



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 22 SUBPART CERTIFICATION REPORT

Model Tested:	SGH-F480T
FCC ID (Requested):	A3LSGHF480T
Report No:	FF-166-R2
Job No:	FF-166
Date issued:	2008-08-20

- Abstract -

All measurement reported here in accordance with FCC Rules, 47CFR
Part2, Part22

Prepared By

JH WOO - Test Engineer

Authorized By

WT JANG - Technical Manager

TABLE OF CONTENT

MEASUREMENT REPORT	Page
1. FCC Certification Information.....	3
1.1 §2.1033 General Information	3
2. INTRODUCTION	4
2.1 General	4
3. MEASURING INSTRUMENT CALIBRATION	5
4. TEST EQUIPMENT LIST.....	6
5. FCC 3G MEASUREMENT PROCEDURES – MAY 2006	7
5.1 Effective Radiated Power / Equivalent Isotropic Radiated Power	8
5.2 Radiated Spurious & Harmonic Emission	9
5.3 Occupied Bandwidth	11
5.4 Spurious and Harmonic Emissions at Antenna Terminal	11
5.4.1 Occupied Bandwidth Emission Limits	11
5.4.2 Conducted Spurious Emission	12
5.5 Frequency Stability / Temperature Variation	13
6. TEST DATA	14
6.1 Effective Radiated Power(E.R.P.)	14
6.2 Cellular WCDMA Radiated Spurious & Harmonic measurement	15
6.3 Cellular WCDMA Radiated Spurious & Harmonic Conversion Table	16
6.4 Frequency Stability	17
6.4.1 Cellular WCDMA Frequency Stability Table	17
6.4.2 Cellular WCDMA Frequency Stability Graph	18
7. SAMPLE CALCULATION	20
7.1 Emission Designator	20
8. CONCLUSION.....	21
9. TEST PLOT	22

MEASUREMENT REPORT

1. FCC Certification Information

The following information is in accordance with FCC Rules, 47CFR Part2, Subpart J, Sections 2.1033 – 2.1055.

1.1 §2.1033 General Information

- Applicant Name: SAMSUNG ELECTRONICS CO., LTD.
- Address: 416 Maetan3-Dong, Yeongtong-gu, Suwon City
Gyeonggi-Do, Korea 443-742
- Attention: SungJoo KIM, Engineering Manager (QA Lab)
- FCC ID: A3LSGHF480T
- Quantity: Quantity production is planned
- Emission Designators: 4M20F9W(Cellular WCDMA)
- Tx Freq. Range: 826.4 - 846.6 MHz (Cellular WCDMA)
- Rx Freq. Range: 871.4 - 891.6 MHz (Cellular WCDMA)
- Max. Power Rating: 0.064 W Cellular WCDMA (18.09dBm)
- FCC Classification(s): PCS Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type: WCDMA850/HSDPA and GSM1900/EDGE Phone with Bluetooth
- Modulation(s): GMSK ,WCDMA
- Frequency Tolerance: $\pm 0.00025\%$ (2.5ppm)
- FCC Rule Part(s): §22(H), §2.
- Dates of Test: August 11-12, 2008
- Place of Test: SAMSUNG Lab,
- Test Report S/N: FF-166-R2

2. INTRODUCTION

2.1 General

These measurement test were conducted at **SAMSUNG ELECTRONICS CO., LTD(SUWON)**. The site address is 416 Maetan3-Dong, Yeongtong-gu, Suwon City, Gyeonggi-Do, Korea 443-742. The site have 1 Fully-anechoic chamber and measurement facility.

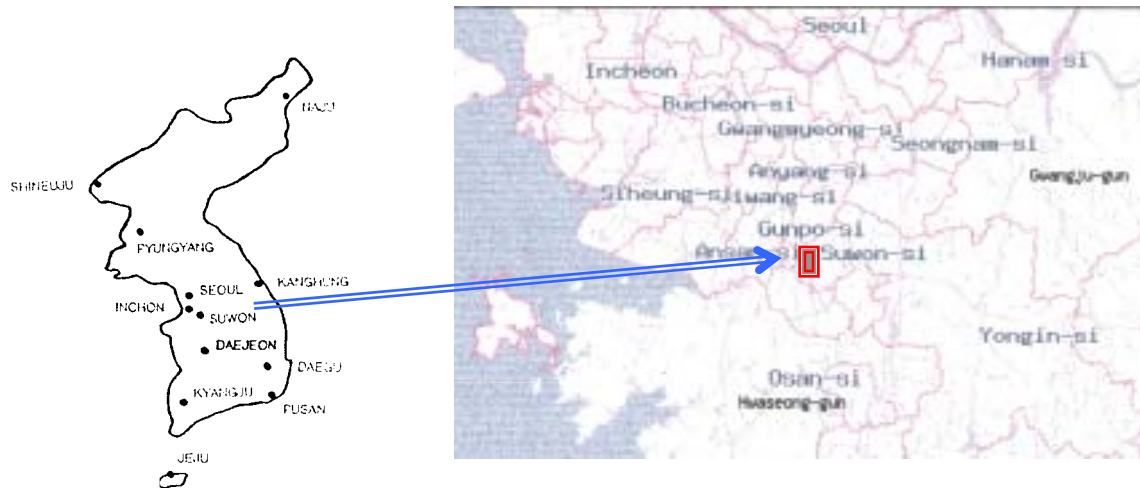


Figure1. Map of the Suwon City area.

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 the rotating device at the same height and at a distance of 3-meters from the receive antenna. The rotating device which can rotate horizontal axis was mounted on the turn unit to facilitate rotation around a vertical axis. The measurement was made for each horizontal/vertical position combination with receive antenna horizontally polarized. This measurement was repeated with receive antenna vertically polarized. The substitution antenna will replace the EUT antenna at the same position and in vertical polarization. The frequency of the signal generator shall be set to the frequencies that were measured on the EUT. The signal generator, output level, shall be adjusted until an equal or a known related level to what was measured from the EUT is obtained in the spectrum analyzer. This level was recorded. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

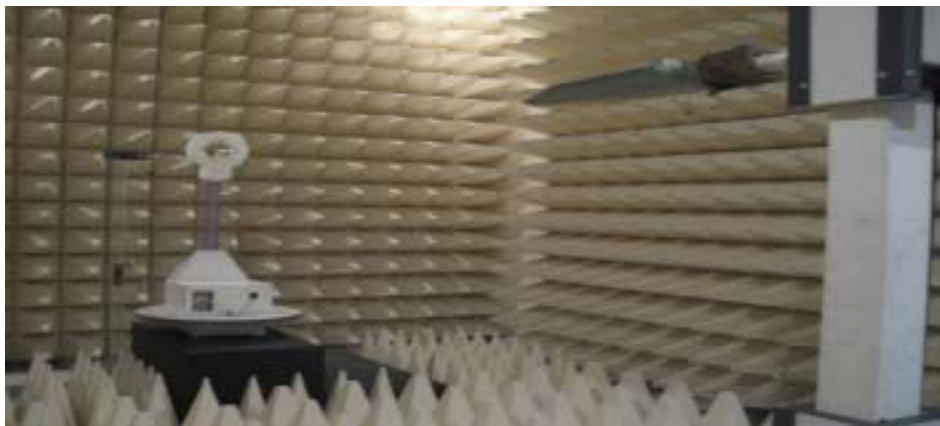


Figure2. Photograph of 3m Fully-Anechoic Chamber

3. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

- End of page -

4. TEST EQUIPMENT LIST

Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2008-10-17
	E4440A(3Hz~26.5GHz)	MY46187454	2009-03-03
	E4440A(3Hz~26.5GHz)	MY41000233	2009-07-24
Signal Generator	SMR20	835197/030	2008-12-05
Network Analyzer	8753E	JP38160590	2009-06-20
Power Sensor	8485A	3318A19924	2008-10-01
Power Meter	E4419B	GB41293846	2008-09-06
Pre-Amplifier	8449B	3008A00691	2008-12-24
Communication test set	8960	GB42230535	2009-01-02
	8960	MY47510060	2009-03-03
Controller	CO2000	CO2000/424	Not Required
Turn Unit	CT0800	CT0800/057	Not Required
Rotating Device	DE3600-RH-PR	DE3600-RH-PR/050	Not Required
Antenna Master	MA4000	MA4000/204	Not Required
Horn Antenna	HF906	100134	2009-10-24
Dipole Antenna	UHA-9105	9105-2412	2009-11-07
Communication test set	CMU200	109162	2008-10-17
Receive Antenna	HL040	353255/019	2008-09-20
Power Supply	E3640A	MY40003594	2009-06-20
Divider	11636B	51946	Not Required
	11636B	51942	Not Required
High Pass Filter	WHK1.0/15G-10SS	1	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Environmental Chamber	SH-241	92000549	2008-11-15
Shielded Fully Anechoic Chamber	CHAMBER	ANT0001	Not Required

5. FCC 3G MEASUREMENT PROCEDURES – MAY 2006

The maximum output power is a measure of the maximum power the UE can transmit (i.e. the actual power as would be measured assuming no measurement error) in a band width of at least $(1+\alpha)$ times the chip rate of the radio access mode

The default test configuration is configure an established radio link between the UE and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. Maximum output is verified according to 3GPP TS 34.121 Section 5.2

1. Configure TCP (Transmit Power Control) set to "All 1"s.
2. RMC and AMR connections at 12.2kbps are measured under 3.4kbps SRB (signaling radio bearer)
3. Measure the mean power of the UE in a bandwidth of at least $(1+\alpha)$ times the chip rate of the radio access mode. The mean power shall be averaged over at least one timeslot.

