



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 24 SUBPART CERTIFICATION REPORT

Model Tested : **S9402**
FCC ID(Requested) : **A3LSWDS9402**
Report No : **FF-168-R1**
Job No : **FF-168**
Date issued : **August 29, 2008**

- Abstract -

All measurement reported herein accordance with FCC Rules, 47CFR Part2, Part24.

Prepared By

JW LEE – Test Engineer

Authorized By

WT JANG – Technical
Manager

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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 : A3LSWDS9402
- Quantity : Quantity production is planned
- Emission Designators : 256KGXW(GSM1900), 242KG7W(GSM1900 EDGE)
- Tx Freq. Range : 1850.2MHz -1909.8MHz (GSM1900)
- Rx Freq. Range : 1930.2MHz - 1989.8MHz (GSM1900)
- Max. Power Rating : 1.117 W EIRP GSM1900 (30.48 dBm)
0.604 W EIRP GSM1900 EDGE(27.81dBm)
- FCC Classification(s) : PCS Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type : Single-Band PCS GSM/EDGE Phone with Bluetooth
- Frequency Tolerance : $\pm 0.00025\%$ (2.5ppm)
- FCC Rule Part(s) : §24(E), §2.
- Dates of Test : August 19-20, 2008
- Place of Test : SAMSUNG Lab,
- Test Report S/N : FF-168-R1

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.

4. TEST EQUIPMENT LIST

Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2008-10-17
	E4440A(3Hz~26.5GHz)	MY41000236	2009-04-15
	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	GB42360886	2009-07-08
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. DESCRIPTION OF TESTS

