PCTEST Engineering Laboratory, Inc.
6660-B Dobbin Road • Columbia, MD 21045 • U.S.A.
TEL (410) 290-6652 • FAX (410) 290-6654
http://www.pctestlab.com

CERTIFICATE OF COMPLIANCE

Matshushita Electric Industrial Co., Ltd.
1006 Oaza Kadoma
Kadoma, Osaka 571 Japan
Attention: Rich Mullen (PSCD)
N. Yoshizumi-Kyushu MEICL

Dates of Tests: July 11-12, 2000
Test Report S/N: 15.200710351.ACJ
Test Site: PCTEST Lab, Columbia MD

FCC ID	**ACJ96NKX-TG2670N**
APPLICANT	**Matshushita Electric Industrial Co., Ltd.**

FCC Rule Part(s):	**§ 15.247; ANSI C-63.4 (1992)**
Classification:	**Spread Spectrum Transceiver (DSS)**
Max Output Power:	**Base - 0.0755 W / Handset – 0.0804 W EIRP**
Method/System:	**Direct Sequence System (DSS)**
Equipment Type:	**Cordless Telephone (Base/Handset)**
Frequency Range:	**2401.5 – 2470.5 MHz (Base/Handset)**
Model No(s).:	**KX-TG2670N**

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C-63-4.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

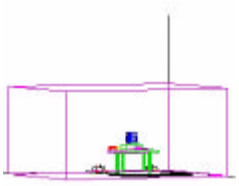
PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.

Randy Ortanez
President & Chief Engineer

2 0 0 7 1 0 3 5 1 . A C J

NVLAP LAB CODE 100431-0

TABLE OF CONTENTS



MEASUREMENT REPORT

Scope - Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

§2983(a) General Information

Applicant Name:	**Matsushita Electric Industrial Co., Ltd.**
Address:	**1006 Oaza Kadoma** **Kadoma, Osaka 571 JAPAN**
Attention:	**Rich Mullen (PSCD)** **N. Yoshizumi-Kyushu MEICL**

- FCC ID: **ACJ96NKX-TG2670N**
- Class: Spread Spectrum Transceiver (DSS)
- Type: Cordless Telephone (Base/Handset)
- Freq. Range: 2401.5 – 2470.5 MHz
- Method/System: Direct Sequence System (DSS)
- Model No(s): **KX-TG2670N**
- Max. RF Output Power: Base (75.5 mW) / Handset (80.4 mW)
- Power Supply: 9VDC 850mA (AC Adapter POLV10) - Base
2.4 VDC 1500mAh NiMh - Handset
- Cable(s): Telco
- USOC Jack: RJ-11
- Rule Part(s): § 15.247
- Dates of Tests: July 11-12, 2000
- Place of Tests: PCTEST Lab, Columbia, MD U.S.A.
- Test Report S/N: 200710351.ACJ

NOTE: The receiver portion was tested and complies with Part 15B under the verification procedure.

NVLAP Lab Code 100431-0

INTRODUCTION

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz (ANSI C63.4-1992) and FCC Public Notice dated July 12, 1995 entitled "Guidance on Measurement for Direct Sequence Spread Spectrum Systems" were used in the measurement of **Panasonic Spread Spectrum** telephone system**.**

These measurement tests were conducted at ***PCTEST Engineering Laboratory, Inc.*** facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4 on October 19, 1992.

PCTEST Location

The map at right shows the location of the PCTEST Lab, its proximity to the FCC Lab, the Columbia vicinity area, the Baltimore-Washington International (BWI) airport, and the city of Baltimore, and the Washington, D.C. area. (see Figure1).

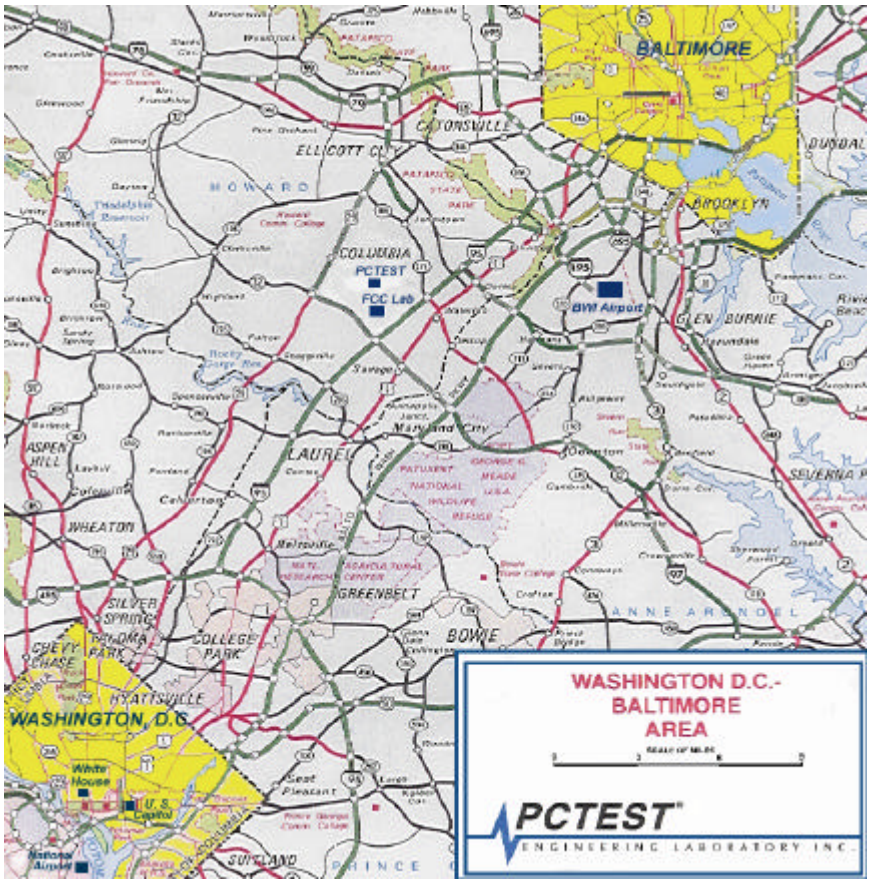


Figure 1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area.

PRODUCT INFORMATION

Equipment Description:

The Equipment under test (EUT) is the **Panasonic** cordless telephone system using spread spectrum direct sequence and time division duplex techniques.

Frequency Range:	2401.5 – 2470.5 MHz
Channels:	24 (Base/handset)
Channel Separation:	3.0 MHz
Spread Spectrum Method:	Direct Sequence (DBPSK modulation)
Max RF Output Power:	135 mW
Antenna:	Omni-directional (base/handset)
Power Consumption:	9VDC 850mA (AC Adapter POLV10)
Battery:	NiMH 2.4VDC 1500mA
Port/Connector(s):	RJ-11C (base)

EMI suppression device(s) added and/or modified during testing: *See letter attached

CH	R /Tx Freq (MHz)	CH	R :/Tx F eq. (M Hz)	CH	R :/Tx Freq (MHz)
1	2401.5	9	2425.5	17	2449.5
2	2404.5	10	2428.5	18	2452.5
3	2407.5	11	2431.5	19	2455.5
4	2410.5	12	2434.5	20	2458.5
5	2413.5	13	2437.5	21	2461.5
6	2416.5	14	2440.5	22	2464.5
7	2419.5	15	2443.5	23	2467.5
8	2422.5	16	2446.5	24	2470.5

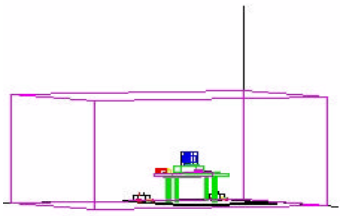


Figure 4. Shielded Enclosure Line-Conducted Test Facility

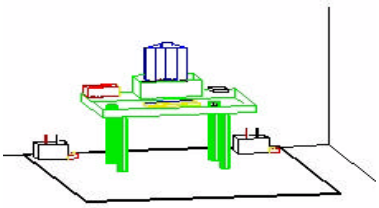


Figure 2. Line Conducted Emission Test Set-Up

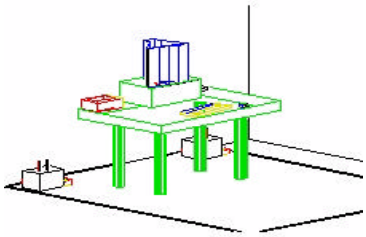


Figure 3. Wooden Table & Bonded LISNs

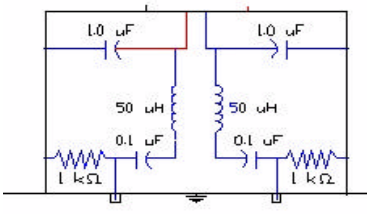


Figure 5. LISN Schematic Diagram

Description of Tests

Conducted Emissions (Base Unit)

The line-conducted facility is located inside a 16'x20'x10' shielded enclosure. It is manufactured by Ray Proof Series 81 (see Figure 2). The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-6. A 1m. x 1.5m. wooden table 80cm. high is placed 40cm. away from the vertical wall and 1.5m away from the side wall of the shielded room (see Figure 3). Solar Electronics and EMCO Model 3725/2 (10kHz-30MHz) 50Ω/50µH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room (see Figure 4). The EUT is powered from the Solar LISN and the support equipment is powered from the EMCO LISN. Power to the LISNs are filtered by a high-current high-insertion loss Ray Proof power line filters (100dB 14kHz-10GHz). The purpose of the filter is to attenuate ambient signal interference and this filter is also bonded to the shielded enclosure. All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2". If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the Solar LISN. LISN schematic diagram is shown in Figure 5. All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT. The spectrum was scanned from 450kHz to 30MHz with 20 msec. sweep time. The frequency producing the maximum level was reexamined using EMI/ Field Intensity Meter and Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode. The bandwidth of the receiver was set to 10 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission. Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet, if applicable; whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in Appendix C. Each EME reported was calibrated using the HP8640B signal generator.

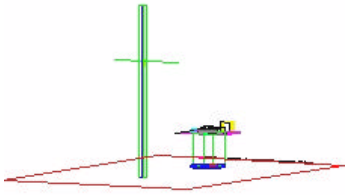


Figure 6. 3-Meter Test Site

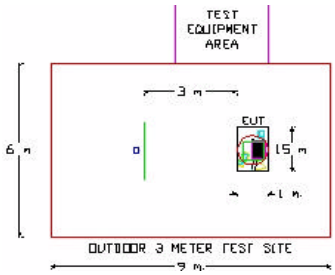


Figure 7. Dimensions of Outdoor Test Site

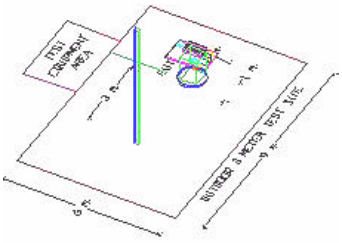


Figure 8. Turntable and System Setup

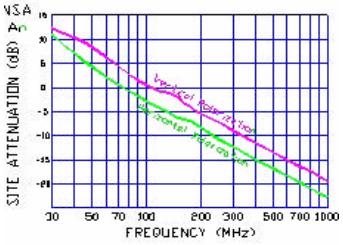


Figure 9. Normalized Site Attenuation Curves (H&V)

description of tests (Continued)

Radiated Emissions (Base & Handset)

Preliminary measurements were made indoors at 1 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found. The spectrum was scanned from 30 to 200 MHz using biconical antenna and from 200 to 1000 MHz using log-spiral antenna. Above 1 GHz, linearly polarized double ridge horn antennas were used.

Final measurements were made outdoors at 3-meter test range using Roberts™ Dipole antennas or horn antenna (see Figure 6). The test equipment was placed on a wooden and plastic bench situated on a 1.5 x 2 meter area adjacent to the measurement area (see Figure 7). Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using EMI/Field Intensity Meter and Quasi-Peak Adapter. The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100kHz or 1 MHz depending on the frequency or type of signal.

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table (see Figure 8). The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet, if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in Appendix C. Each EME reported was calibrated using the HP8640B signal generator. The Theoretical Normalized Site Attenuation Curves for both horizontal and vertical polarization are shown in Figure 9.

§ 15.205 Restricted Bands

Special attention is made for the EUT's harmonic and spurious radiated emission in the restricted bands of operation. The EUT was tested from 9kHz and up to the tenth harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average measurements was used using RBW 1 MHz – VBW 10Hz and linearly polarized horn antennas. In addition, peak measurements were taken to ensure that the peak levels are not more than 20dB above the average limit. All out of band emissions, other than those created by the spreading sequency, data sequence, and the carrier modulation must not exceed the limits show int Table 2 per 15.209.

Frequency (MHz)	F/S (UV/m)	Meas. Dist. (Meters)
0.009-0.490	2400/F (kHz)	300
0.490-1.705	24000/F (kHz)	30
1.705-30.00	30	30
30.0-88.0	100	3
88.0-216.0	150	3
216.0-960.0	200	3
Above 960	500	3

Tab. 2. Radiated Emission Limits Per 15.209

Test Equipment

HP 8566B	**Spectrum Analyzer 100Hz-22HGHz**
HP83017A	**Microwave Analyzer 40dB Gain (0.5 – 26.5 GHz)**
HP 3784A	**Digital Transmission Analyzer**
EMCO 3115	**Horn Antenna (1 – 18GHz)**
HP 8495A	**20dB Attenuator (DC-40GHz) 0-70dB**
HP 8493B	**10dB Attenuator**
MicroCoax Cables	**Low Loss Microwave Cables (1-26.5 GHz)**
CDI Dipoles	**Dipole Antennas (30 – 1000 MHz)**

§ 15.203 Antenna Requirement

An intentional radiator antenna shall be designed to ensure that no antenna other that that furnished by the applicant can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with this requirement.

Base Unit

The Panasonic **KX-TG2670N** base unit complies with the requirement of §15.203. The antenna is a **permanently attached omni-directional antenna.**

Handset Unit

The Panasonic **KX-TG2670N** handset unit complies with the requirement of §15.203.

CONCLUSION

For both units, there are no provisions for connection to an external antenna. Both Base and Handset units meets the Antenna Requirements of §15.203.

§15.247(a)(2) – Direct Sequence Bandwidth

Minimum Standard – 6dB bandwidth for direct sequence systems must be at least 500Hz (0.5 MHz).

Res. Bandwidth =	100 kHz (5dB/div)
Vid. BW =	100 kHz
Span =	5 MHz
Ref. Level	- 35 dBm
Sweep	50ms
Attenuator	0 dB ext. pad
6dB Bandwidth –Mkr Delta	**(6dB down from peak)**
(see attached spectrum plots)	

FREQ (MHz)	Base/Handset (B/H)	Channel	6dB Bandwidth (MHz)
2401.5	B	1	1.66
2434.5	B	12	1.66
2470.5	B	24	1.64
2401.5	H	1	1.68
2434.5	H	12	1.66
2470.5	H	24	1.68

Table 3. 6dB Bandwidth measurements

REMARKS:

PASS

§15.247(b) Maximum Peak Output Power

Minimum Standard – The maximum peak output power of the transmitter shall not exceed 1 watt.

Res. Bandwidth =	3 MHz (5dB/div)
Vid. BW =	3 MHz
Span =	300 kHz
Ref. Level	-28 dBm
Sweep	5 ms sec
Attenuator	0 dB ext. pad

Max. Power Peak + Atten = dBm ⇒ Watts

FRE) (MH :)	Base/H andset (B/ H)	Cha nnel	Power (utput (dB)	Power (utput (m\ /)
2401.5	B	1	17.19	52.4
2434.5	B	12	18.03	63.6
2470.5	B	24	18.78	75.5
2401.5	H	1	18.94	78.4
2434.5	H	12	19.33	80.4
2470.5	H	24	18.78	75.5

Table 4. Output Power Measurements

REMARKS:

PASS

§15.247(c) Power Density

Minimum Standard – The transmitted power density averaged over any 1 second interval shall not be greater than 8dBm in any 3kHz bandwidth within these bands.

Res. Bandwidth =	3 kHz (10dB/div)
Vid. BW =	3 kHz
Span =	300 kHz (3.0 MHz)
Ref. Level	- 35 dBm
Sweep	1000 sec

Peak + Atten = dBm ⇒ (Limit < 8dBm)

FREQ (MHz)	Base/Ha dset (B/H	Chan el	Power D nsity (dBr
2406.16	B	1	- 0.49
2441.52	B	12	- 1.07
2477.84	B	24	- 0.92
2406.16	H	1	3.07
2441.52	H	12	3.27
2477.84	H	24	2.02

Table 5. Output Power Density Data.

REMARKS:

PASS

RADIATED Measurements (Fundamental & Harmonics)

A. Transmitter Portion (Base)

Operating Frequency: 2401.5 MHz

Distance of Measurements: 3 meters

Channel: 1

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	DET QP/AVG	E/S (µV/m)	E/S (dBµV/m)	Margin dB)
2401.5	- 31.0	36.4	V	QP	417830.4	112.4	n/a
4803.0	- 104.0	44.4	V	Peak	234.153	47.4	6.6
7204.5	- 109.5	50.4	V	AVG	248.886	47.9	64.5
9606.0	- 114.1	54.8	V	Peak	242.661	47.7	64.7
12007.5	< - 120	57.5					

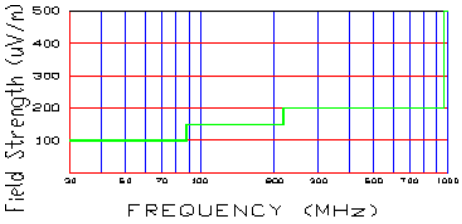


Figure 10. Restriced band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Fundamental & Harmonics) (CONT.)

B. Transmitter Portion (Base)

Operating Frequency: 2434.5 MHz

Distance of Measurements: 3 meters

Channel: 12

REQ. MHz)	L evel* (Bm)	FCL dB)	OL H/V)	DET QP /AVG	F/S (µ V/m)	F/S (dB µV/m)	Margin dB)
2434.5	- 30.3	36.6	V	Peak	460256.6	113.3	n/a
4869.0	- 105.0	44.6	V	Peak	213.059	46.6	7.4
7303.5	- 110.0	50.5	V	Peak	236.320	47.5	6.5
9738.0	- 113.0	55.0	V	Peak	278.612	48.9	64.4
12172.5	< - 120	57.6					

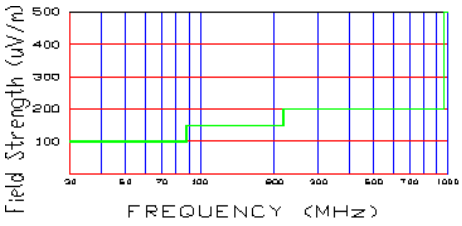


Figure 10. Restriced band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Fundamental & Harmonics) (CONT.)

C. Transmitter Portion (Base)

Operating Frequency: 2470.5 MHz

Distance of Measurements: 3 meters

Channel: 24

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	DET QP/AVG	F/S (µV/m)	F/S (dBµV/m)	Margin dB)
2470.5	- 29.8	36.8	V	Peak	501764.6	114.0	n/a
4941.0	- 105.2	44.6	V	Peak	209.170	46.4	7.6
7411.5	- 110.8	50.5	V	Peak	216.272	46.7	7.3
9882.0	- 113.2	55.0	V	Peak	276.376	48.8	65.2
12352.5	< - 120	57.7					

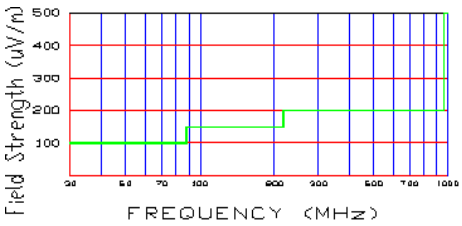


Figure 10. Restriced band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Fundamental & Harmonics) (CONT.)