Table1
3GPP TS 34.121 Nominal Maximum Output Power

Operating Band	Power Class3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
Band V	+24	+1/-3	+21	+2/-2

Operating Band	Channel	HSDPA Inactive		HSDPA Active
		12.2 kbps RMC	12.2 kbps AMR	12.2 kbps RMC
Cellular WCDMA	4132	22.76	22.87	22.35
	4175	22.77	22.78	22.18
	4233	22.94	22.88	22.45

5.1 Effective Radiated Power / Equivalent Isotropic Radiated Power

Test Set-up for the ERP/EIRP TEST

Test Set-up for the ERP/EIRP TEST

Effective Radiated Power Output and Equivalent Isotropic Radiated Power output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004

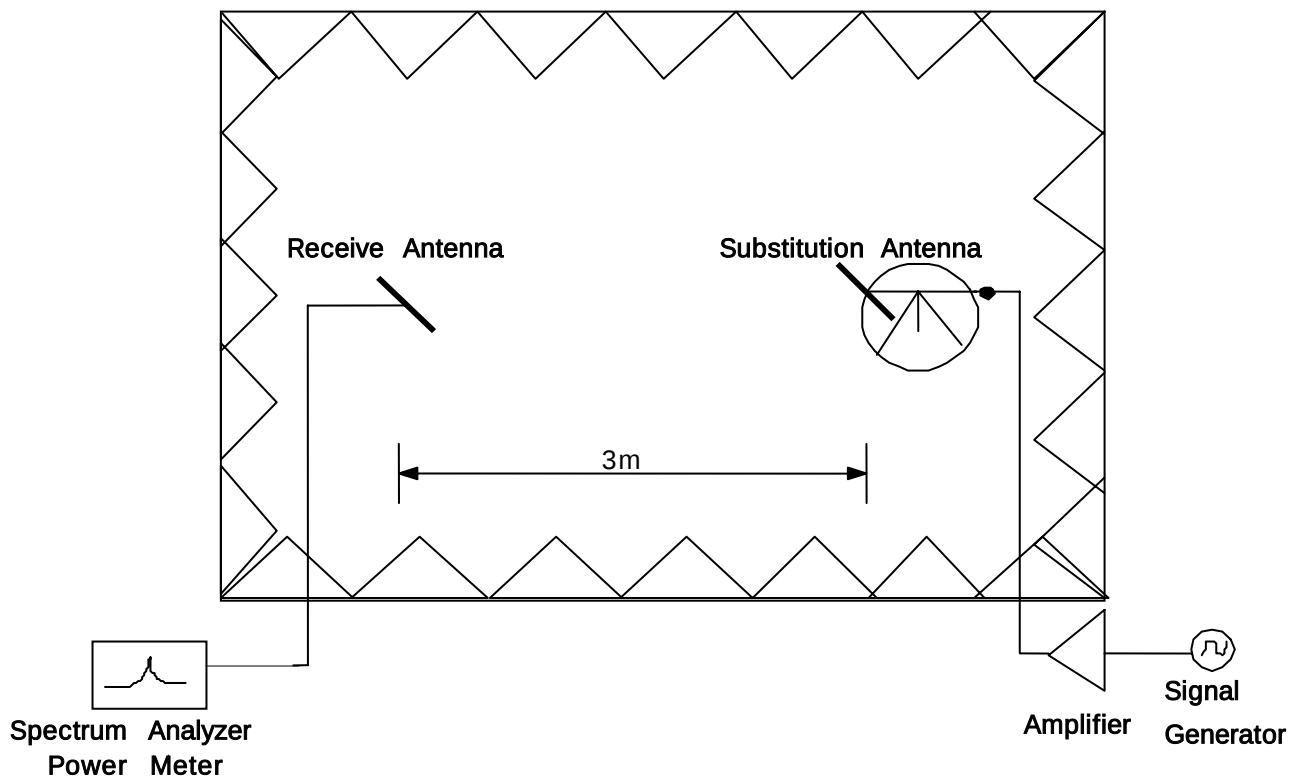


Figure 3. Diagram of ERP/EIRP test Set-up

The EUT was placed on the rotating device at 3-meters from the receive antenna. The turn unit and rotating device was adjusted for the highest reading on the receive spectrum analyzer. For GSM signals, an average detector is used, with RBW=VBW=3MHz, SPAN=10MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of dipole is measured. The ERP and EIRP are recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

5.2 Radiated Spurious & Harmonic Emission

Test Set-up for the Radiated Emission TEST

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004

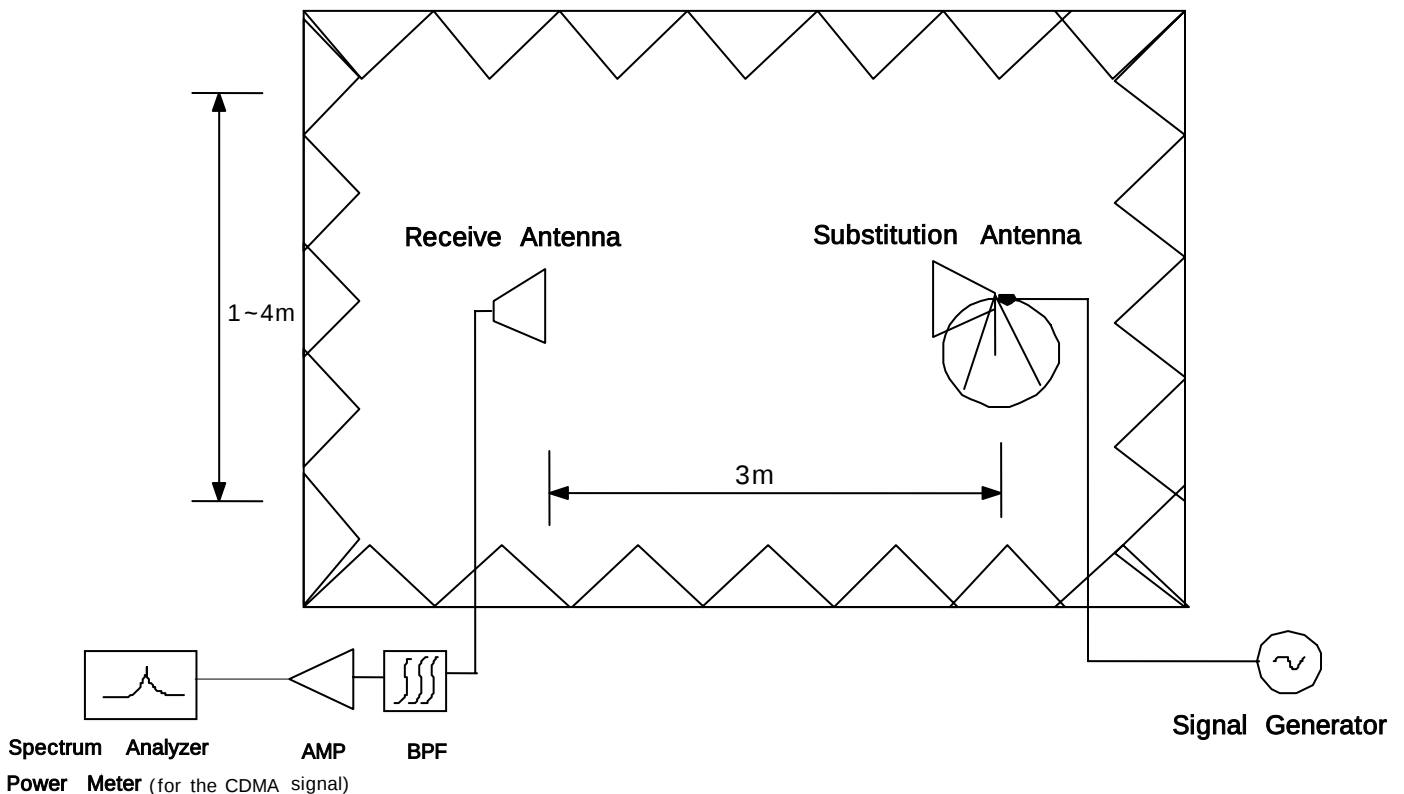


Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up

The EUT was placed on the rotating device at 3-meters from the receive antenna. The turn unit and rotating device was adjusted for the highest reading on the receive spectrum analyzer. The Spectrum was investigated from 30MHz to the 10th Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1MHz. The value that we could measure was only reported. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

SAMPLE CALCULATION

Example: Channel 600 PCS Mode 2nd Harmonic(3760MHz)

The receive analyzer reading at 3meters with the EUT on the turntable was -81.0dBm . The gain of the substituted antenna is 8.1dBi . The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0dBm of the receive analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0dB at 3760MHz. So 6.1dB is added to the signal generator reading of -30.9dBm yielding -24.8dBm . The fundamental EIRP was 25.5dBm so this harmonic was $25.5\text{dBm} - (-24.8) = 50.3\text{dBc}$.

- End of page -

5.3 Occupied Bandwidth

Test Procedure

The EUT was setup to maximum output power at its lowest channel. The occupied bandwidth was measured using a spectrum analyzer. The measurements are repeated for the highest and a middle channel. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power. Plots of the EUT's occupied bandwidth are shown herein.

5.4 Spurious and Harmonic Emissions at Antenna Terminal

5.4.1 Occupied Bandwidth Emission Limits

- (a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB.
- (b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
- (c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.
- (d) The measurement of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

- End of page -

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A	1850 – 1865	1930 – 1945
B	1870 – 1885	1950 – 1965
C	1895 – 1910	1975 – 1990
D	1865 – 1870	1945 – 1950
E	1885 – 1890	1965 – 1970
F	1890 – 1895	1970 – 1975

Table 1. Broadband PCS Service Frequency Blocks

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A* Low + A	824 – 835	869 – 880
B	835 – 845	880 – 890
A* High	845 – 846.5	890 – 891.5
B*	846.5 – 849	891.5 – 894

Table 2. Cellular Service Frequency Blocks

5.4.2 Conducted Spurious Emission

Minimum standard:

On any frequency outside a license frequency block, the power of any emission shall be attenuated below the transmitter power(P) by at least $43+10\log(P)$ dB. Limit equivalent to -13 dBm, calculation shown below.

$$43 + 10\log(0.333 \text{ W}) = 38.22\text{dB}$$

$$25.22 \text{ dBm} - 38.22 \text{ dB} = -13 \text{ dBm}$$

Test Procedure:

The EUT was setup to maximum output power at its lowest channel. The Resolution BW of the analyzer is set to 1% of the emission bandwidth to show compliance with the -13 dBm limit, in the 1MHz bands immediately outside and adjacent to the edge of the frequency block. The measurements are repeated for the EUT's highest channel. For the Out-of-Band measurements a 1MHz RBW was used to scan from 10MHz to 10GHz. (PCS Mode : 10MHz to 20GHz). A display line was placed at -13 dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements. Plots are shown herein.

5.5 Frequency Stability / Temperature Variation

The frequency stability of the transmitter is measured by:

- a.) Temperature: The temperature is carried from -30°C to +60°C using an environmental chamber.
- b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification- The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 0.00025 (± 2.5 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter and the individual oscillators is measured at room temperature (25°C to 27°C to provide a reference).
2. The equipment is subjected to an overnight "soak" at -30°C without any power applied.
3. After the overnight "soak" at -30°C (Usually 14~16 hours), the equipment is turned on in a "standby" condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter and the individual oscillators is made within a three minute interval after applying to the transmitter.
4. Frequency measurements are made at 10°C interval up to room temperature. At least a period of one and one half-hour is provided to allow stabilization of the equipment at each temperature level.
5. Again the transmitter carrier frequency and the individual oscillators is measured at room temperature to begin measurement of the upper temperature levels.
6. Frequency measurements are at 10 intervals starting at -30°C up to +60°C allowing at least two hours at each temperature for stabilization. In all measurements the frequency is measured within three minutes after re-applying power to the transmitter.
7. The artificial load is mounted external to the temperature chamber.

NOTE : The EUT is tested down to the battery endpoint.

- End of page -

6. TEST DATA

6.1 Effective Radiated Power(E.R.P.)

Supply Voltage : 3.7VDC

Modulation : Cellular WCDMA

■ Reference level

Frequency (MHz)	Output (dBm)	Polarization	P/M (dBm)	Ant gain (dBd)	Ref level (dBm)
826.4	17.00	H	-19.72	-0.67	-19.05
		V	-20.06	-0.67	-19.39
836.6	17.00	H	-19.91	-0.73	-19.18
		V	-19.92	-0.73	-19.19
846.6	18.00	H	-20.55	-0.79	-19.76
		V	-19.70	-0.79	-18.91

■ Result

Frequency (MHz)	From EUT Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	ERP (dBm)	ERP (W)	Battery
826.4	-19.05	H	281/100	17.00	0.050	Standard
836.6	-19.05	H	279/100	17.13	0.052	Standard
846.6	-19.67	H	279/80	18.09	0.064	Standard

NOTE : Standard batteries are the only battery options for this phone

- All modes of operation were investigated, and the worst-case results are reported.