5.1. Effective Radiated Power / Equivalent Isotropic Radiated Power

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

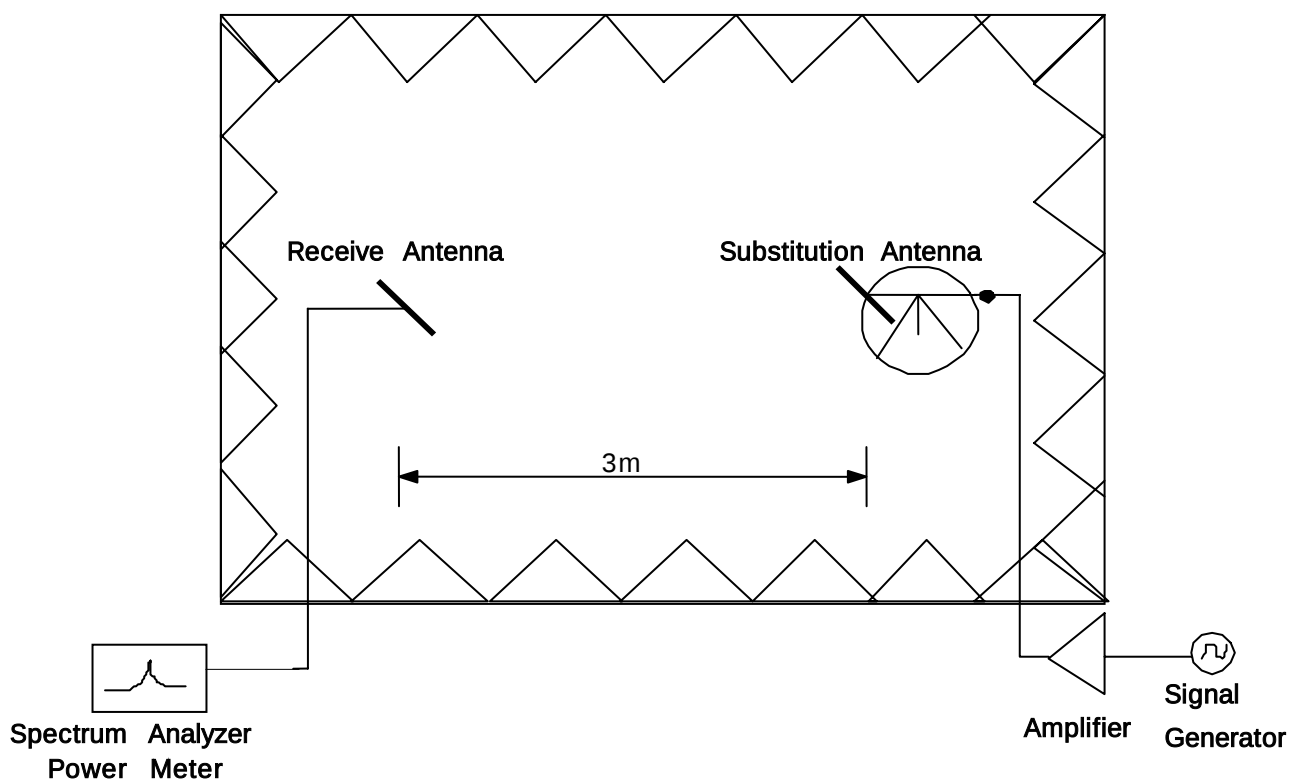


Figure 3. Diagram of ERP/EIRP test Set-up

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

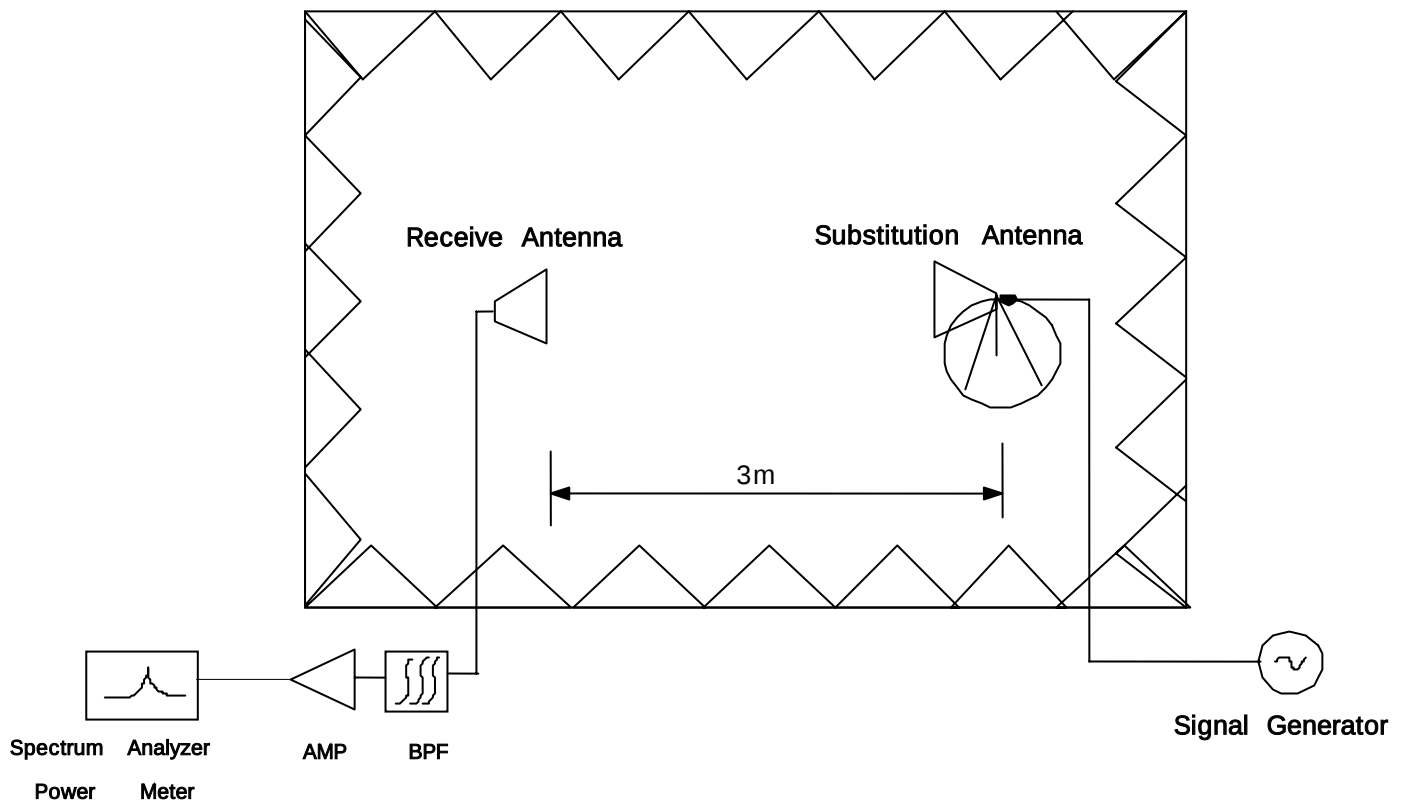


Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up

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 661 , Second Harmonic(3760.00MHz)

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 3760.00MHz . 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 $25.5\text{dBm} - (-24.8) = 50.3\text{dBc}$.

5.3. Peak-Average Ratio

A peak to average ratio measurement is performed at the conducted port of the EUT. An average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth.

5.4.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.

5.5. Spurious and Harmonic Emission at Antenna Terminal

5.5.1. 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.

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

5.5.2. 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 -13dBm, calculation shown below.

$$43 + 10\log (1.117 \text{ W}) = 43.48 \text{ dB}$$

$$30.48 \text{ dBm} - 43.48 \text{ dB} = -13 \text{ dBm}$$

Compliance with the out-of-band emissions requirement is based on test being performed with an analyzer resolution bandwidth of 1MHz. However in the 1MHz band immediately outside and adjacent to the frequency block a resolution bandwidth of at least 1% of the fundamental emissions bandwidth may be employed.

