SAMSUNG ELECTRONICS Co., Ltd.,
Regulatory Compliance Group
IT R&D Center
416 Maetan3-Dong,
Yeongtong-gu, Suwon city,
Gyeonggi-Do, Korea 443-742

FCC CFR47 PART 15 SUBPART CERTIFICATION REPORT

Model Tested	**:**	**SGH-E490**
Additional Model	**:**	**SGH-E498**
FCC ID (Requested)	**:**	**A3LSGHE490**
Report No	**:**	**FD-199-R2**
Job No	**:**	**FD-199**
Date issued	**:**	**October 16**

- Abstract -
All measurement reported herein accordance with FCC Rules, 47CFR Part2, Part15.

Prepared By

JW LEE – Test Engineer

Checked By

WW JANG - Manager

Authorized By

SH PARK – Senior Manager

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MEASUREMENT REPORT

1. FCC Certification Information

The following information is in accordance with FCC Rules, 47CFR Part15, Subpart C

1.1. §2.1033 General Information

- Applicant Name: SAMSUNG ELECRONICS CO., LTD.
- Address: 416 Maetan3-Dong, Yeongtong-gu, Suwon City Gyeonggi-Do, Korea 443-742
- Attention: SungJoo KIM, Engineering Manager (QA Lab)
- FCC ID: A3LSGHE490
- Additional Model: SGH-E498
- Quantity: Quantity production is planned.
- Equipment (EUT) Type: Single-Band PCS GSM/EDGE Phone with Bluetooth
- This Bluetooth Module has been tested by Bluetooth Qualification Lab, and we confirm the following:
  A) The hopping sequence is pseudorandom
  B) All Channels were used equally on average
  C) The receiver input bandwidth equals the transmit bandwidth
  D) the receiver hops in sequence with the transmit signal
- 15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) stream.
- 15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate its channel selection/hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.
- FCC Classification(s): FCC Part15 Spread Spectrum Transceiver (DSS)
- Frequency Range: 2402 ~ 2480MHz(Bluetooth)
- Max. Output Power: 0.00114W(0.57dBm)
- FCC Rule Part(s): §15.247, §2
- Dates of Test: October 12, 2006
- Place of Test: SAMSUNG Lab,
- Test Report S/N: FD-199-R2

2. INTRODUCTION

2.1. SAMSUNG TEST LOCATION

These measurement test were conducted at the **SAMSUNG ELECTRONICS CO., LTD(SUWON)**.
The site address is 416 Maetan3-Dong, Yeongtong-gu, Suwon City, Gyeonggi-Do, Korea 442-742.
The site has 1 Fully-anechoic chamber and measurement facility.

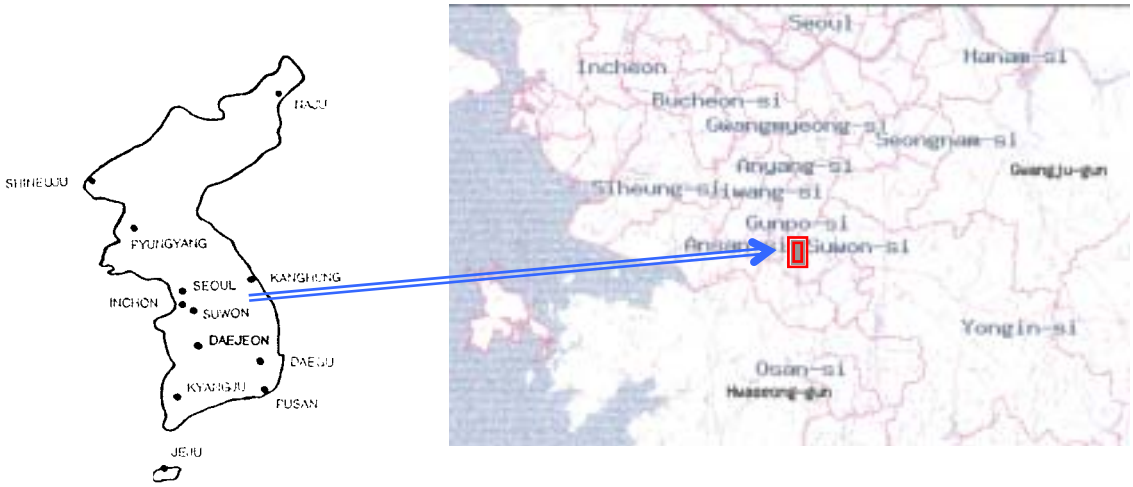


Figure1. Map of the Suwon City area.

2.2. SCOPE

All measurement tests were conducted at the SAMSUNG Lab, except Radiated Emission & Conducted Emission test. RE and CE measurement test reports are issued separately.

2.3. MEASUREMENT PROCEDURE

The radiated and spurious measurements were made Fully-anechoic chamber at a 3-meter test range (see Figure2). The equipment under testing was placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer.

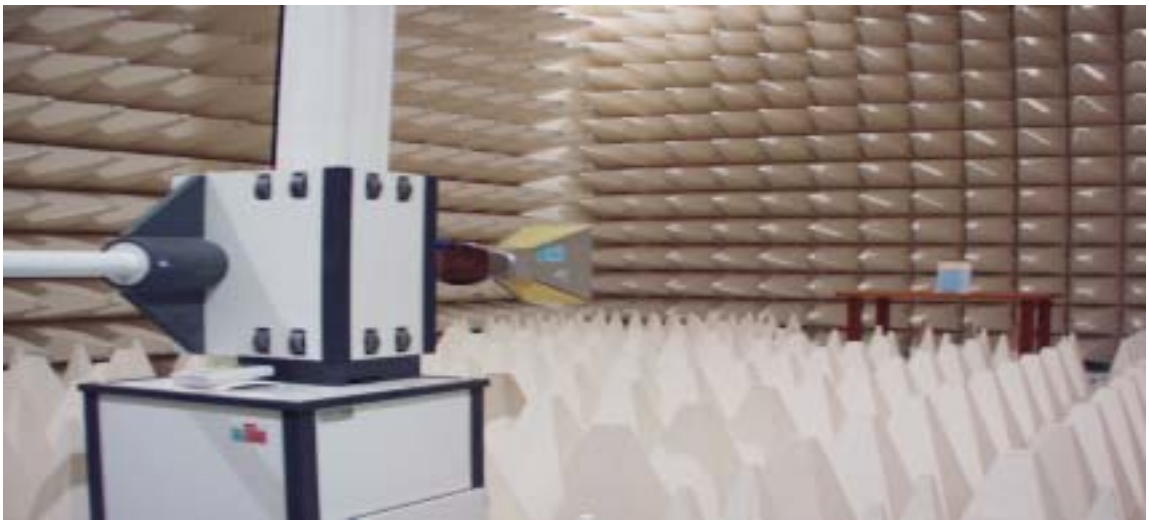


Figure2. Photograph of 3m Fully Anechoic Chamber

3. TEST EQUIPMENT LIST

Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	E4440A(3Hz~26.5GHz)	MY41000236	2007-04-14
	E4440A(3Hz~26.5GHz)	MY41000233	2007-04-05
Communication test set	CMU200	109162	2006-10-18
Signal Generator	SMR20	835197/030	2007-01-10
Network Analyzer	8753E	JP38160590	2007-06-26
Pre-Amplifier	8449B	3008A00691	2007-01-02
Antenna Master	MA240	240/618	Not Required
Controller	HD100	100/756	Not Required
Horn Antenna	HF906	360306/011	2007-03-31
High Pass Filter	WHK/3.5/18G-10SS	3	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Shielded Fully Anechoic Chamber	RF0002	ANT0001	Not Required
Power Supply	E3640A	MY40003594	2007-06-28
	E3640A	MY40003595	2007-05-19
Divider	11636B	51946	Not Required
	11636B	51942	Not Required

4. TECHNICAL CHARACTERISTICS TEST

4.1. 20dB BANDWIDTH

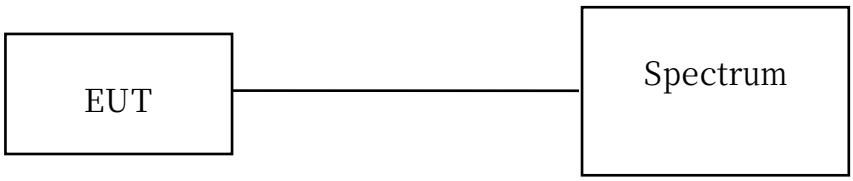
FCC Part15, Subpart C Section 15.247(a)

4.1.1. LIMIT

For frequency hopping system operation in the 2400-2483.5MHz and 5725-5850MHz bands, the maximum 20dB bandwidth of the hopping channels is 1MHz.

Frequency(MHz)	Channel no.	20dB Bandwidth LIMIT(kHz)
2402	0	<1000
2441	39	<1000
2480	78	<1000

4.1.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable.

4.1.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect it to measurement instrument. Then set it to any one proper frequency within its operating range.
3. Measure the frequency difference of two frequencies that were attenuated 20dB from the highest peak value.
4. Repeat above procedures until all frequencies measured were complete.

4.1.4. TEST RESULT

Frequency(MHz)	Channel no.	20dB Bandwidth(kHz)	20dB Bandwidth LIMIT(kHz)	Pass/Fail
2402	0	870	<1000	Pass
2441	39	826	<1000	Pass
2480	78	836	<1000	Pass

4.2. OUTPUT POWER MEASUREMENT

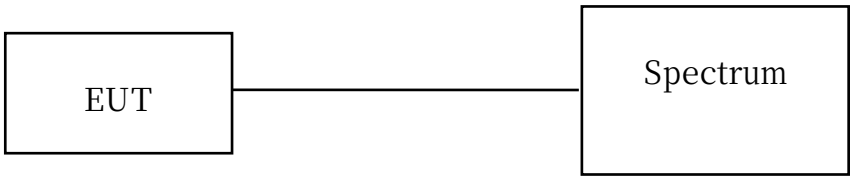
FCC Part15, Subpart C Section 15.247(b)

4.2.1.LIMIT

For frequency hopping systems in the 2400-2483.5MHz band employing at least 75 hopping channels, and all frequency hopping systems in the 5725-5850 MHz BAND : 1 Watt (30dBm)

Frequency Range(MHz)	2400~2483.5
Quantity of Hopping Channel	>75
Limit(W)	1

4.2.2.TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.2.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Turn the EUT and connect it to measurement instrument. Then set it to any one proper frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 3MHz RBW and 3MHz VBW.

4.2.4. TEST RESULT

Frequency(MHz)	Channel no.	Power Output(dBm)	Power Output LIMIT(dBm)	Pass/Fail
2402	0	0.57	<30	Pass
2441	39	0.53	<30	Pass
2480	78	0.26	<30	Pass

4.3. CONDUCTED SPURIOUS EMISSION TEST

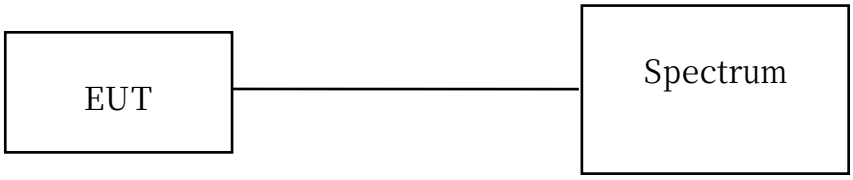
FCC Part15, Subpart C Section 15.247(d)

4.3.1. LIMIT

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Frequency(MHz)	Channel no.	LIMIT (30MHz – 25GHz)
2402	0	>20dBc
2441	39	>20dBc
2480	78	>20dBc

4.3.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.3.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. The transmitter output was connected to the spectrum analyzer via a low loss cable.
3. Turn the EUT and connect it to measurement instrument. Then set it to any one proper frequency within its operating range.

4.3.4. TEST RESULT

Frequency(MHz)	Channel no.	Actual attenuation below frequency of operation(dBc)	LIMIT (30MHz – 25GHz)	Pass/Fail
2402	0	39.13	>20dBc	Pass
2441	39	38.06	>20dBc	Pass
2480	78	41.12	>20dBc	Pass

4.4. BAND EDGE COMPLIANCE

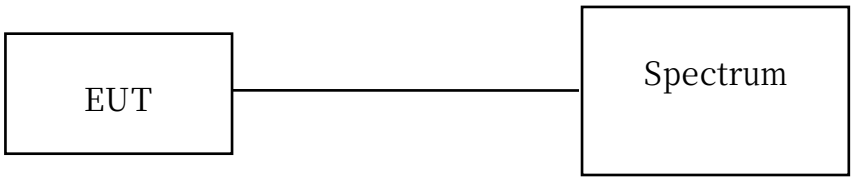
FCC Part15, Subpart C Section 15.247(d)

4.4.1. LIMIT

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Frequency Range(MHz)	2400~2483.5
Band edge LIMIT(dBc)	>20

4.4.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.4.3. TEST PROCEDURE

1. Turn the EUT and connect it to measurement instrument. Then set it to any one proper frequency within its operating range.
2. The transmitter output was connected to the spectrum analyzer via a low loss cable.
3. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100MHz bandwidth from band edge.

4.4.4. TEST RESULT

Frequency(MHz)	Result of Band edge(dBc)	Band edge LIMIT(dBc)	Pass/Fail
<2400	36.85	>20	Pass
>2483.5	49.04	>20	Pass

4.5. NUMBER OF HOPPING CHANNELS

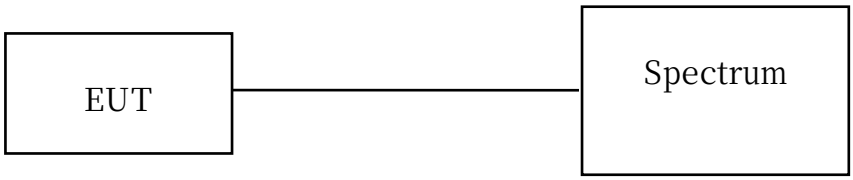
FCC Part15, Subpart C Section 15.247(a)

4.5.1. LIMIT

At least 75 hopping frequencies

Frequency Range(MHz)	2400~2483.5
LIMIT(Quantity of Hopping Channel)	>75

4.5.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.5.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operation range and make sure the instrument is operated in its linear range.
3. Set the SA on MaxHold Mode, and then keep the EUT in hopping mode.