Radiated measurements at 3 meters by Substitution Method

6.2 Cellular WCDMA Radiated Spurious & Harmonic measurement

Operating Frequency : 826.4 MHz(Low), 836.4 MHz(Middle), 846.6 MHz(High)

Measured Output Power : 18.09 dBm = 0.064 W

Modulation Signal : CDMA

Limit : $43 + 10\log_{10}(P) = 31.09\text{dBc}$

■ Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
4132	2	1652.80	-59.60	H	66.91
	3	2479.20	-66.33	V	68.41
	4	3305.60	-66.44	H	65.49
	5	4132.00	-	-	-
	6	4958.40	-	-	-
	7	5784.80	-	-	-
4175	2	1672.80	-59.20	V	65.92
	3	2509.20	-63.89	V	66.22
	4	3345.60	-67.04	V	66.02
	5	4182.00	-	-	-
	6	5018.40	-	-	-
	7	5854.80	-	-	-
4233	2	1693.20	-62.42	H	68.68
	3	2539.80	-64.52	H	67.10
	4	3386.40	-67.18	H	66.23
	5	4233.00	-	-	-
	6	5079.60	-	-	-
	7	5926.20	-	-	-

NOTE :

1. "-" Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. The spectrum is measured from 30MHz to the 10th harmonic and All modes of operation were investigated, and the worst-case results are reported..

Radiated Spurious Emission measurements at 3 meters by Substitution Method

6.3 Cellular WCDMA Radiated Spurious & Harmonic Conversion Table

Date : August 12, 2008

Test Engineer : JH WOO

Tx Cable loss
Tx Horn Ant Gain
Tx Level to radiate -13dBm
ESI Level received from Tx with -13dBm
Tested Level from EUT
= ERP+2.14 - (-13 + -)

CH	Har	Frequency (MHz)	Tx C/L dB	Tx Horn Gain dBi	Tx Level dBm	ESI Level : H dBm	ESI Level : V dBm	Test ed EUT Level : H dBm	Test ed EUT Level : V dBm	Result EUT : H (dBc)	Result EUT : V (dBc)
4357	2	1652.80	-7.44	9.50	-15.10	-25.78	-25.24	-59.60	-59.60	66.91	66.91
	3	2479.20	-9.40	10.70	-14.30	-30.65	-30.96	-66.33	-66.33	68.41	68.41
	4	3305.60	-10.62	12.30	-14.70	-34.30	-34.88	-66.44	-66.44	65.49	65.49
	5	4132.00	-12.18	12.50	-13.30	-37.37	-37.16	-	-	-	-
	6	4958.40	-13.25	12.70	-12.50	-39.95	-40.17	-	-	-	-
	7	5784.80	-14.88	12.90	-11.00	-42.25	-42.16	-	-	-	-
4408	2	1673.20	-7.53	9.50	-15.00	-26.45	-26.15	-59.20	-59.20	65.92	65.92
	3	2509.80	-9.52	10.70	-14.20	-30.90	-30.96	-63.89	-63.89	66.22	66.22
	4	3346.40	-10.72	12.30	-14.60	-34.28	-34.36	-67.04	-67.04	66.02	66.02
	5	4183.00	-12.46	12.50	-13.00	-36.90	-37.13	-	-	-	-
	6	5019.60	-13.94	12.70	-11.80	-40.04	-40.64	-	-	-	-
	7	5856.20	-14.92	12.90	-11.00	-42.75	-42.94	-	-	-	-
4458	2	1693.20	-7.61	9.50	-14.90	-26.64	-26.78	-62.42	-62.42	68.68	68.68
	3	2539.80	-9.56	10.70	-14.10	-30.32	-30.81	-64.52	-64.52	67.10	67.10
	4	3386.40	-10.77	12.30	-14.50	-34.25	-34.55	-67.18	-67.18	66.23	66.23
	5	4233.00	-12.36	12.50	-13.10	-37.07	-37.26	-	-	-	-
	6	5079.60	-14.20	12.70	-11.50	-40.12	-40.75	-	-	-	-
	7	5926.20	-15.12	12.90	-10.80	-43.10	-42.67	-	-	-	-

6.4 Frequency Stability

6.4.1 Cellular WCDMA Frequency Stability Table

Operating Frequency : 836,600,000 Hz

Channel : 4183

Reference Voltage : 3.7VDC

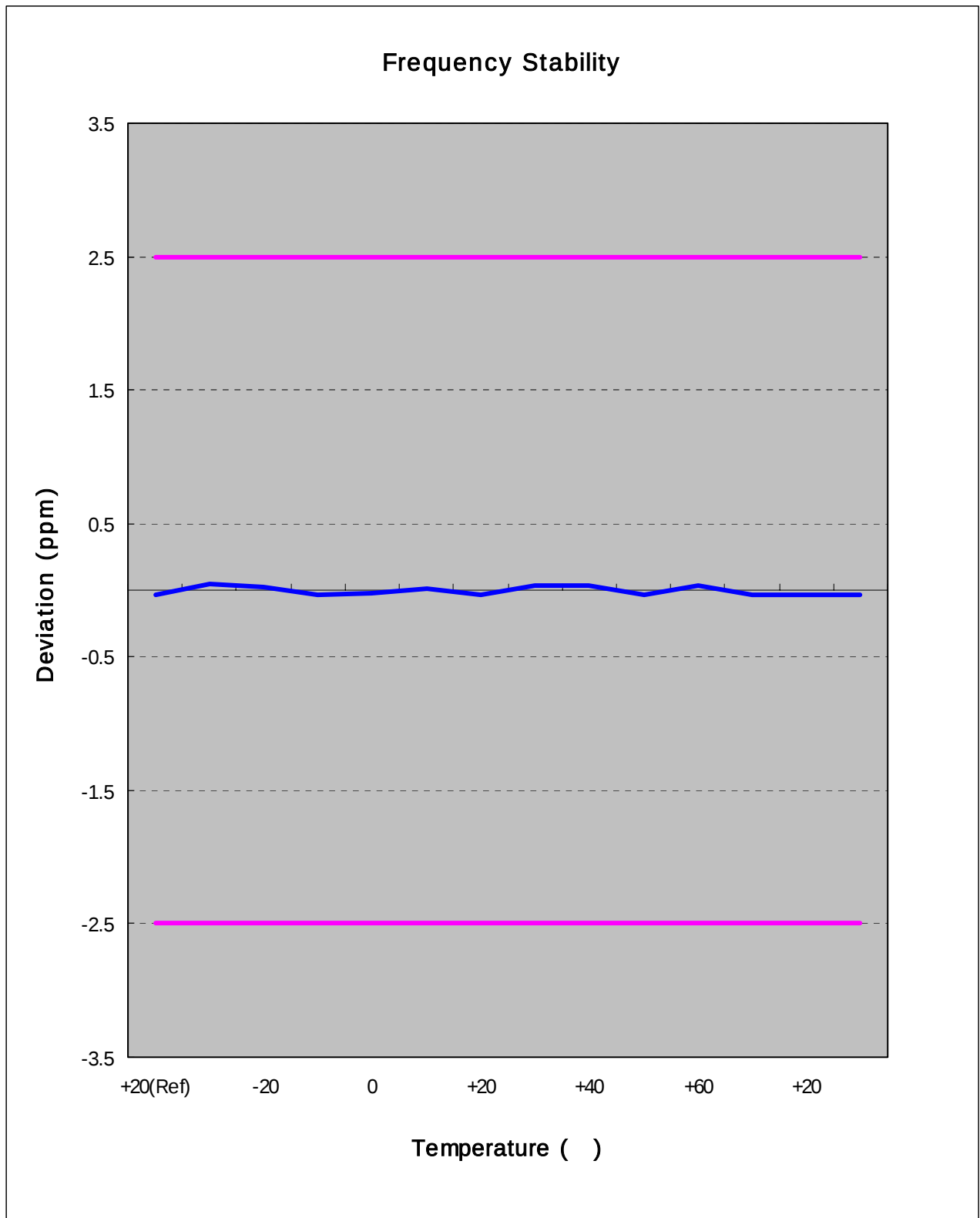
Deviation Limit : ± 0.00025 % or 2.5ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	-32.81	836,599,967	-0.000004	-0.039
100%		-30	38.00	836,600,038	0.000005	0.045
100%		-20	24.15	836,600,024	0.000003	0.029
100%		-10	-30.84	836,599,969	-0.000004	-0.037
100%		0	-21.41	836,599,979	-0.000003	-0.026
100%		+10	14.31	836,600,014	0.000002	0.017
100%		+20	-32.81	836,599,967	-0.000004	-0.039
100%		+30	30.09	836,600,030	0.000004	0.036
100%		+40	26.46	836,600,026	0.000003	0.032
100%		+50	-24.74	836,599,975	-0.000003	-0.030
100%		+60	29.62	836,600,030	0.000004	0.035
85%	3.35	+20	-31.19	836,599,969	-0.000004	-0.037
115%	4.26	+20	-30.66	836,599,969	-0.000004	-0.037
Batt. Endpoint	3.35	+20	-31.19	836,599,969	-0.000004	-0.037

Note : The temperature is varied from -30 °C to +60 °C using an environmental chamber.