In case of GSM : $0.01 * 273\text{KHz} = 2.73\text{KHz}$
A Resolution BW of 3KHz was used for measurement at the band edges.

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 -13dBm 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. (GSM1900 Mode : 10MHz to 20GHz). A display line was placed at -13dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements.

Plots are shown herein.

5.6. 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 ($\pm 2.5\text{ppm}$) 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.

6. TEST DATA

6.1. Equivalent Isotropic Radiated Power (E.I.R.P.)

Supply Voltage : 3.7VDC

Modulation : PCS 1900

■ Reference level

Frequency (MHz)	Output (dBm)	Polarization (H/V)	S/A (dBm)	Ant gain (dBi)	Ref level (dBm)
1850.20	30.00	H	-8.71	9.70	-18.40
		V	-8.73	9.70	-18.42
1880.00	30.00	H	-8.85	9.70	-18.55
		V	-8.83	9.70	-18.53
1909.80	30.00	H	-9.41	9.70	-19.11
		V	-9.08	9.70	-18.78

■ Result(Slave)

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1850.20	-18.76	H	5/180	29.64	0.920	Standard
1880.00	-18.07	H	0/0	30.48	1.117	Standard
1909.80	-19.12	V	334/90	29.66	0.925	Standard

■ EDGE Result(Slave)

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1880.00	-20.74	H	0/0	27.81	0.604	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. GSM1900 Radiated Spurious & Harmonic measurement

Operating Frequency : 1850.2 MHz(Low), 1880.00 MHz(Middle), 1909.80 MHz(High)

Measured Output Power : 30.48 dBm = 1.117 W

Modulation Signal : GSM1900

Limit : $43 + 10\log_{10}(P) = 43.48$ dBc

■ Result(Slave)

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	Result (dBc)	POL (H/V)
512	2	3700.40	-61.69	68.35	H
	3	5550.60	-65.29	67.40	H
	4	7400.80	-62.86	60.62	V
	5	9251.00	-68.06	60.34	V
	6	11101.20	-	-	-
	7	12951.40	-	-	-
661	2	3760.00	-64.05	70.03	H
	3	5640.00	-65.71	67.84	H
	4	7520.00	-60.28	58.22	H
	5	9400.00	-67.86	60.14	H
	6	11280.00	-	-	-
	7	13160.00	-	-	-
810	2	3819.60	-63.53	69.10	V
	3	5729.40	-67.21	68.79	V
	4	7639.20	-60.57	57.57	V
	5	9549.00	-68.12	60.72	V
	6	11458.80	-	-	-
	7	13368.60	-	-	-

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.
- 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. GSM1900 Radiated Spurious & Harmonic Conversion Table

Date : 2008. 08. 20

Test Engineer : JW LEE

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

CH	Har	Frequency (MHz)	Tx C/L dB	Tx Horn Gain dBi	Tx Level dBm	ESI Level : H dBm	ESI Level : V dBm	Tested EUT Level : H dBm	Tested EUT Level : V dBm	Result EUT : H (dBc)	Result EUT : V (dBc)
512	2	3700.40	-13.91	12.40	-11.50	-36.82	-36.64	-61.69	-63.30	68.35	70.14
	3	5550.60	-18.04	12.90	-7.90	-41.37	-41.37	-65.29	-66.38	67.40	68.49
	4	7400.80	-20.27	10.50	-3.20	-45.94	-45.35	-63.08	-62.86	60.62	60.99
	5	9251.00	-23.06	11.20	-1.10	-51.85	-49.57	-68.71	-68.06	60.34	61.97
	6	11101.20	-25.92	11.60	1.30	-54.92	-54.59	-	-	-	-
	7	12951.40	-28.16	12.90	2.30	-56.76	-56.49	-	-	-	-
661	2	3760.00	-14.05	12.40	-11.40	-37.50	-36.99	-64.05	-65.63	70.03	72.12
	3	5640.00	-18.03	12.90	-7.90	-41.30	-41.76	-65.71	-66.12	67.89	67.84
	4	7520.00	-20.41	10.60	-3.20	-45.54	-45.69	-60.28	-60.99	58.22	58.78
	5	9400.00	-22.44	11.60	-2.20	-51.20	-50.63	-67.86	-68.51	60.14	61.36
	6	11280.00	-26.22	12.10	1.10	-54.35	-54.25	-	-	-	-
	7	13160.00	-27.70	12.80	1.90	-57.39	-57.52	-	-	-	-
810	2	3819.60	-14.59	12.40	-10.80	-37.15	-37.91	-65.35	-63.53	71.68	69.10
	3	5729.40	-18.34	13.00	-7.70	-41.97	-41.90	-67.29	-67.21	68.80	68.79
	4	7639.20	-20.39	11.20	-3.80	-46.12	-46.48	-60.63	-60.57	57.99	57.57
	5	9549.00	-23.07	11.70	-1.60	-50.91	-50.34	-68.15	-68.12	60.72	61.26
	6	11458.80	-26.21	11.70	1.50	-54.31	-54.64	-	-	-	-
	7	13368.60	-27.83	12.30	2.50	-58.60	-58.83	-	-	-	-