4.5.4. TEST RESULT

HOPPING CHANNEL FREQUENCY RANGE(MHz)	QUANTITY OF HOPPING CHANNEL READ VALUE	QUANTITY OF HOPPING CHANNEL LIMIT	Pass/Fail
2400~2483.5	79	>75	Pass

4.6. CHANNEL SEPARATION TEST

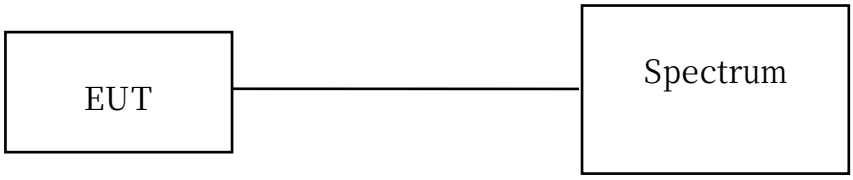
FCC Part15, Subpart C Section 15.247(a)

4.6.1. LIMIT

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

Frequency Range(MHz)	2400~2483.5
LIMIT(KHz)	>25

4.6.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.6.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect it to measurement instrument. Then set it to any one proper frequency within its operating range.
3. By using the Max Hold function record the separation of two adjacent channels.
4. Measure the frequency difference of these two adjacent channels by SA MARKER function.

4.6.4. TEST RESULT

CHANNEL NUMBER	CHANNEL FREQUENCY	SEPARATION READ VALUE(KHz)	SEPARATION LIMIT(KHz)	Pass/Fail
39	2441	1000	>25	Pass

4.7. DWELL TIME

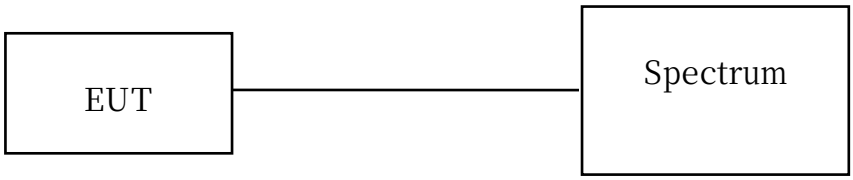
FCC Part15, Subpart C Section 15.247(a)(1)(iii)

4.7.1. LIMIT

The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4seconds multiplied by the number of hopping channels employed.

Frequency Range(MHz)	2400~2483.5
LIMIT(ms)	<400

4.7.2. TEST SETUP



The EUT was connected to a spectrum through a 50ohm RF cable

4.7.3. TEST PROCEDURE

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operation range and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
4. Measure the time duration of one transmission on the measured frequency.
5. A DH1 Packet need 1 time slot for transmitting and 1 time slot for receiving. Then the system makes worst case 800 hops per second with 79 channels. So you have each channel 10.13times per second and so for 31.6 seconds you have 320.108 times of appearance.
So we have 320.108 * Tx-Time per appearance = Dwell Time

4.7.4. TEST RESULT

CHANNEL NUMBER	CHANNEL FREQUENCY(MHz)	Time of occupancy (Dwell Time) (ms)	Time of occupancy limit(ms)	Pass/Fail
39	2441.00	134.72	<400	Pass

4.8. RADIATED HARMONIC MEASUREMENT

FCC Part15, Subpart C Section 15.249, 15.209

4.8.1. LIMIT

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

FUNDAMENTAL FREQUENCY(MHz)	FIELD STRENGTH OF HARMONICS(dBuV/m) (at 3m)
2400~2483.5	<54

4.8.2. TEST SETUP

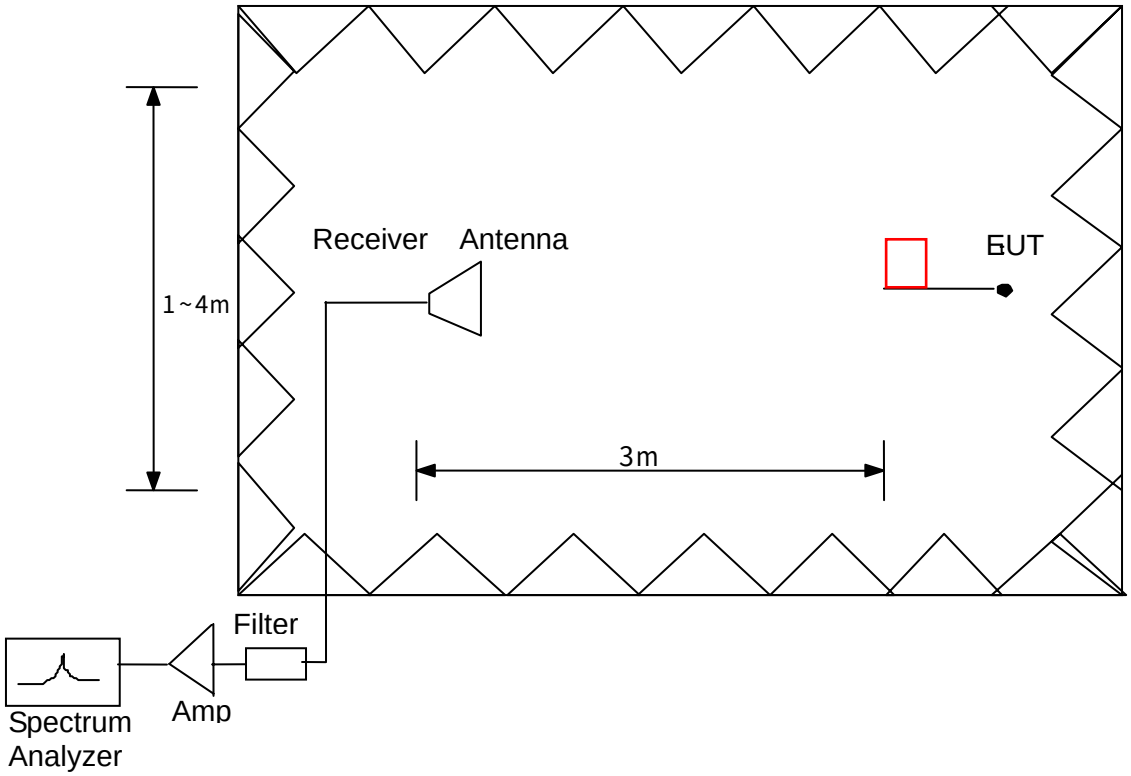


Figure 3. Diagram of Radiated harmonic test Set-up

4.8.3. TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 1meters above the ground at a 3meter fully-anechoic chamber. The table was rotated 360degrees to determine the position of the highest radiation.
2. The EUT was set 3meters away from the receiver antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna is a horn antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna

was tuned to heights from 1 meter to 4meters and the rotatable table was turned from 0degrees to 360degrees to find the maximum reading.
5. The test-receiver system was set to Average Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.8.4. TEST RESULT

Test mode : Ch0

FREQ. (MHz)	Reading	Cable loss (dB)	Ant. Fact. (dB)	POL. (H/V)	F/S (dBuV/m)	LIMIT (dBuV/m)	MARGIN	Pass /Fail
4804	-69.37	-18.36	11.05	H	30.32	<54.0	-23.68	Pass
7206	*	-15.45	11.44	*	*	<54.0	*	*
9608	*	-12.57	12.17	*	*	<54.0	*	*

Test mode : Ch39

FREQ. (MHz)	Reading	Cable loss (dB)	Ant. Fact. (dB)	POL. (H/V)	F/S (dBuV/m)	LIMIT (dBuV/m)	MARGIN	Pass /Fail
4882	-68.94	-17.97	11.05	H	31.14	<54.0	-22.86	Pass
7323	*	-15.14	11.44	*	*	<54.0	*	*
9764	*	-11.41	12.17	*	*	<54.0	*	*

Test mode : Ch78

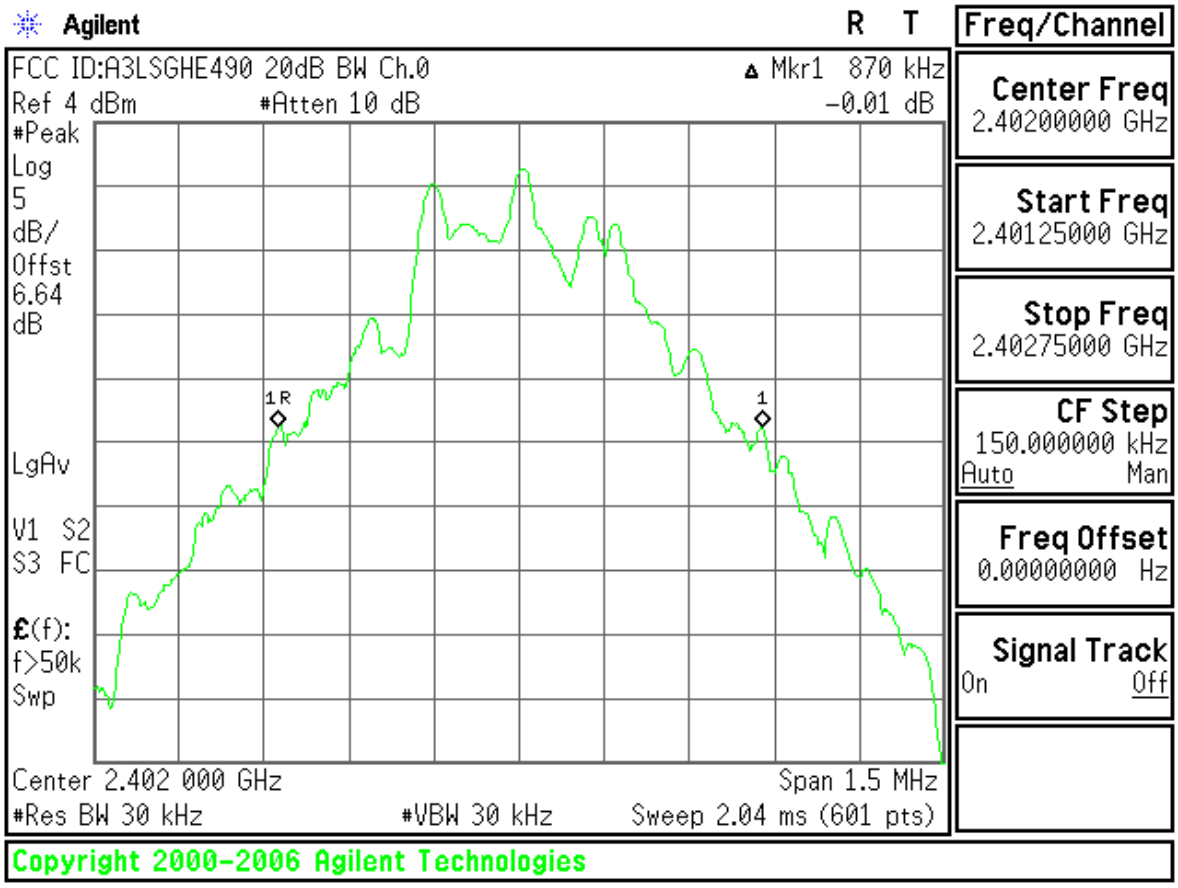
FREQ. (MHz)	Reading	Cable loss (dB)	Ant. Fact. (dB)	POL. (H/V)	F/S (dBuV/m)	LIMIT (dBuV/m)	MARGIN	Pass /Fail
4960	-68.71	-17.78	11.05	H	31.56	<54.0	-22.44	Pass
7440	*	-15.49	11.44	*	*	<54.0	*	*
9920	*	-9.93	12.17	*	*	<54.0	*	*

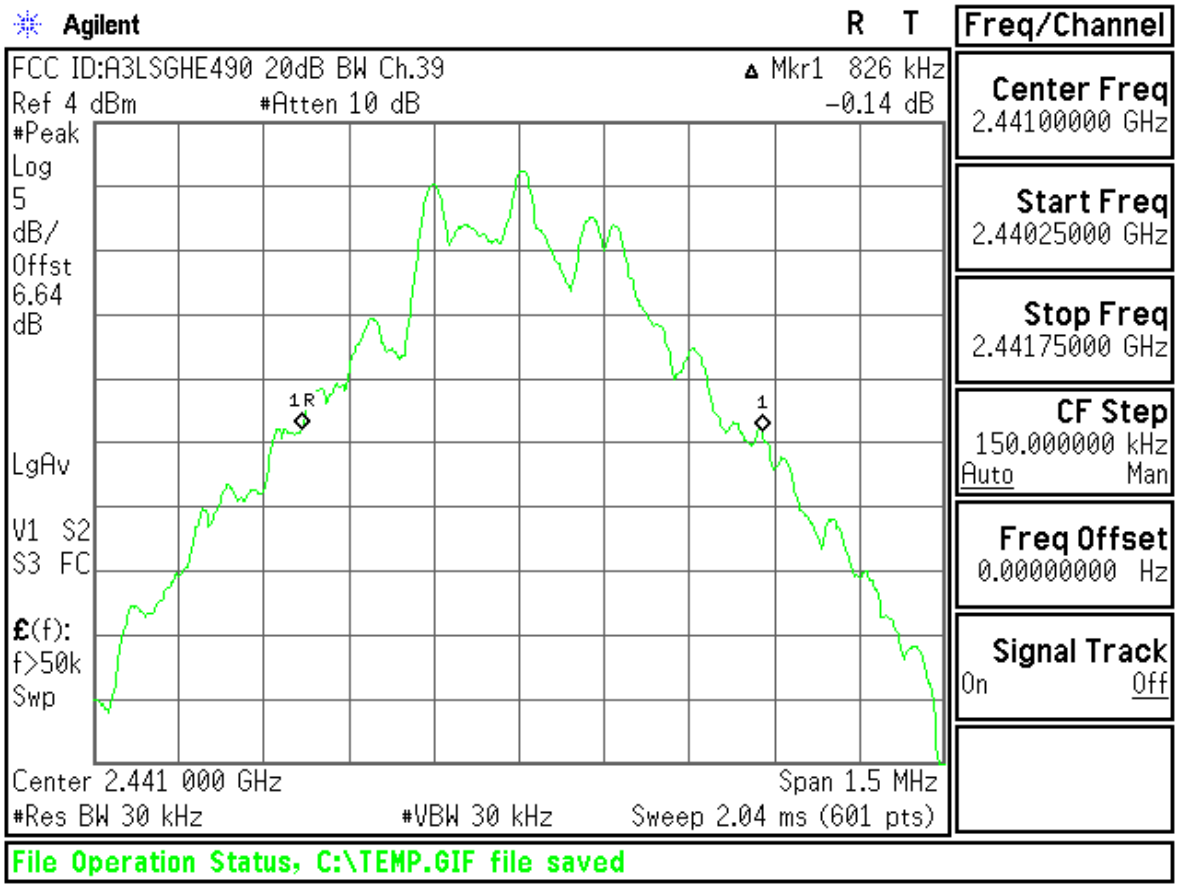
NOTE :
1. "*" Measurement does not apply for this frequency.
2. The test data reported are the worst-case field strength value of harmonics.
3. All modes of operation were investigated, and the worst-case results are reported.