D. Transmitter Portion (Handset)

Operating Frequency: 2401.5 MHz

Distance of Measurements: 3 meters

Channel: 1

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	DET QP/AVG	F/S (µV/m)	F/S (dBµV/m)	Margin dB)
2401.5	- 29.3	36.4	V	Peak	511093.1	114.2	n/a
4803.0	- 105.2	44.4	V	Peak	203.939	46.2	7.8
7204.5	- 110.0	50.4	V	Peak	234.963	47.4	66.8
9606.0	- 115.6	54.8	V	Peak	204.174	46.2	68.0
12007.5	< - 120	57.5					

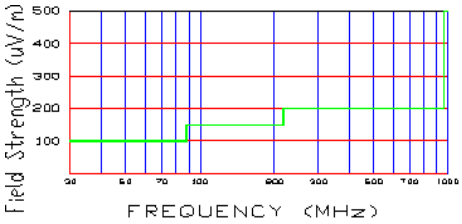


Figure 10. Restricted band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Fundamental & Harmonics) (CONT.)

E. Transmitter Portion (Handset)

Operating Frequency: 2434.5 MHz

Distance of Measurements: 3 meters

Channel: 12

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	DET QP/AVG	F/S (µV/m)	F/S (dBµV/m)	Margin dB)
2434.5	- 29.0	36.6	V	Peak	534564.4	114.6	n/a
4869.0	- 106.2	44.6	V	Peak	185.567	45.4	8.6
7303.5	- 110.6	50.5	V	Peak	220.546	46.9	7.1
9738.0	- 113.2	54.9	V	Peak	272.270	48.7	65.9
12172.5	< - 120	57.6					

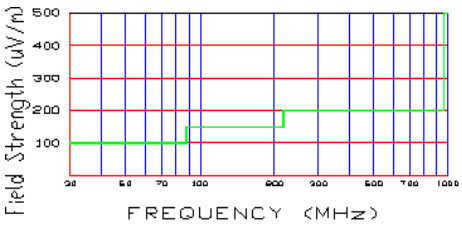


Figure 10. Restriced band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Fundamental & Harmonics) (CONT.)

F. Transmitter Portion (Handset)

Operating Frequency: 2470.5 MHz

Distance of Measurements: 3 meters

Channel: 24

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	DET QP/AVG	F/S (µV/m)	F/S (dBµV/m)	Margin dB)
2470.5	- 29.8	36.8	V	Peak	501764.6	114.0	n/a
4941.0	- 103.9	44.6	V	Peak	242.941	47.7	6.3
7411.5	- 111.0	50.5	V	Peak	211.349	46.5	7.5
9882.0	- 113.6	55.0	V	Peak	263.937	48.4	65.6
12352.5	< - 120	57.7					

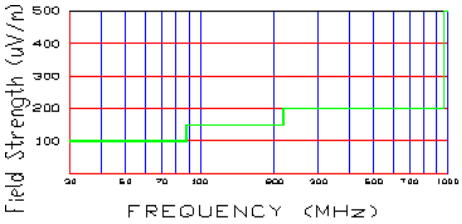


Figure 10. Restriced band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in table 2. (note: * Restricted Band)

2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz

3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz

4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.

5. The antenna is manipulated through typical positions, polarity and length during the tests.

6. The EUT is supplied with nominal AC voltage or/and a new/fully recharged battery.

7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.

8. < - 120 are below the analyzer floor level.

RADIATED Measurements (Spurious)

A. Transmitter Portion (Base/Handset)

Operating Frequency: 2401.5 – 2470.5 MHz

Distance of Measurements: 3 meters

Channel: 1, 12, 24

FREQ. (MHz)	Level* (dBm)	FCL dB)	POL (H/V)	F/S (µV/m)	DET QP/AVG	Margin dB)
31.5	- 74.2	- 0.8	V	39.9	QP	- 8.0
73.7	- 83.2	6.7	H	33.6	QP	- 9.5
147.4	- 86.9	13.4	H	47.4	QP	- 10.0
296.0	- 182.1	116.4	V	116.2	QP	- 4.7
320.0	- 91.9	21.3	V	66.1	QP	- 9.6
492.0	- 97.9	25.9	V	56.3	QP	- 11.0

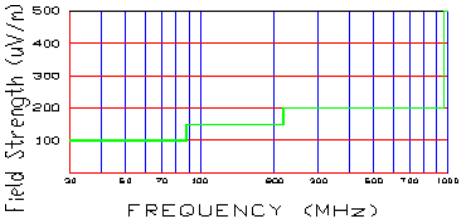


Figure 10. Restricted band harmonics and spurious limits.

Above 1 GHz limit is 500 uV/m (54dBu/m)

NOTES:

1.All emissions were investigated and the worst case emissions are reported

2. For hand-held devices, the EUT is rotated through three orthogonal axis to determine which configuration produces the maximum emissions

3. The EUT is supplied with the minimal AC voltage or/and a new/fully recharged battery.

4. The EUT was tested up to the 10th harmonic (9.3 GHz) and no significant emission was found.

§15.247(e) Processing Gain (from Panasonic)

The spread spectrum characteristic of the Panasonic TCS970 cordless phone are derived from the ASIC (C85) of the Logic Board. The audio signal transformed to the ADPCM signal from the Audio Modem part of the ASIC. The ADPCM signal becomes the input to the Baseband Modem part of the ASIC (U1), scramble by the 16 pin PN sequence, differential encode by the DBPSK, spread by the 12 chip spreading code. The spread signal becomes the input to the RF Board in the period of 2mS under the control of TDD. The spread signal which comes from the RF Board despread by the Matched Filter of the Baseband Modem of the ASIC (U1), differential decode by the DBPSK, descramble signal decode the ADPCM signal from the Audio Modem part of the ASIC (U1).

In the receiver, the demodulated output signal of the FM discriminator is transferred into the logic board. The logic board output is a baseband data and clock signal which are sent to BER measuring circuit. A Jamming signal is added to the RF output signal. This jamming signal is generated by a signal generator which operates with a continuous wave (CW) output.

The signal generator is stepped across the 2 MHz bandwidth of the system. The generator was stepped in 20kHz steps. At each point, the level required to reduce the Bit Error Rate (BER) of 0.001 was recorded. This level is the jammer level. The output power of the transmitting unit was measured at the same point. The Jamming Margin (Jammer to Signal Ratio (J/S)) when the BER shows $1x10^{-3}$ is measured. It should be noted that the ADPCM codec shows good voice quality when the ratio is achieved. There are 100 measuring points within the main love of the output spectrum waveform. After the worst twenty points (20%) are discarded, the resultant J/S of 0.3 dB is achieved.

In a practical system, there are always implementation losses which degrade the performance of the system below that of an optimal, theoretical system of the same type. Performance was traded, at some point, for low cost consideration. We know that in our system, losses occur due to non-optimal filtering, from lack of equalization, LO phase noise, "corner cutting in digital processing", etc. We are confident that the total losses in our system including transmitter and receiver losses are in excess of 2dB.

For the phone, the system losses are assumed to be 2dB. The signal-to-Noise ratio for an ideal non-coherent receiver is calculated from:

$$Pe = 1/2e^{(-1/2(S/N)o)}$$

Where: Pe = probability of error

(S/N)o = signal-to-noise ratio

Ref.: Viterbi, A.J., Principles of Coherent Communication, (New York: McGraw-Hill, 1966), Pg 207.

The Processing Gain was then calculated using the formula:

Gp = (S/N)o + Mj + Lsys where: (S/N)o = signal-to-noise ratio
Mj = J/S ratio
Lsys = system losses

Ref.: Dixon, R., Spread Spectrum Systems, New York: Wiley, 1984), Chapter 1.

Using the above equation, a 10dB signal-to-noise ratio is required for a 0.001 BER.

Gp = (S/N)o + Mj + Lsys

Gp = 10dB + (0.3dB) + 2dB

Gp = 12.3 dB

The processing gain was measured to be 12.3dB using the CW Jamming method.

§15..247(e) The processing gain of a direct sequence system shall be at least 10dB. The processing gain shall be determined from the ratio in dB of the signal to noise ratio with the system spreading code turned on, as measured at the demodulated output of the receiver.

Results:

PASS

The test results of Section 15.247(e) were confirmed by PCTEST Engineering Lab.

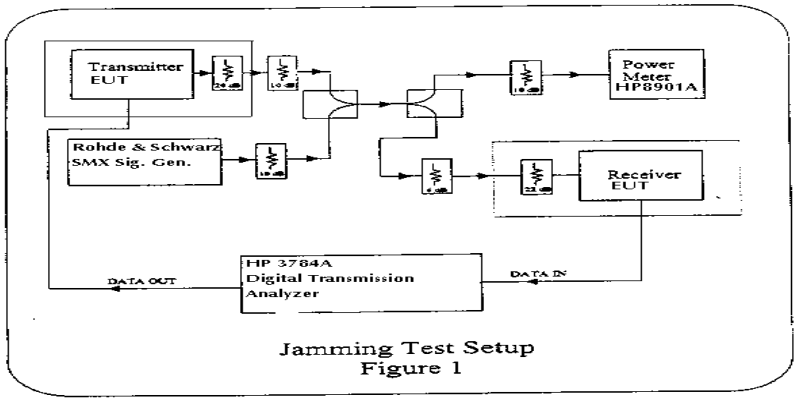


Fig. 17. Processing Gain Jamming Method Test Setup.

§15.247(e) Processing Gain (from Panasonic)

KX-TG2670N Processing Gain Test Results

Kyushu Matsushita Electric Co., Ltd..

Telephone Engineering Department/
Telecom Division

Kazuhide Watanabe

	Portable Unit	Base Unit
	KX-TG2670N-R	KX-TG2670N-H
Δf(kHz)	J/S Ratio(dB)	J/S Ratio(dB)
1000	8.3	8.6
950	6.6	6.6
900	4.3	4.5
850	2.7	3.0
800	0.7	0.6
750	-1.2	-0.2
700	-1.2	-1.6
650	-1.3	-1.7
600	-1.2	-1.5
550	-1.2	-1.5
500	-0.9	-1.5
450	-0.9	-1.9
400	-0.9	-1.5
350	-0.7	-1.5
300	-0.8	-1.1
250	-0.7	-0.9
200	-0.5	-0.8
150	0.1	-1.1
100	-0.4	-0.5
50	-1.6	-1.0
0	0.1	-1.5
-50	-1.9	-2.0
-100	0.6	-1.0
-150	-0.1	-0.6
-200	0.2	-0.9
-250	-0.3	-0.9
-300	-0.6	-1.2
-350	-0.6	-1.2
-400	-0.9	-1.2
-450	-1.3	-1.5
-500	-1.2	-1.6
-550	-1.5	-1.6
-600	-1.5	-1.9
-650	-1.5	-1.9
-700	-1.5	-2.0
-750	-1.1	-1.1
-800	0.2	-0.4
-850	2.2	1.5
-900	4.1	3.5
-950	6.0	5.3
-1000	8.0	7.4

J/S Ratio = (Jammer Signal) /(Desired Signal) Ratio

= worst 20% points

These points are excluded.

Mj Jamming Margin

Mj(J/S ratio)	
Portable	-1.2dB
Base	-1.6dB

Note: Mj level is worst value
after exclude worst 20% points.

Process Gain

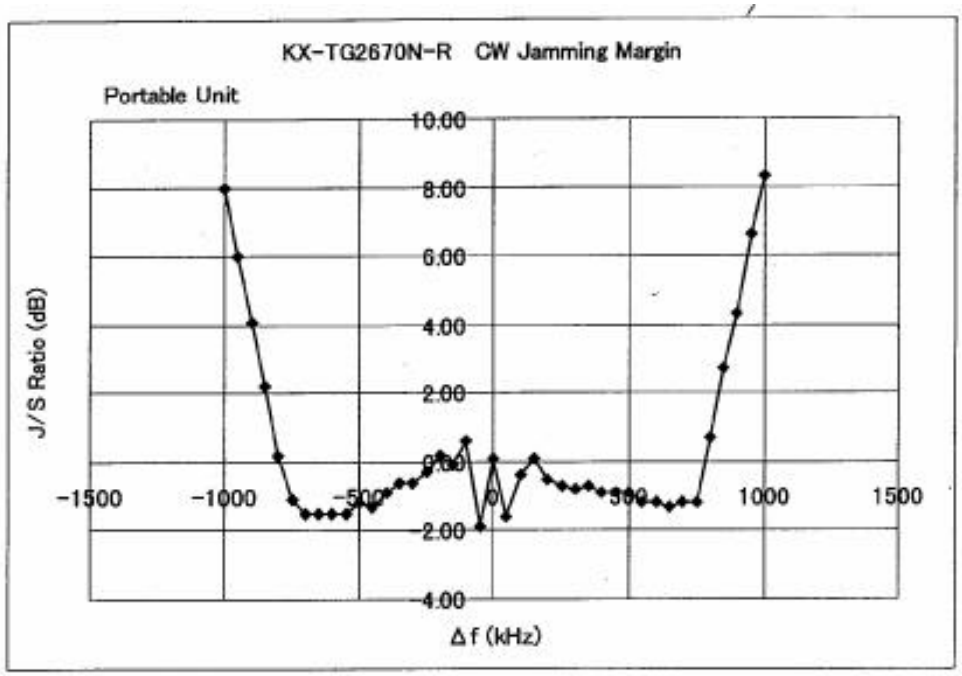
Gp = (S/N)o + Mj + Lsys

(S/N)o = 11dB
Lsys = 2.0dB
Mj: compare above table.

Gp (Process Gain)		
Portable	11.8dB	(=-1.2+11+2)
Base	11.4dB	(=-1.6+11+2)

Fig. 18. Test Results of
Processing Gain

§15.247(e) Processing Gain (from Panasonic)



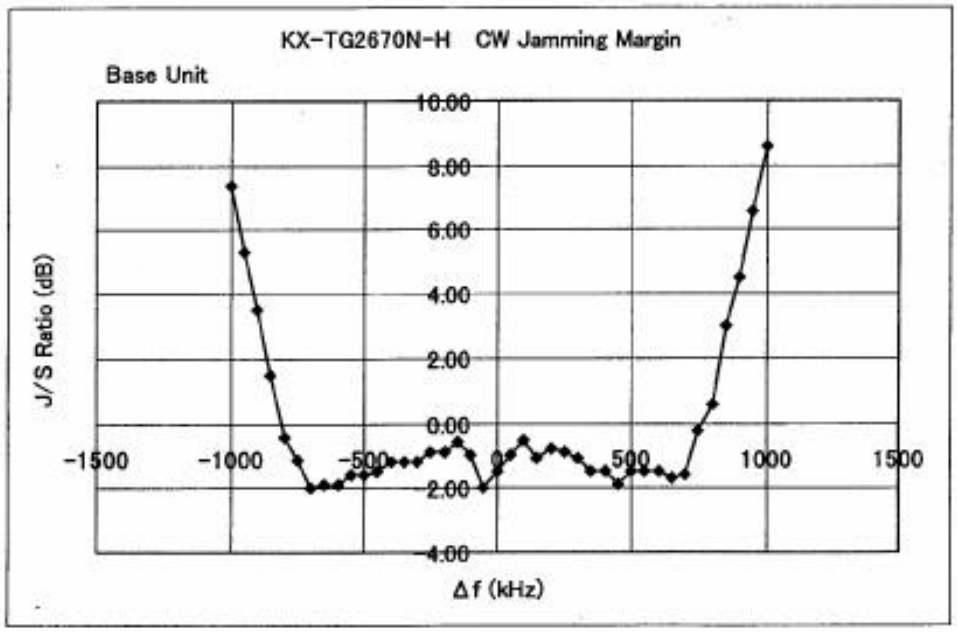


Fig. 19. Test Results of Jamming Margin

TEST EQUIPMENT

Type	Model	Cal. Due Date	S/N
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	12/05/00	3638A08713
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	04/17/01	2542A11898
Spectrum Analyzer/Tracking Gen.	HP 8591A (9kHz-1.8GHz)	06/02/01	3144A02458
Spectrum Analyzer	HP 8591A (9kHz-1.8GHz)	10/15/00	3108A02053
Spectrum Analyzer	HP 8594A (9kHz-2.9GHz)	11/02/00	3051A00187
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	2232A19558
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	1851A09816
Signal Generator*	Rohde & Schwarz (0.1-1000MHz)	09/11/00	894215/012
Ailtech/Eaton Receiver	NM 37/57A-SL (30-1000MHz)	04/12/01	0792-03271
Ailtech/Eaton Receiver	NM 37/57A (30-1000MHz)	03/11/01	0805-03334
Ailtech/Eaton Receiver	NM 17/27A (0.1-32MHz)	09/17/00	0608-03241
Quasi-Peak Adapter	HP 85650A	08/09/00	2043A00301
Ailtech/Eaton Adapter	CCA-7 CISPR/ANSI QP Adapter	03/11/01	0194-04082
RG58 Coax Test Cable	No. 167		n/a
Harmonic/Flicker Test System	HP 6841A (IEC 555-2/3)		3531A00115
Broadband Amplifier (2)	HP 8447D		1145A00470, 1937A03348
Broadband Amplifier	HP 8447F		2443A03784
Transient Limiter	HP 11947A (9kHz-200MHz)		2820A00300
Horn Antenna	EMCO Model 3115 (1-18GHz)		9704-5182
Horn Antenna	EMCO Model 3115 (1-18GHz)		9205-3874
Horn Antenna	EMCO Model 3116 (18-40GHz)		9203-2178
Biconical Antenna (4)	Eaton 94455/Eaton 94455-1/Singer 94455-1/Compliance Design 1295, 1332, 0355		
Log-Spiral Antenna (3)	Ailtech/Eaton 93490-1		0608, 1103, 1104
Roberts Dipoles	Compliance Design (1 set) A100	08/25/00	5118
Ailtech Dipoles	DM-105A (1 set)		33448-111
EMCO LISN (2)	3816/2		1077, 1079
EMCO LISN	3725/2		2009
Microwave Preamplifier 40dB Gain	HP 83017A (0.5-26.5GHz)		3123A00181
Microwave Cables	MicroCoax (1.0-26.5GHz)		
Ailtech/Eaton Receiver	NM37/57A-SL		0792-03271
Spectrum Analyzer	HP 8591A		3034A01395
Modulation Analyzer	HP 8901A		2432A03467
NTSC Pattern Generator	Leader 408		0377433
Noise Figure Meter	HP 8970B		3106A02189
Noise Figure Meter	Ailtech 7510		TE31700
Noise Generator	Ailtech 7010		1473
Microwave Survey Meter	Holaday Model 1501 (2.450GHz)		80931
Digital Thermometer	Extech Instruments 421305		426966
Attenuator	HP 8495A (0-70dB) DC-4GHz		
Bi-Directional Coax Coupler	Narda 3020A (50-1000MHz)		
Shielded Screen Room	RF Lindgren Model 26-2/2-0		6710 (PCT270)
Shielded Semi-Anechoic Chamber	Ray Proof Model S81		R2437 (PCT278)
Environmental Chamber	Associated Systems Model 1025 (Temperature/Humidity)		PCT285

* Calibration traceable to the National Institute of Standards and Technology (NIST).