6.4. Frequency Stability

6.4.1. GSM1900 Frequency Stability Table

Operating Frequency : 1,880,000,000 Hz

Channel : 661

Reference Voltage : 3.7VDC

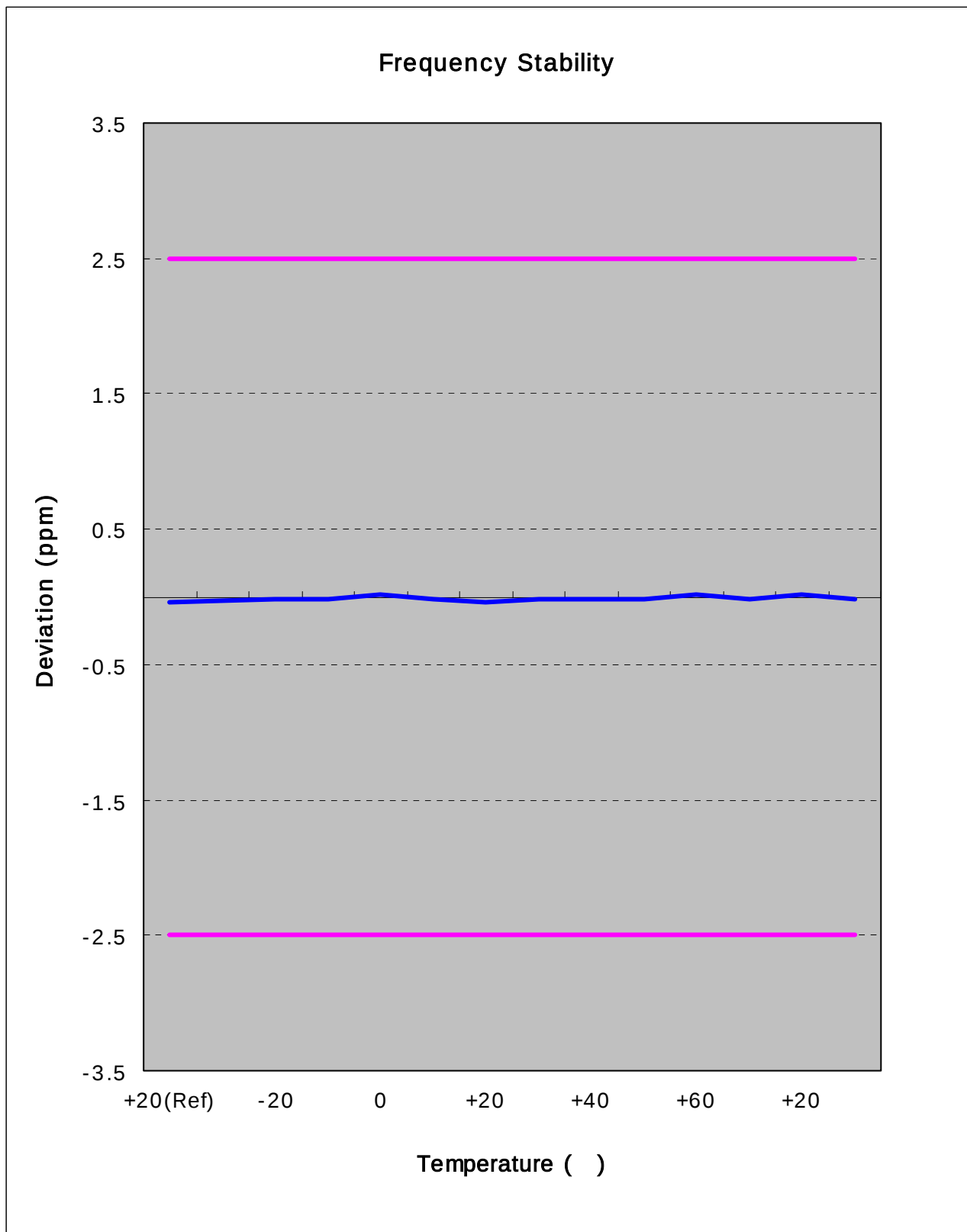
Deviation Limit : ± 0.00025 % or 2.5ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	-64.57	1,879,999,935	-0.000003	-0.034
100%		-30	-45.74	1,879,999,954	-0.000002	-0.024
100%		-20	-33.48	1,879,999,967	-0.000002	-0.018
100%		-10	-29.02	1,879,999,971	-0.000002	-0.015
100%		0	27.82	1,880,000,028	0.000001	0.015
100%		+10	-24.93	1,879,999,975	-0.000001	-0.013
100%		+20	-64.57	1,879,999,935	-0.000003	-0.034
100%		+30	-21.89	1,879,999,978	-0.000001	-0.012
100%		+40	-27.08	1,879,999,973	-0.000001	-0.014
100%		+50	-23.36	1,879,999,977	-0.000001	-0.012
100%		+60	33.24	1,880,000,033	0.000002	0.018
85%	3.33	+20	-34.39	1,879,999,966	-0.000002	-0.018
115%	4.26	+20	30.59	1,880,000,031	0.000002	0.016
Batt.Endpoint	3.33	+20	-34.39	1,879,999,966	-0.000002	-0.018