5. CONCLUSION

The data collected shows that the Single modulation Single-Band PCS GSM/EDGE Phone with Bluetooth. FCC ID : A3LSGHE490 complies with the requirements of Parts 15 of the FCC Rules.

6. TEST PLOTS


Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 20dB BW Ch.0
Mkr1 870 kHz
Ref 4 dBm
#Atten 10 dB
-0.01 dB
#Peak
Log
5
dB/
Offst
6.64
dB
1R
1
LgAv
V1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.402 000 GHz
Span 1.5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 2.04 ms (601 pts)
Center Freq
2.40200000 GHz
Start Freq
2.40125000 GHz
Stop Freq
2.40275000 GHz
CF Step
150.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies


Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 20dB BW Ch.39
Mkr1 826 kHz
Ref 4 dBm
#Atten 10 dB
-0.14 dB
#Peak
Log
5
dB/
Offst
6.64
dB
1R
1
LgAv
V1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.441 000 GHz
Span 1.5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 2.04 ms (601 pts)
Center Freq
2.44100000 GHz
Start Freq
2.44025000 GHz
Stop Freq
2.44175000 GHz
CF Step
150.000000 kHz
Auto Man
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Signal Track
On Off
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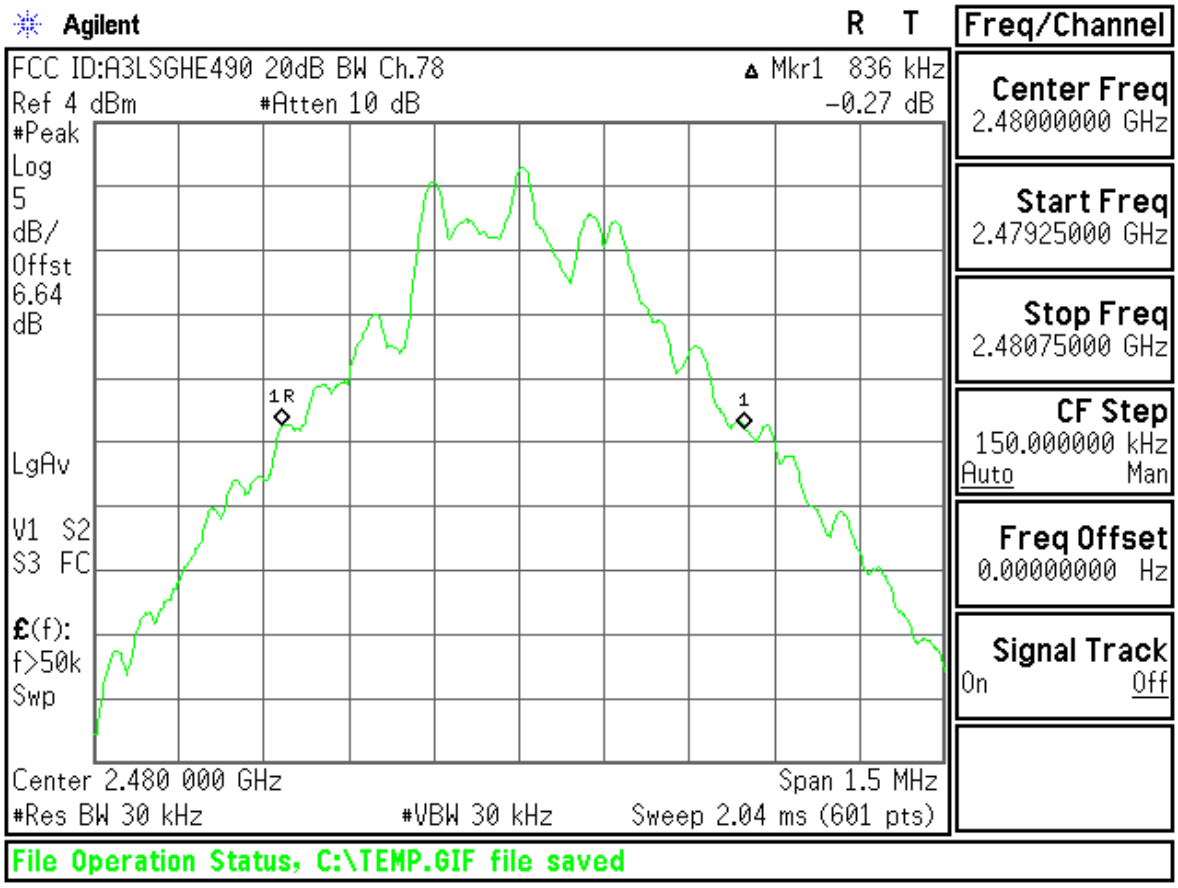
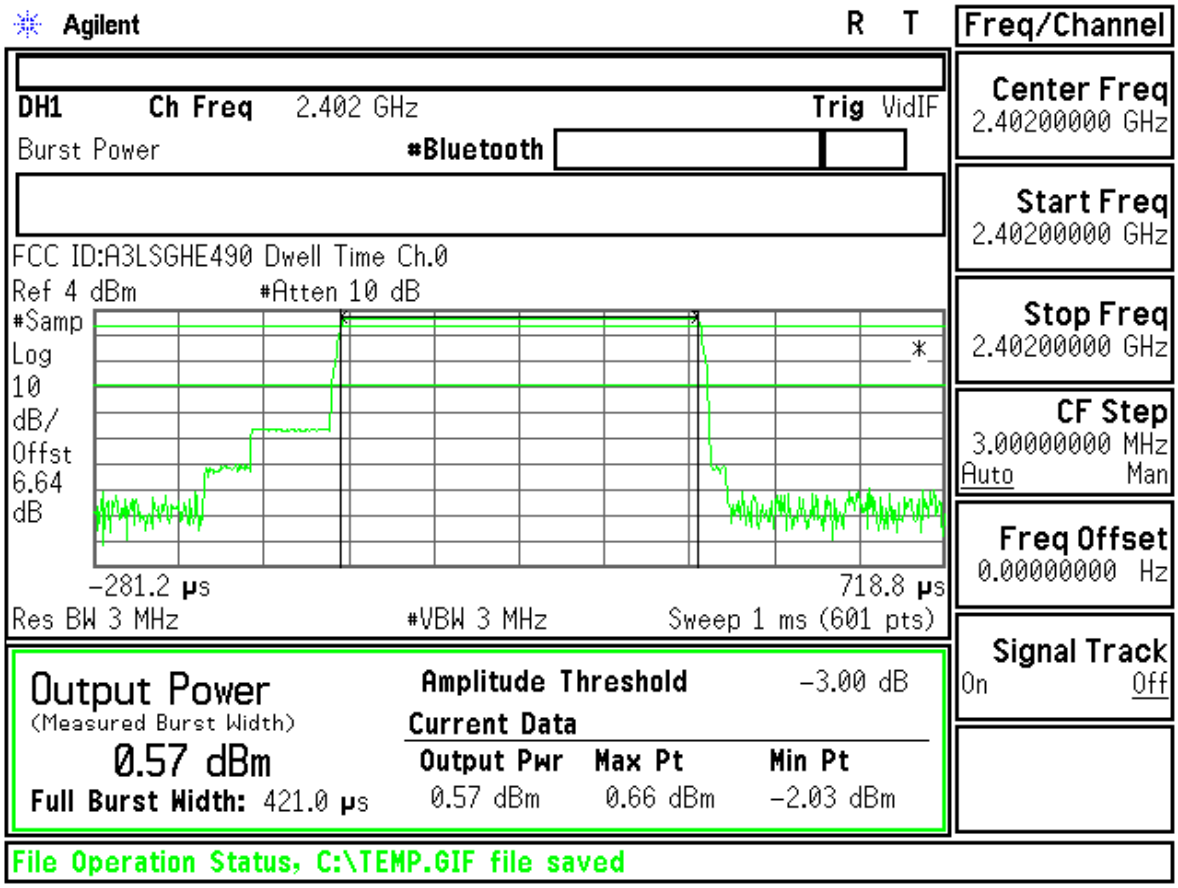
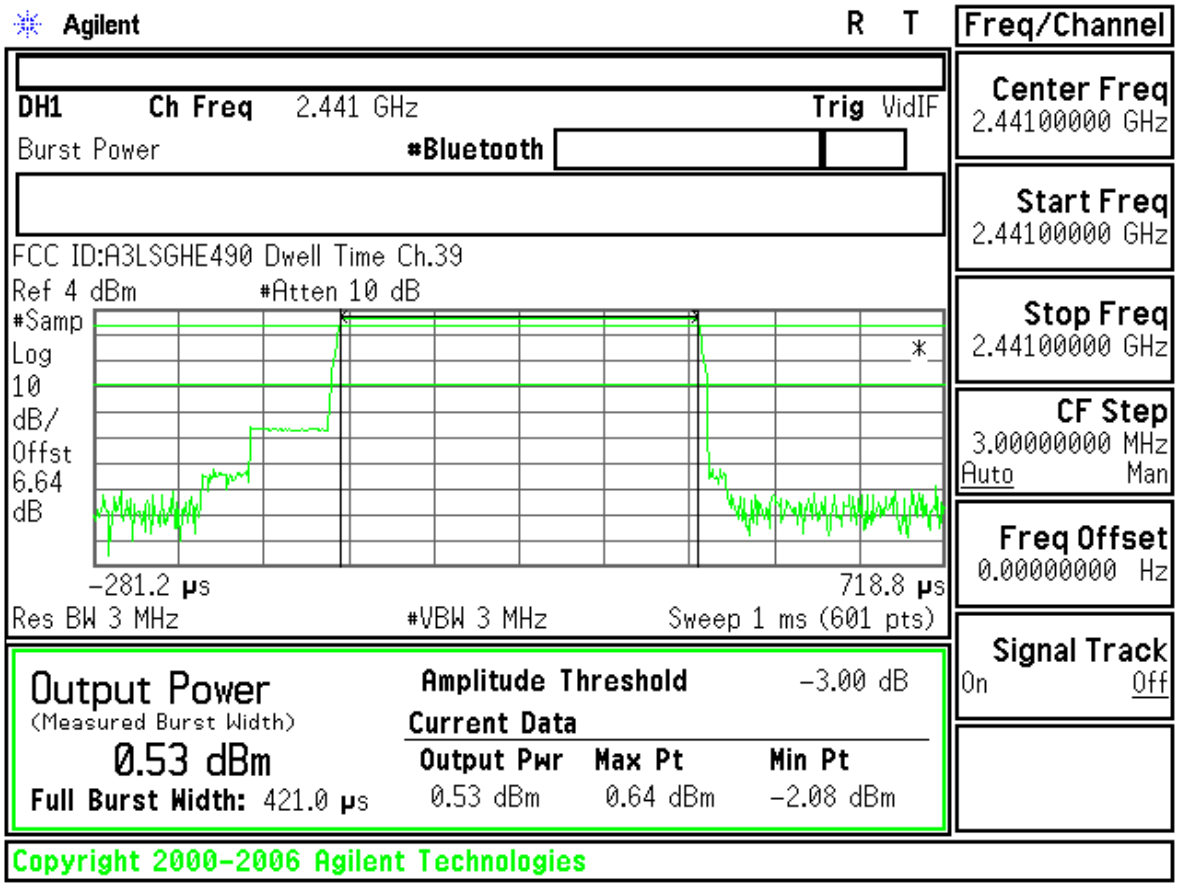
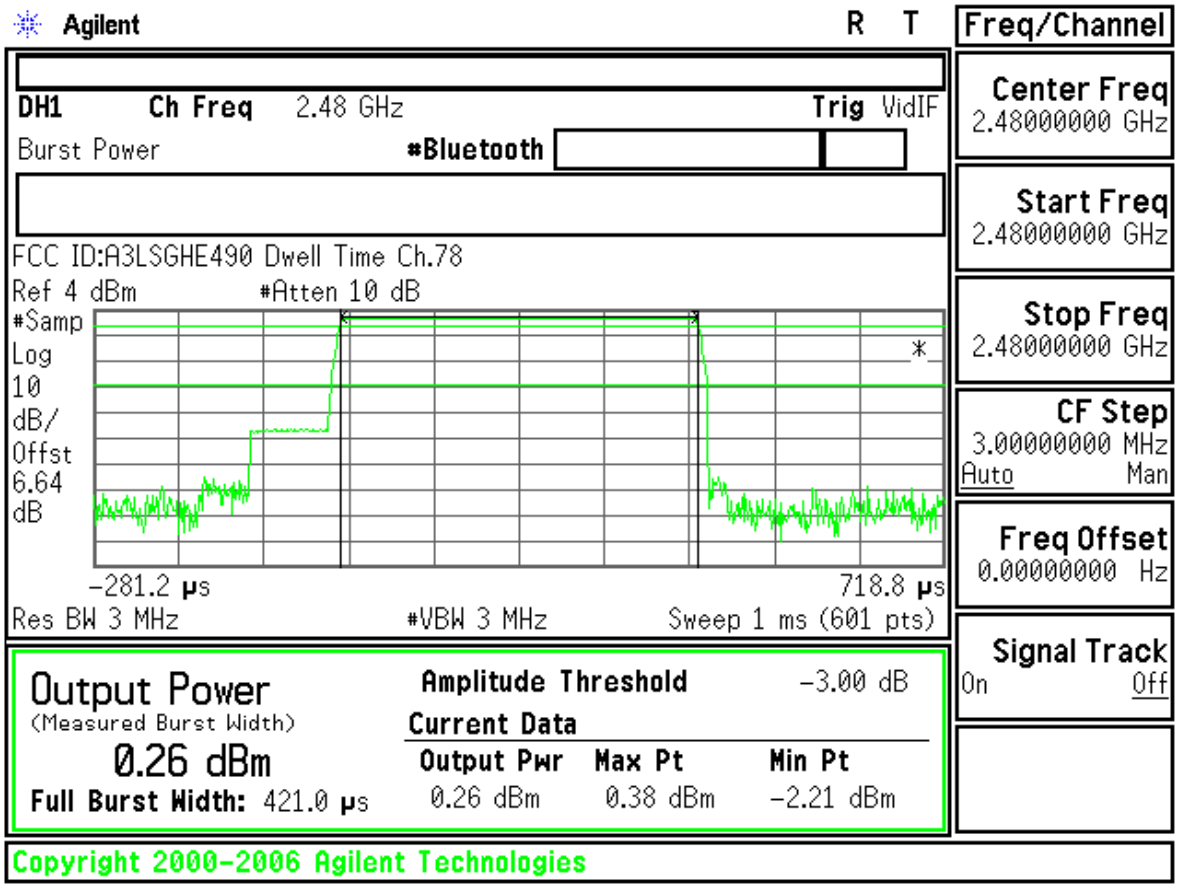
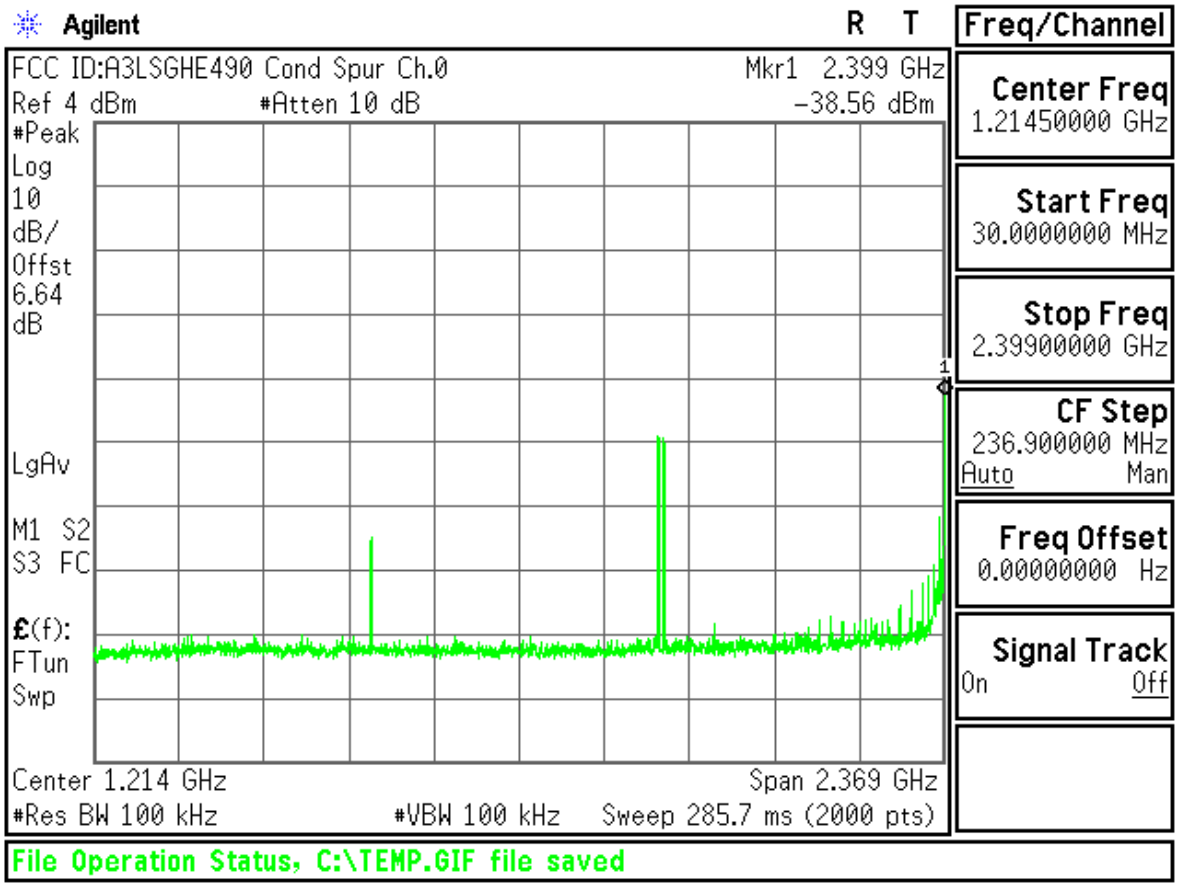
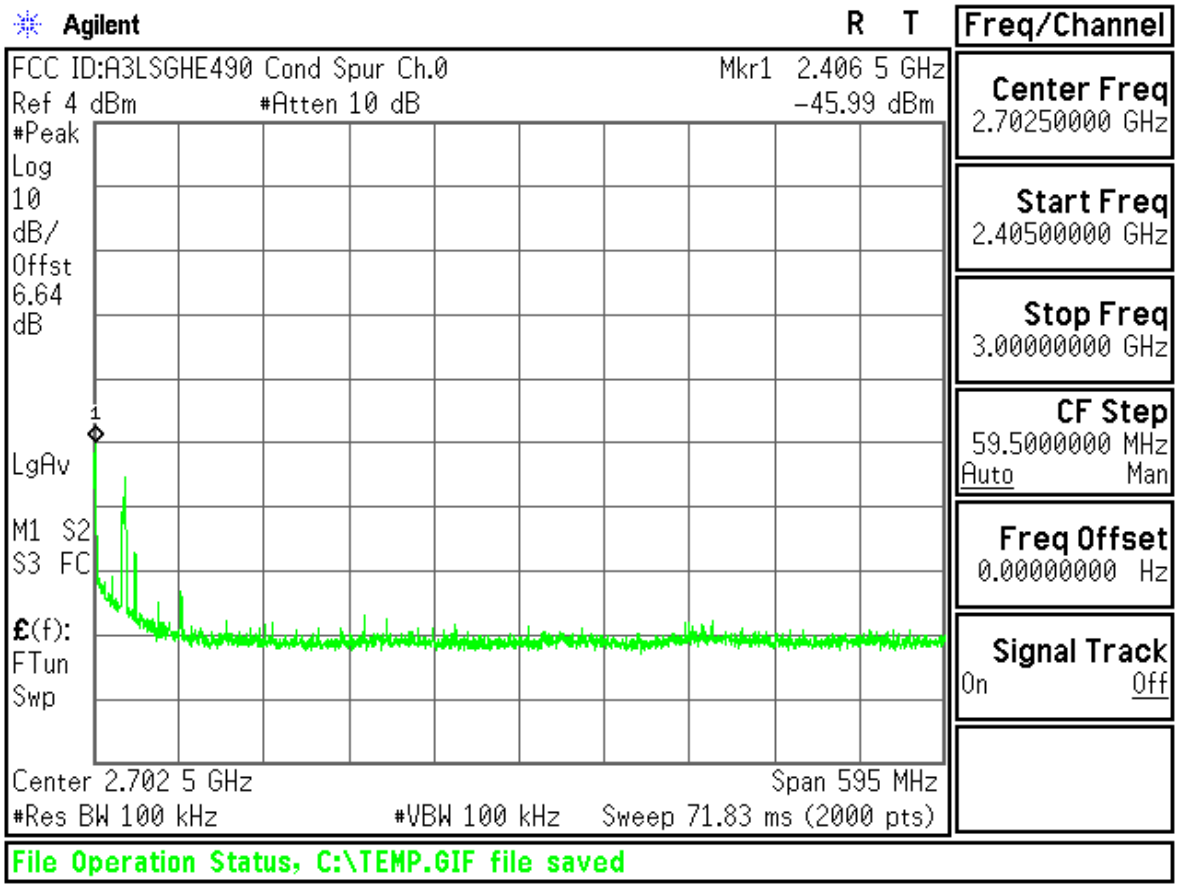