Conclusion

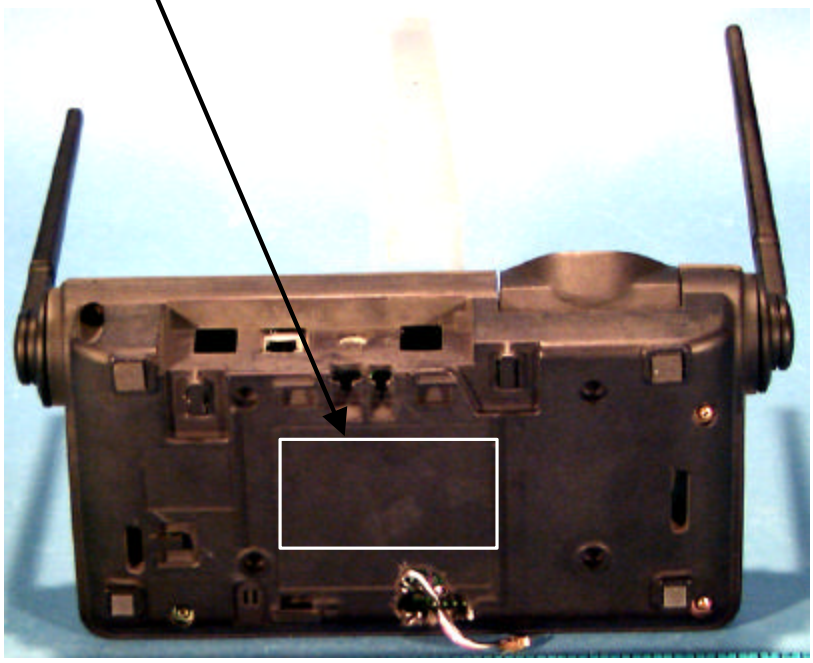
The data collected shows that the **Panasonic Cordless Telephone System** complies with Part 15C of the FCC Rules.

Appendix A: FCC ID Sample Label & Location

(SEE NEXT PAGE)

LABELLING REQUIREMENTS PER §§ 2.925 & §§ 15.19

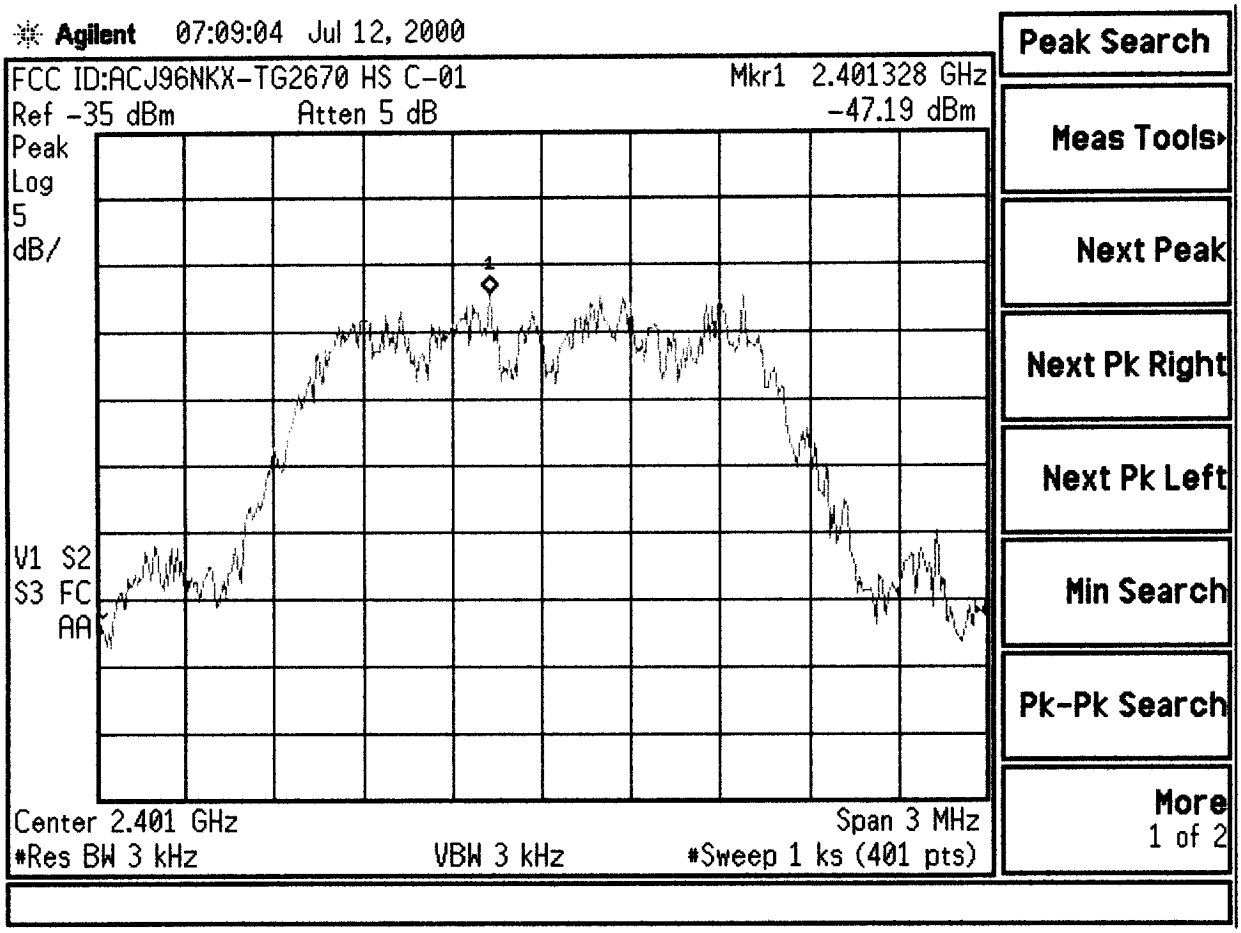
The Label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

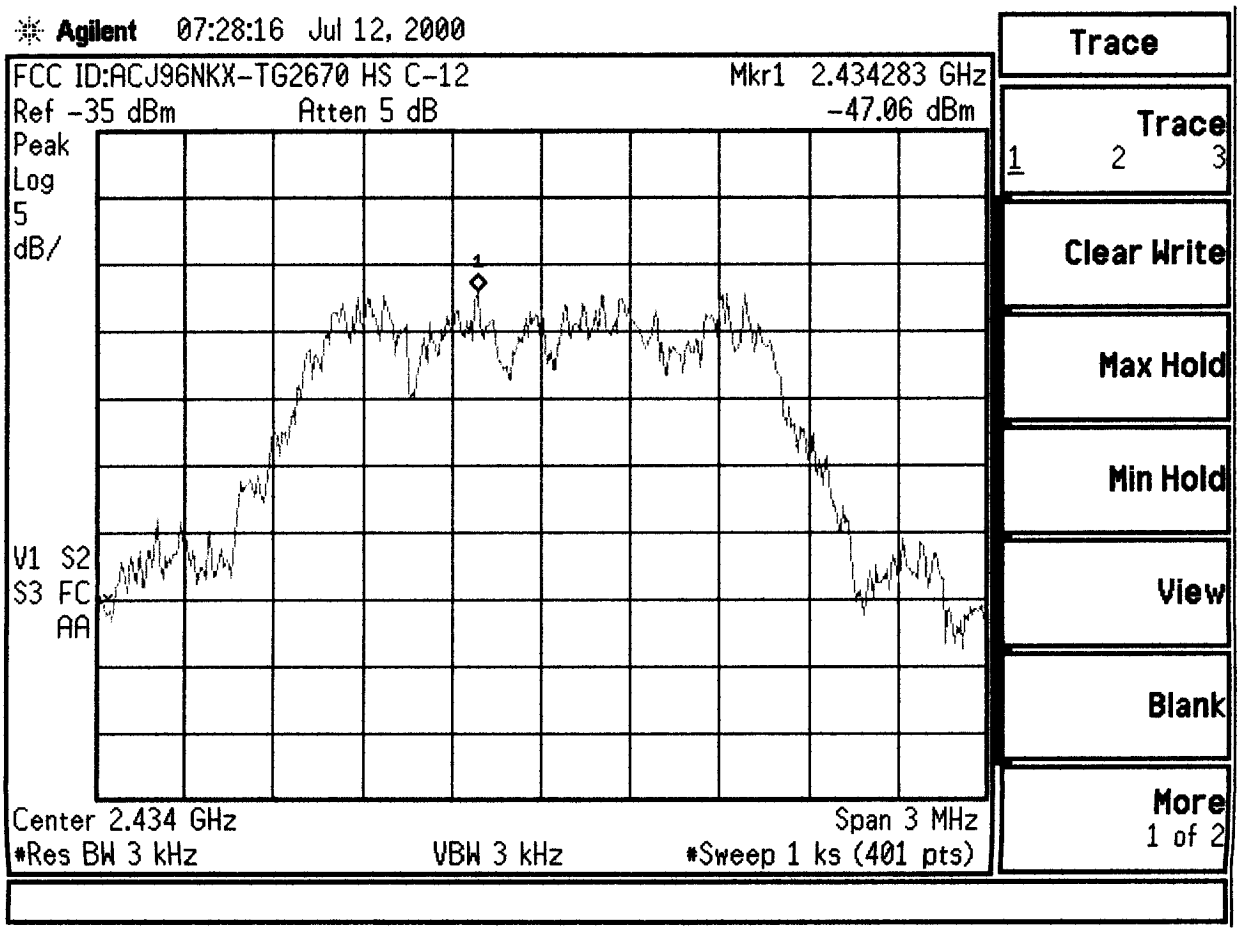


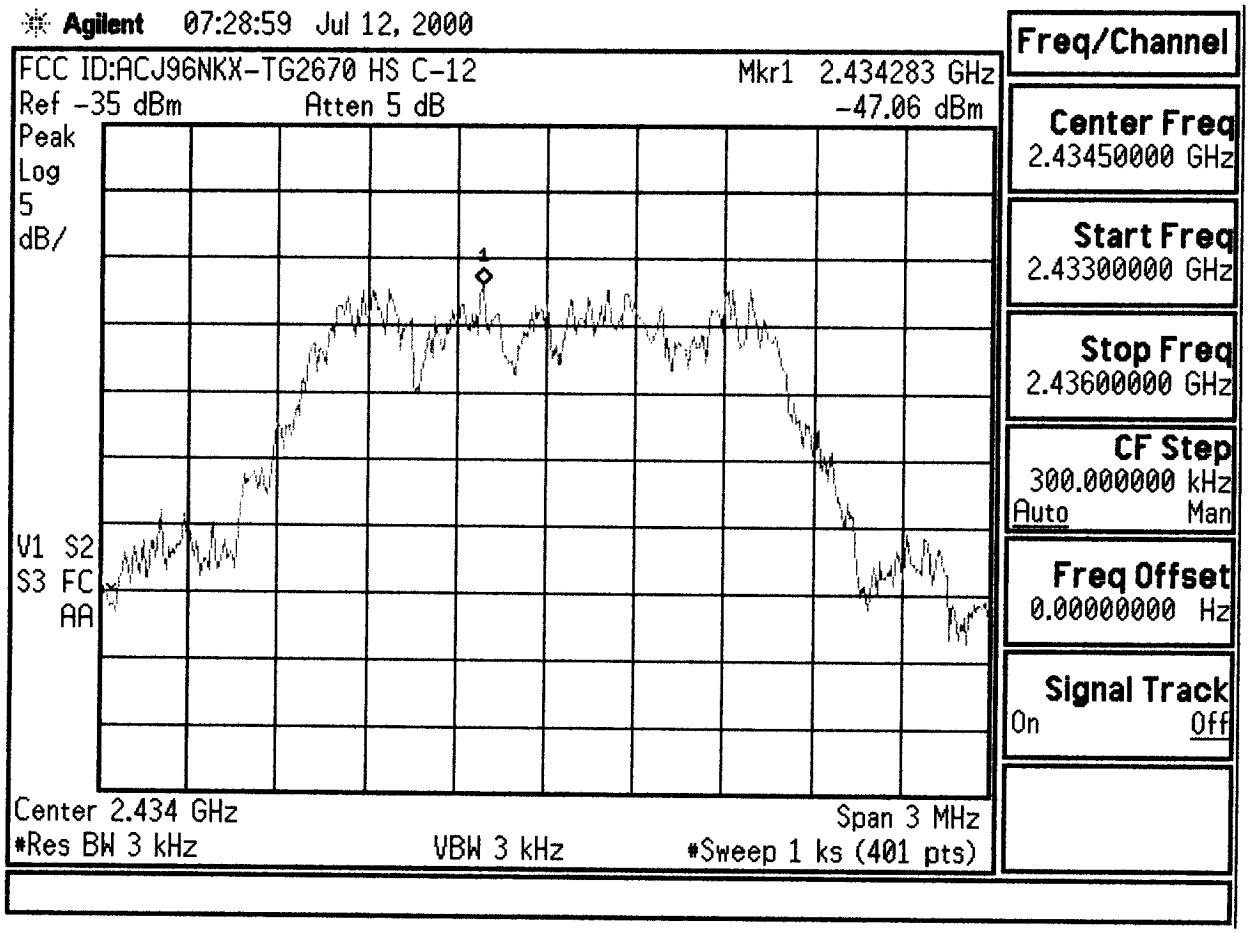
FCC ID: ACJ96NKX-TG2670N

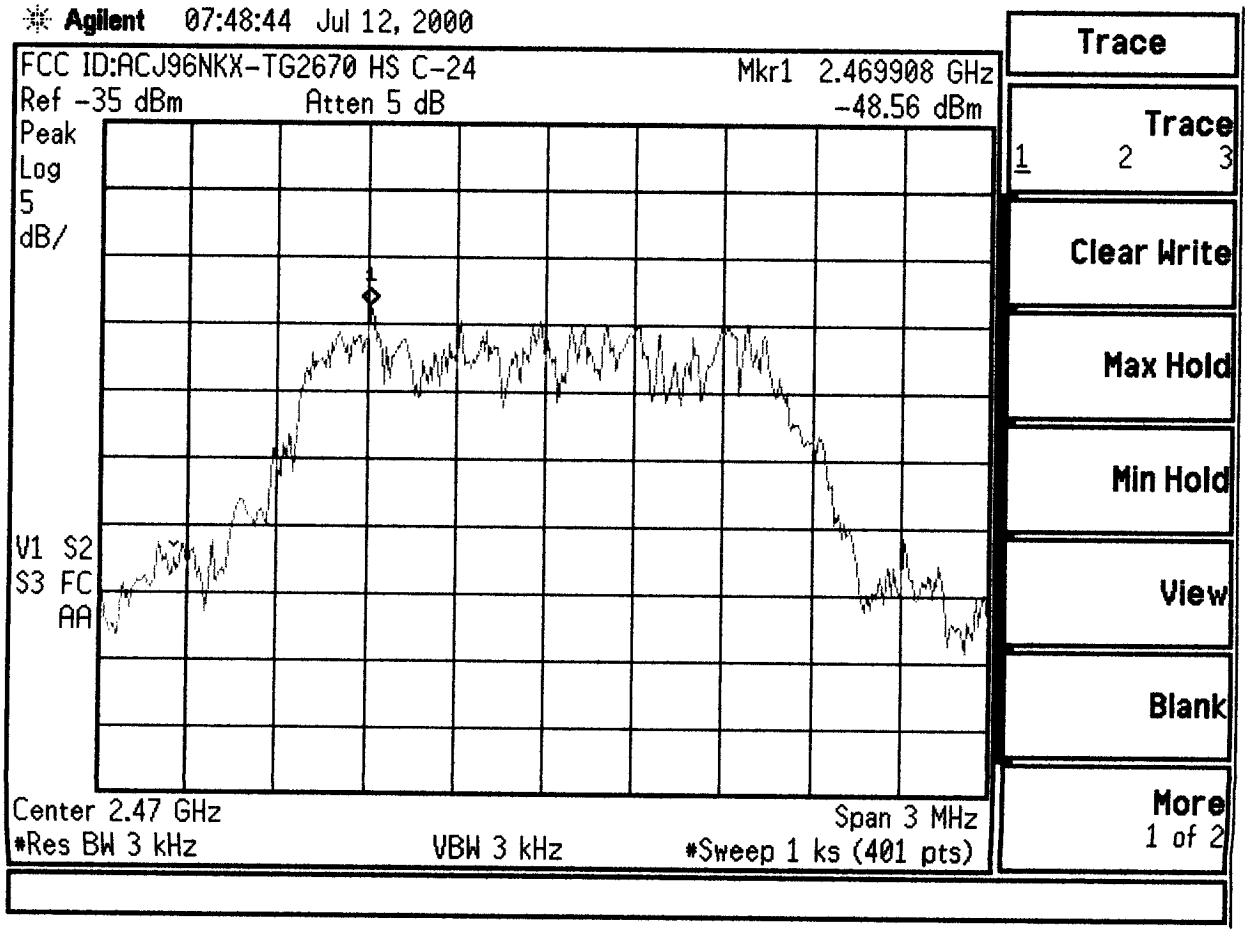
THIS DEVICE COMPLIES WITH PART 15 OF FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: 1. THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND 2. THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

