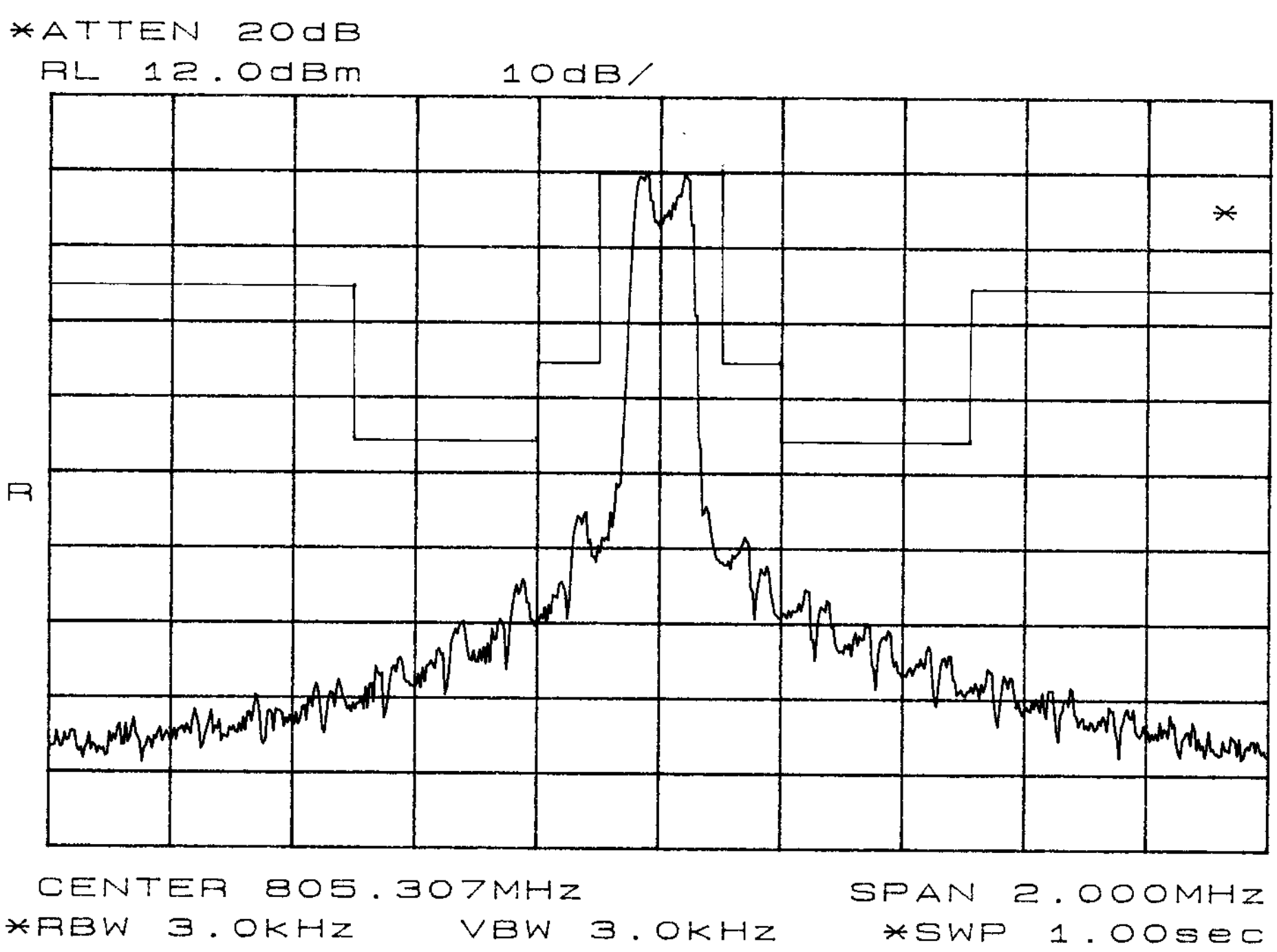
Appendix 1 : Occupied Emission Bandwidth Plotted Data