Agilent
R T
FCC ID:A3LSGHE490 20dB BW Ch.78
Mkr1 836 kHz
Ref 4 dBm
#Atten 10 dB
-0.27 dB
#Peak
Log
5
dB/
Offst
6.64
dB
1R
1
LgAv
V1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.480 000 GHz
Span 1.5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 2.04 ms (601 pts)
Freq/Channel
Center Freq
2.48000000 GHz
Start Freq
2.47925000 GHz
Stop Freq
2.48075000 GHz
CF Step
150.000000 kHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

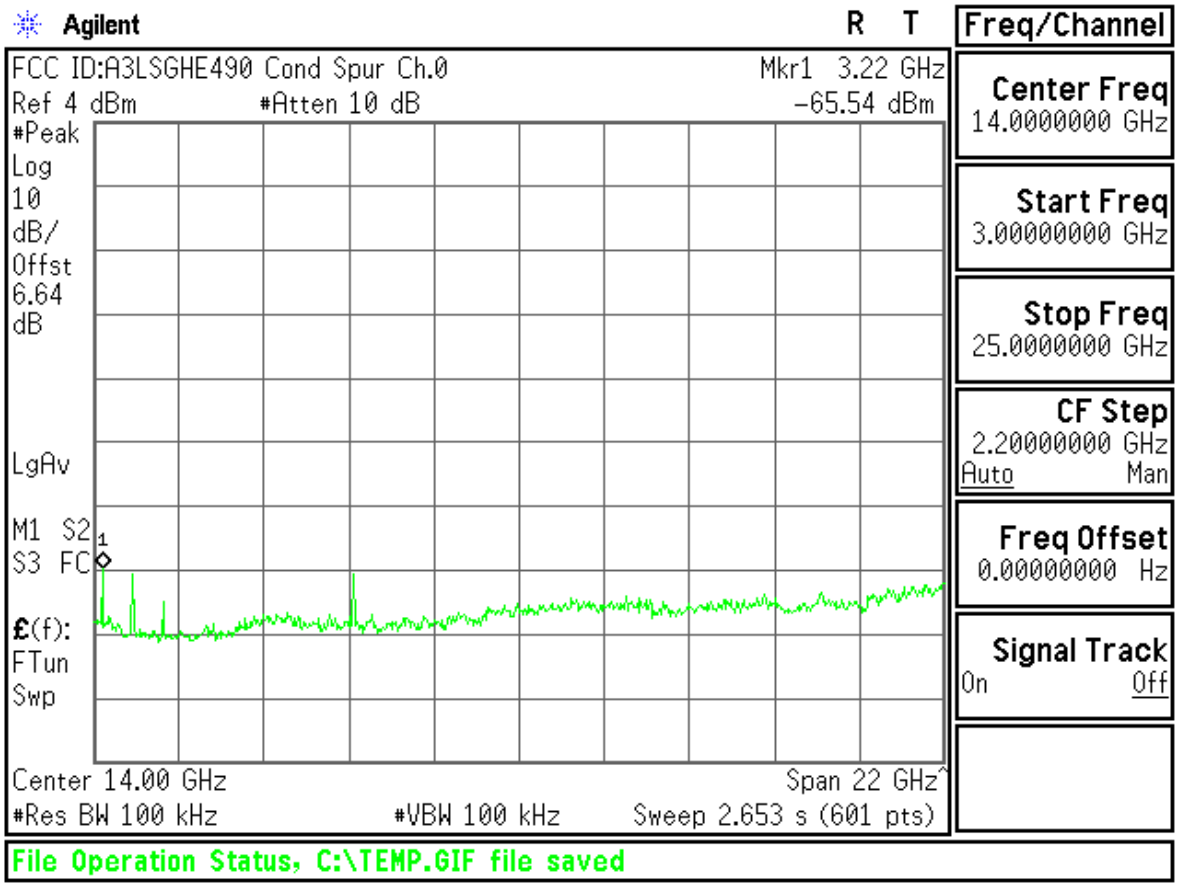

Agilent
R T
DH1
Ch Freq 2.402 GHz
Trig VidIF
Burst Power
#Bluetooth
FCC ID:A3LSGHE490 Dwell Time Ch.0
Ref 4 dBm
#Atten 10 dB
#Samp
Log
10
dB/
Offst
6.64
dB
-281.2 µs
718.8 µs
Res BW 3 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Output Power
(Measured Burst Width)
0.57 dBm
Full Burst Width: 421.0 µs
Amplitude Threshold -3.00 dB
Current Data
Output Pwr Max Pt Min Pt
0.57 dBm 0.66 dBm -2.03 dBm
Freq/Channel
Center Freq
2.40200000 GHz
Start Freq
2.40200000 GHz
Stop Freq
2.40200000 GHz
CF Step
3.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