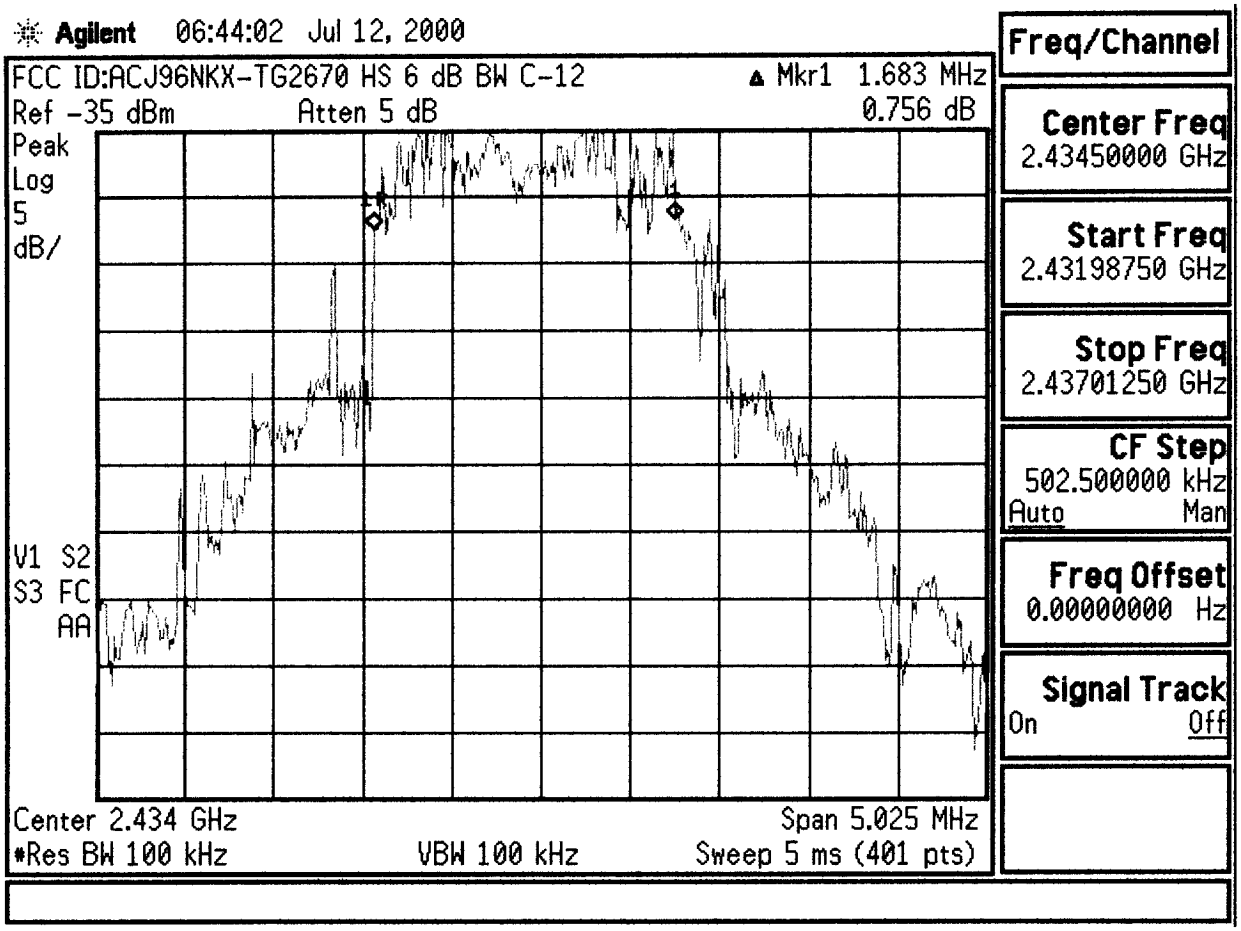
Appendix B – Plots of Emissions

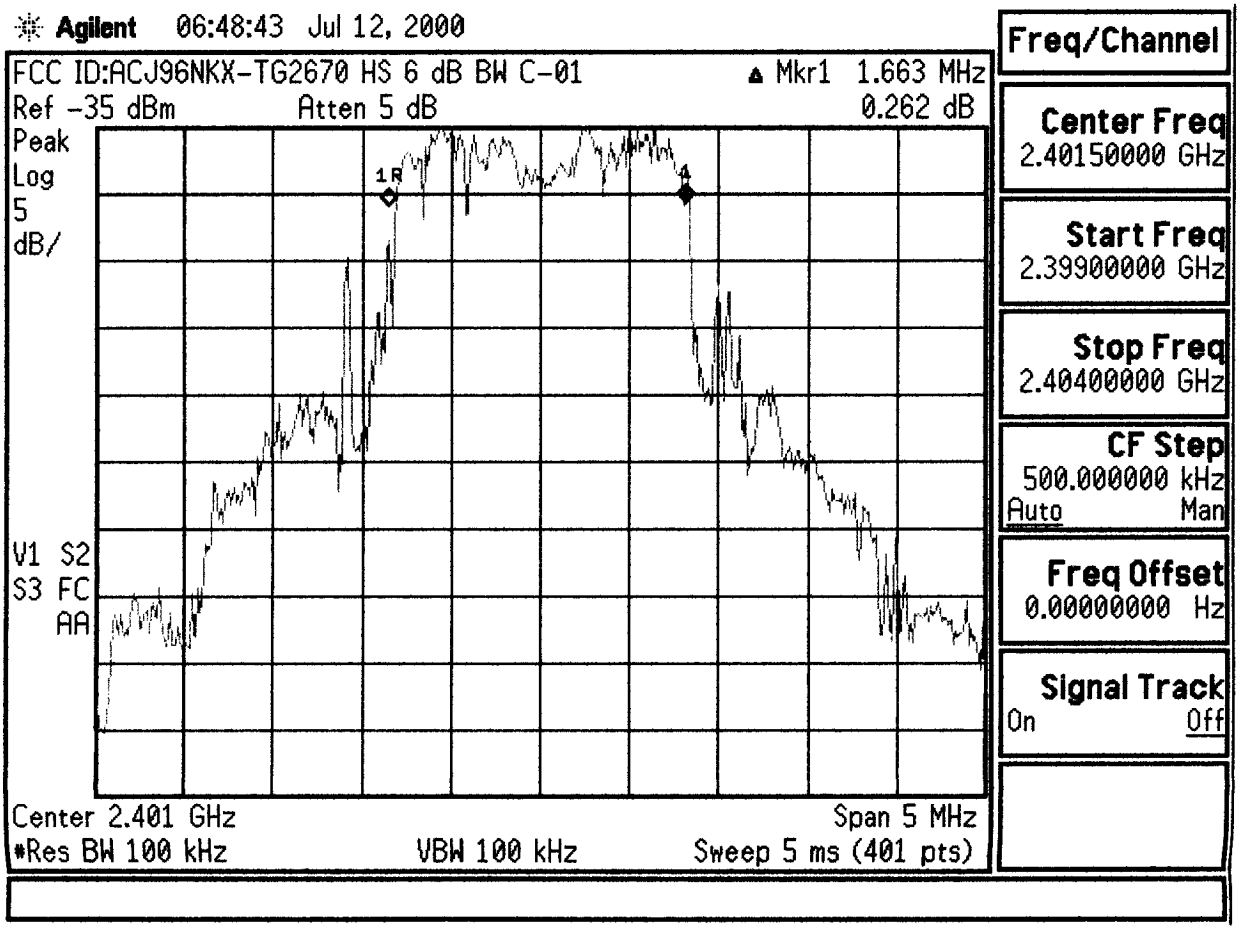

Agilent 07:09:04 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS C-01
Mkr1 2.401328 GHz
Ref -35 dBm
Atten 5 dB
-47.19 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

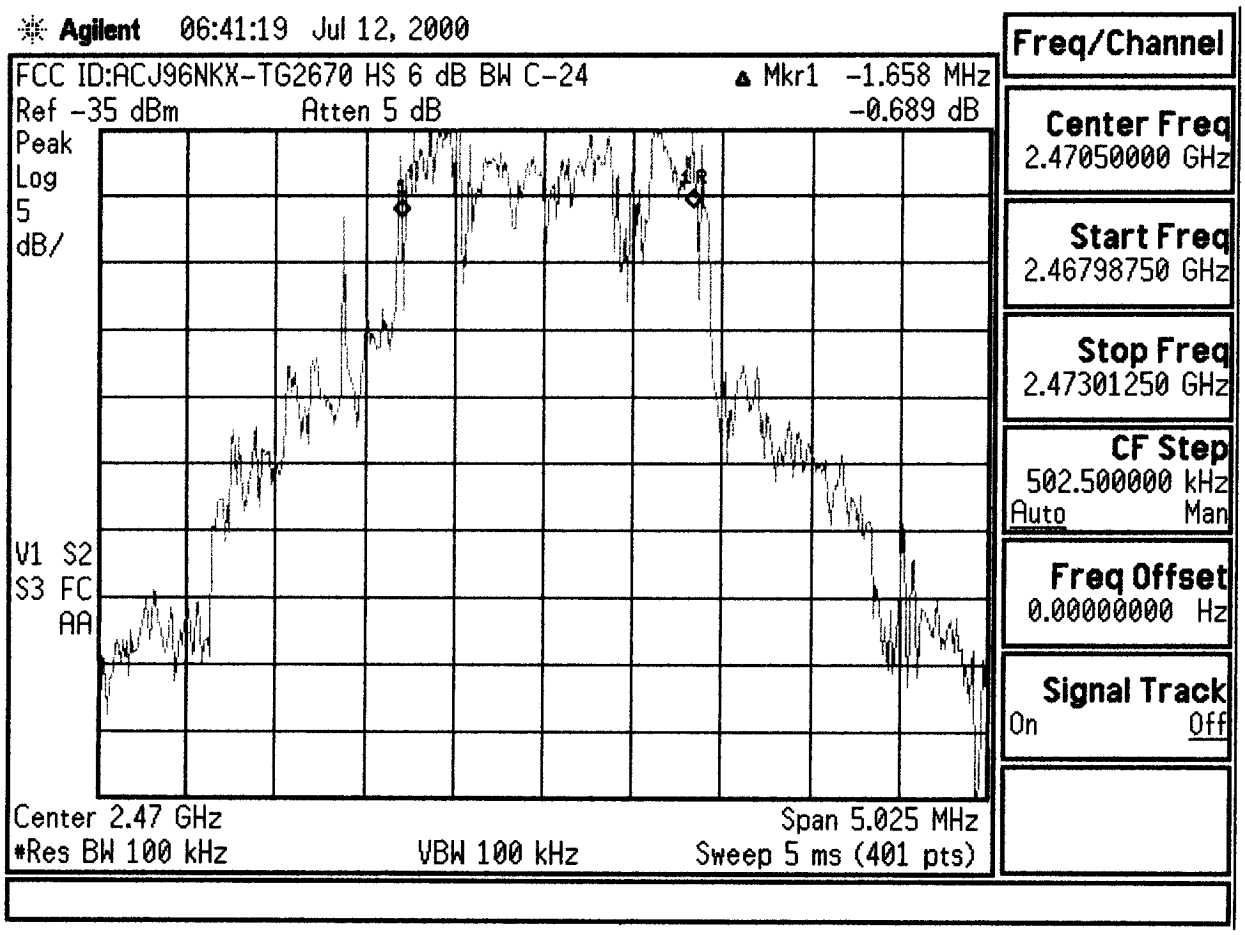

Agilent 07:28:16 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS C-12
Mkr1 2.434283 GHz
Ref -35 dBm
Atten 5 dB
-47.06 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2

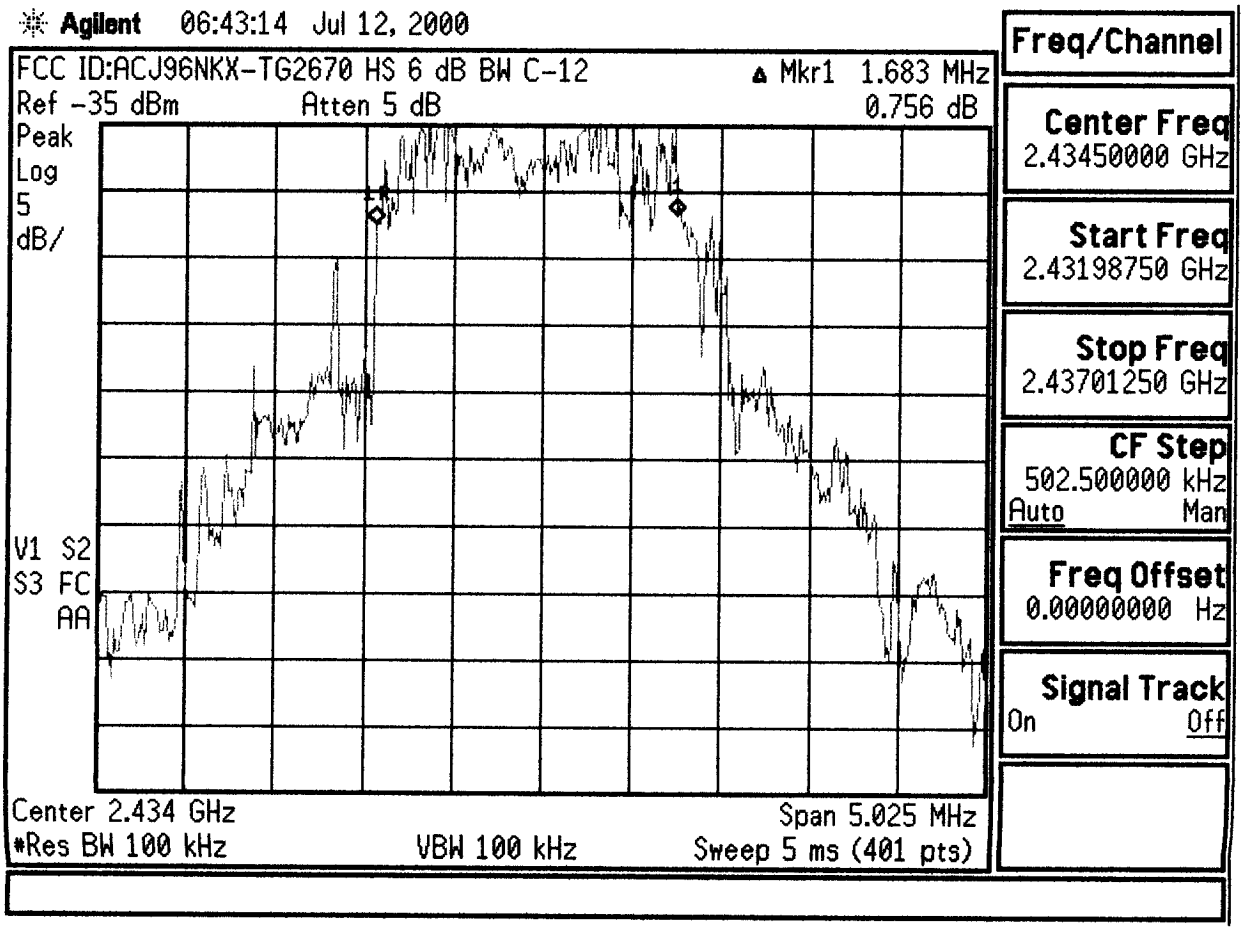

Agilent 07:28:59 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS C-12
Mkr1 2.434283 GHz
Ref -35 dBm
Atten 5 dB
-47.06 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
#Res BW 3 kHz
VBW 3 kHz
Span 3 MHz
#Sweep 1 ks (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43300000 GHz
Stop Freq
2.43600000 GHz
CF Step
300.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

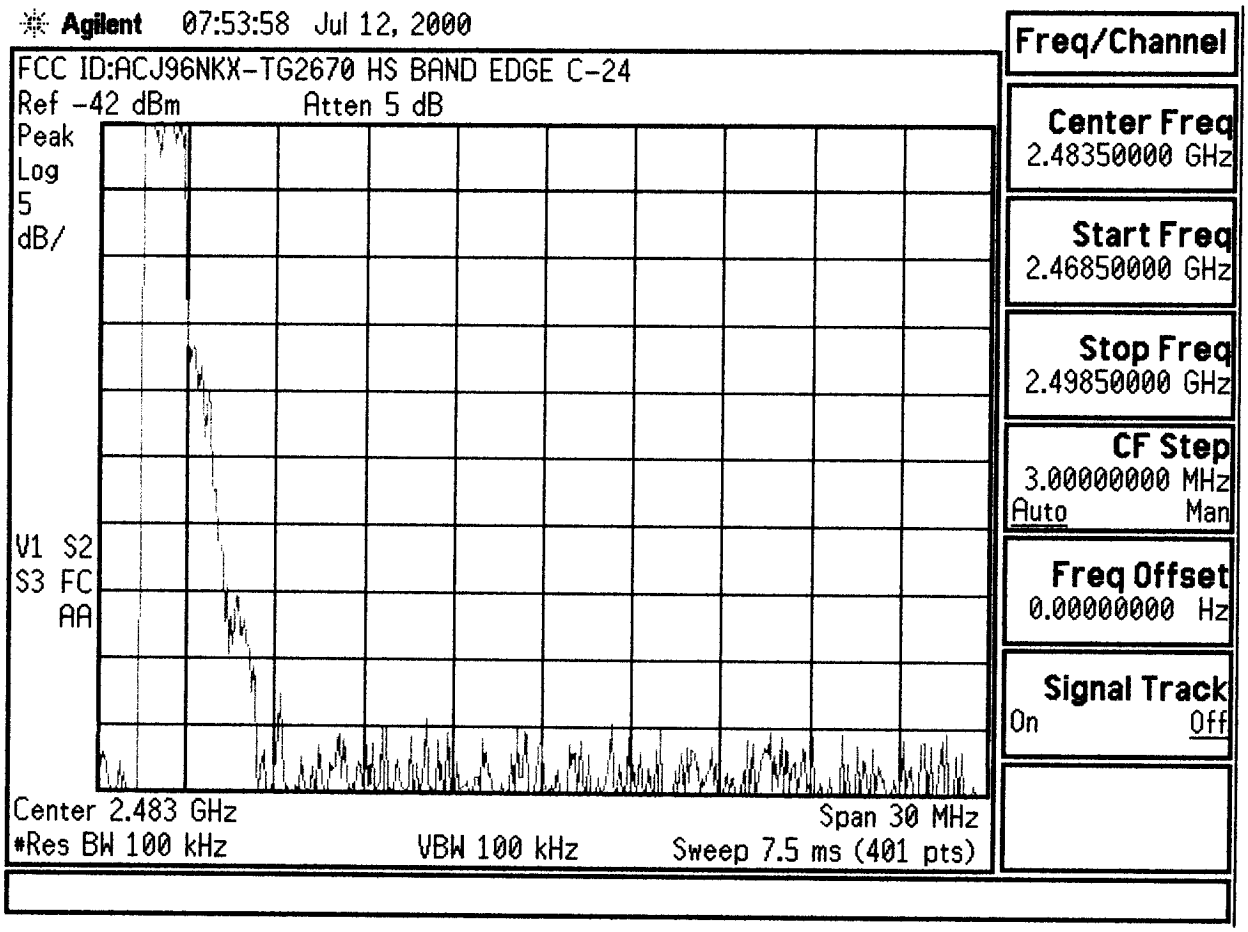

Agilent 07:48:44 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS C-24
Mkr1 2.469908 GHz
Ref -35 dBm
Atten 5 dB
-48.56 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.47 GHz
#Res BW 3 kHz
VBW 3 kHz
Span 3 MHz
#Sweep 1 ks (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2

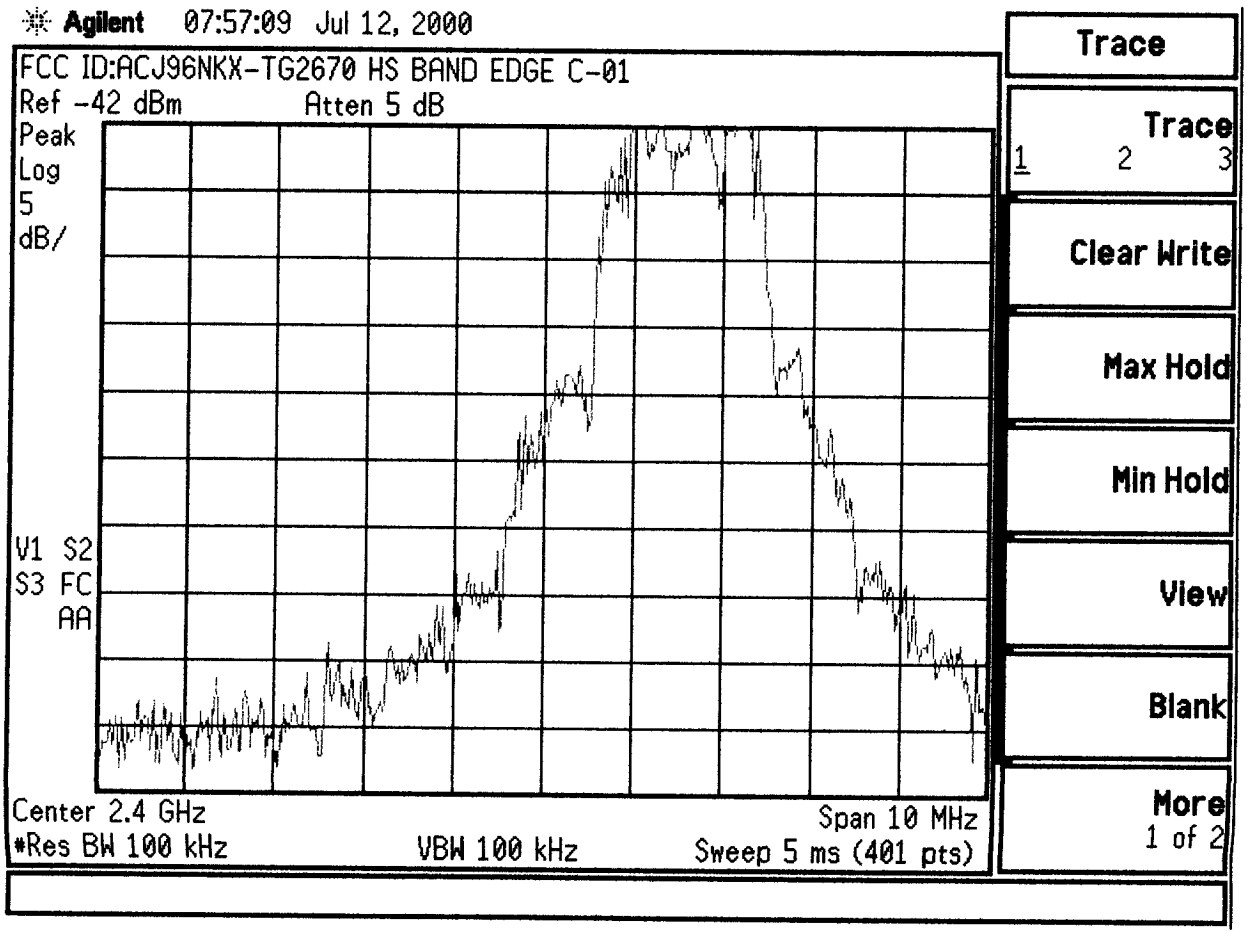

Agilent 06:44:02 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS 6 dB BW C-12
Mkr1 1.683 MHz
0.756 dB
Ref -35 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 5.025 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43198750 GHz
Stop Freq
2.43701250 GHz
CF Step
502.500000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