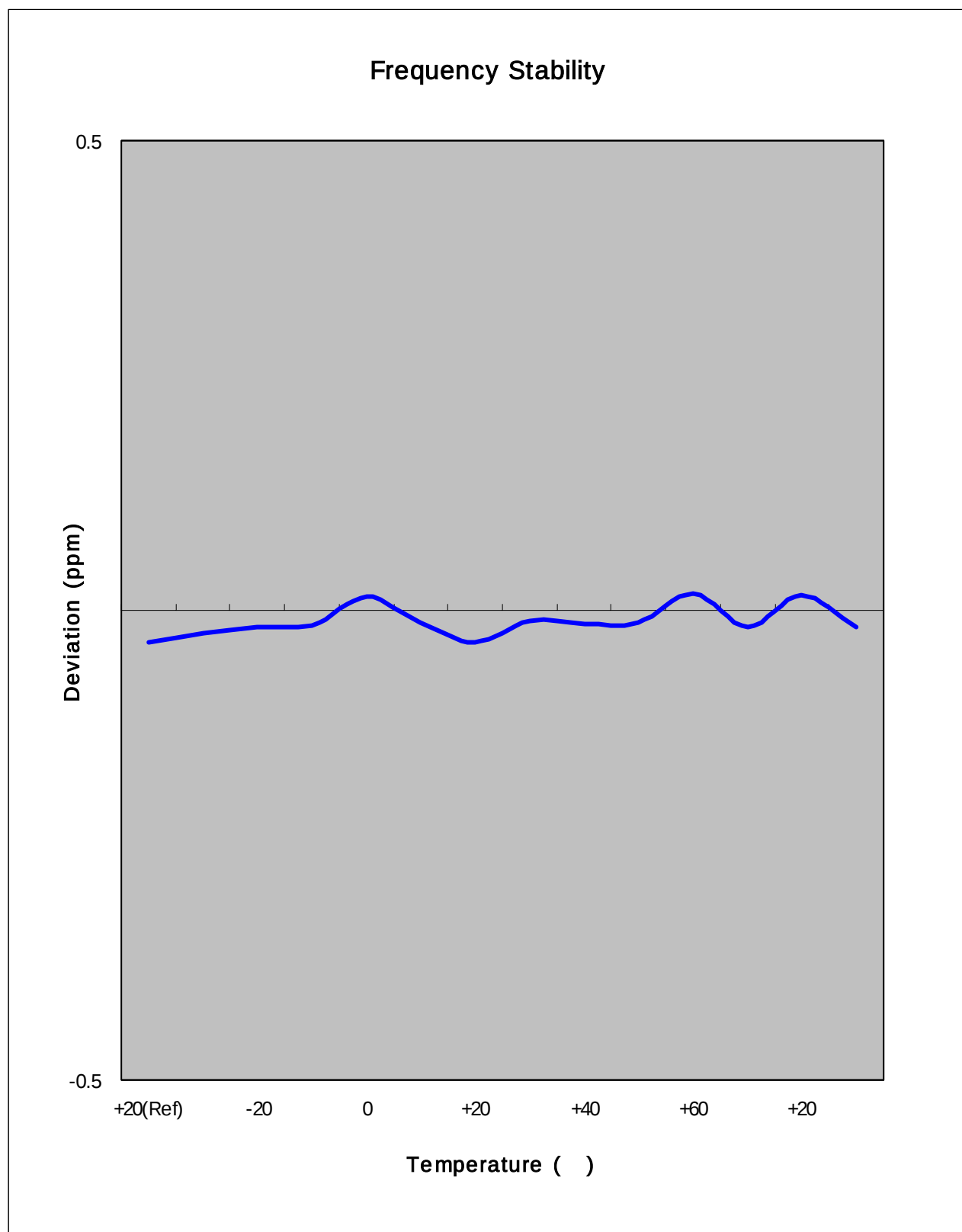
Note : The temperature is varied from -30 °C to +60 °C using an environmental chamber.