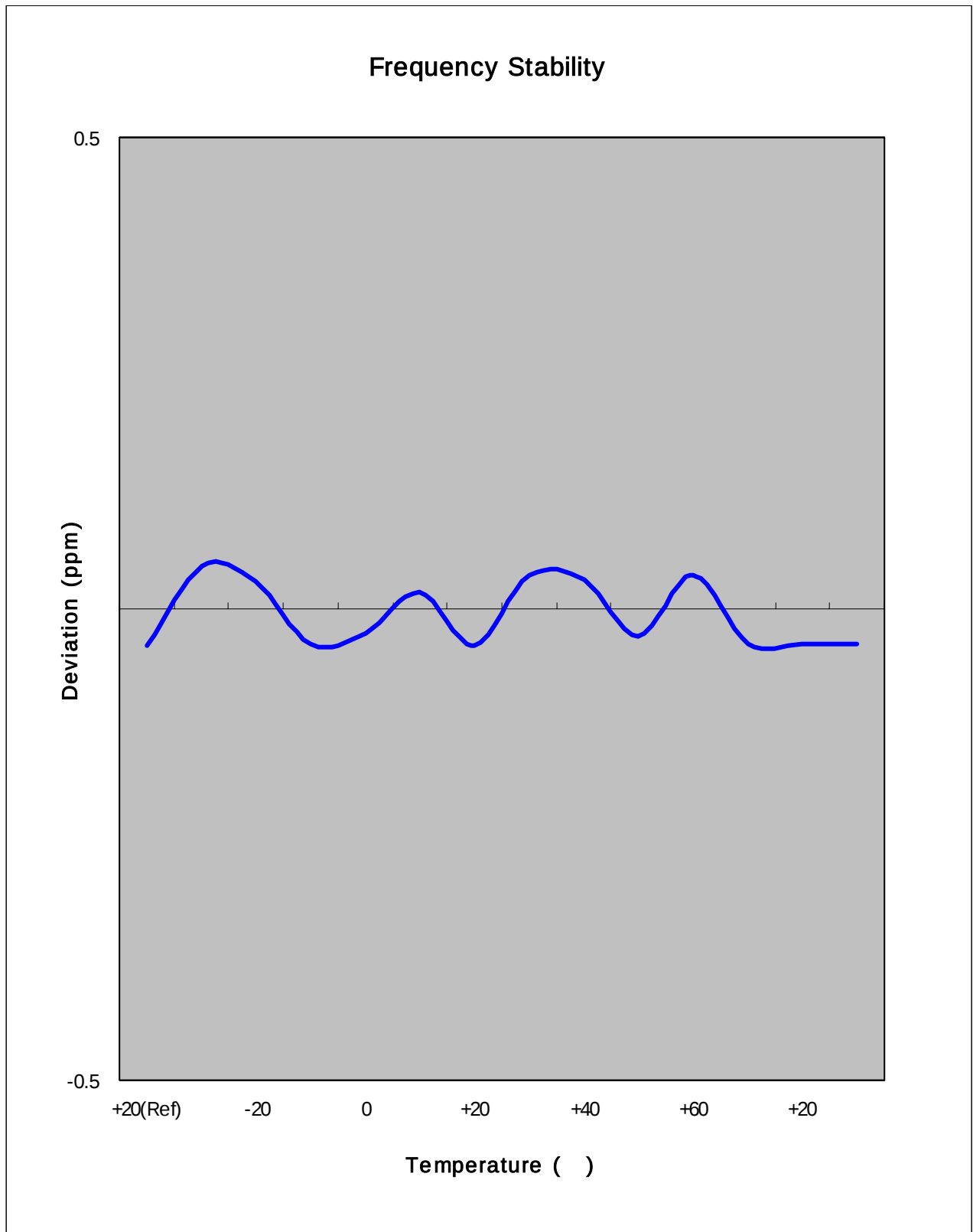
The EUT is tested down to the battery end point

6.4.2 Cellular WCDMA Frequency Stability Graph



- End of page -

Zoom In



- End of page -

7. SAMPLE CALCULATION

7.1 Emission Designator

Emission Designator = 4M19F9W

WCDMA BW = 4.19MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination(Audio/Data)

(Measured at the 99.75% power bandwidth)

- End of page –



8. CONCLUSION

The data collected shows that the SAMSUNG WCDMA850/HSDPA and GSM1900/EDGE Phone with Bluetooth FCC ID : A3LSGHF480T complies with all the requirements of Parts 2, 22 of the FCC Rules.

- End of page -

9. TEST PLOT

Measurement/Instrument Screen																
Control	Waveform Quality							Call Params								
Waveform Quality Setup ▾		Minimum	Maximum	Average	Cell Power			Cell Power								
	EVM (%):	5.02	10.83	5.72	-104.00			dBm/3.84 MHz								
	Frequency Error (Hz):	-32.62	16.42	-6.88	Channel Type			12.2k RMC								
	Origin Offset (dB):	-31.38	-30.34	-30.78	Paging Service			RB Test Mode								
	Phase Error (°):	2.32	5.19	2.72	HSPA Parameters			34.121 Preset Call Configs ▾								
	Mag Error (%):	2.97	6.11	3.21	Channel (UARFCN) Params			1 of 3								
	Time Error (chips):	0.25	0.39	0.34	Max PCDE: -30.27 dB at Cch.64.16:0			Single								
50 / 50																
Thermal Power																
Calibrate Measurements	Thermal Power 22.77 dBm							Single								
								Active Cell Connected								
								Sys Type: UTRA FDD								
Swap Window Positions								1 of 2								
					IntRef	Offset	R T									

Control	Waveform Quality										Call Parm	
Waveform Quality Setup ▾			Minimum		Maximum		Average		Cell Power			
	EVM (%):		8.91		9.61		9.22		-104.00			
	Frequency Error (Hz):		-33.91		4.09		-12.76		dBm/3.84 MHz			
	Origin Offset (dB):		-32.65		-29.16		-30.35		Channel Type			
	Phase Error (°):		3.05		3.64		3.35		12.2k RMC			
	Mag Error (%):		6.88		7.40		7.14					
	Time Error (chips):		0.28		0.43		0.34		Paging Service			
	Max PCDE: -29.85 dB at Cch,64,16:0								RB Test Mode			
50 /50								Single				
Thermal Power												
Calibrate Measurements	Thermal Power 22.94 dBm										HSPA Parameters	
Swap Window Positions											34.121 Preset Call Configs ▾	
											Channel (UARFCN) Parm	
			Active Cell Connected				Sys Type: UTRA FDD					
1 of 2				IntRef	Offset	R	T				1 of 3	

Agilent

R T

Freq/Channel

Base Ch Freq 826.4 MHz Trig Free
Occupied Bandwidth #3GPP W-CDMA

Center Freq
826.400000 MHz

Start Freq
821.400000 MHz

Stop Freq
831.400000 MHz

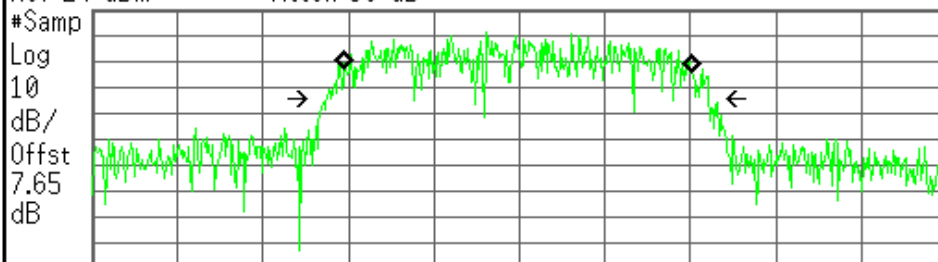
CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

FCC ID:A3LSGHF480T 0BW Ch.4357

Ref 24 dBm Atten 30 dB



Center 826.40 MHz Span 10 MHz

#Res BW 100 kHz #VBW 1 MHz Sweep 2.92 ms (601 pts)

Occupied Bandwidth 4.0644 MHz Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -22.215 kHz
x dB Bandwidth 4.483 MHz*

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

Base Ch Freq 836.6 MHz Trig Free
Occupied Bandwidth #3GPP W-CDMA

Center Freq
836.600000 MHz

Start Freq
831.600000 MHz

Stop Freq
841.600000 MHz

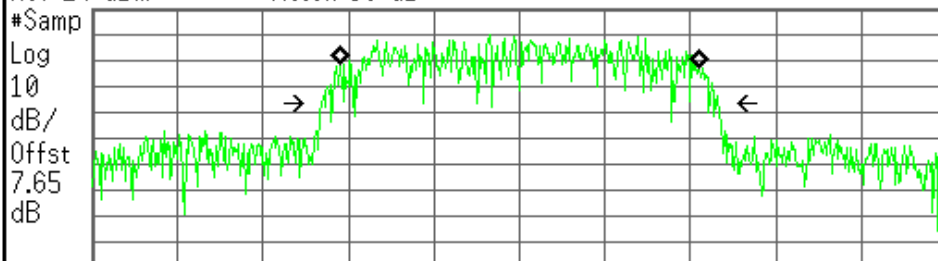
CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

FCC ID:A3LSGHF480T 0BW Ch.4408

Ref 24 dBm Atten 30 dB

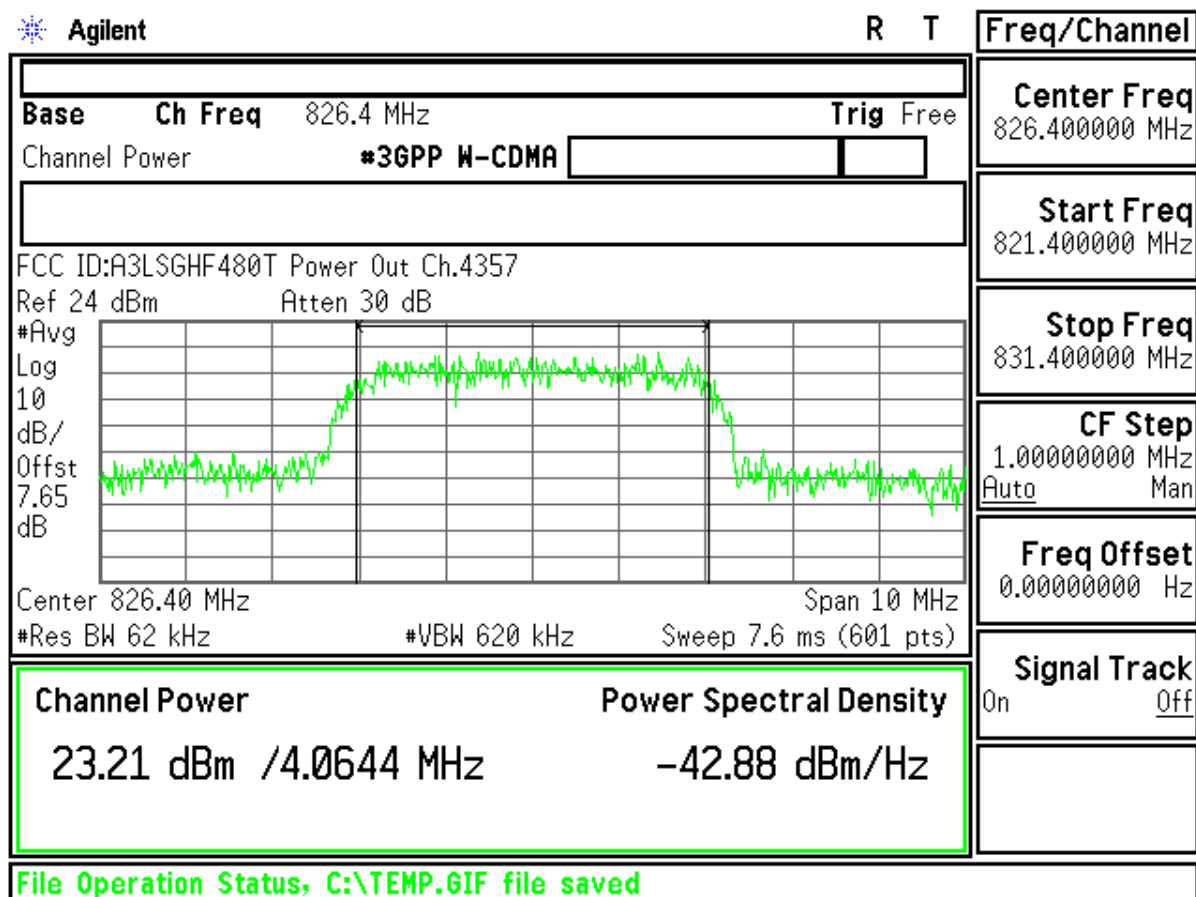
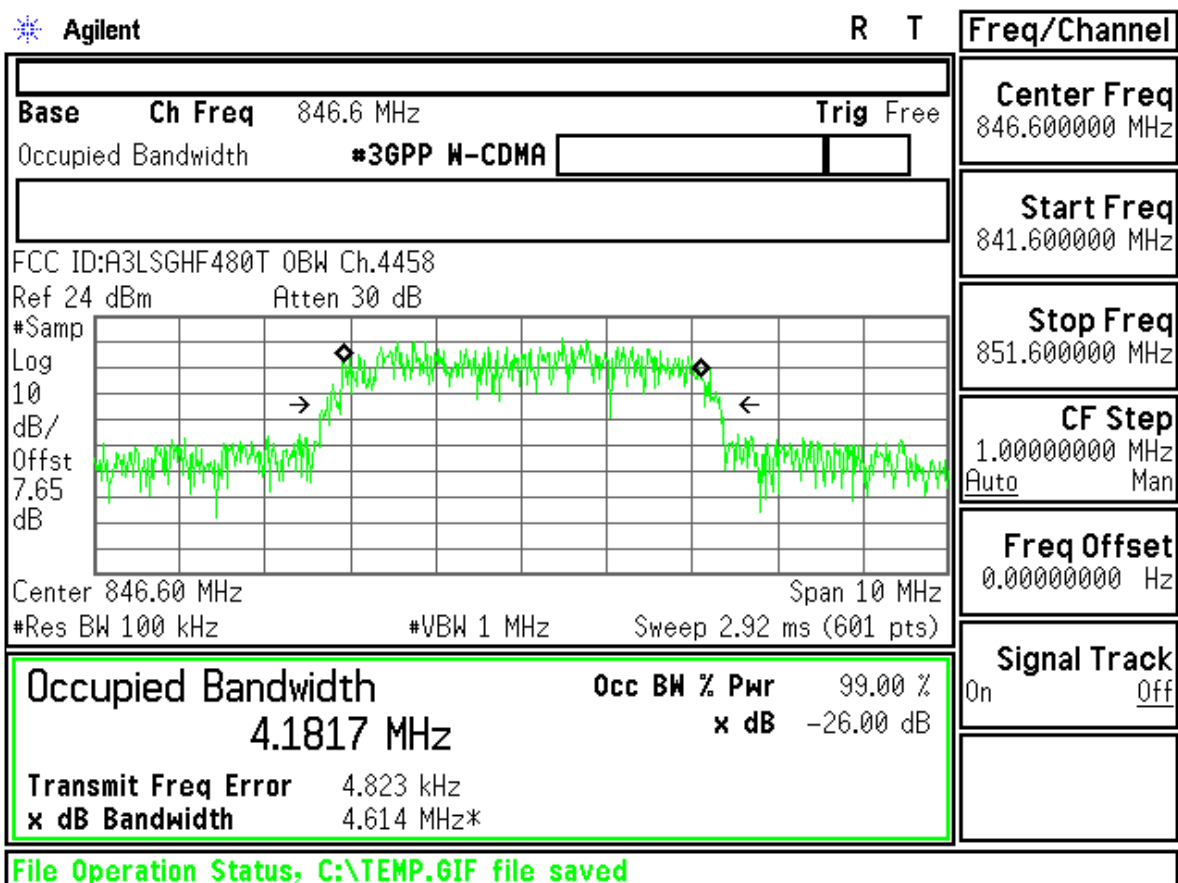