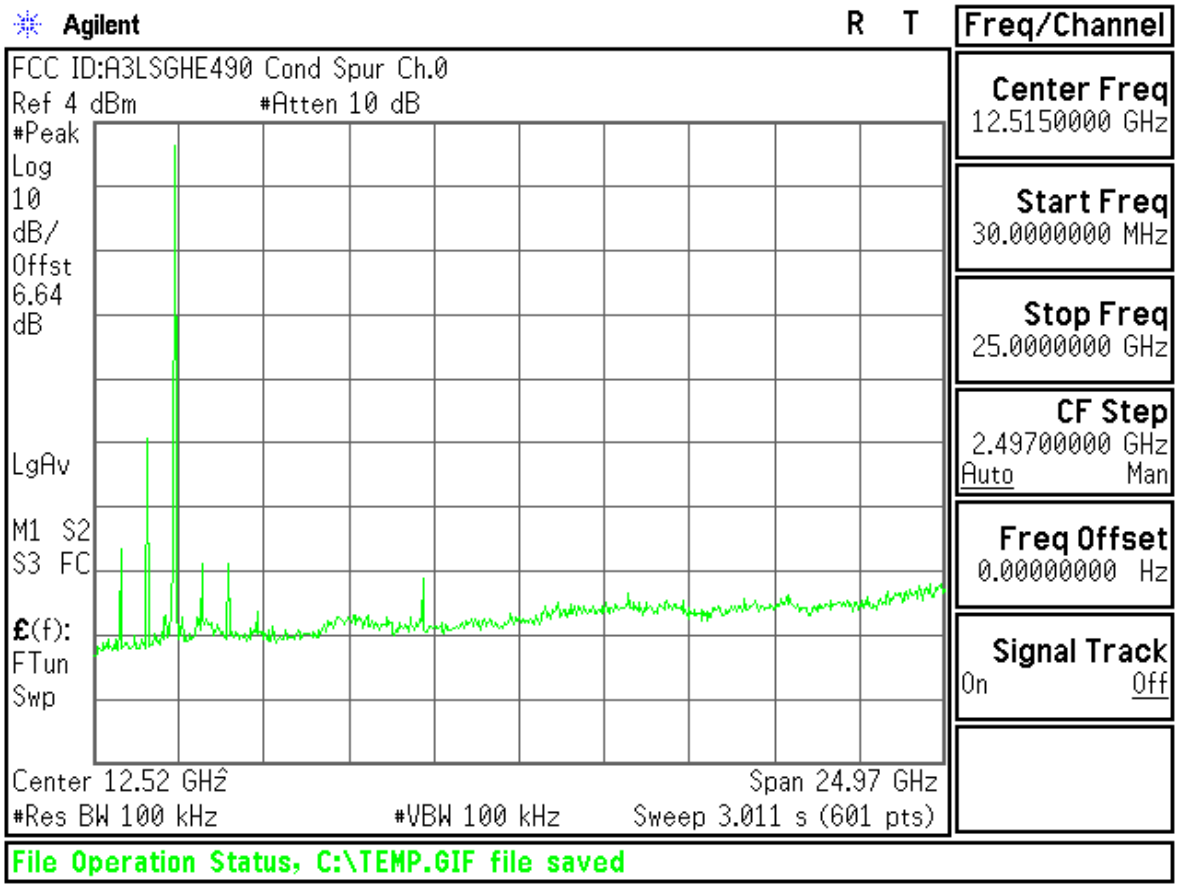

Agilent
R T
Freq/Channel
DH1 Ch Freq 2.441 GHz
Trig VidIF
Burst Power
#Bluetooth
FCC ID:A3LSGHE490 Dwell Time Ch.39
Ref 4 dBm
#Atten 10 dB
#Samp
Log
10
dB/
Offst
6.64
dB
-281.2 µs
718.8 µs
Res BW 3 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Output Power
(Measured Burst Width)
0.53 dBm
Full Burst Width: 421.0 µs
Amplitude Threshold -3.00 dB
Current Data
Output Pwr Max Pt Min Pt
0.53 dBm 0.64 dBm -2.08 dBm
Center Freq
2.44100000 GHz
Start Freq
2.44100000 GHz
Stop Freq
2.44100000 GHz
CF Step
3.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

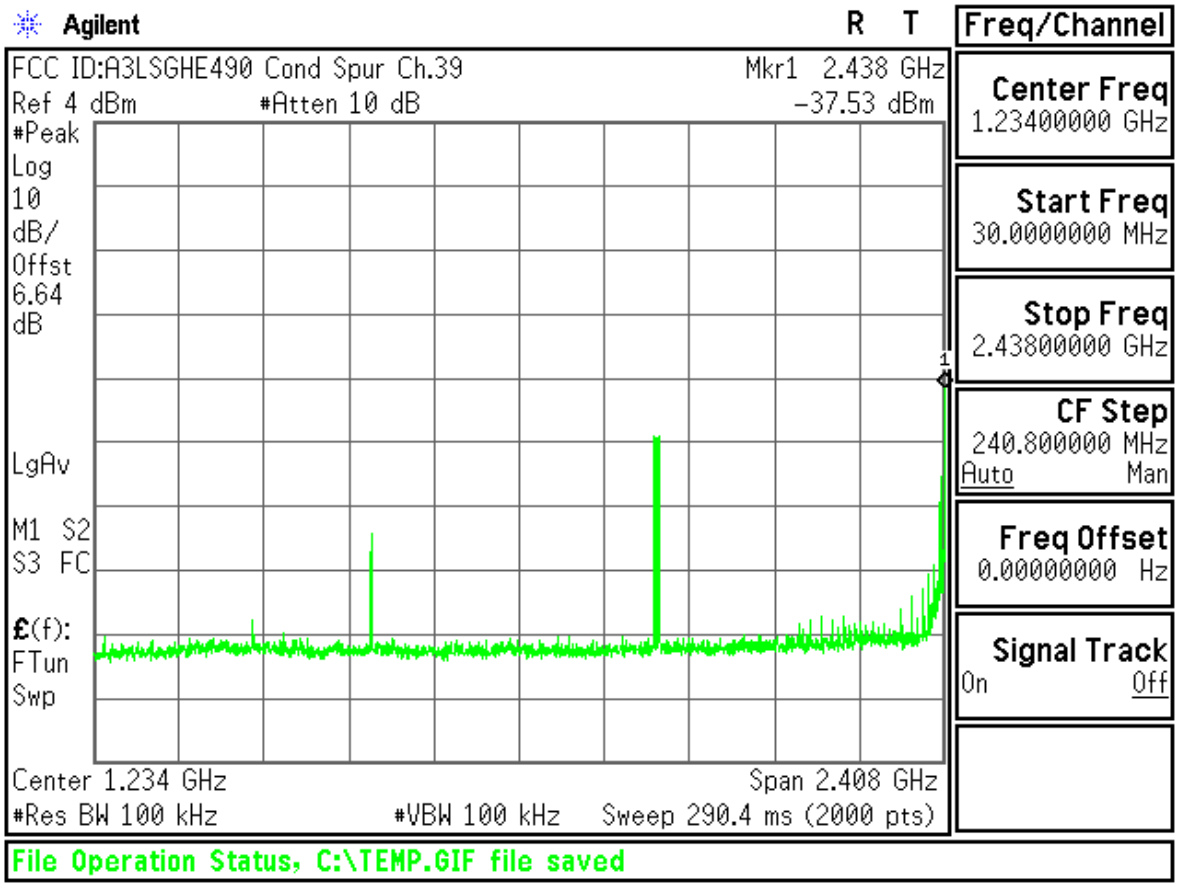

Agilent
R T
Freq/Channel
DH1 Ch Freq 2.48 GHz
Trig VidIF
Burst Power
#Bluetooth
FCC ID:A3LSGHE490 Dwell Time Ch.78
Ref 4 dBm
#Atten 10 dB
#Samp
Log
10
dB/
Offst
6.64
dB
-281.2 µs
718.8 µs
Res BW 3 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Output Power
(Measured Burst Width)
0.26 dBm
Full Burst Width: 421.0 µs
Amplitude Threshold -3.00 dB
Current Data
Output Pwr Max Pt Min Pt
0.26 dBm 0.38 dBm -2.21 dBm
Center Freq
2.48000000 GHz
Start Freq
2.48000000 GHz
Stop Freq
2.48000000 GHz
CF Step
3.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

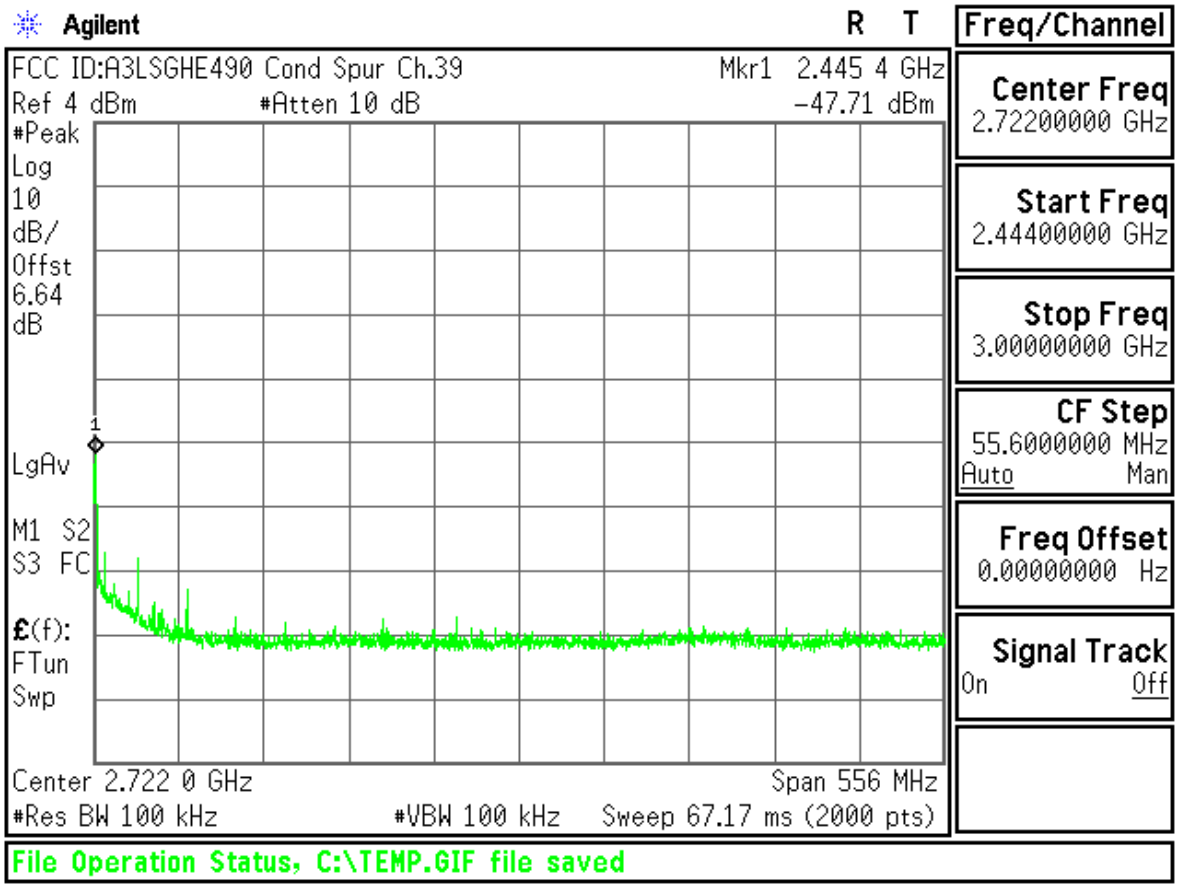

Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Cond Spur Ch.0
Mkr1 2.399 GHz
Ref 4 dBm
#Atten 10 dB
-38.56 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 1.214 GHz
Span 2.369 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 285.7 ms (2000 pts)
Center Freq
1.21450000 GHz
Start Freq
30.0000000 MHz
Stop Freq
2.39900000 GHz
CF Step
236.900000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved

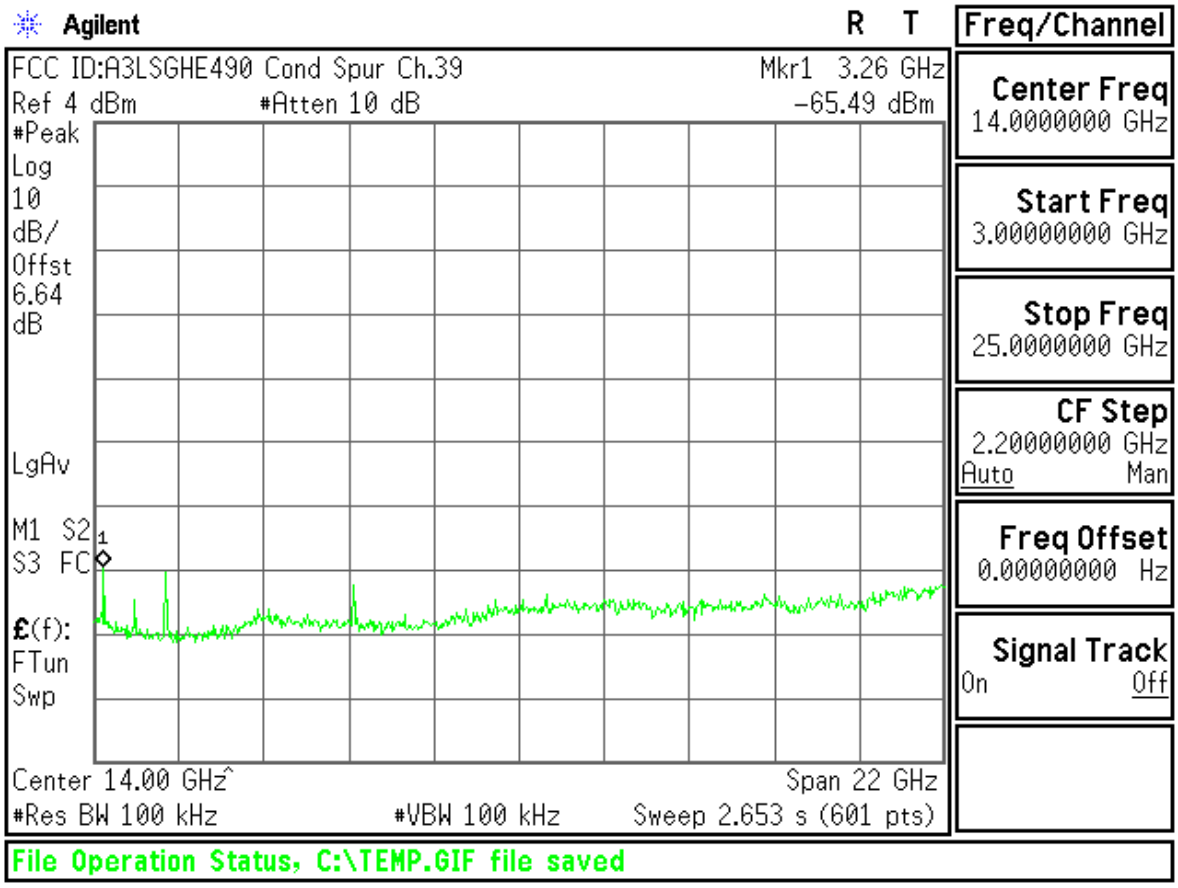

Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Cond Spur Ch.0
Mkr1 2.406 5 GHz
Ref 4 dBm
#Atten 10 dB
-45.99 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 2.702 5 GHz
Span 595 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 71.83 ms (2000 pts)
Center Freq
2.70250000 GHz
Start Freq
2.40500000 GHz
Stop Freq
3.00000000 GHz
CF Step
59.5000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved