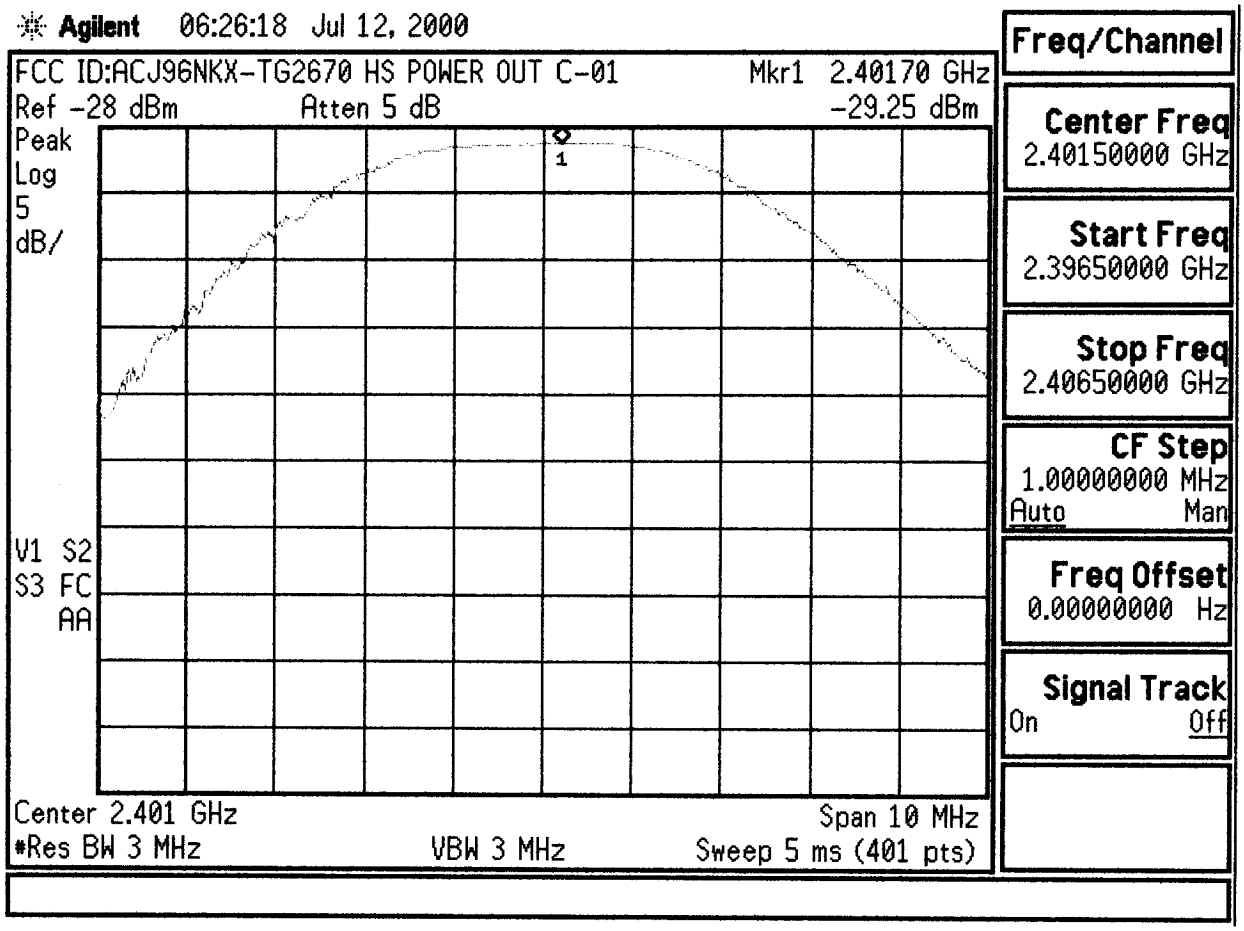

Agilent 06:48:43 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS 6 dB BW C-01
Mkr1 1.663 MHz
0.262 dB
Ref -35 dBm
Atten 5 dB
Peak
Log
5
dB/
1R
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 5 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.40150000 GHz
Start Freq
2.39900000 GHz
Stop Freq
2.40400000 GHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

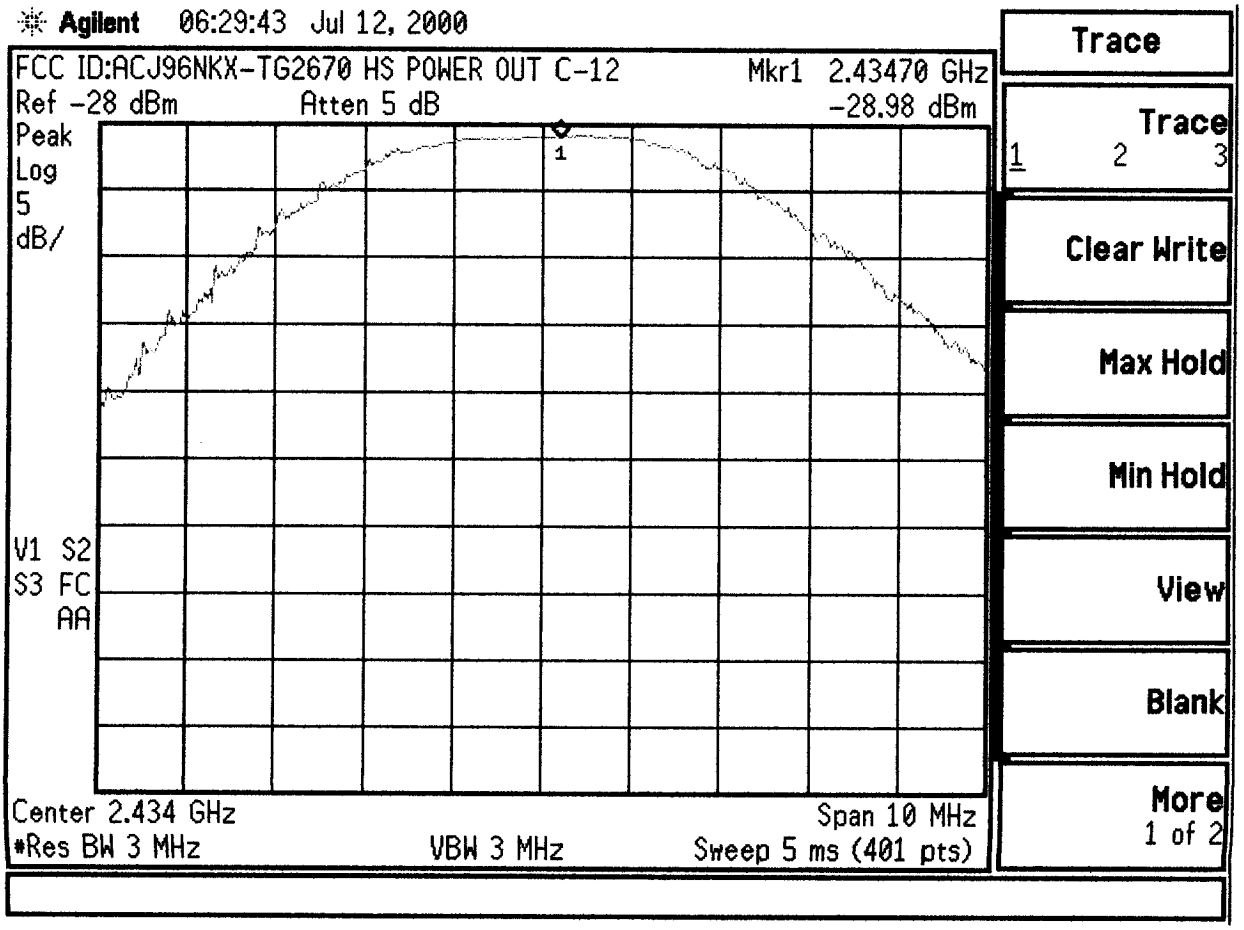

Agilent 06:41:19 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS 6 dB BW C-24
Mkr1 -1.658 MHz
Ref -35 dBm
Atten 5 dB
-0.689 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.47 GHz
Span 5.025 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.47050000 GHz
Start Freq
2.46798750 GHz
Stop Freq
2.47301250 GHz
CF Step
502.500000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

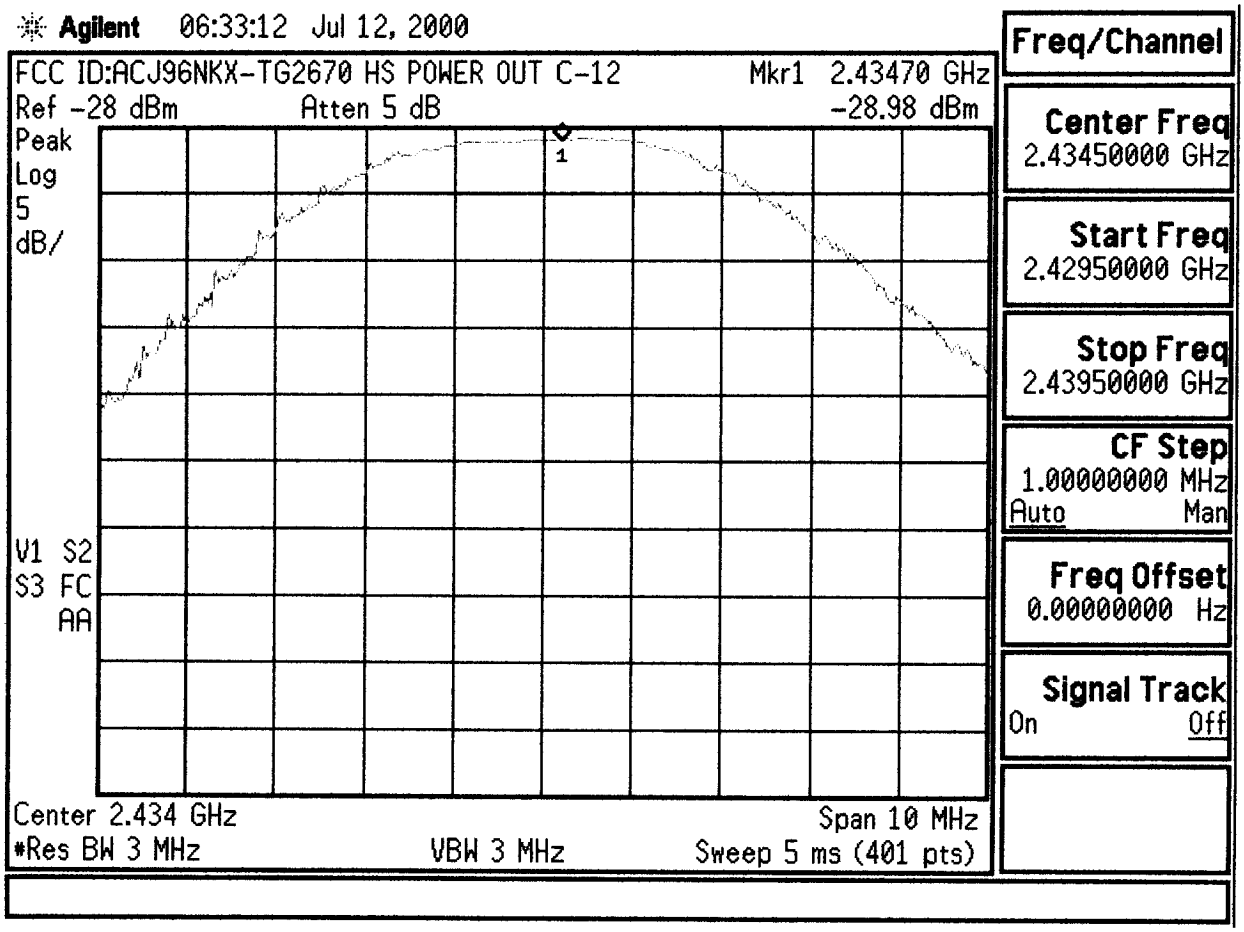

Agilent 06:43:14 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS 6 dB BW C-12
Mkr1 1.683 MHz
Ref -35 dBm
Atten 5 dB
0.756 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 5.025 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43198750 GHz
Stop Freq
2.43701250 GHz
CF Step
502.500000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

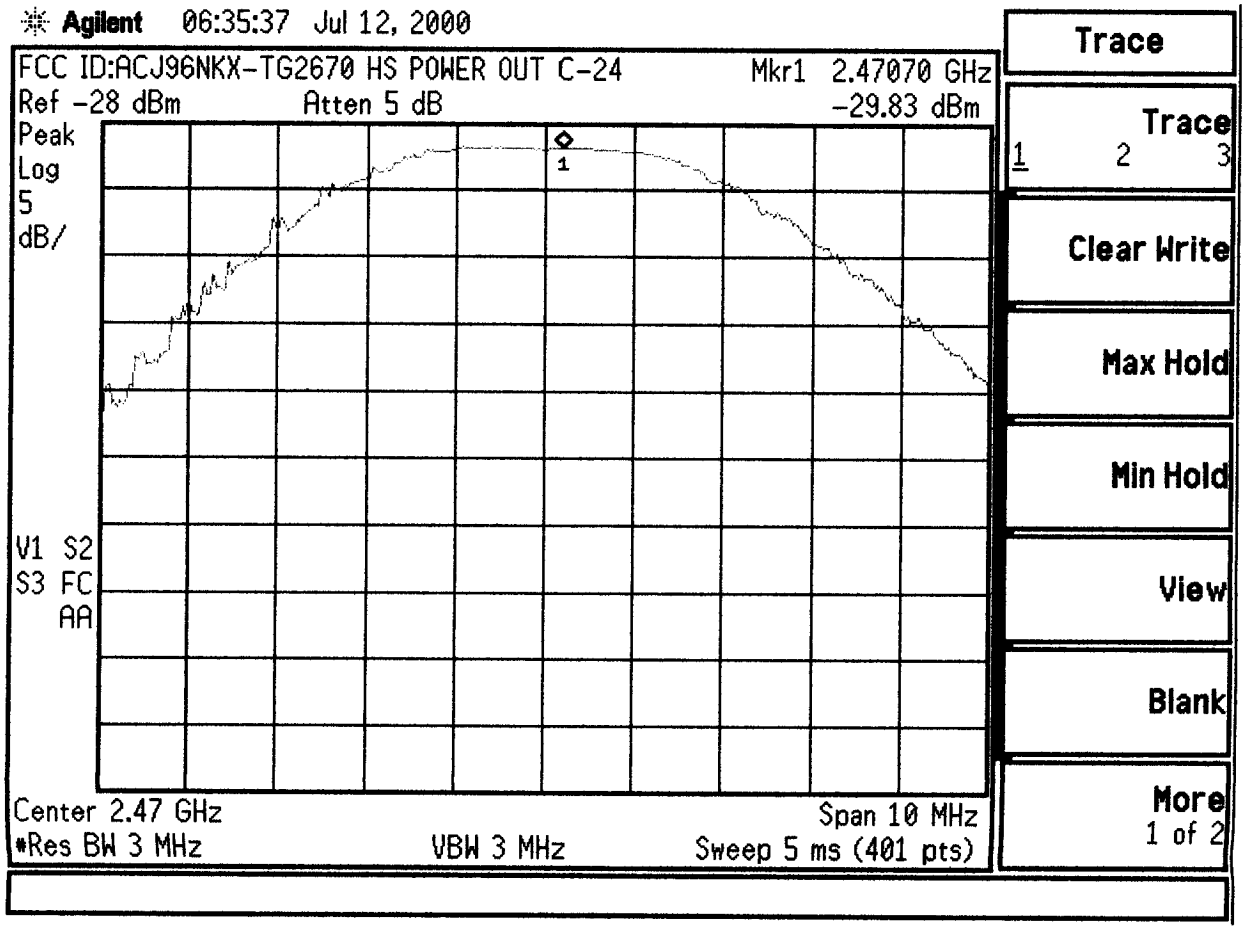

Agilent 07:53:58 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS BAND EDGE C-24
Ref -42 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.483 GHz
#Res BW 100 kHz
VBW 100 kHz
Span 30 MHz
Sweep 7.5 ms (401 pts)
Freq/Channel
Center Freq
2.48350000 GHz
Start Freq
2.46850000 GHz
Stop Freq
2.49850000 GHz
CF Step
3.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

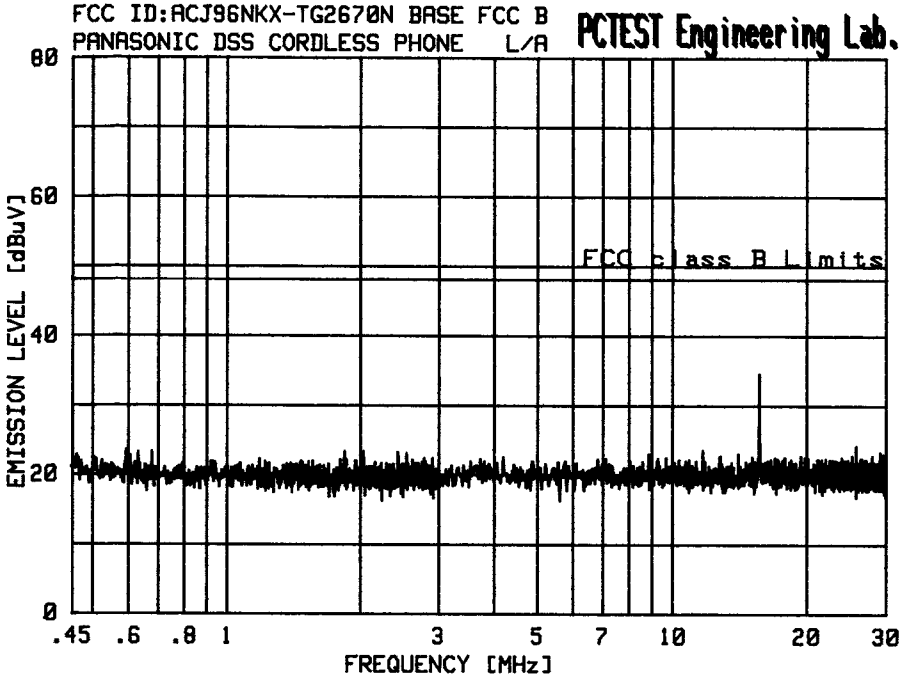

Agilent 07:57:09 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS BAND EDGE C-01
Ref -42 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.4 GHz
#Res BW 100 kHz
VBW 100 kHz
Span 10 MHz
Sweep 5 ms (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2


Agilent 06:26:18 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS POWER OUT C-01
Mkr1 2.40170 GHz
Ref -28 dBm
Atten 5 dB
-29.25 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.40150000 GHz
Start Freq
2.39650000 GHz
Stop Freq
2.40650000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