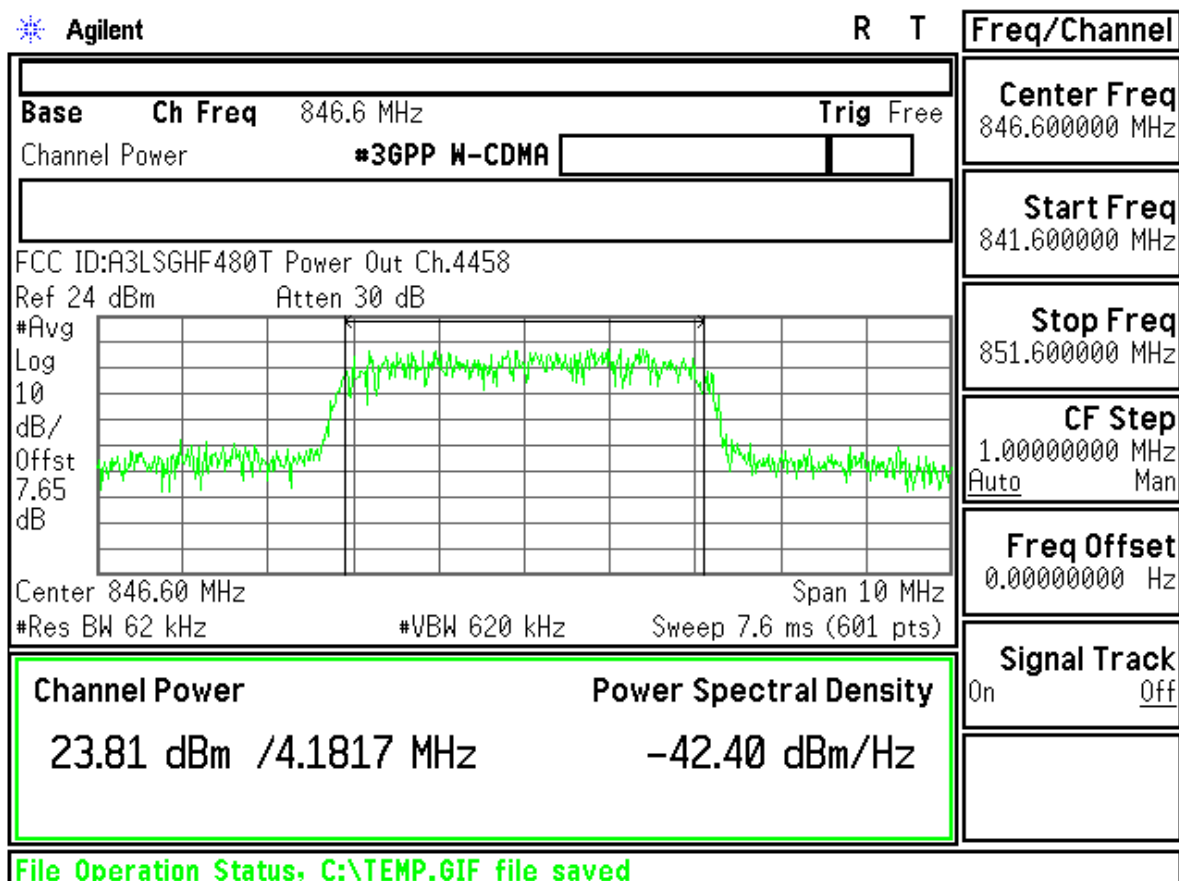
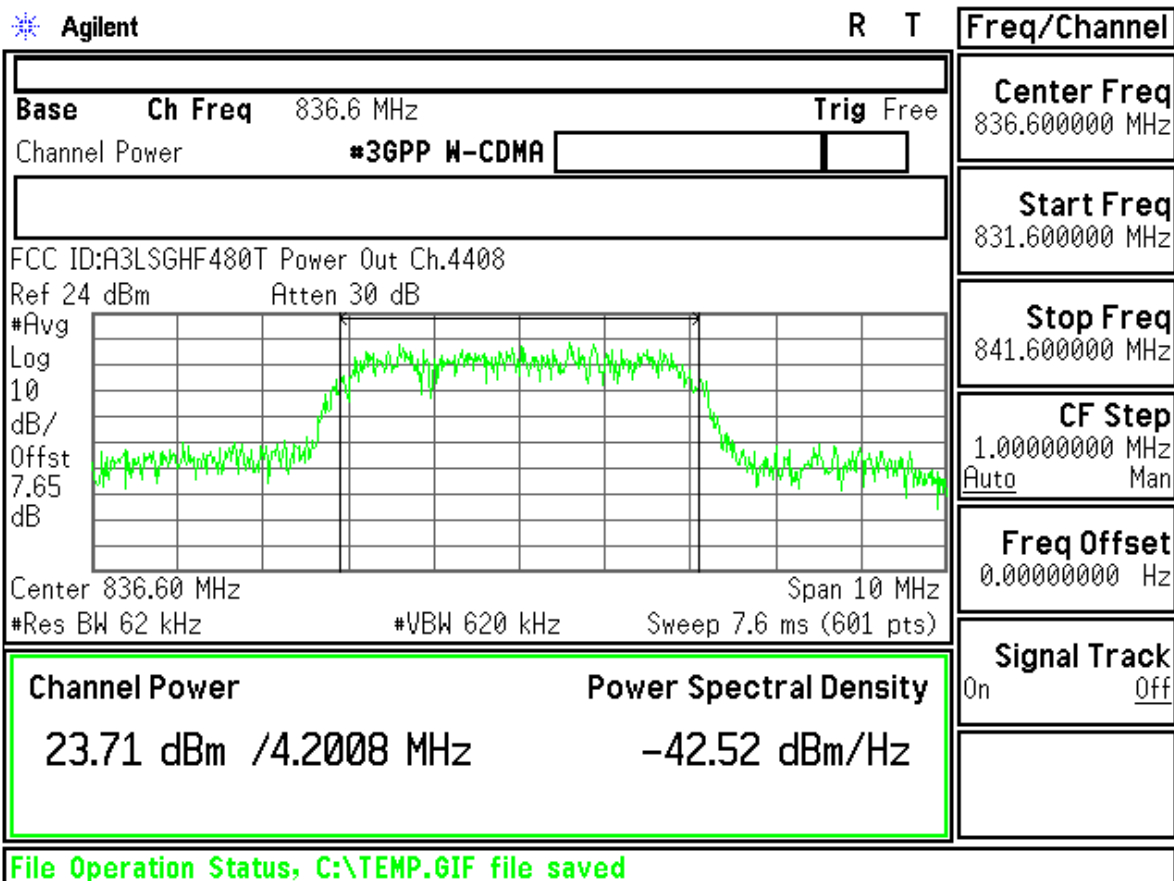
Center 836.60 MHz Span 10 MHz

#Res BW 100 kHz #VBW 1 MHz Sweep 2.92 ms (601 pts)

Occupied Bandwidth 4.2008 MHz Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 343.336 Hz
x dB Bandwidth 4.642 MHz*

File Operation Status, C:\TEMP.GIF file saved





Agilent

R T

Freq/Channel

FCC ID:A3LSGHF480T Cond Spur Ch.4357

Ref 24 dBm

Atten 30 dB

#Peak

Log

10

dB/

Offst

7.65

dB

DI

-13.0

dBm

#LgAv

M1 S2

S3 FC

E(f):

FTun

Swp

AC Coupled: unspecified below 20 MHz

Center 1.255 GHz

Span 2.49 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 4.16 ms (601 pts)

Center Freq
1.25500000 GHz

Start Freq
10.0000000 MHz

Stop Freq
2.50000000 GHz

CF Step
249.000000 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:A3LSGHF480T Cond Spur Ch.4357

Mkr1 816.4 MHz

Ref 24 dBm

Atten 30 dB

-28.74 dBm

#Peak

Log

10

dB/

Offst

7.65

dB

DI

-13.0

dBm

#LgAv

M1 S2

S3 FC

E(f):

FTun

Swp

AC Coupled: unspecified below 20 MHz

Center 413.2 MHz

Span 806.4 MHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.36 ms (601 pts)