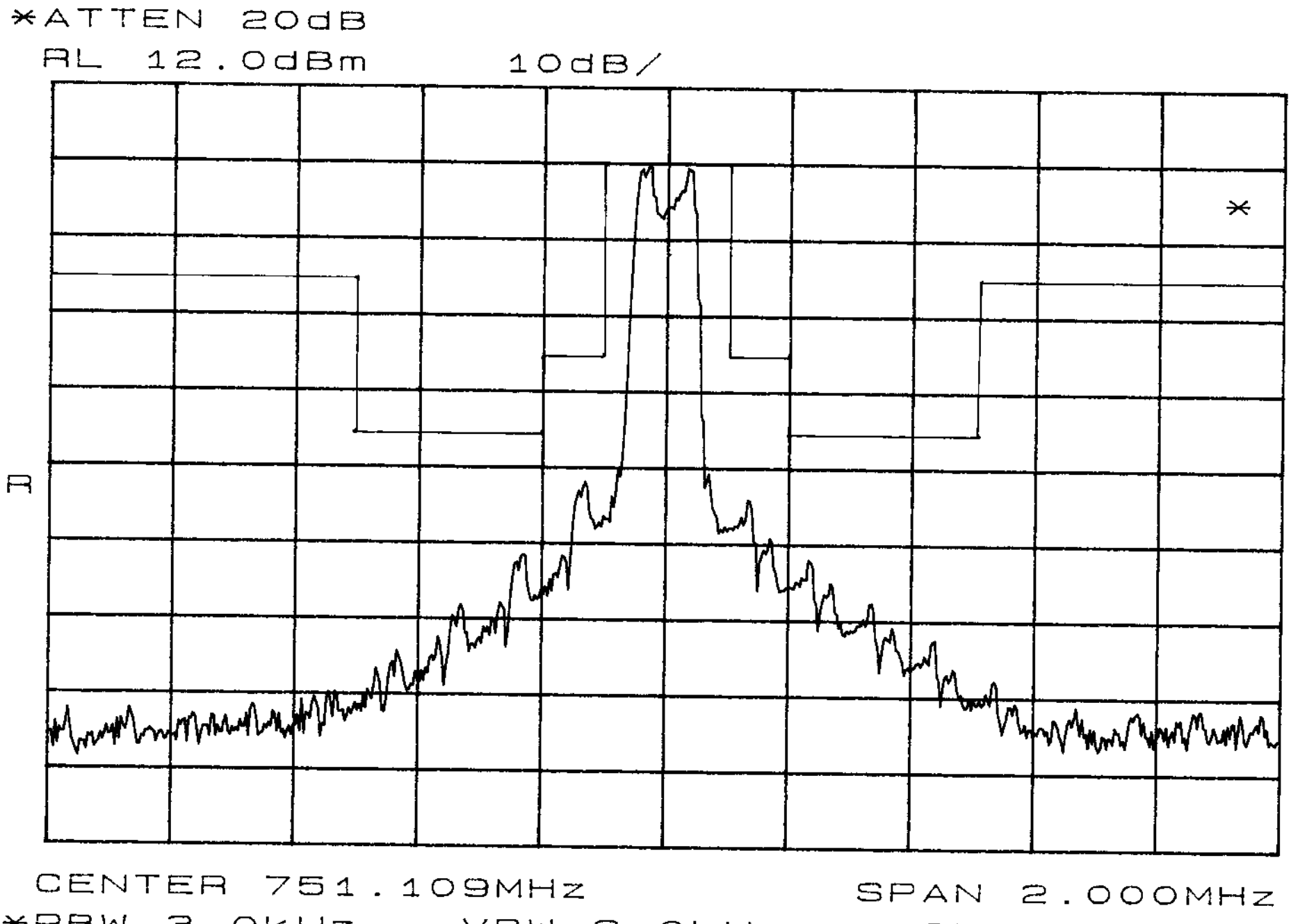

ATTEN 20dB
ΔMKR −1.17dB
RL 6.0dBm
10dB/
105.3kHz
D
S
R
CENTER 794.800MHz
SPAN 200.0kHz
RBW 3.0kHz
VBW 3.0kHz
*SWP 1.00sec