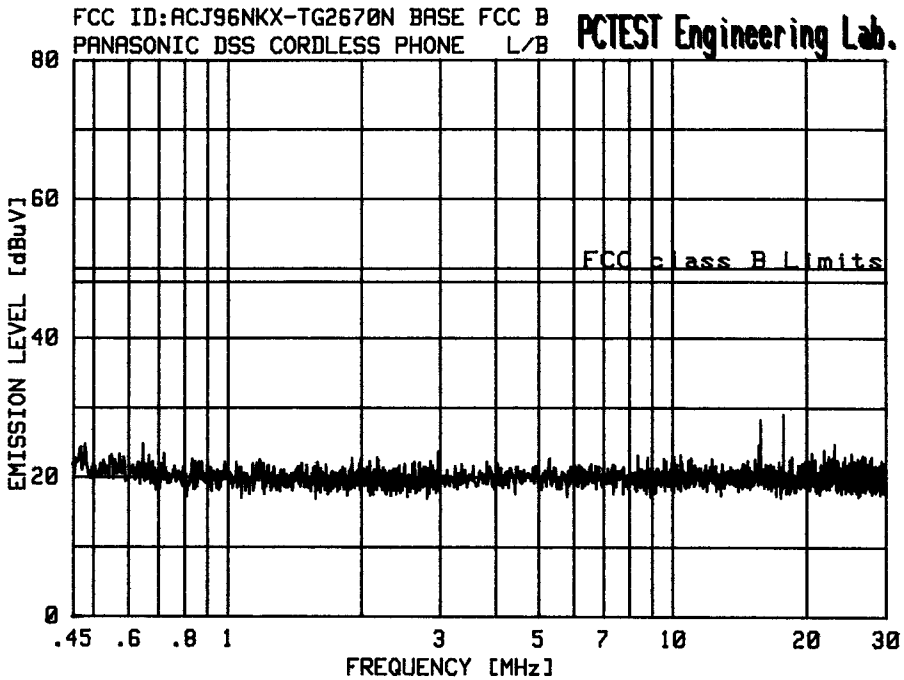

Agilent 06:29:43 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS POWER OUT C-12
Mkr1 2.43470 GHz
Ref -28 dBm
Atten 5 dB
-28.98 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2


Agilent 06:33:12 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS POWER OUT C-12
Mkr1 2.43470 GHz
Ref -28 dBm
Atten 5 dB
-28.98 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.42950000 GHz
Stop Freq
2.43950000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

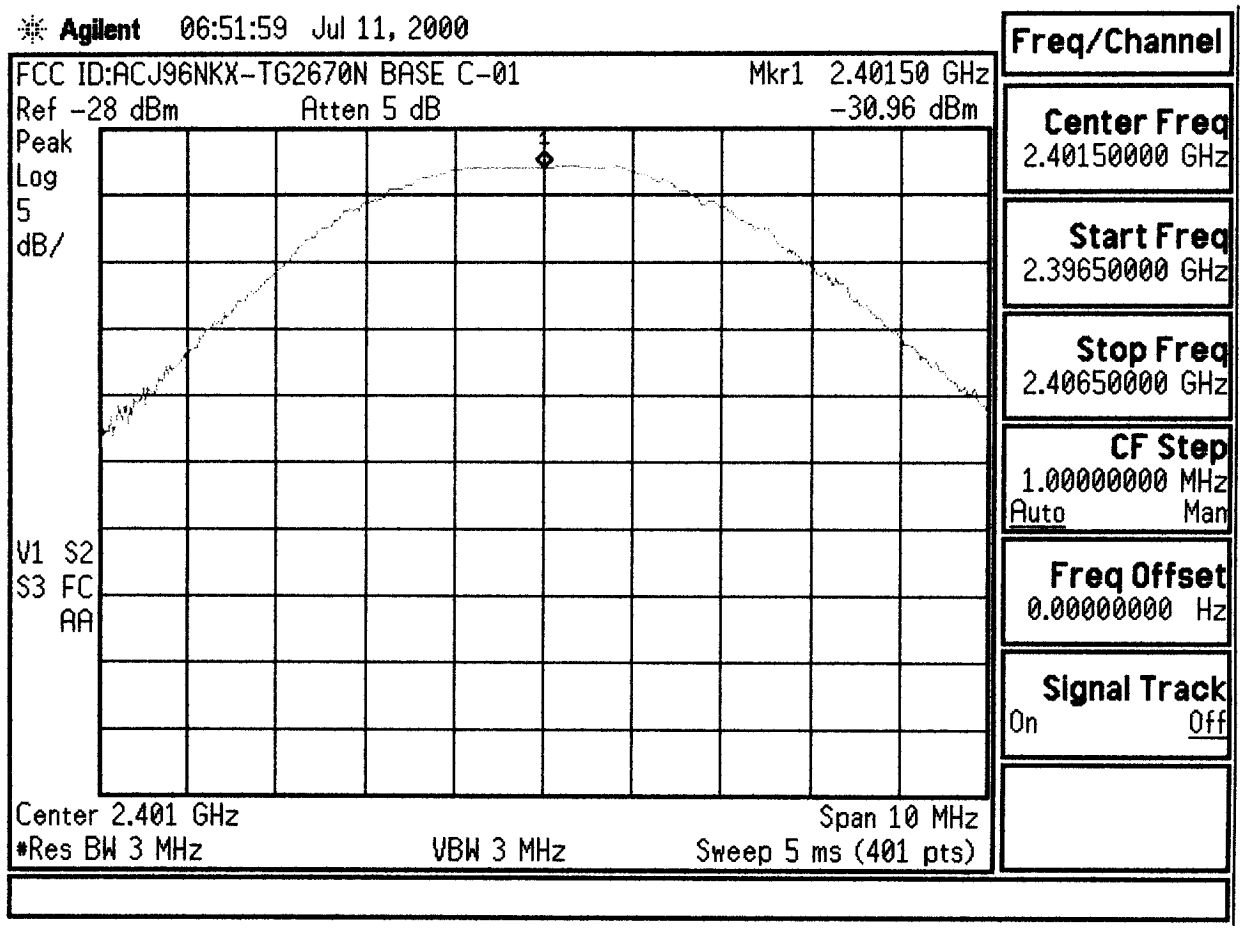

Agilent 06:35:37 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 HS POWER OUT C-24
Mkr1 2.47070 GHz
Ref -28 dBm
Atten 5 dB
-29.83 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.47 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2

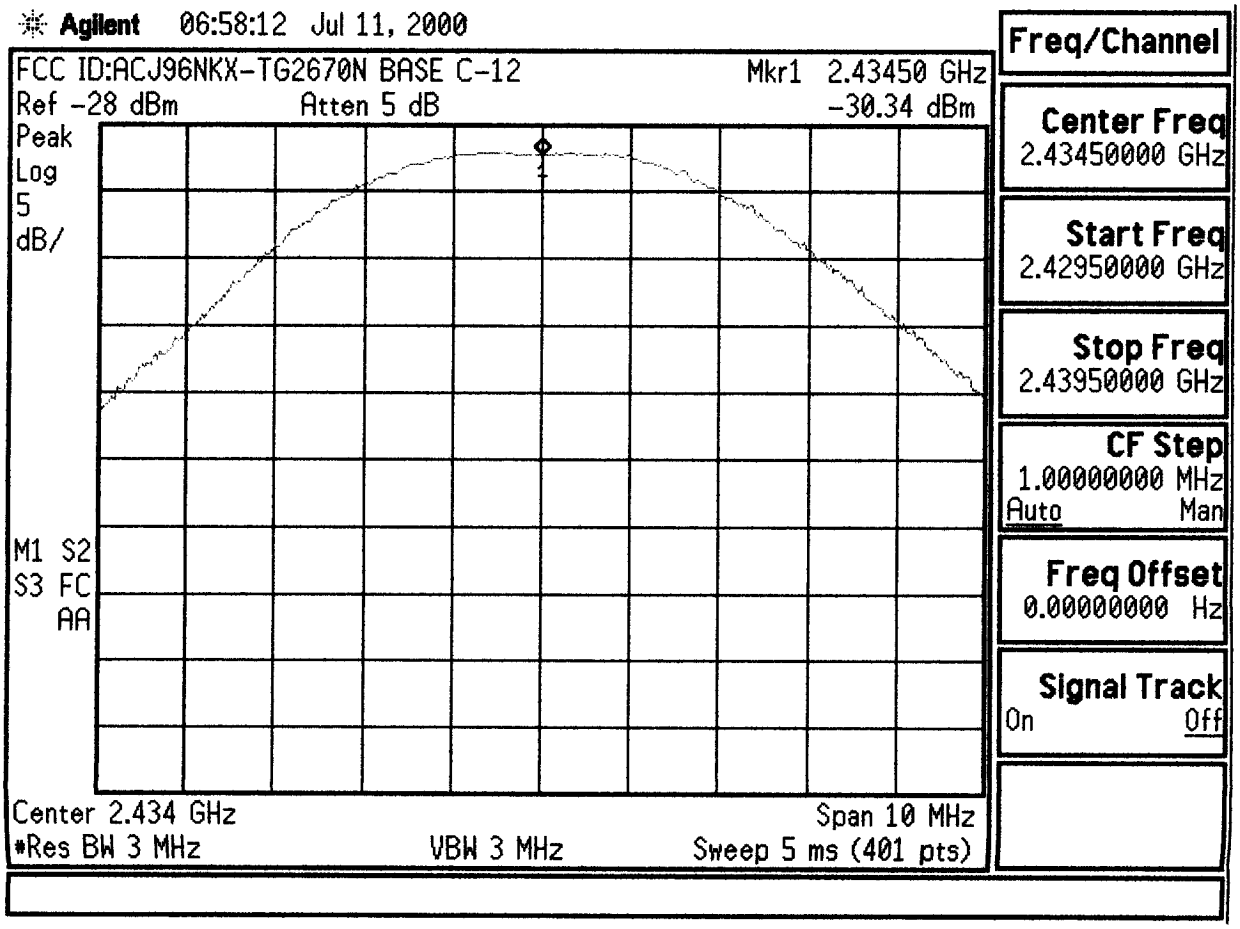


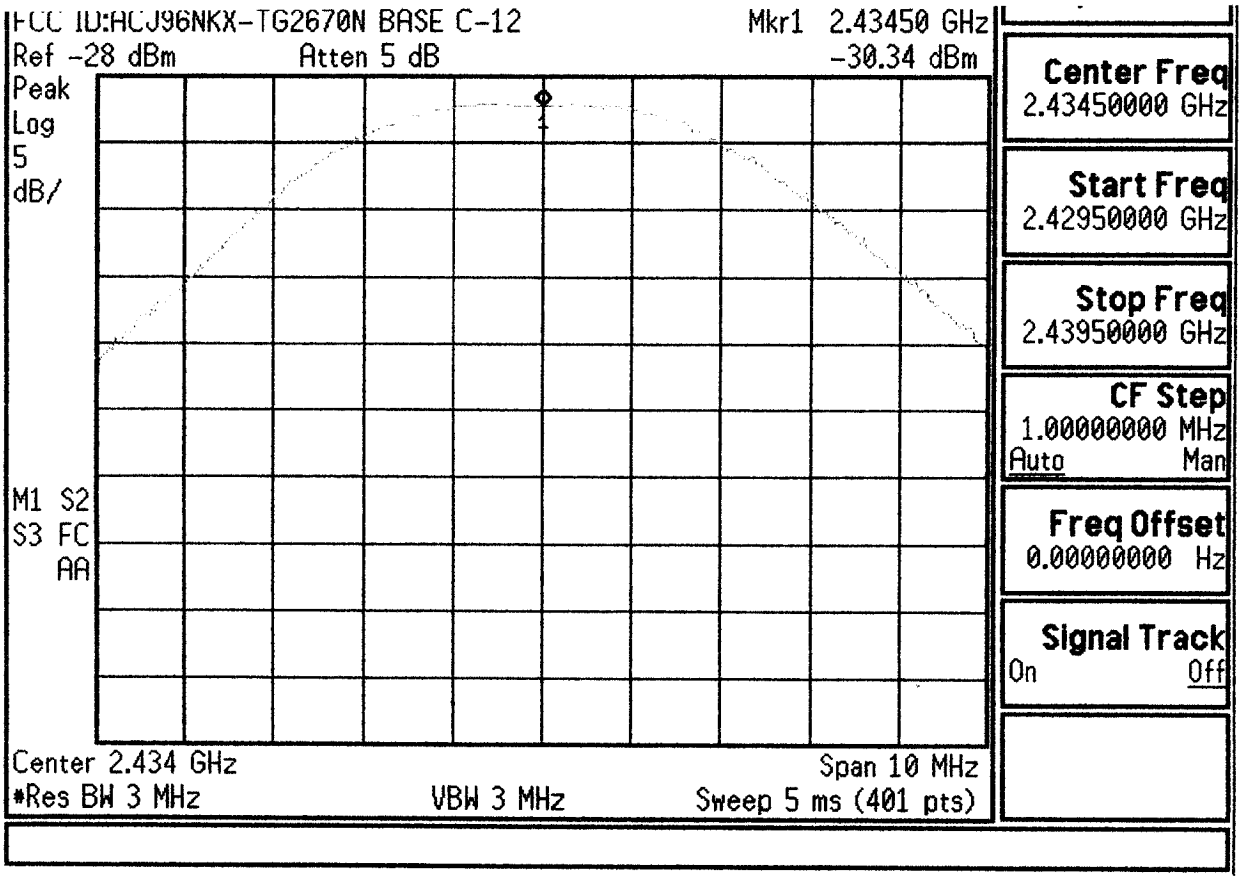
No.	Freq. [MHz]	Quasi-Pk [dBuV]	Average [dBuV]	QP-AV [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1	15.666	30.16	-	-	30.16	48.00	-17.84
2	25.693	20.93	-	-	20.93	48.00	-27.07
3	.577	21.34	-	-	21.34	48.00	-26.66
4	11.746	20.93	-	-	20.93	48.00	-27.07
5	.658	21.10	-	-	21.10	48.00	-26.90
6	1.819	20.96	-	-	20.96	48.00	-27.04
7	1.953	20.93	-	-	20.93	48.00	-27.07
8	.602	21.17	-	-	21.17	48.00	-26.83
9	2.344	20.94	-	-	20.94	48.00	-27.06
10	29.084	20.93	-	-	20.93	48.00	-27.07

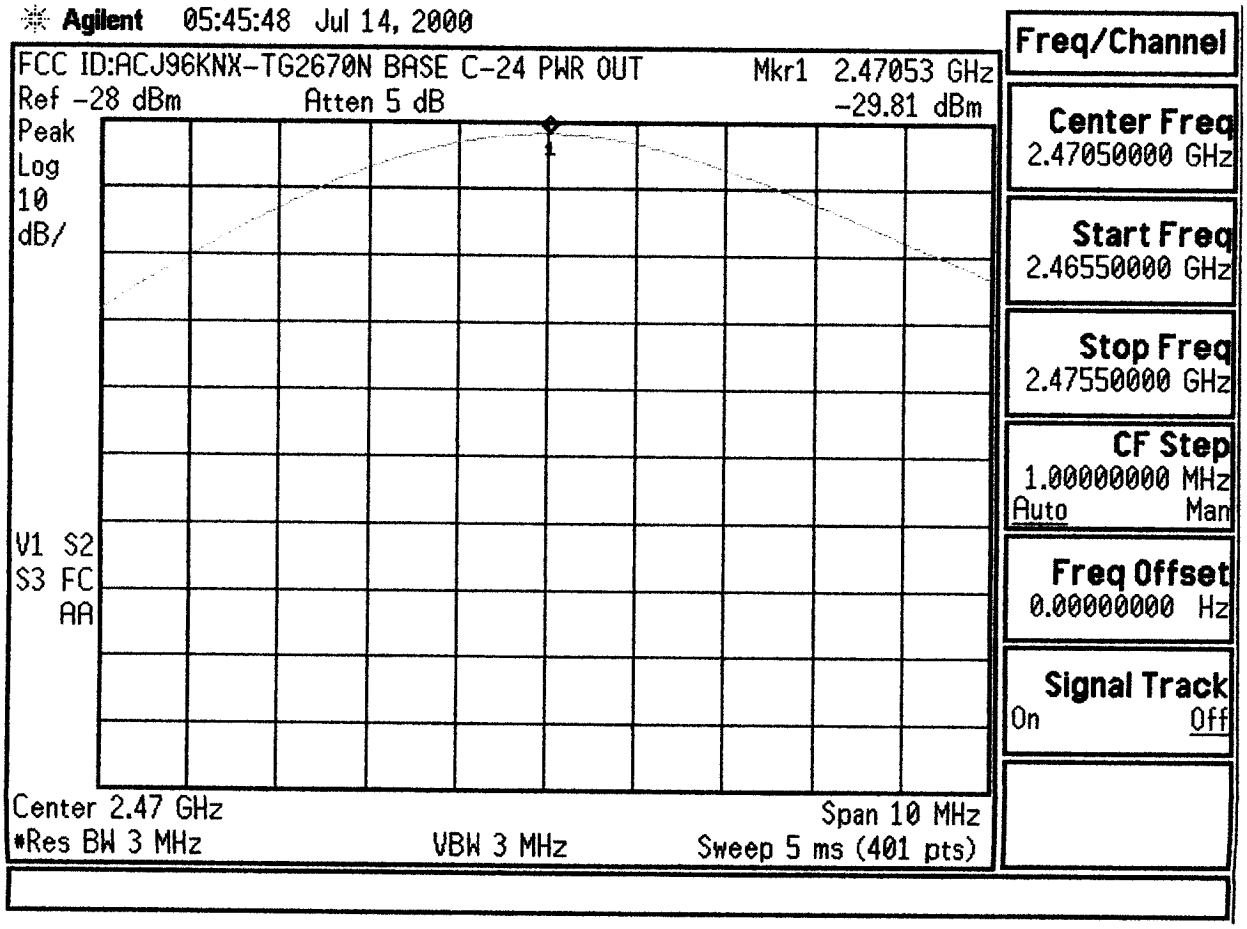


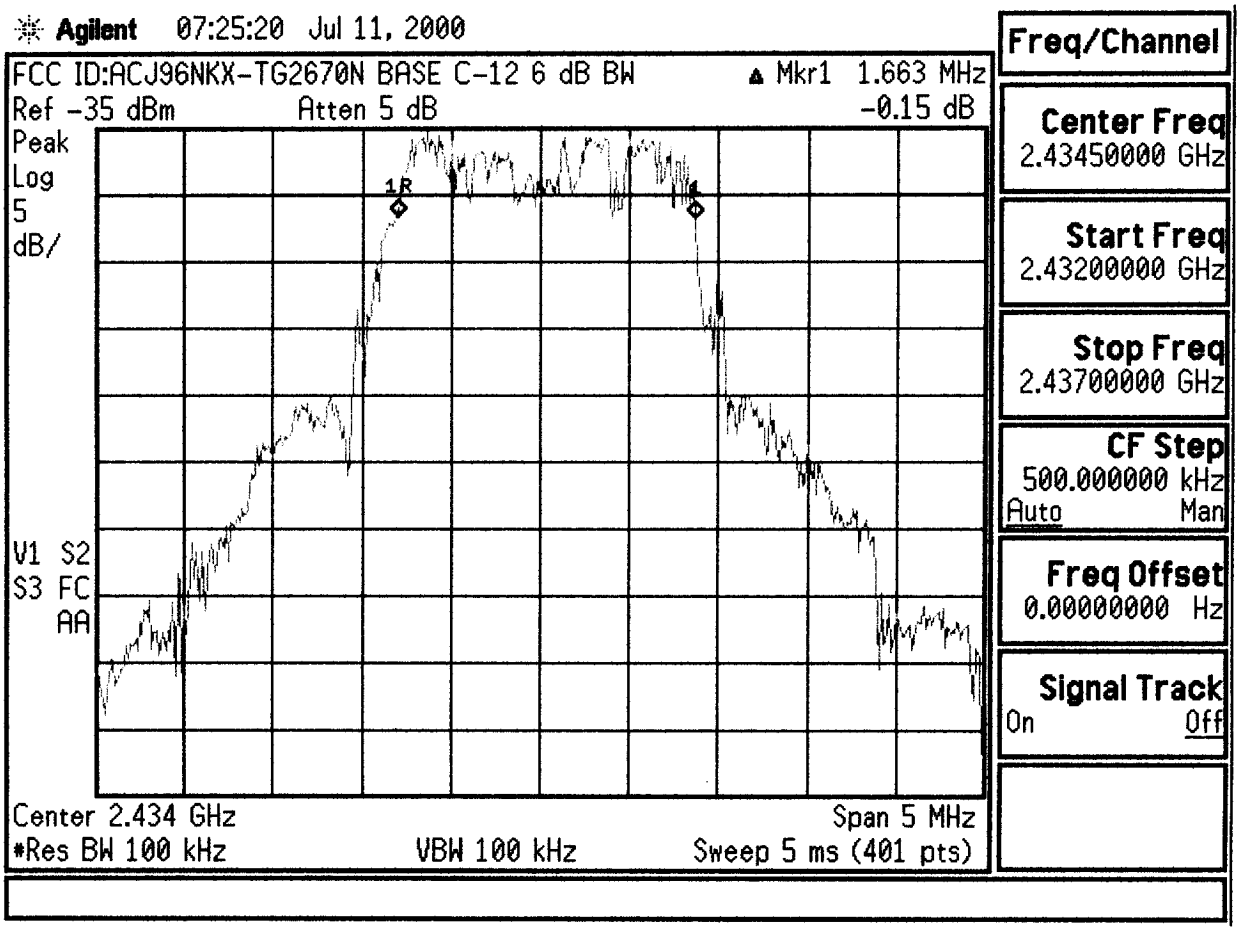
No.	Freq. [MHz]	Quasi-Pk [dBuV]	Average [dBuV]	QP-AV [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1	17.752	27.30	-	-	27.30	48.00	-20.70
2	15.748	24.09	-	-	24.09	48.00	-23.91
3	.628	21.20	-	-	21.20	48.00	-26.80
4	.461	21.57	-	-	21.57	48.00	-26.43
5	23.131	23.00	-	-	23.00	48.00	-25.00
6	15.601	22.77	-	-	22.77	48.00	-25.23
7	.450	21.63	-	-	21.63	48.00	-26.37
8	21.909	21.27	-	-	21.27	48.00	-26.73
9	2.971	21.20	-	-	21.20	48.00	-26.80
10	.696	21.13	-	-	21.13	48.00	-26.87