Center Freq
413.200000 MHz

Start Freq
10.0000000 MHz

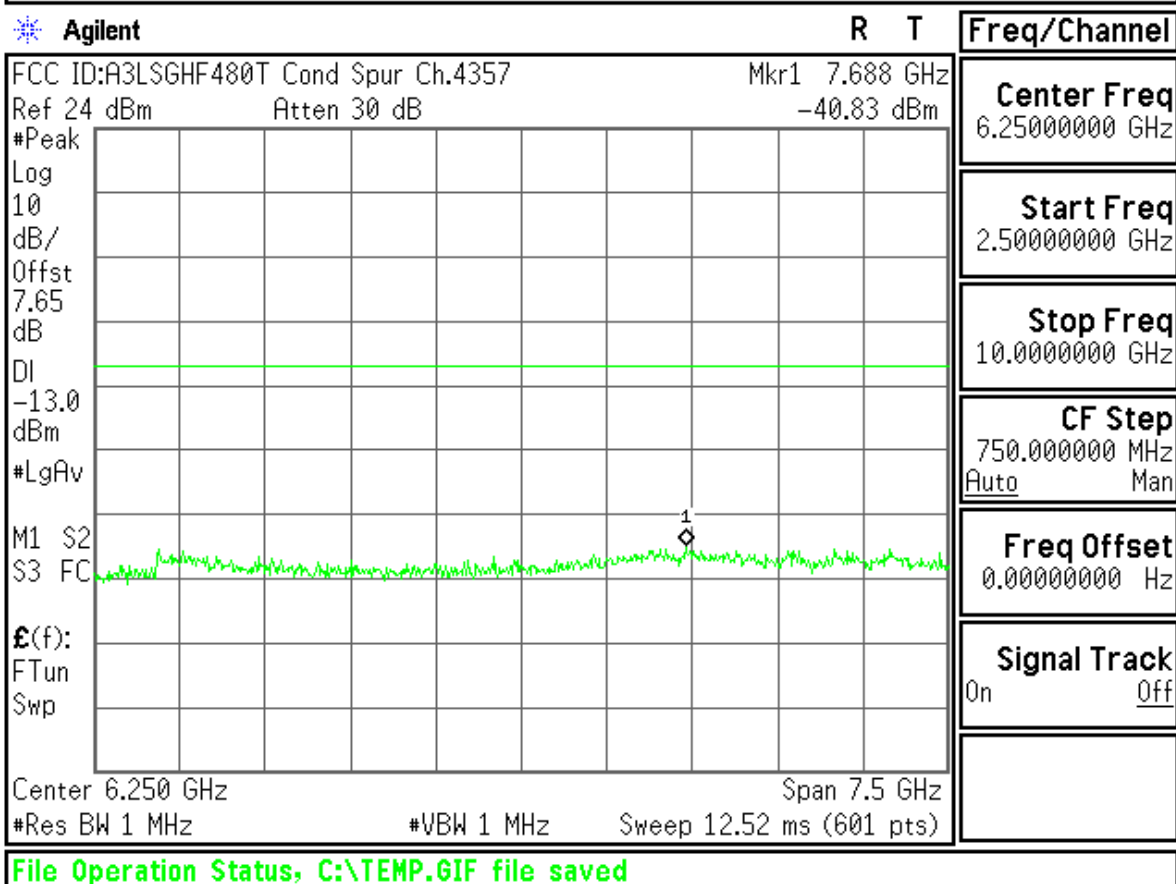
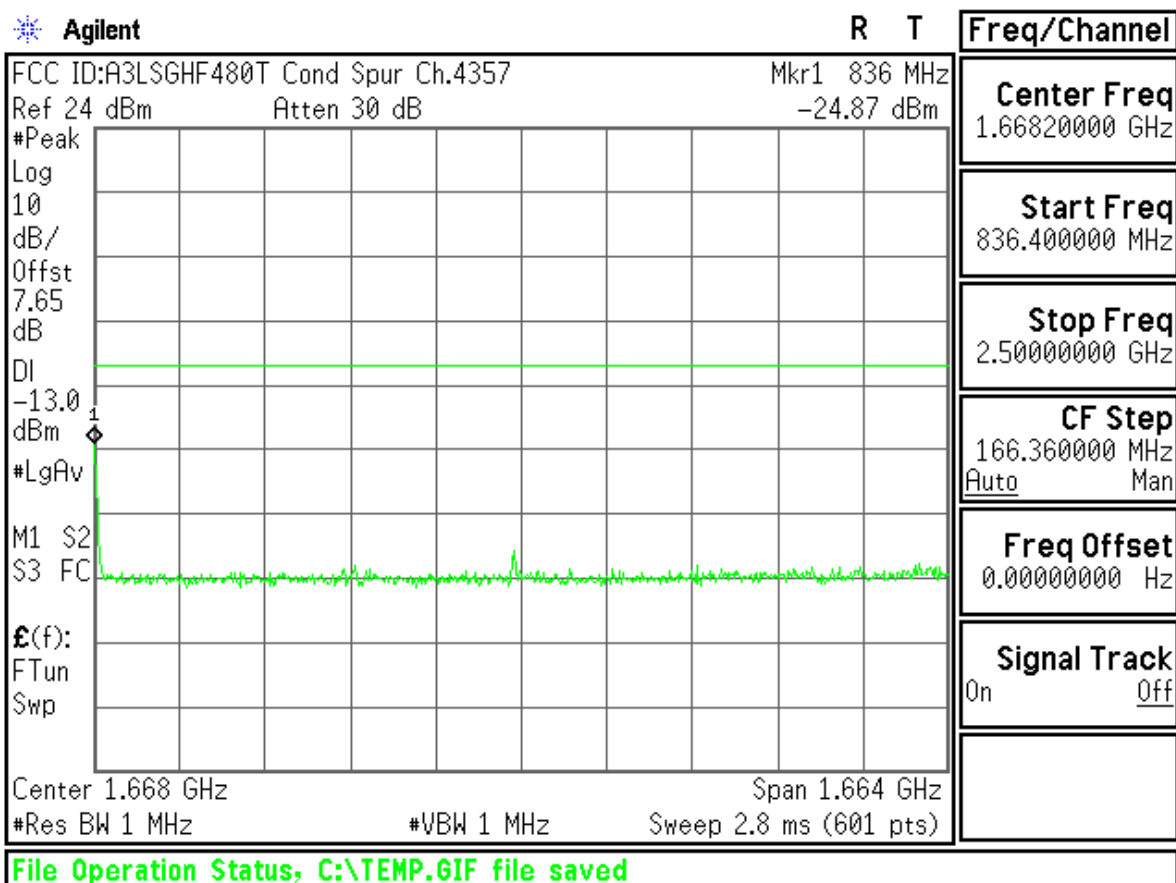
Stop Freq
816.400000 MHz

CF Step
80.6400000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

File Operation Status, C:\TEMP.GIF file saved



FCC ID:A3LSGHF480T Cond Spur Ch.4408

Ref 24 dBm

Atten 30 dB

#Peak

Log

10

dB/

Offst

7.65

dB

DI

-13.0

dBm

#LgAv

M1 S2

S3 FC

$\mathcal{E}(f)$:

FTun

Swp

AC Coupled: unspecified below 20 MHz

Center 1.255 GHz

Span 2.49 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 4.16 ms (601 pts)

Center Freq
1.25500000 GHz

Start Freq
10.0000000 MHz

Stop Freq
2.50000000 GHz

CF Step
249.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

File Operation Status, C:\TEMP.GIF file saved

FCC ID:A3LSGHF480T Cond Spur Ch.4408

Mkr1 826.6 MHz

Ref 24 dBm

Atten 30 dB

-27.85 dBm

#Peak

Log

10

dB/

Offst

7.65

dB

DI

-13.0

dBm

#LgAv

M1 S2

S3 FC

$\mathcal{E}(f)$:

FTun

Swp

AC Coupled: unspecified below 20 MHz

Center 418.3 MHz

Span 816.6 MHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.4 ms (601 pts)