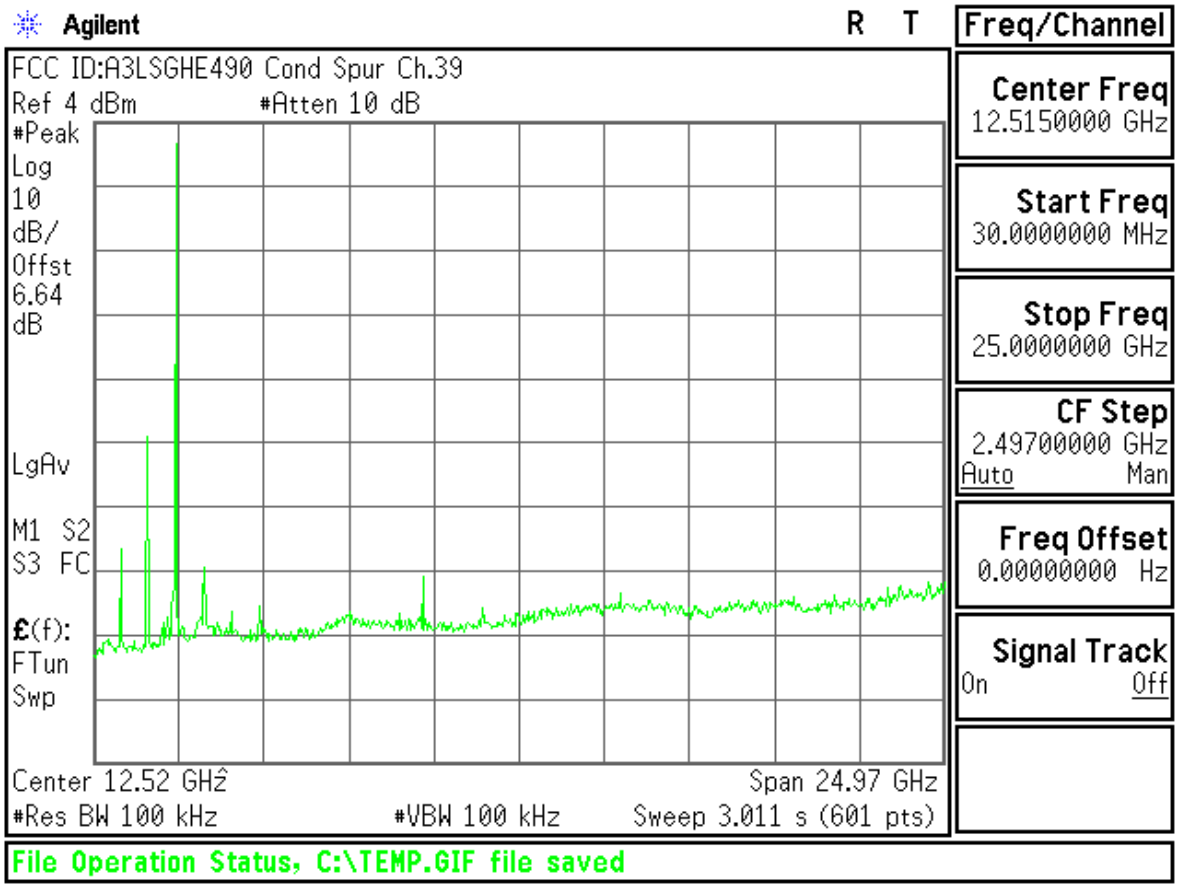

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.0
Mkr1 3.22 GHz
Ref 4 dBm
#Atten 10 dB
−65.54 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 14.00 GHz
Span 22 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 2.653 s (601 pts)
Freq/Channel
Center Freq
14.0000000 GHz
Start Freq
3.00000000 GHz
Stop Freq
25.0000000 GHz
CF Step
2.20000000 GHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

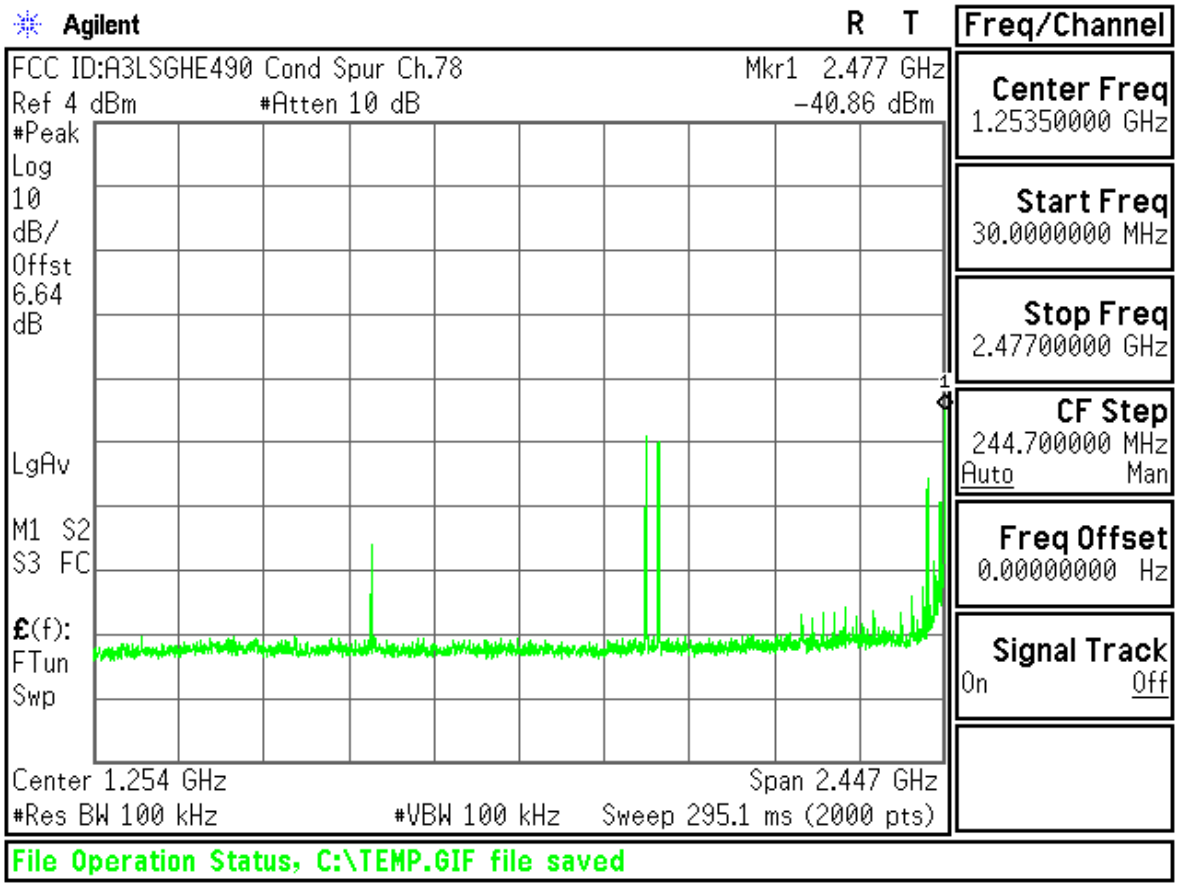

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.0
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 12.52 GHz
Span 24.97 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
Freq/Channel
Center Freq
12.5150000 GHz
Start Freq
30.0000000 MHz
Stop Freq
25.0000000 GHz
CF Step
2.49700000 GHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

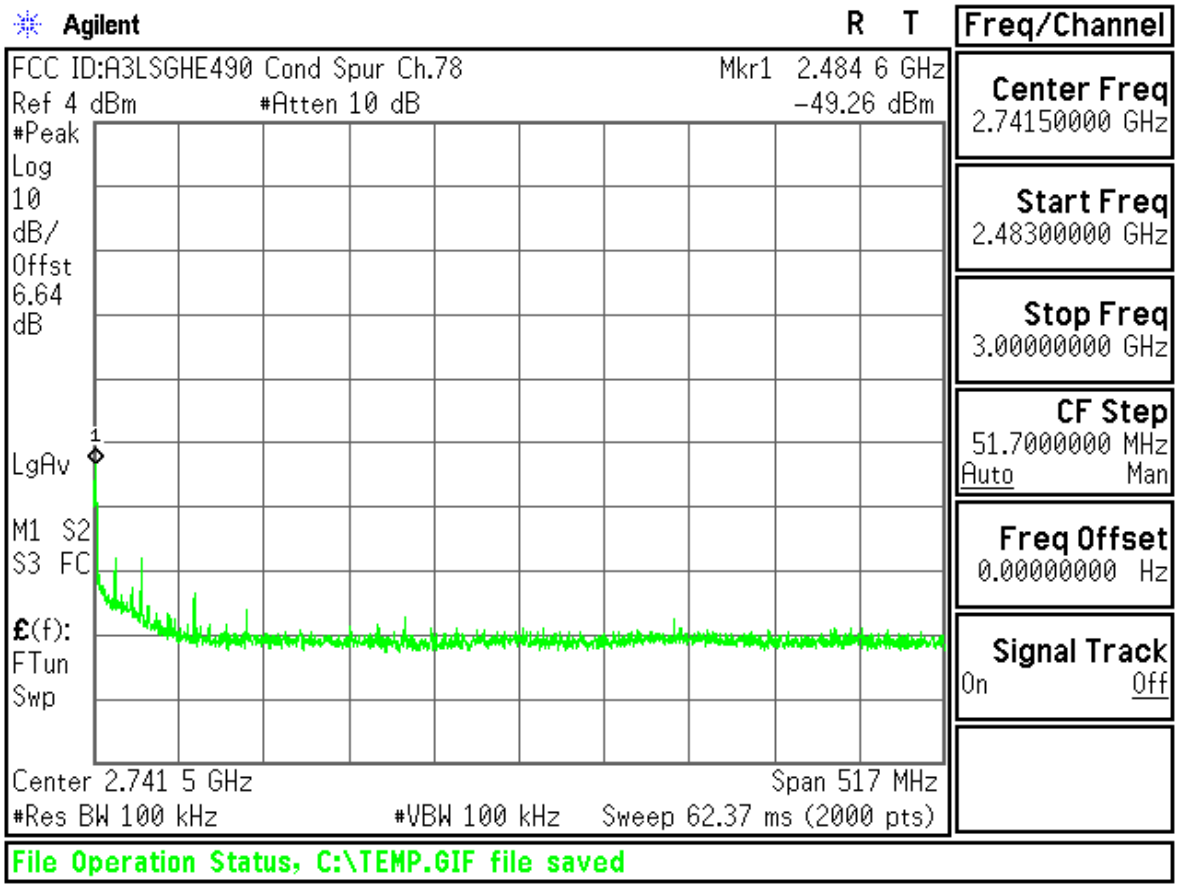

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.39
Mkr1 2.438 GHz
Ref 4 dBm
#Atten 10 dB
−37.53 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 1.234 GHz
Span 2.408 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 290.4 ms (2000 pts)
Freq/Channel
Center Freq
1.23400000 GHz
Start Freq
30.0000000 MHz
Stop Freq
2.43800000 GHz
CF Step
240.800000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved

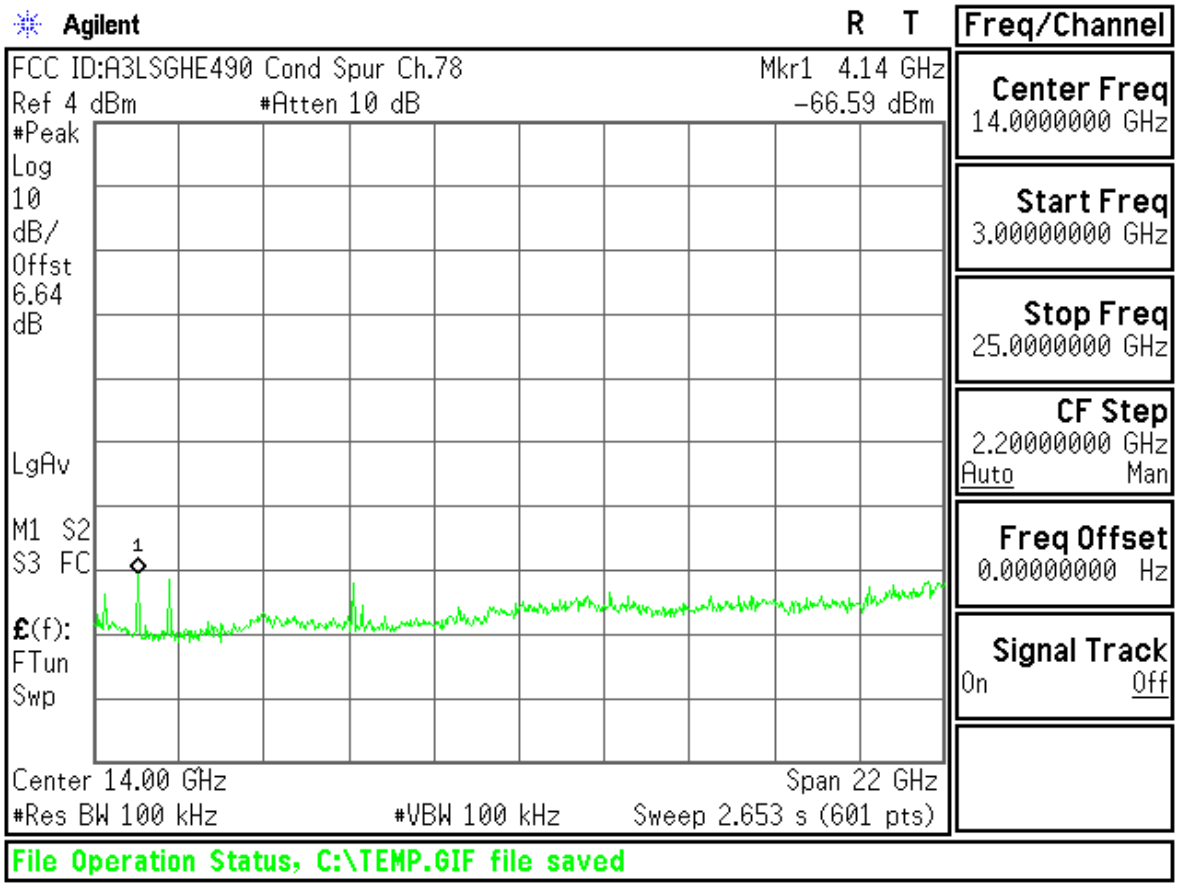

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.39
Mkr1 2.445 4 GHz
Ref 4 dBm
#Atten 10 dB
−47.71 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 2.722 0 GHz
Span 556 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 67.17 ms (2000 pts)
Freq/Channel
Center Freq
2.72200000 GHz
Start Freq
2.44400000 GHz
Stop Freq
3.00000000 GHz
CF Step
55.6000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved