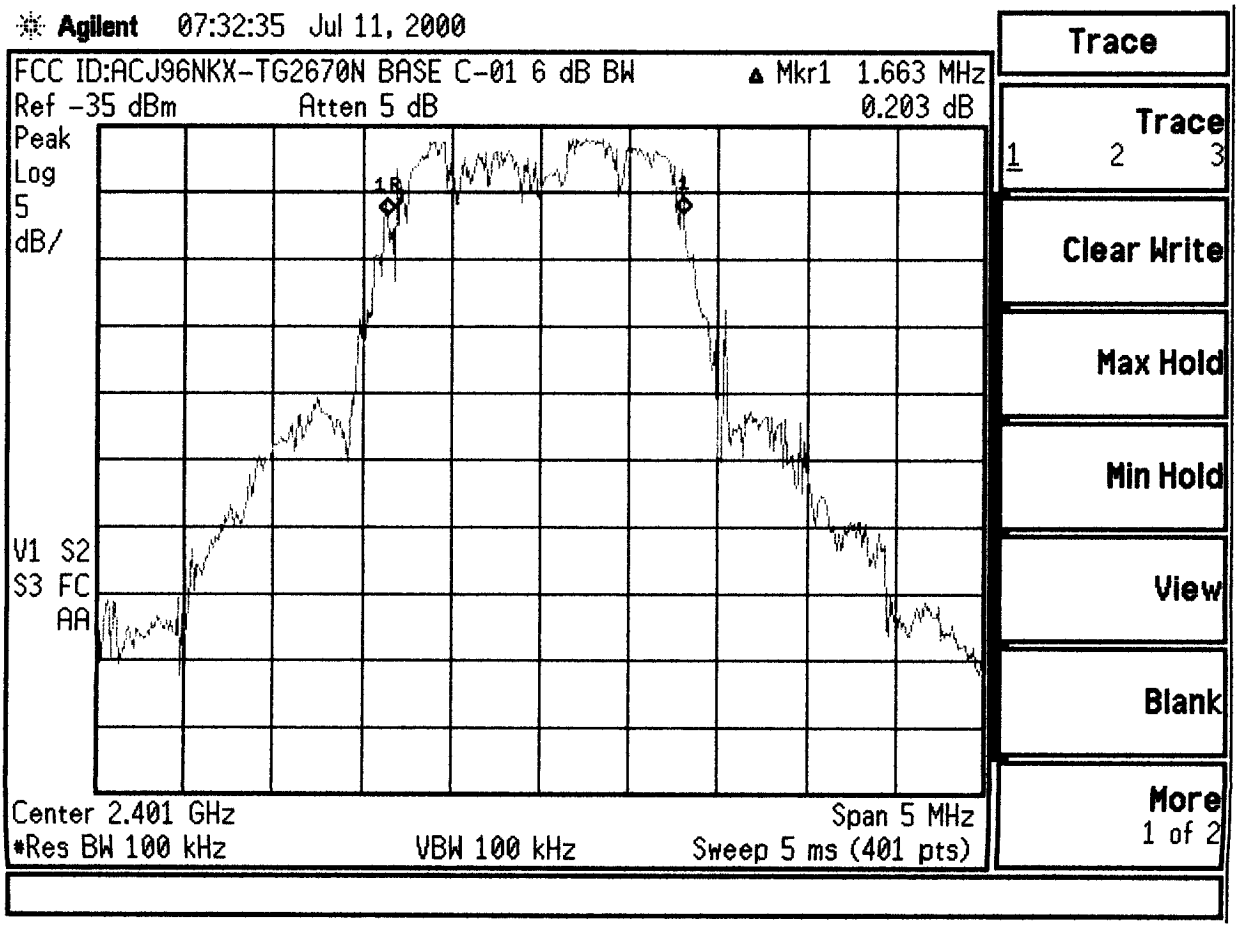

Agilent 06:51:59 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-01
Mkr1 2.40150 GHz
Ref -28 dBm
Atten 5 dB
-30.96 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.40150000 GHz
Start Freq
2.39650000 GHz
Stop Freq
2.40650000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

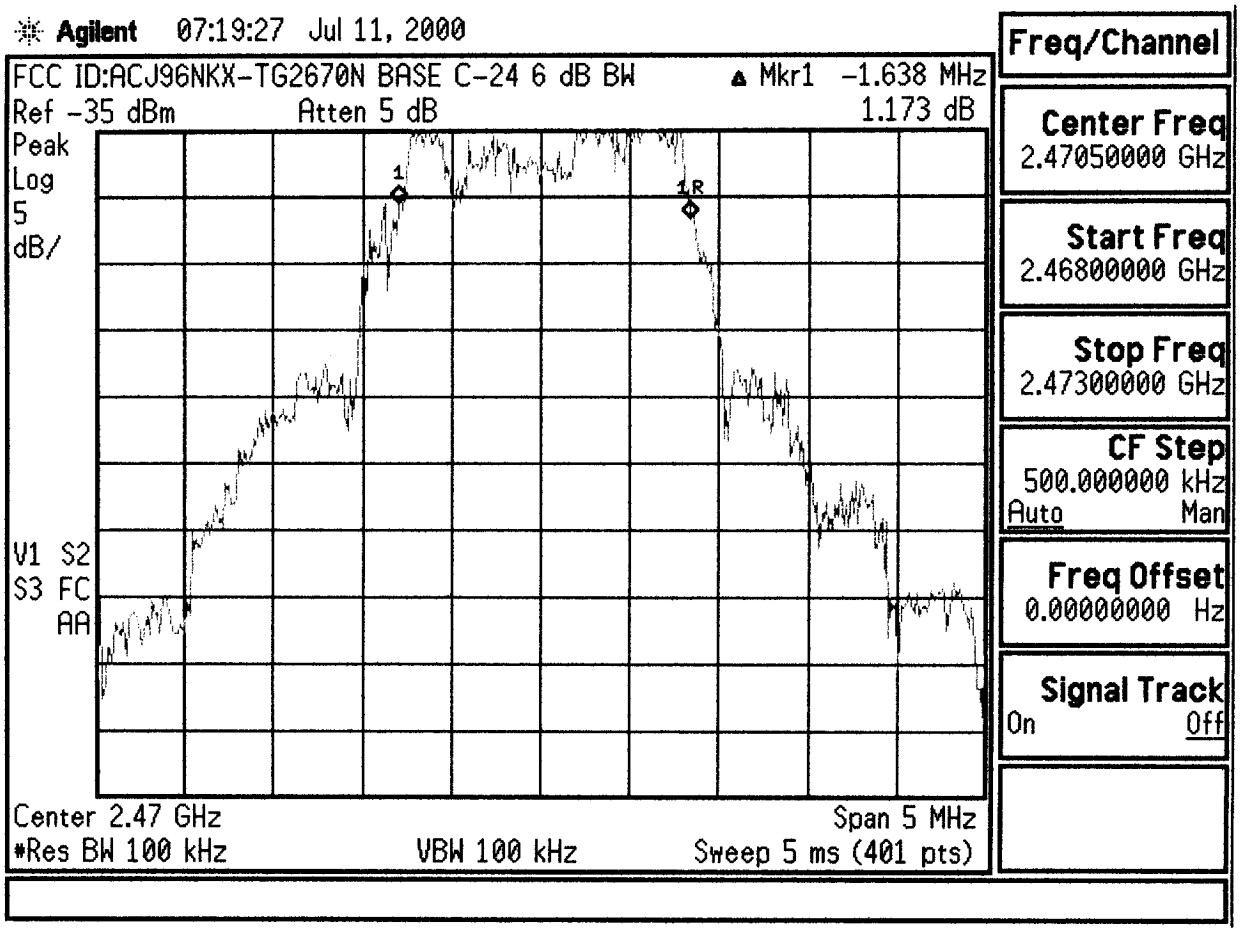

Agilent 06:58:12 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-12
Mkr1 2.43450 GHz
Ref -28 dBm
Atten 5 dB
-30.34 dBm
Peak
Log
5
dB/
M1 S2
S3 FC
AA
Center 2.434 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.42950000 GHz
Stop Freq
2.43950000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

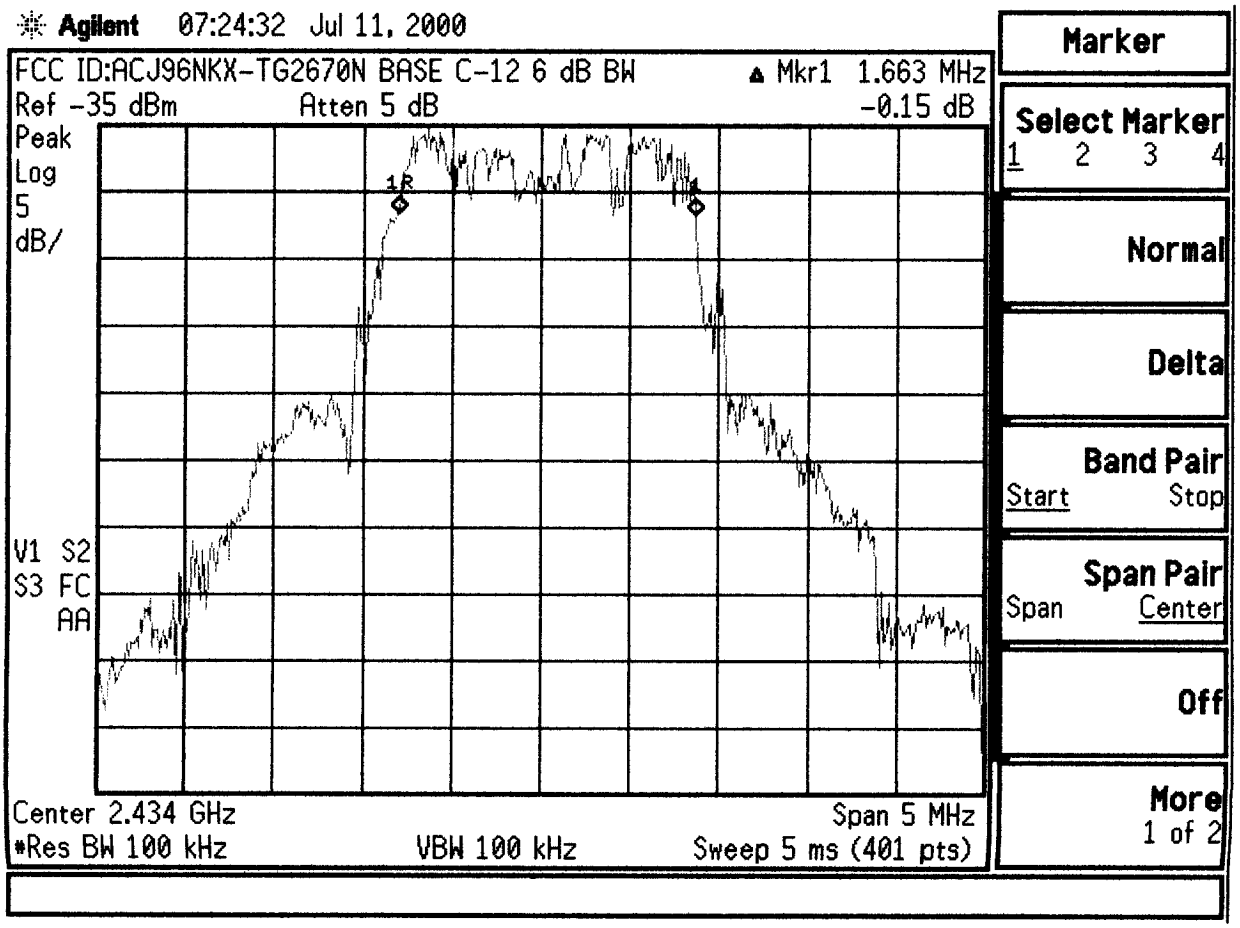

FCC ID:ACJ96NKX-TG2670N BASE C-12
Mkr1 2.43450 GHz
Ref -28 dBm
Atten 5 dB
-30.34 dBm
Peak
Log
5
dB/
M1 S2
S3 FC
AA
Center Freq
2.43450000 GHz
Start Freq
2.42950000 GHz
Stop Freq
2.43950000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 2.434 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)

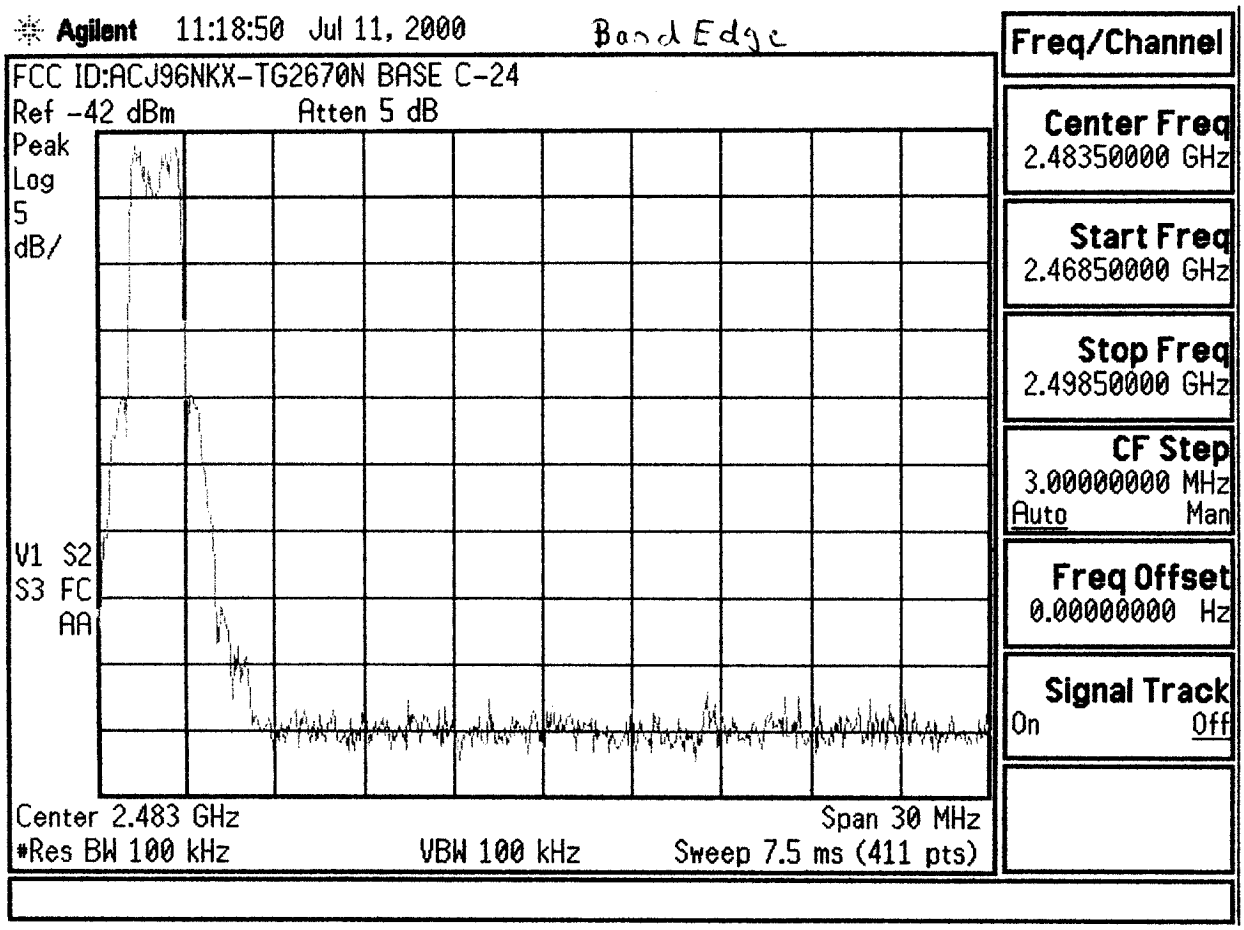

Agilent 05:45:48 Jul 14, 2000
FCC ID:ACJ96KNX-TG2670N BASE C-24 PWR OUT
Mkr1 2.47053 GHz
Ref -28 dBm
Atten 5 dB
-29.81 dBm
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Freq/Channel
Center Freq
2.47050000 GHz
Start Freq
2.46550000 GHz
Stop Freq
2.47550000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 2.47 GHz
Span 10 MHz
#Res BW 3 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)