Center Freq
418.300000 MHz

Start Freq
10.0000000 MHz

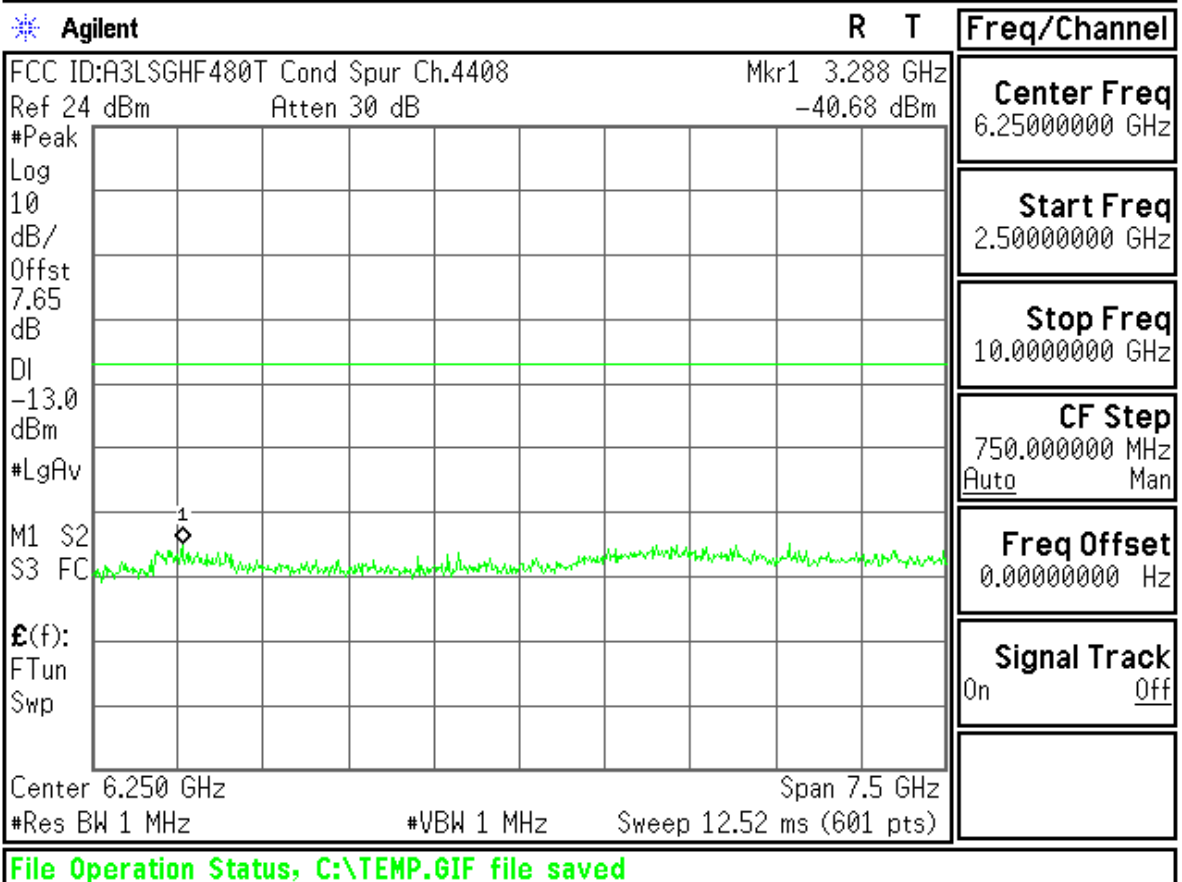
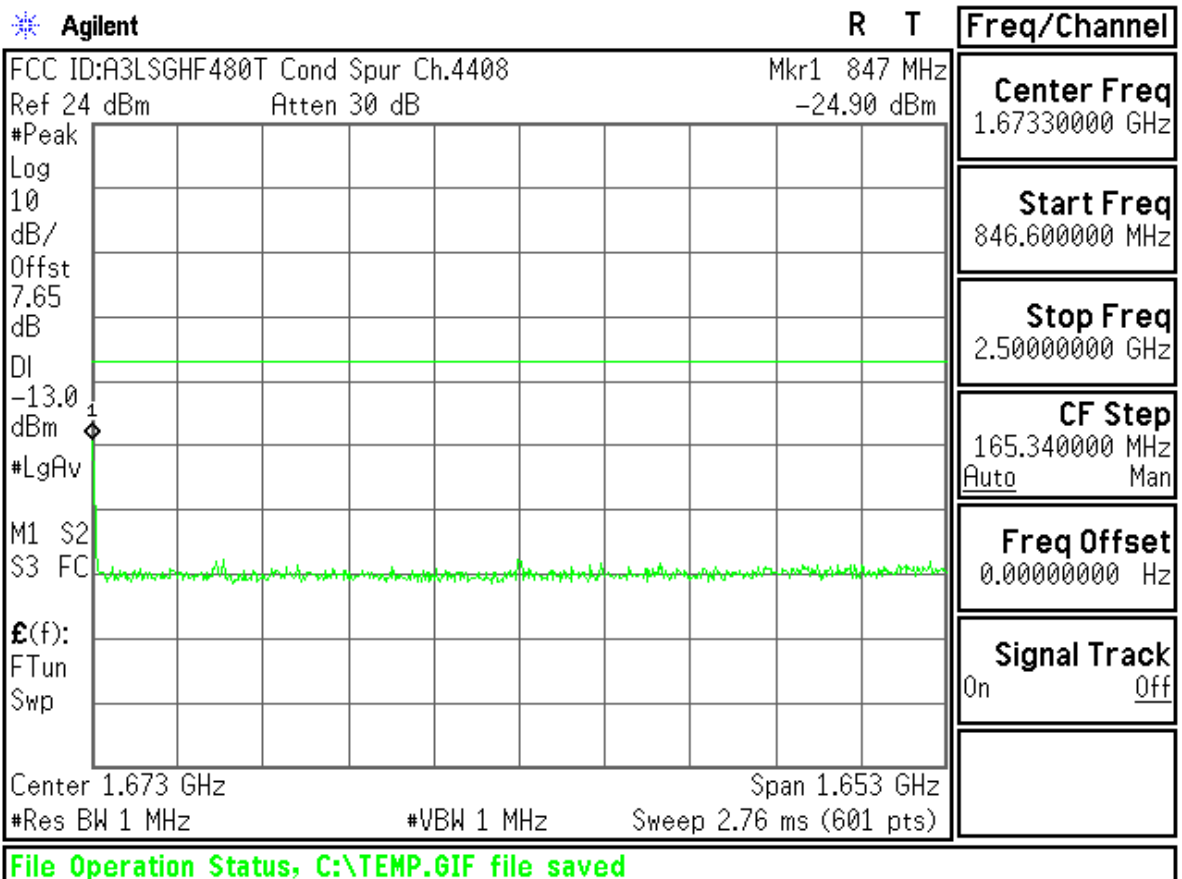
Stop Freq
826.600000 MHz

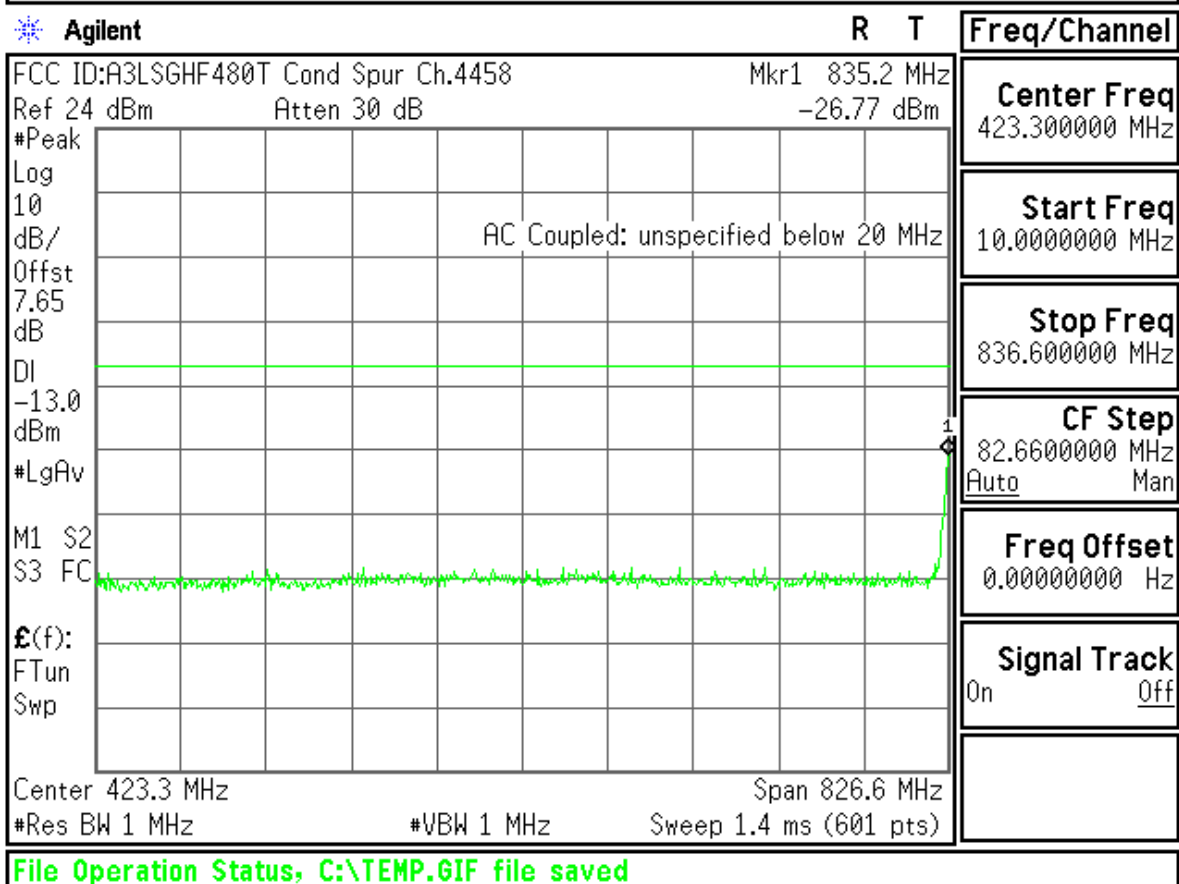
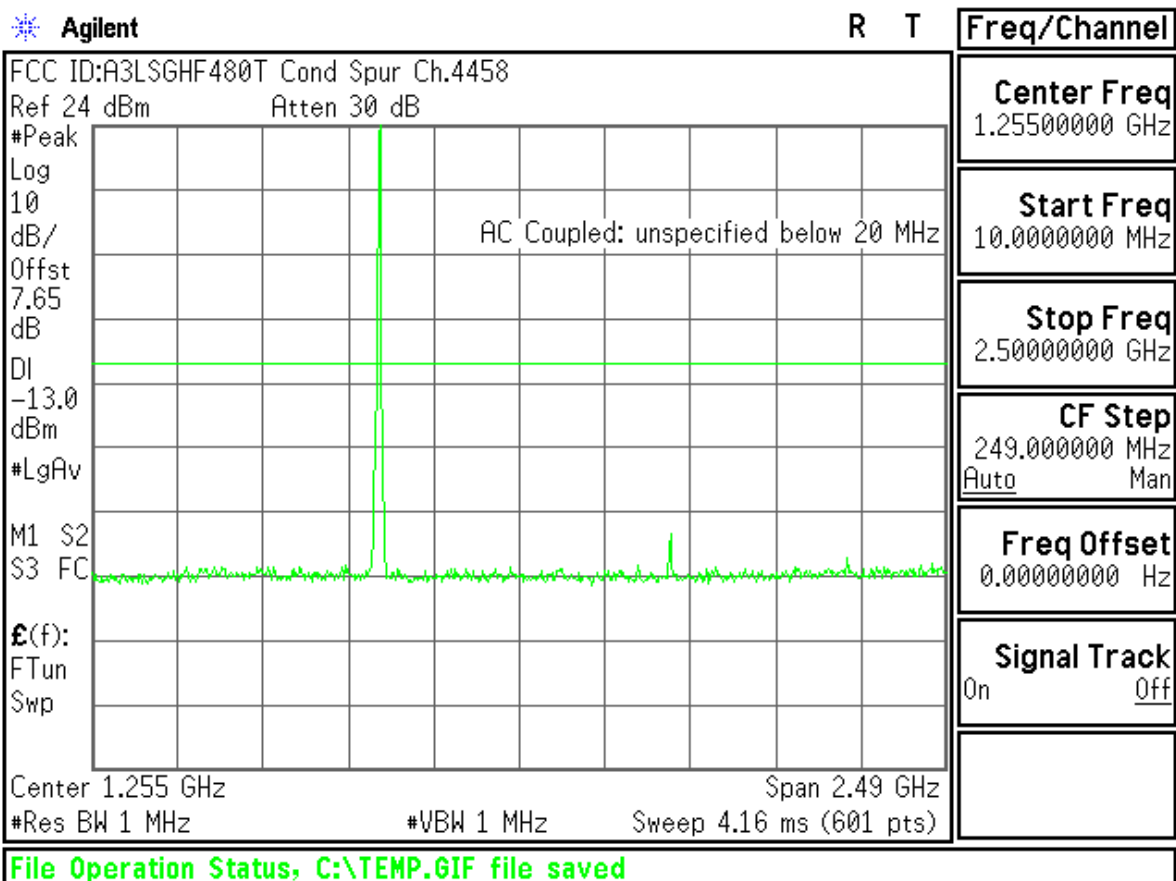
CF Step
81.6600000 MHz
Auto Man