The EUT is tested down to the battery end point.

6.4.2. GSM1900 Frequency Stability Graph



Zoom IN





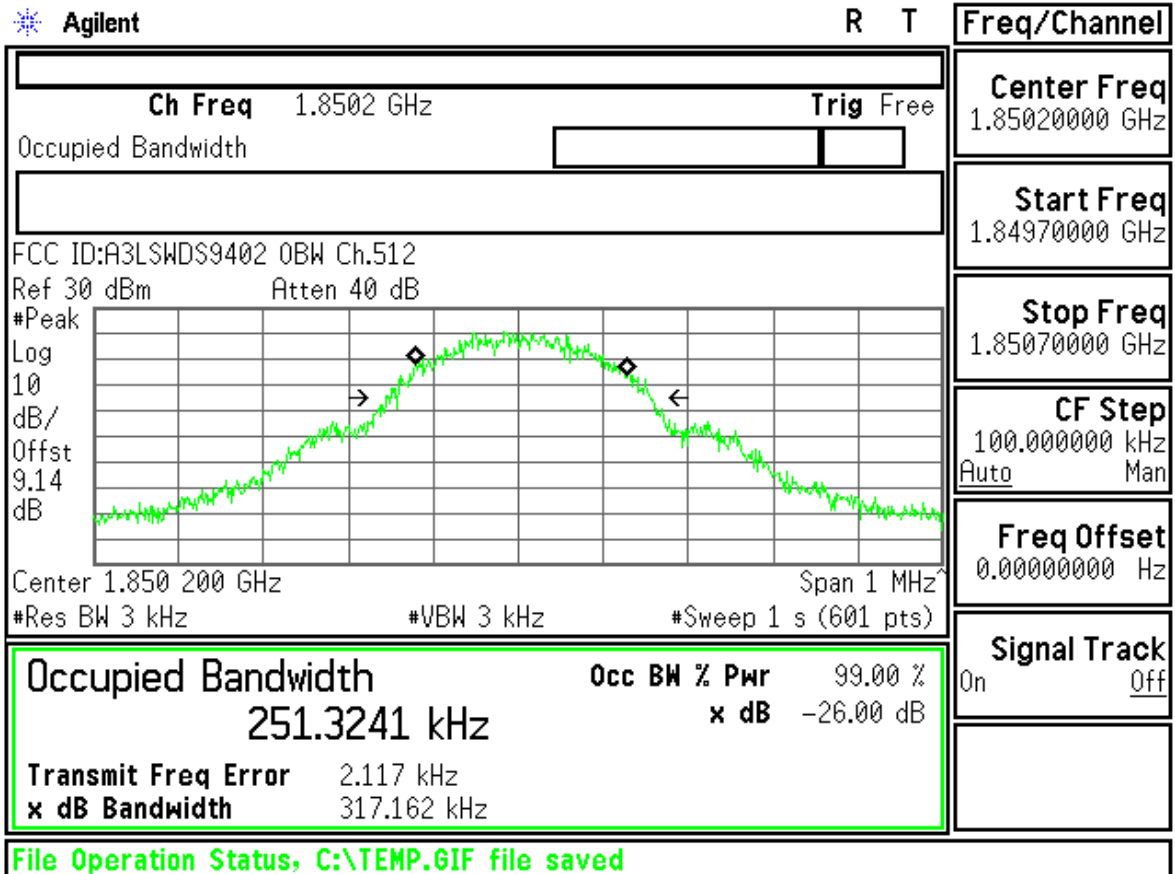
7. CONCLUSION

The data collected shows that the SAMSUNG Single-Band PCS GSM/EDGE Phone with Bluetooth. FCC ID : A3LSWDS9402 complies with all the requirements of Parts 2,24 of the FCC Rules.