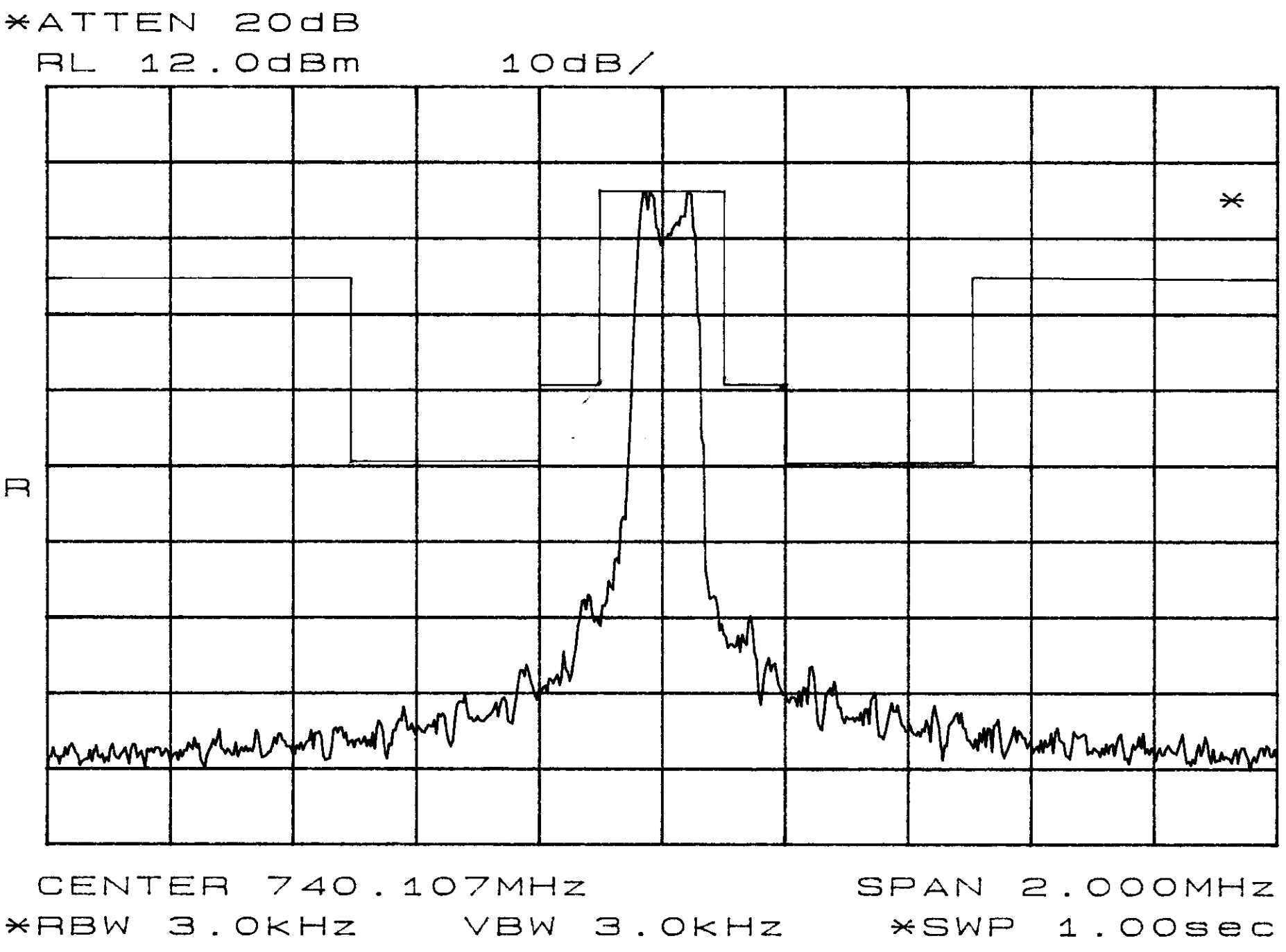

ATTEN 20dB
ΔMKR -2.00dB
RL 6.0dBm
10dB/
109.0kHz
CENTER 799.7000MHz
SPAN 200.0kHz
RBW 3.0kHz
VBW 3.0kHz
*SWP 1.00sec


ATTEN 20dB
ΔMKR -.83dB
RL 6.0dBm
10dB/
113.7kHz
dB
CENTER 805.3070MHz
SPAN 200.0kHz
RBW 3.0kHz
VBW 3.0kHz
*SWP 1.00sec

Appendix 2 : Emission Mask Plotted Data


*ATTEN 20dB
RL 12.0dBm
10dB/
R
*
CENTER 805.307MHz
SPAN 2.000MHz
*RBW 3.0kHz
VBW 3.0kHz
*SWP 1.00sec


*ATTEN 20dB
RL 12.0dBm
10dB/
R
*
CENTER 751.109MHz
SPAN 2.000MHz
*RBW 3.0KHz
VBW 3.0KHz
*SWP 1.00sec


*ATTEN 20dB
RL 12.0dBm
10dB/
R
*
CENTER 740.107MHz
SPAN 2.000MHz
*RBW 3.0kHz
VBW 3.0kHz
*SWP 1.00sec