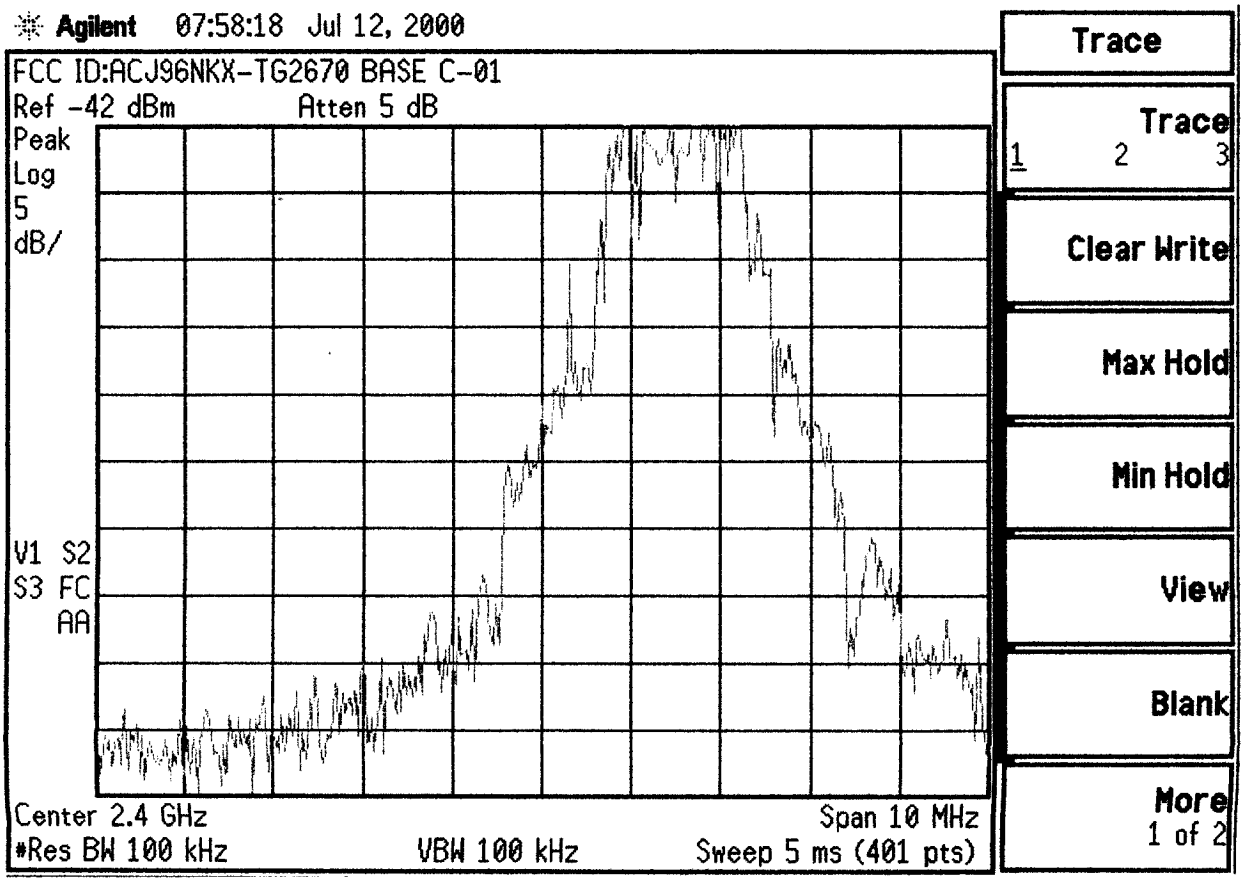

Agilent 07:25:20 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-12 6 dB BW
Mkr1 1.663 MHz
Ref -35 dBm
Atten 5 dB
-0.15 dB
Peak
Log
5
dB/
1R
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 5 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43200000 GHz
Stop Freq
2.43700000 GHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

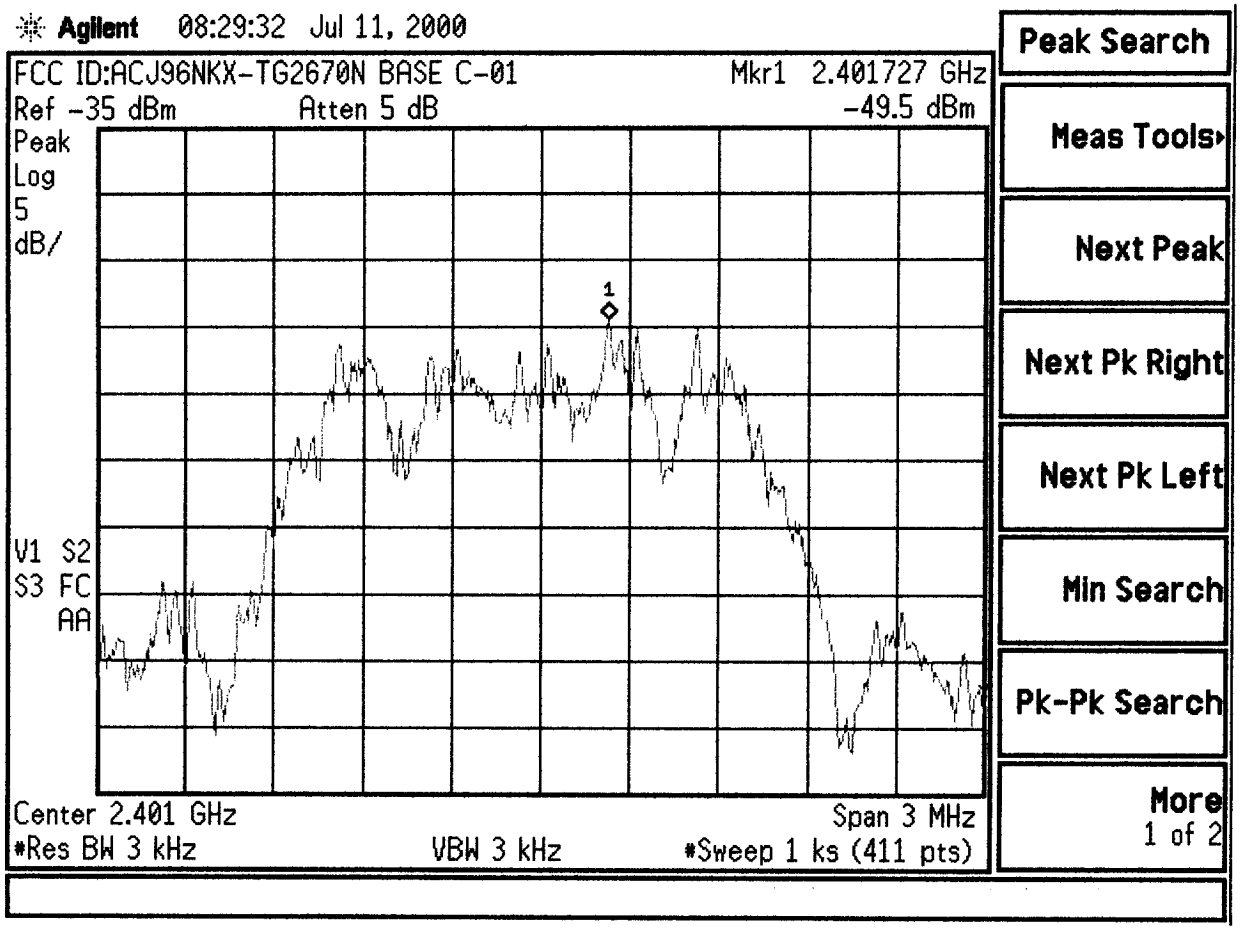

Agilent 07:32:35 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-01 6 dB BW
Mkr1 1.663 MHz
Ref -35 dBm
Atten 5 dB
0.203 dB
Peak
Log
5
dB/
1R
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 5 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2

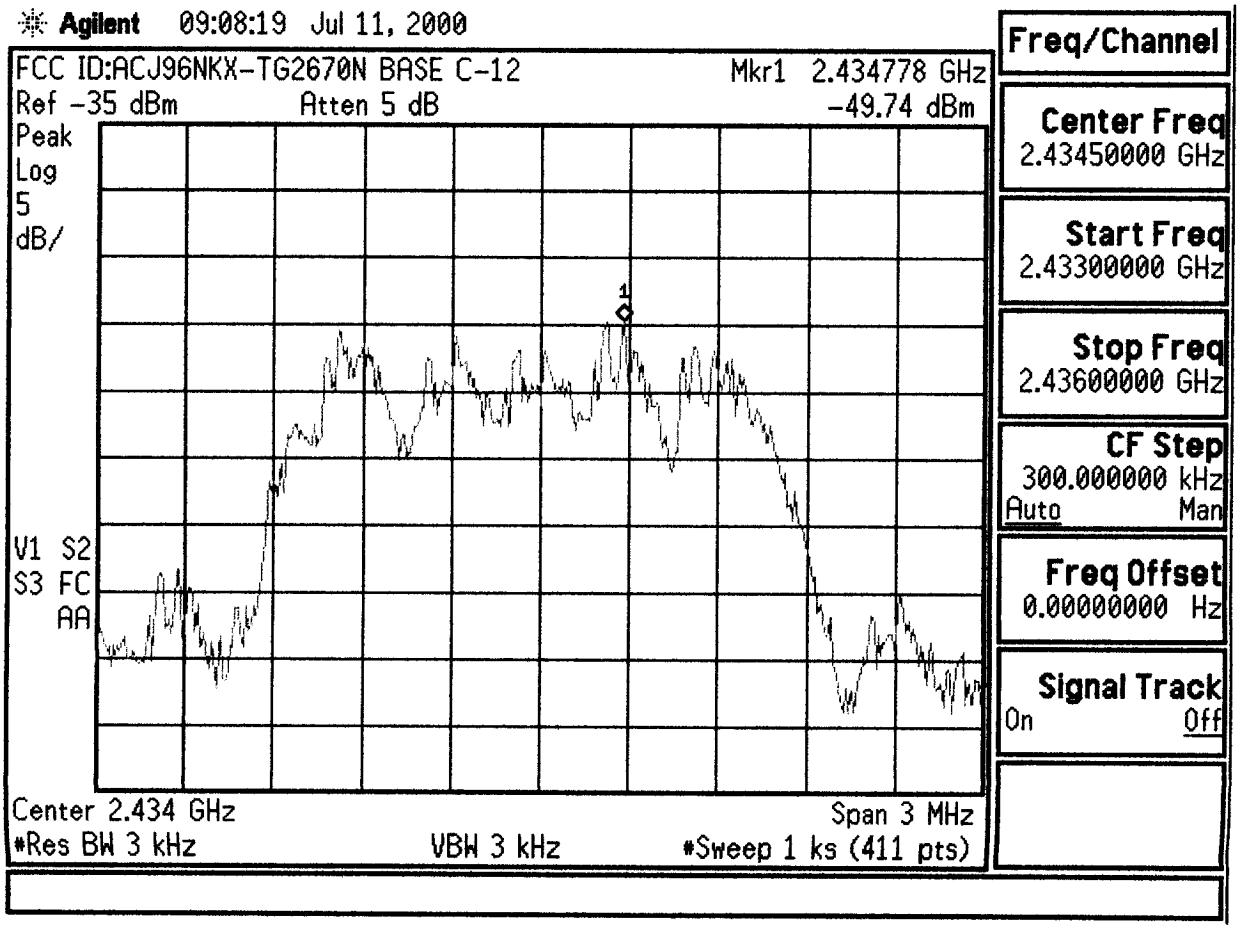

Agilent 07:19:27 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-24 6 dB BW
Mkr1 -1.638 MHz
1.173 dB
Ref -35 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.47 GHz
Span 5 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.47050000 GHz
Start Freq
2.46800000 GHz
Stop Freq
2.47300000 GHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

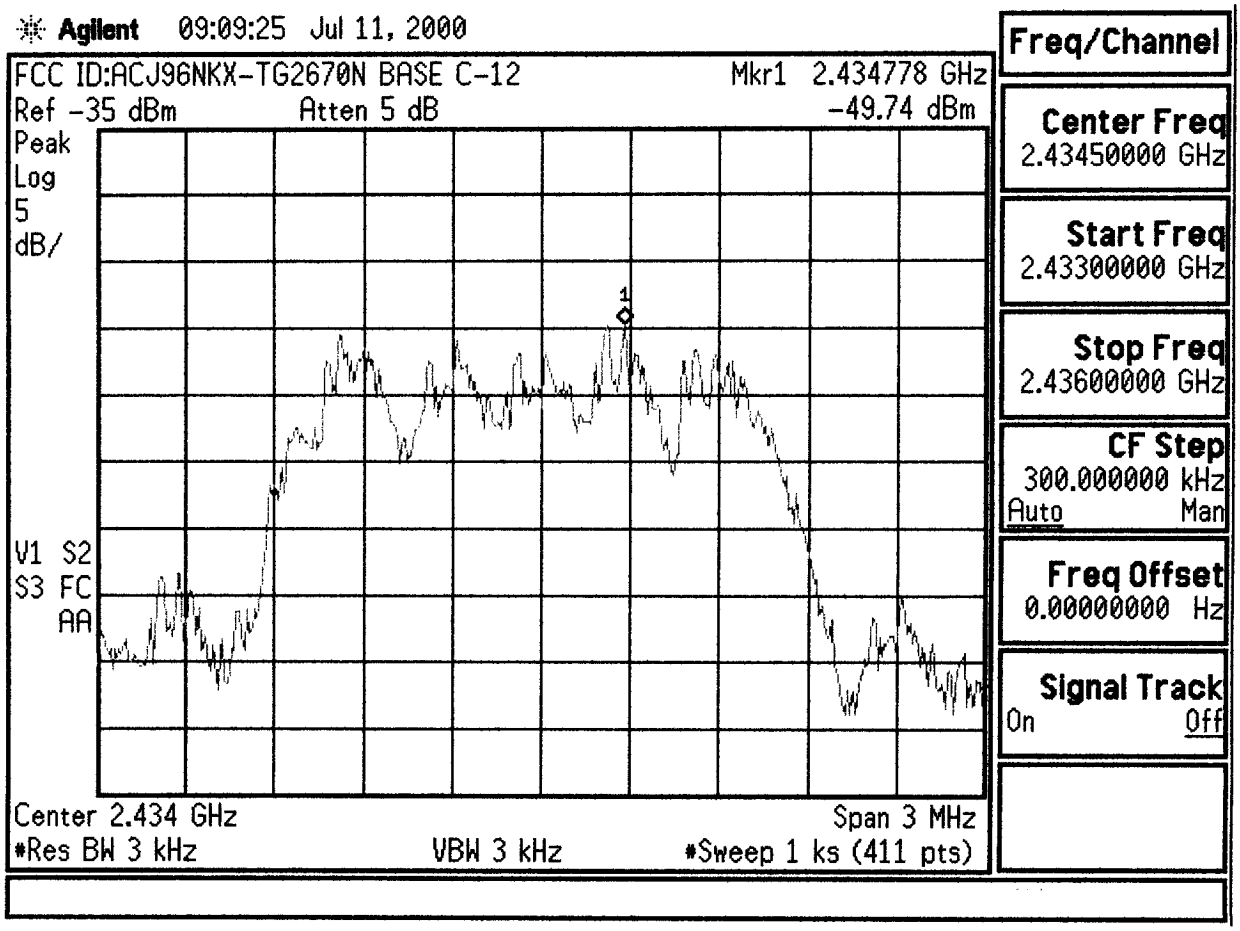

Agilent 07:24:32 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-12 6 dB BW
Mkr1 1.663 MHz
-0.15 dB
Ref -35 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 5 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 5 ms (401 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Band Pair
Start Stop
Span Pair
Span Center
Off
More
1 of 2

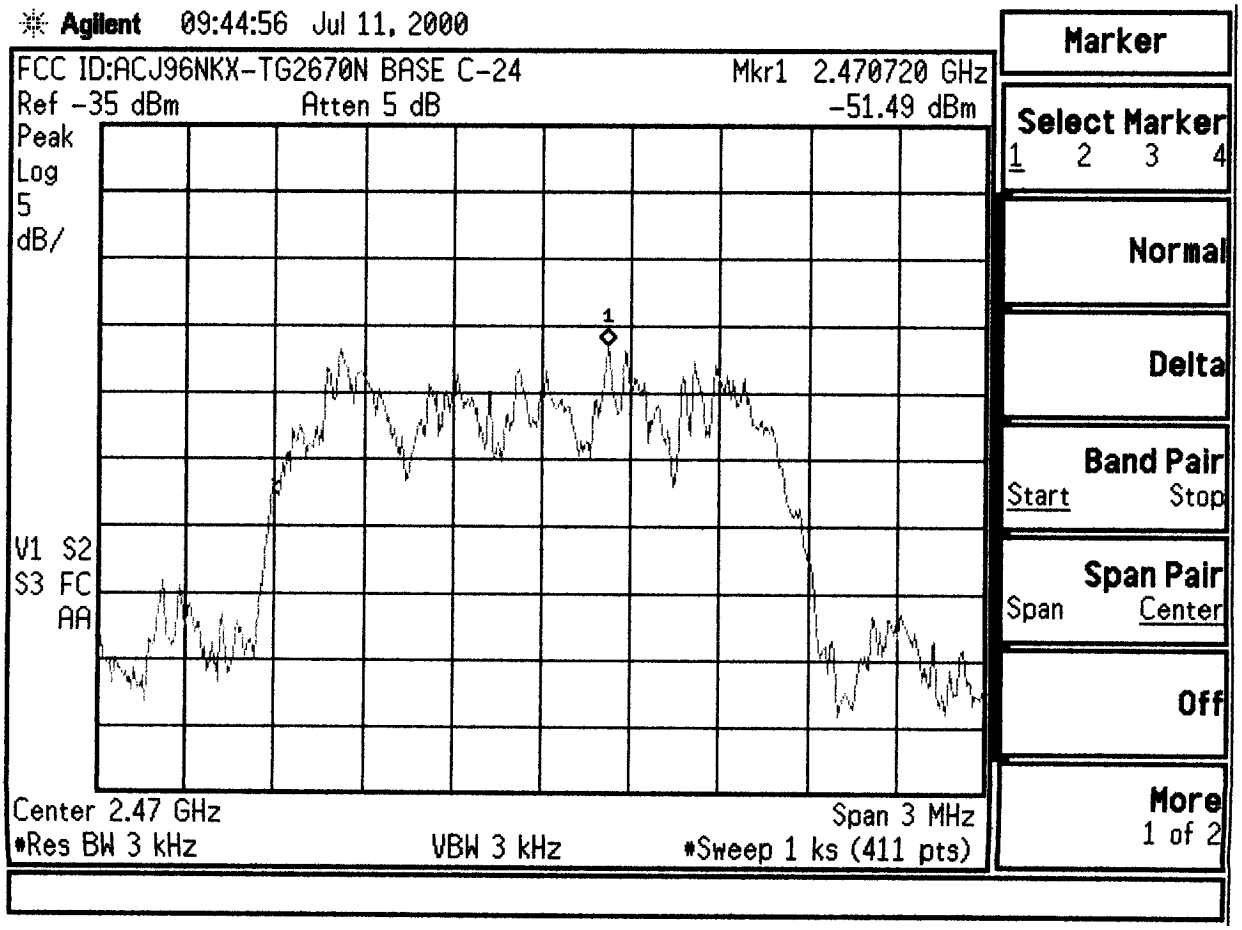

Agilent 11:18:50 Jul 11, 2000
Band Edge
FCC ID:ACJ96NKX-TG2670N BASE C-24
Ref -42 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.483 GHz
#Res BW 100 kHz
VBW 100 kHz
Span 30 MHz
Sweep 7.5 ms (411 pts)
Freq/Channel
Center Freq
2.48350000 GHz
Start Freq
2.46850000 GHz
Stop Freq
2.49850000 GHz
CF Step
3.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off


Agilent 07:58:18 Jul 12, 2000
FCC ID:ACJ96NKX-TG2670 BASE C-01
Ref -42 dBm
Atten 5 dB
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.4 GHz
#Res BW 100 kHz
VBW 100 kHz
Span 10 MHz
Sweep 5 ms (401 pts)
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2


Agilent 08:29:32 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-01
Mkr1 2.401727 GHz
Ref -35 dBm
Atten 5 dB
-49.5 dBm
Peak
Log
5
dB/
1
V1 S2
S3 FC
AA
Center 2.401 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (411 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent 09:08:19 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-12
Mkr1 2.434778 GHz
Ref -35 dBm
Atten 5 dB
-49.74 dBm
Peak
Log
5
dB/
1
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (411 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43300000 GHz
Stop Freq
2.43600000 GHz
CF Step
300.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off


Agilent 09:09:25 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-12
Mkr1 2.434778 GHz
Ref -35 dBm
Atten 5 dB
-49.74 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.434 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (411 pts)
Freq/Channel
Center Freq
2.43450000 GHz
Start Freq
2.43300000 GHz
Stop Freq
2.43600000 GHz
CF Step
300.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off


Agilent 09:44:56 Jul 11, 2000
FCC ID:ACJ96NKX-TG2670N BASE C-24
Mkr1 2.470720 GHz
Ref -35 dBm
Atten 5 dB
-51.49 dBm
Peak
Log
5
dB/
V1 S2
S3 FC
AA
Center 2.47 GHz
Span 3 MHz
#Res BW 3 kHz
VBW 3 kHz
#Sweep 1 ks (411 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Band Pair
Start Stop
Span Pair
Span Center
Off
More
1 of 2