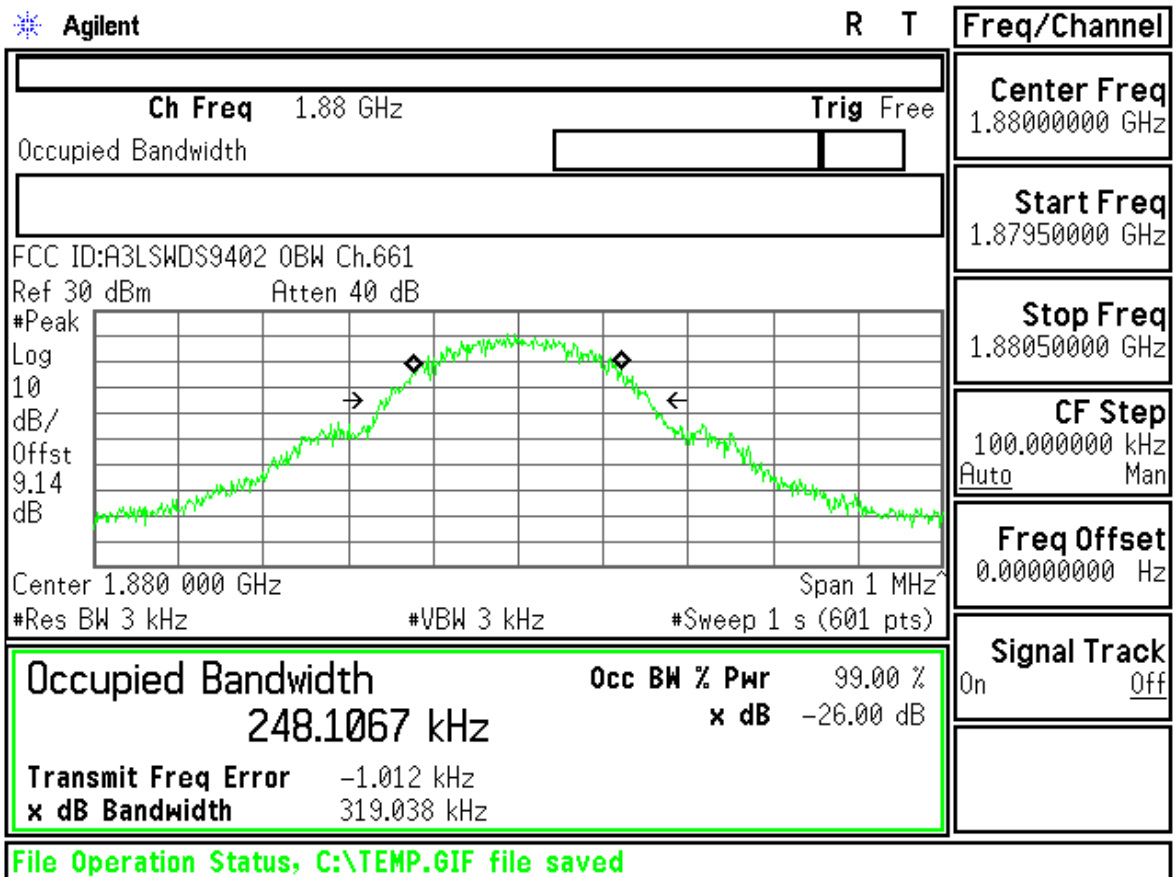
8. TEST PLOTS

- Slave

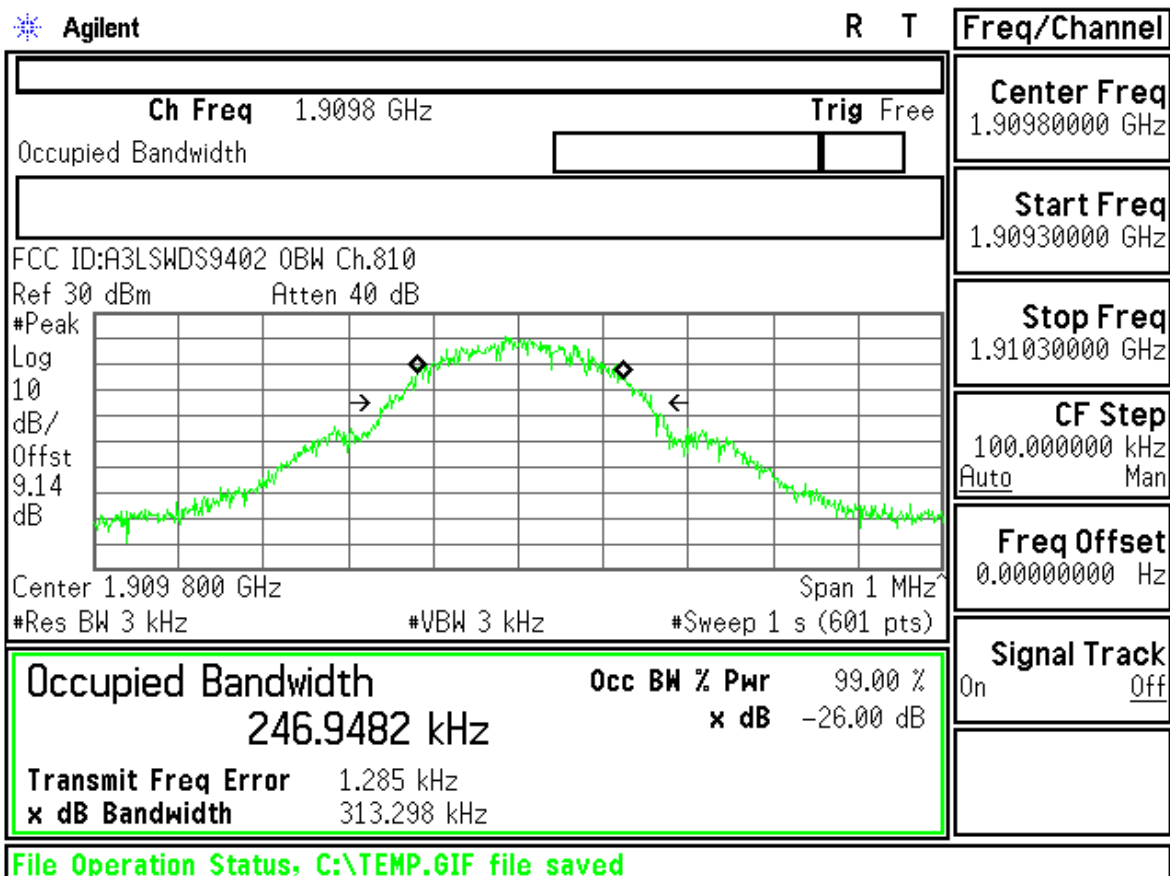
GSM1900 Slave