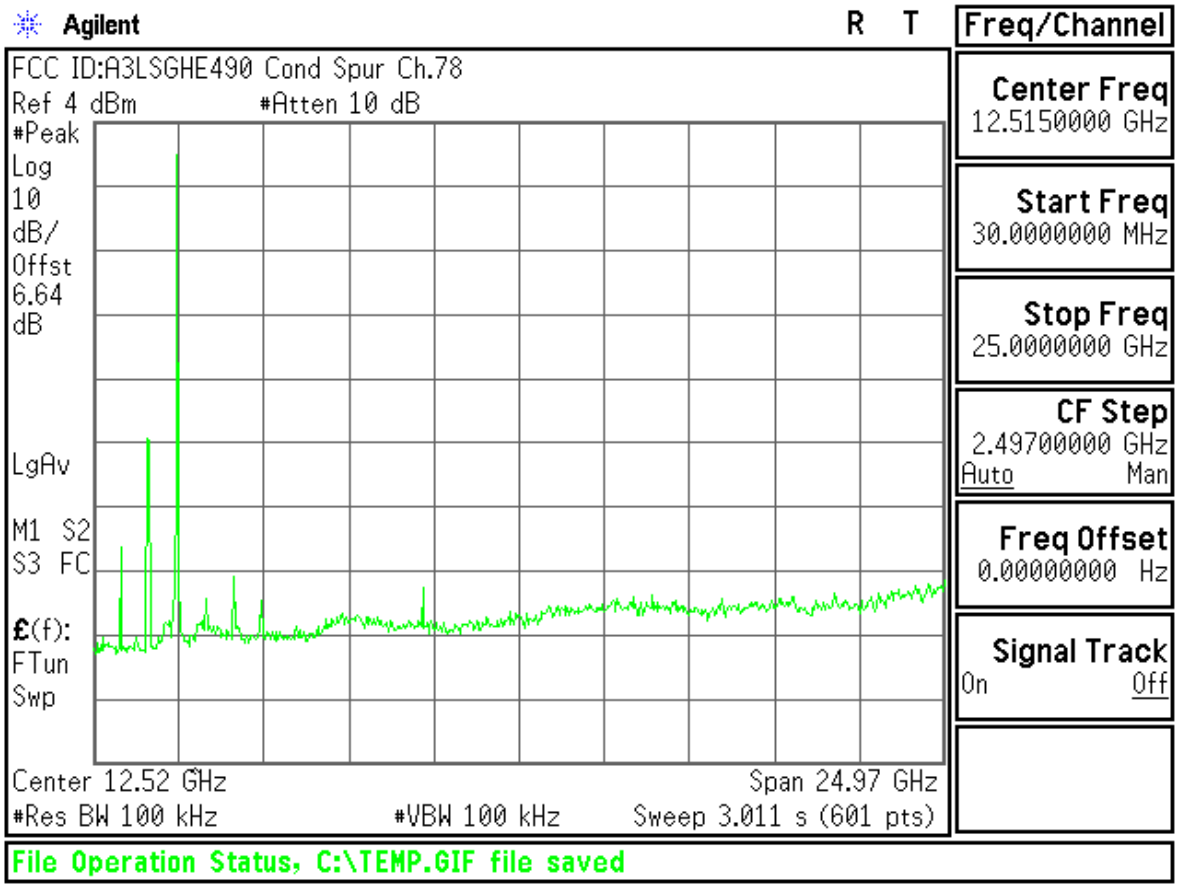

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.39
Mkr1 3.26 GHz
Ref 4 dBm
#Atten 10 dB
-65.49 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 14.00 GHz
Span 22 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 2.653 s (601 pts)
Freq/Channel
Center Freq
14.0000000 GHz
Start Freq
3.00000000 GHz
Stop Freq
25.0000000 GHz
CF Step
2.20000000 GHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

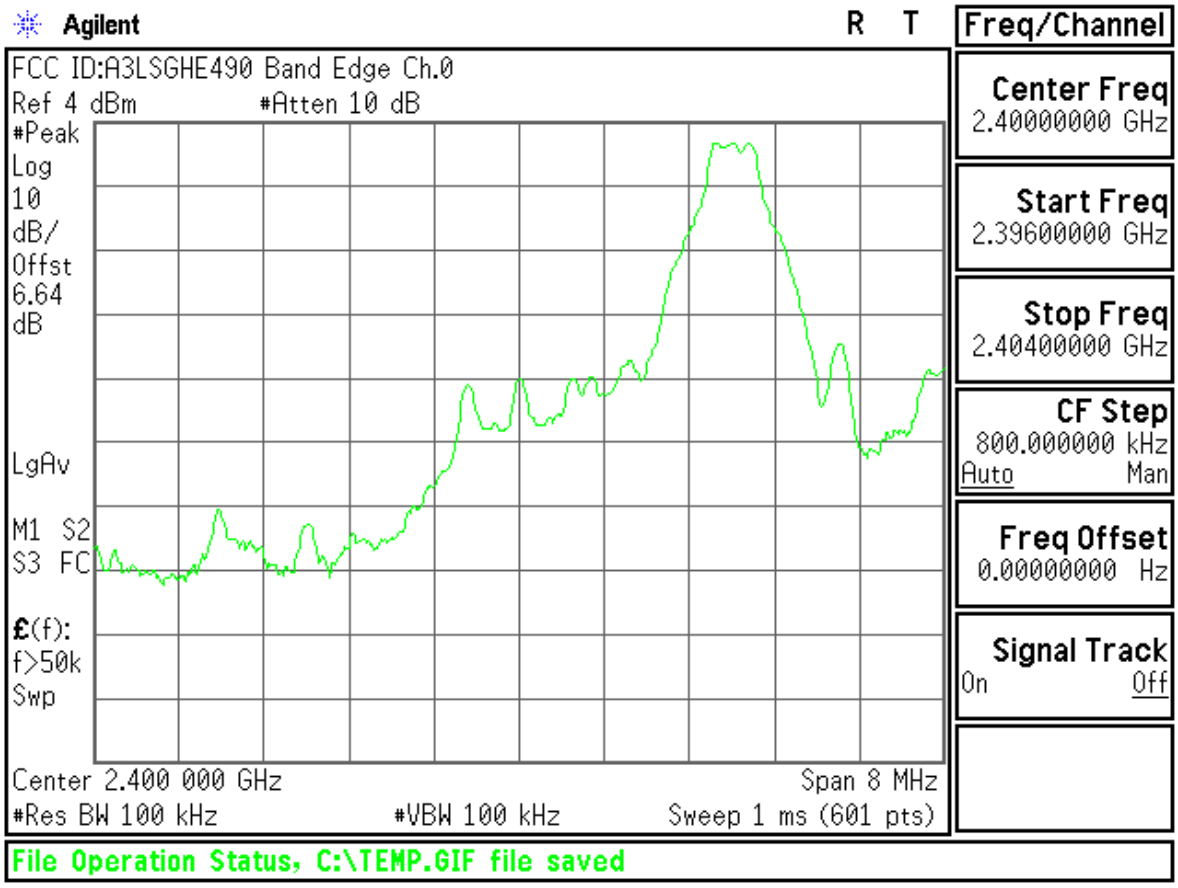

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.39
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 12.52 GHz
Span 24.97 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
Freq/Channel
Center Freq
12.5150000 GHz
Start Freq
30.0000000 MHz
Stop Freq
25.0000000 GHz
CF Step
2.49700000 GHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

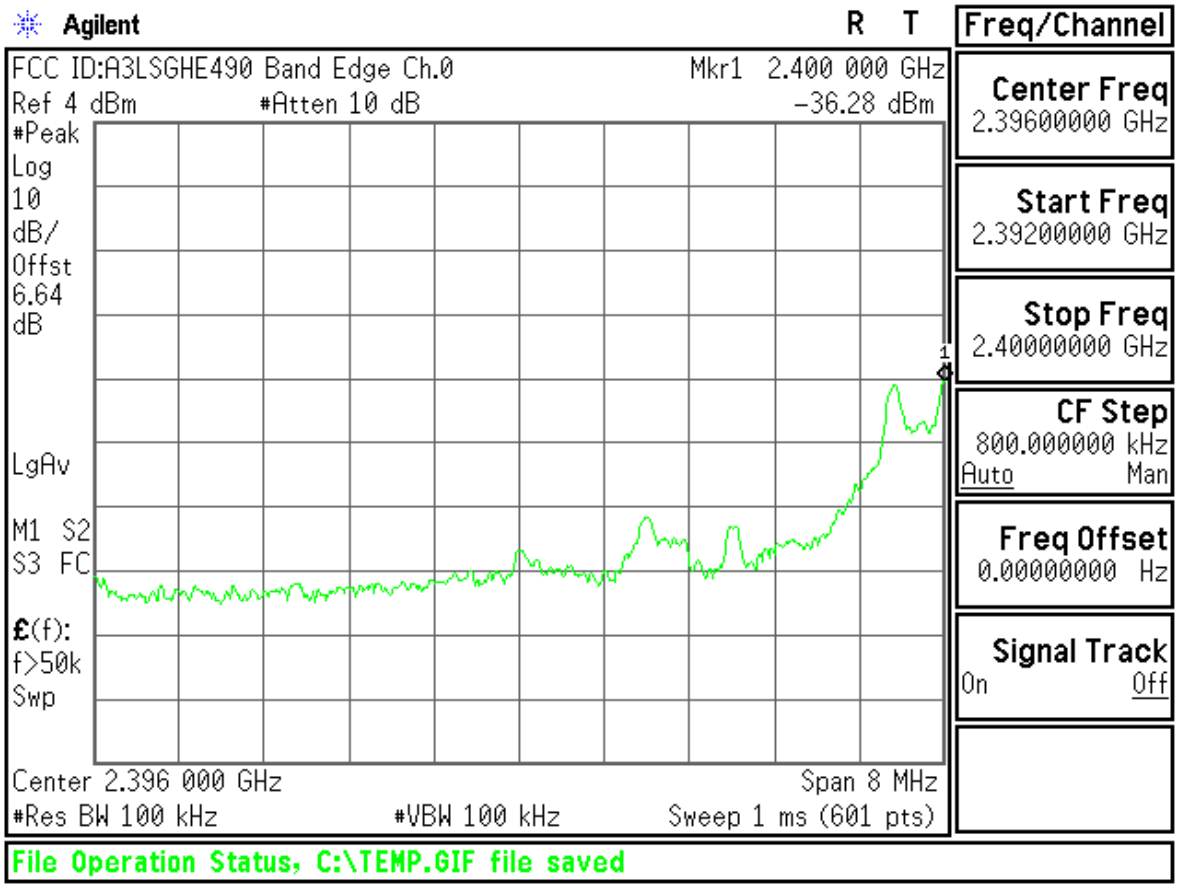

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.78
Mkr1 2.477 GHz
Ref 4 dBm
#Atten 10 dB
-40.86 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 1.254 GHz
Span 2.447 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 295.1 ms (2000 pts)
Freq/Channel
Center Freq
1.25350000 GHz
Start Freq
30.0000000 MHz
Stop Freq
2.47700000 GHz
CF Step
244.700000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

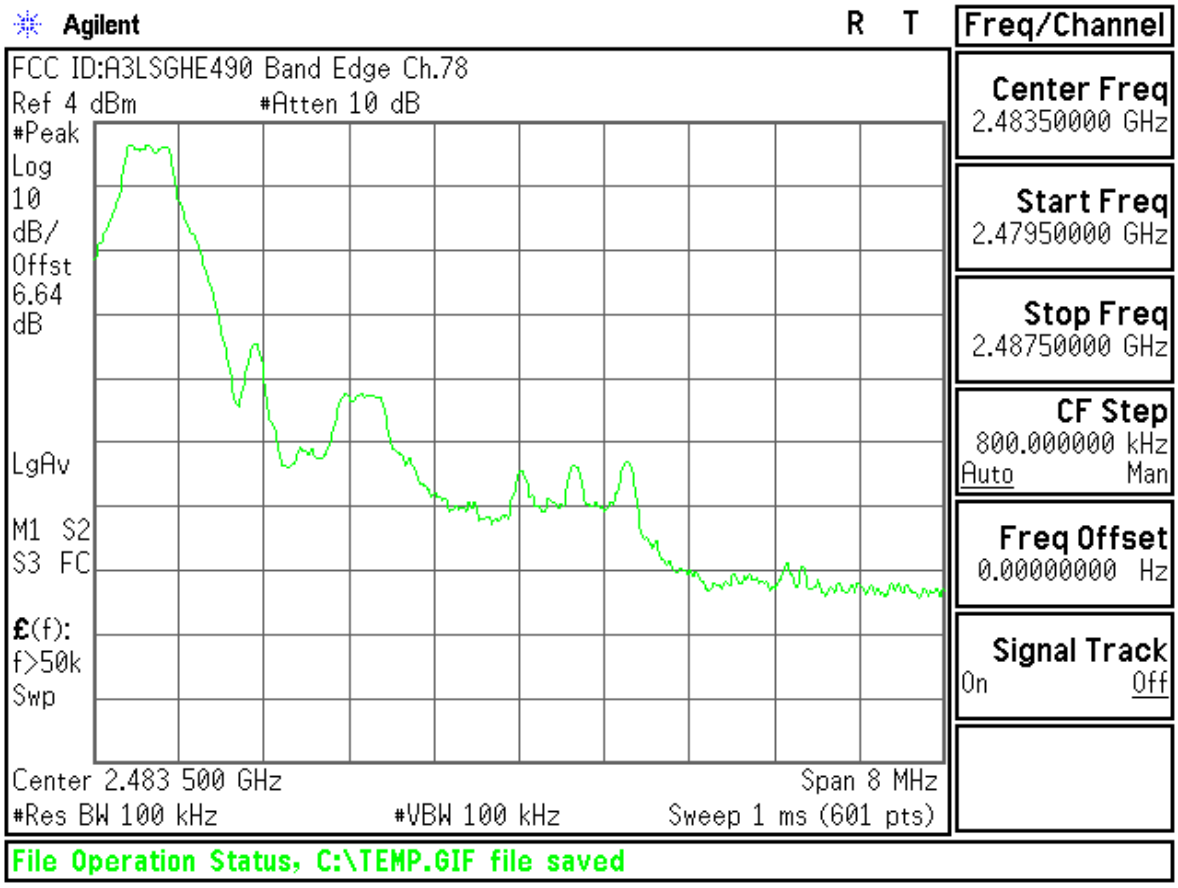

Agilent
R T
FCC ID:A3LSGHE490 Cond Spur Ch.78
Mkr1 2.484 6 GHz
Ref 4 dBm
#Atten 10 dB
-49.26 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 2.741 5 GHz
Span 517 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 62.37 ms (2000 pts)
Freq/Channel
Center Freq
2.74150000 GHz
Start Freq
2.48300000 GHz
Stop Freq
3.00000000 GHz
CF Step
51.7000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
File Operation Status, C:\TEMP.GIF file saved