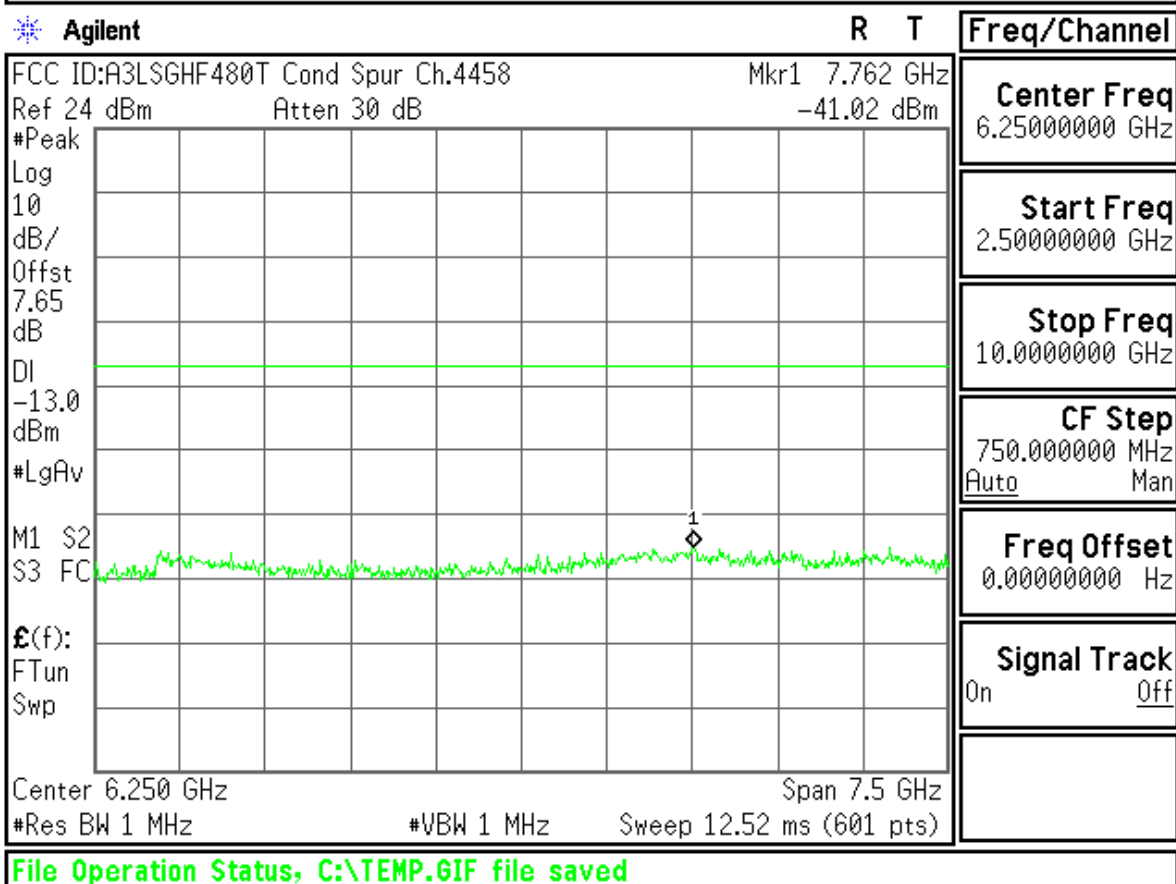
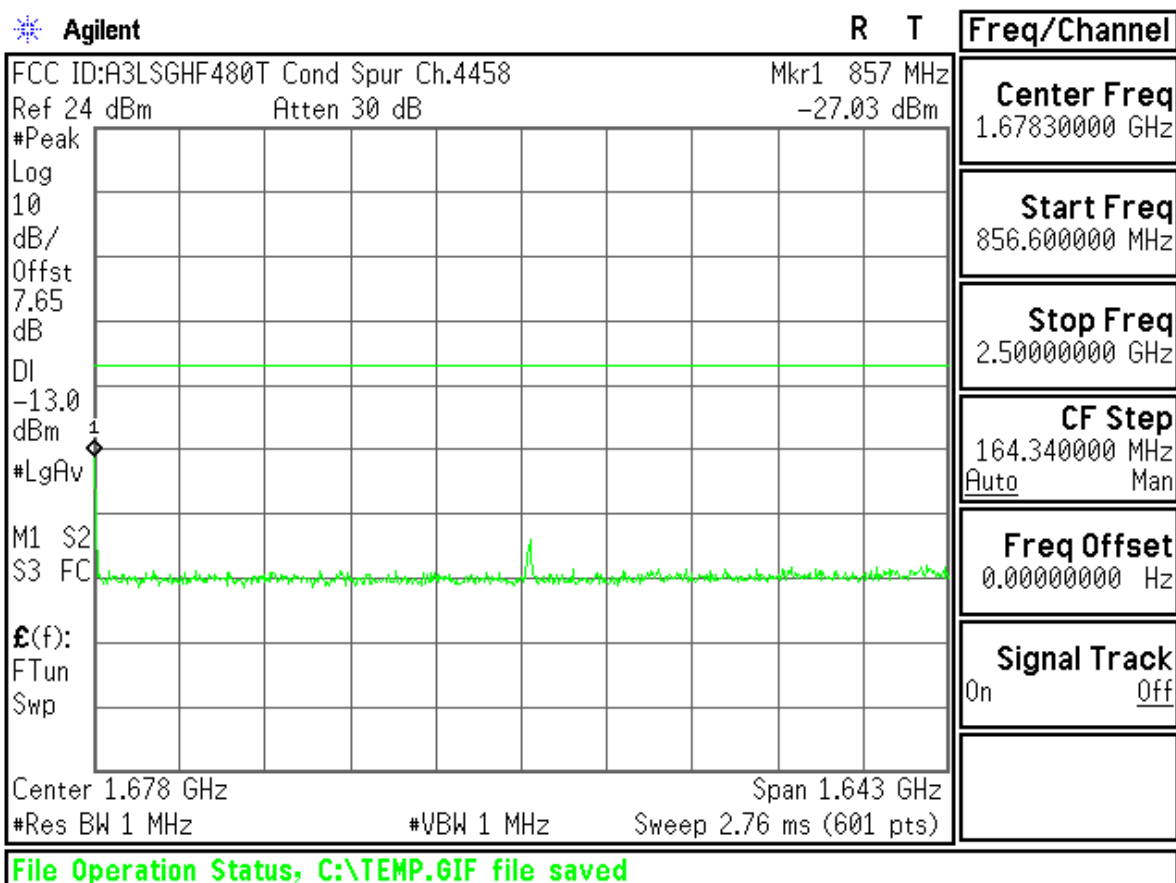
Freq Offset
0.00000000 Hz

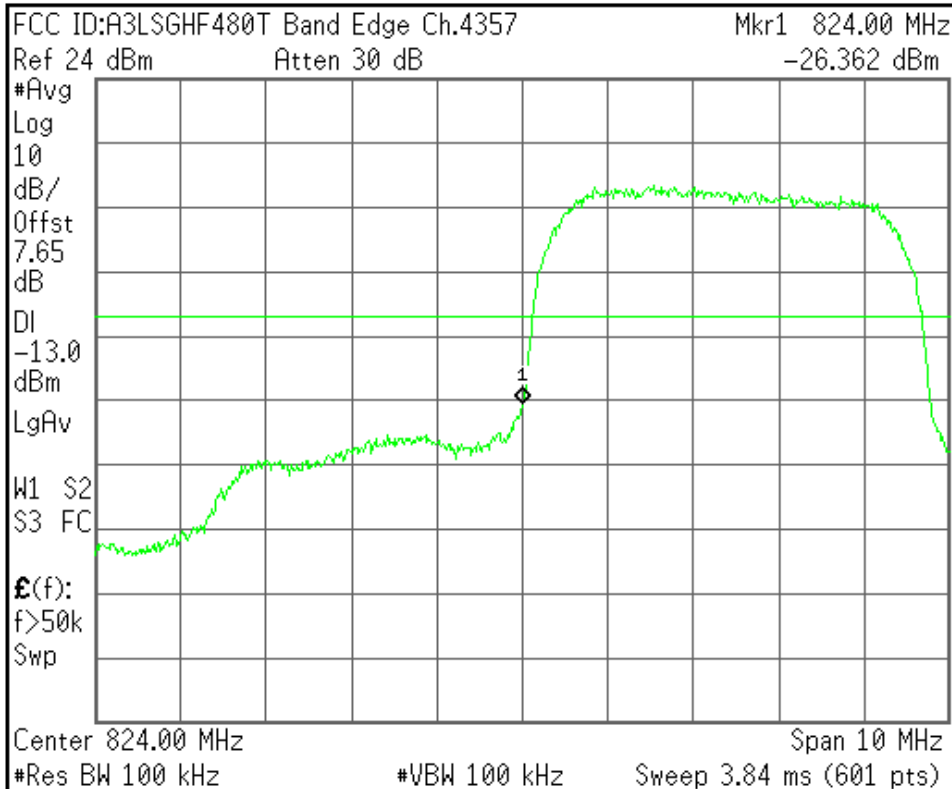
Signal Track
On Off

File Operation Status, C:\TEMP.GIF file saved









Center Freq
 824.000000 MHz

Start Freq
 819.000000 MHz

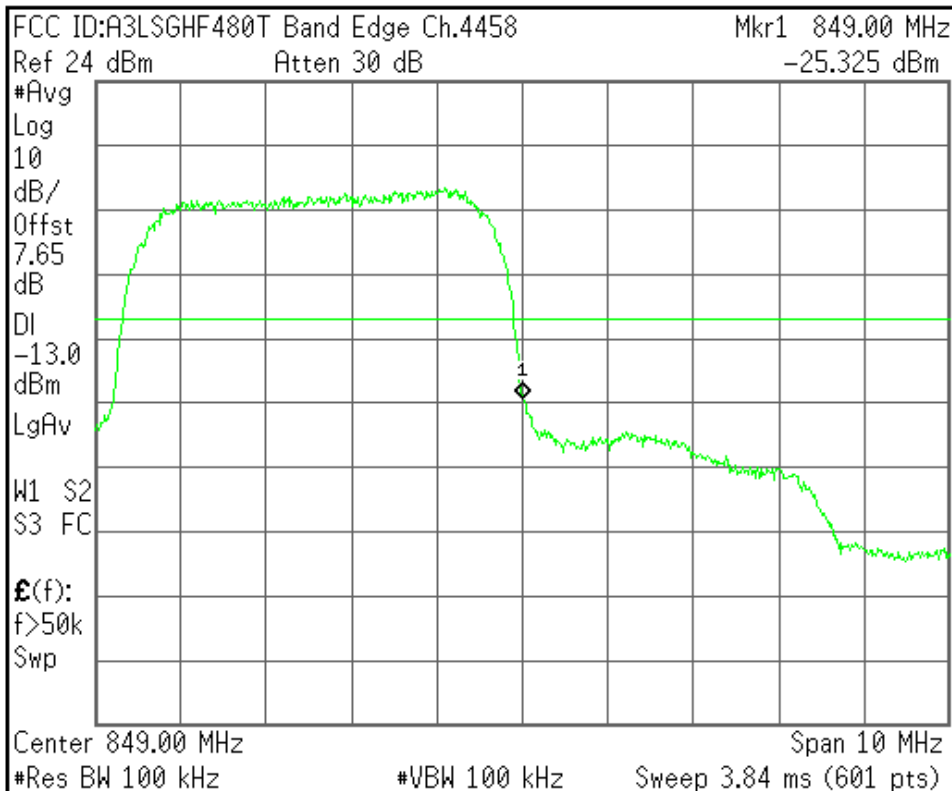
Stop Freq
 829.000000 MHz

CF Step
 1.00000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

Signal Track
 On Off

File Operation Status, C:\TEMP.GIF file saved



Center Freq
 849.000000 MHz

Start Freq
 844.000000 MHz

Stop Freq
 854.000000 MHz

CF Step
 1.00000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

Signal Track
 On Off

File Operation Status, C:\TEMP.GIF file saved