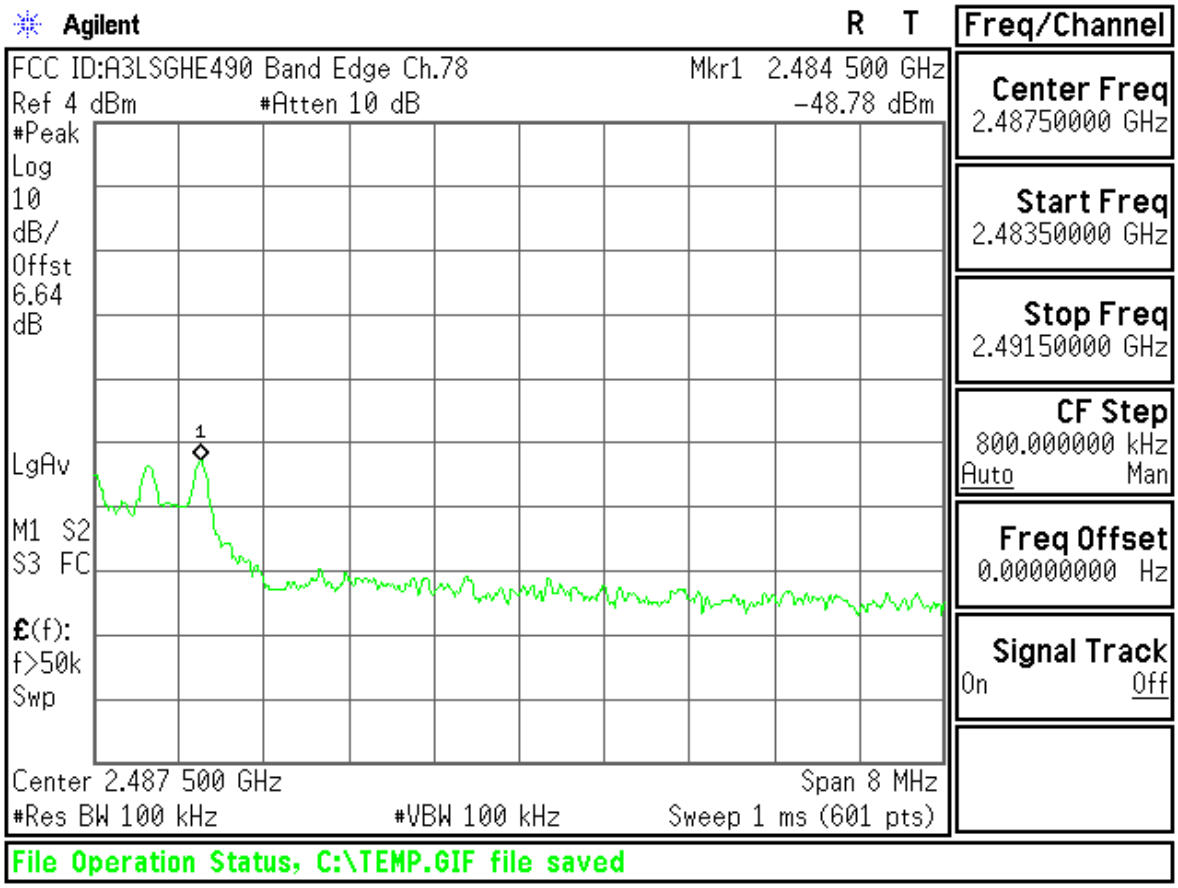

Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Cond Spur Ch.78
Mkr1 4.14 GHz
Ref 4 dBm
#Atten 10 dB
−66.59 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
14.0000000 GHz
Start Freq
3.00000000 GHz
Stop Freq
25.0000000 GHz
CF Step
2.20000000 GHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 14.00 GHz
Span 22 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 2.653 s (601 pts)
File Operation Status, C:\TEMP.GIF file saved

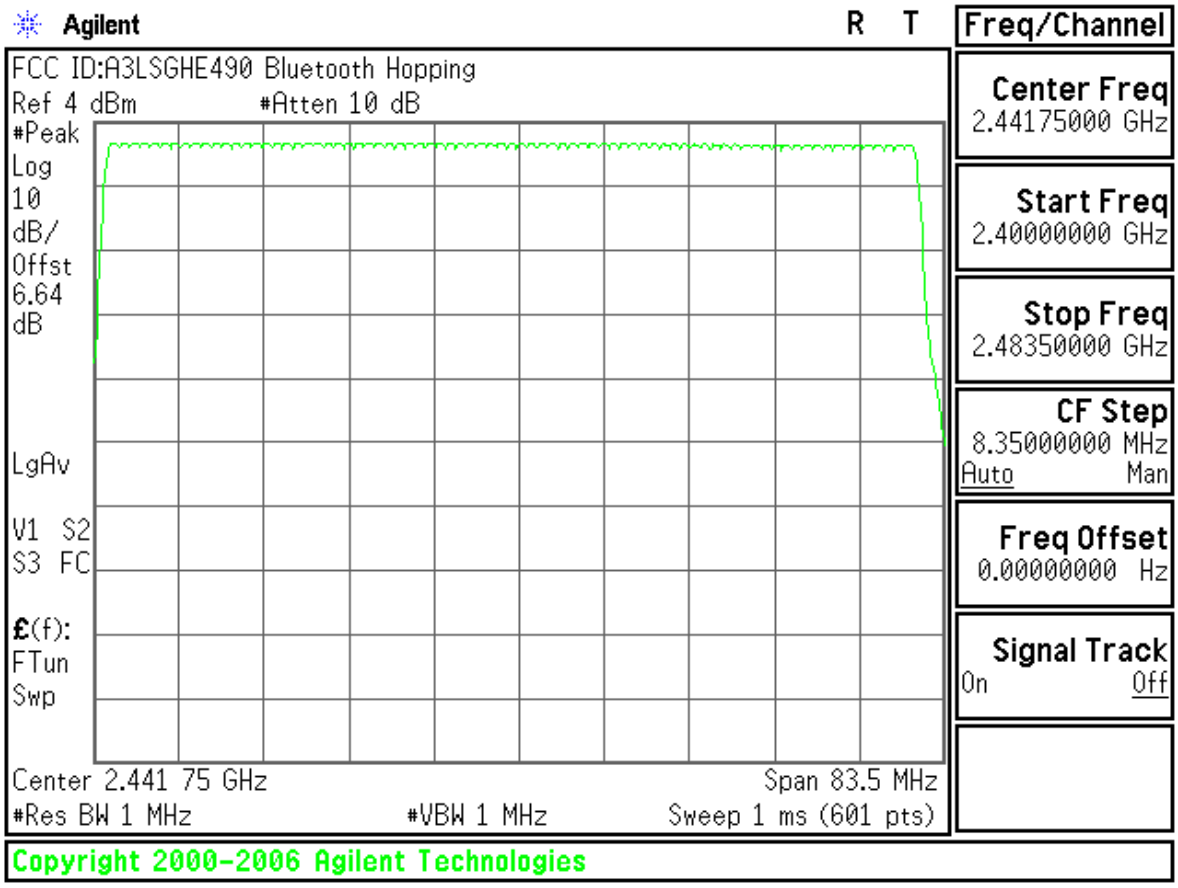

Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Cond Spur Ch.78
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
12.5150000 GHz
Start Freq
30.0000000 MHz
Stop Freq
25.0000000 GHz
CF Step
2.49700000 GHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 12.52 GHz
Span 24.97 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
File Operation Status, C:\TEMP.GIF file saved


Agilent
R T
FCC ID:A3LSGHE490 Band Edge Ch.0
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.400 000 GHz
Span 8 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 1 ms (601 pts)
Freq/Channel
Center Freq
2.40000000 GHz
Start Freq
2.39600000 GHz
Stop Freq
2.40400000 GHz
CF Step
800.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved


Agilent
R T
FCC ID:A3LSGHE490 Band Edge Ch.0
Mkr1 2.400 000 GHz
Ref 4 dBm
#Atten 10 dB
-36.28 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.396 000 GHz
Span 8 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 1 ms (601 pts)
Freq/Channel
Center Freq
2.39600000 GHz
Start Freq
2.39200000 GHz
Stop Freq
2.40000000 GHz
CF Step
800.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved


Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Band Edge Ch.78
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.483 500 GHz
Span 8 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 1 ms (601 pts)
Center Freq
2.48350000 GHz
Start Freq
2.47950000 GHz
Stop Freq
2.48750000 GHz
CF Step
800.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved


Agilent
R T
Freq/Channel
FCC ID:A3LSGHE490 Band Edge Ch.78
Mkr1 2.484 500 GHz
Ref 4 dBm
#Atten 10 dB
-48.78 dBm
#Peak
Log
10
dB/
Offst
6.64
dB
1
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.487 500 GHz
Span 8 MHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 1 ms (601 pts)
Center Freq
2.48750000 GHz
Start Freq
2.48350000 GHz
Stop Freq
2.49150000 GHz
CF Step
800.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:\TEMP.GIF file saved


Agilent
R T
FCC ID:A3LSGHE490 Bluetooth Hopping
Ref 4 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Center 2.441 75 GHz
Span 83.5 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Freq/Channel
Center Freq
2.44175000 GHz
Start Freq
2.40000000 GHz
Stop Freq
2.48350000 GHz
CF Step
8.35000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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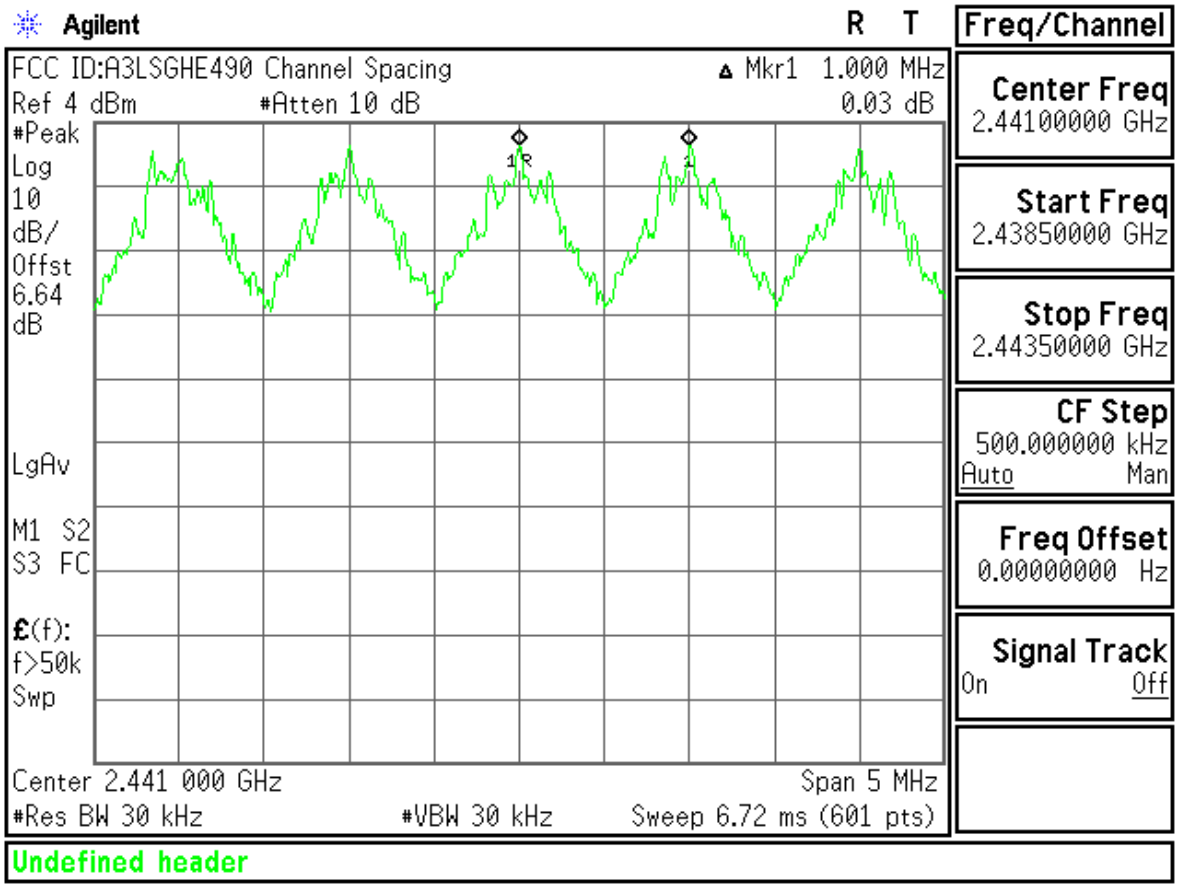
Agilent
R T
FCC ID:A3LSGHE490 Channel Spacing
Ref 4 dBm
#Atten 10 dB
Mkr1 1.000 MHz
0.03 dB
#Peak
Log
10
dB/
Offst
6.64
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.441 000 GHz
Span 5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 6.72 ms (601 pts)
Freq/Channel
Center Freq
2.44100000 GHz
Start Freq
2.43850000 GHz
Stop Freq
2.44350000 GHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Undefined header