Slave



Slave



FCC ID : A3LSWDS9402 Transmit Power 512CH Slave

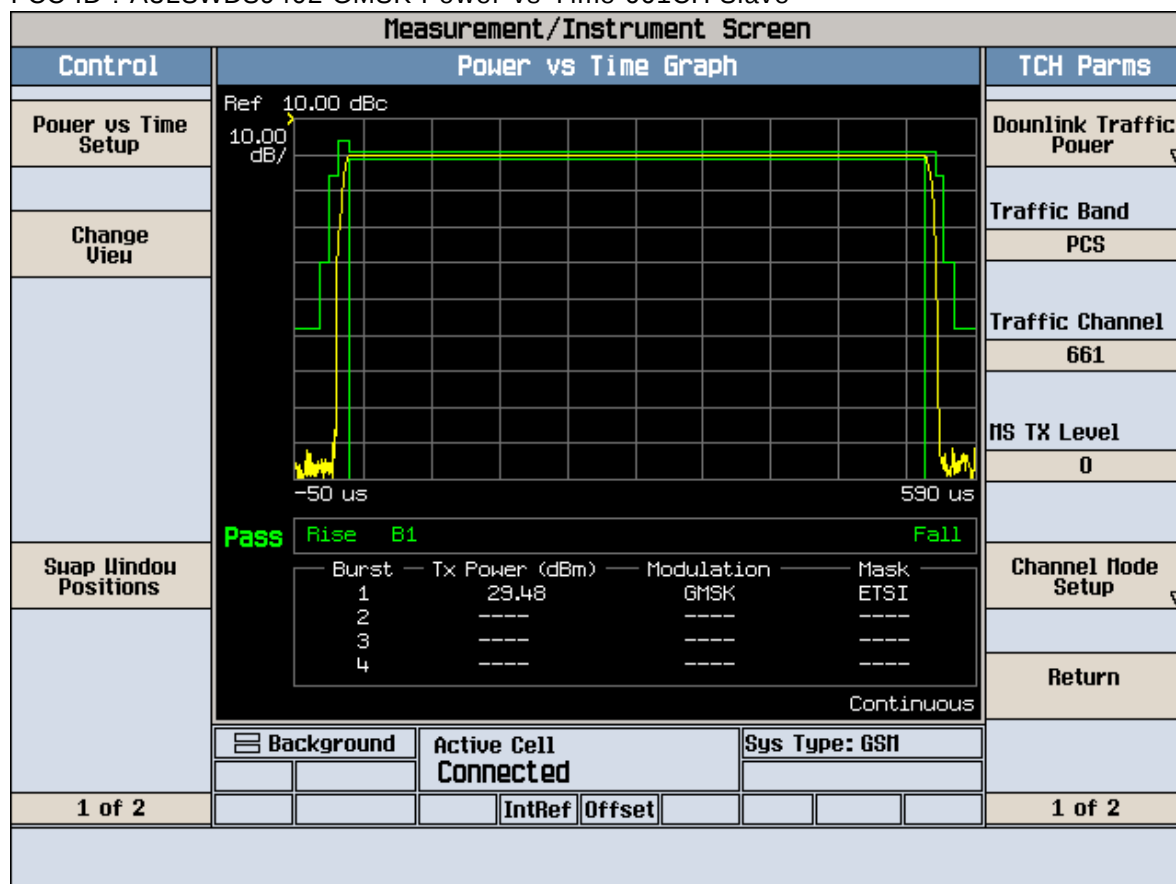
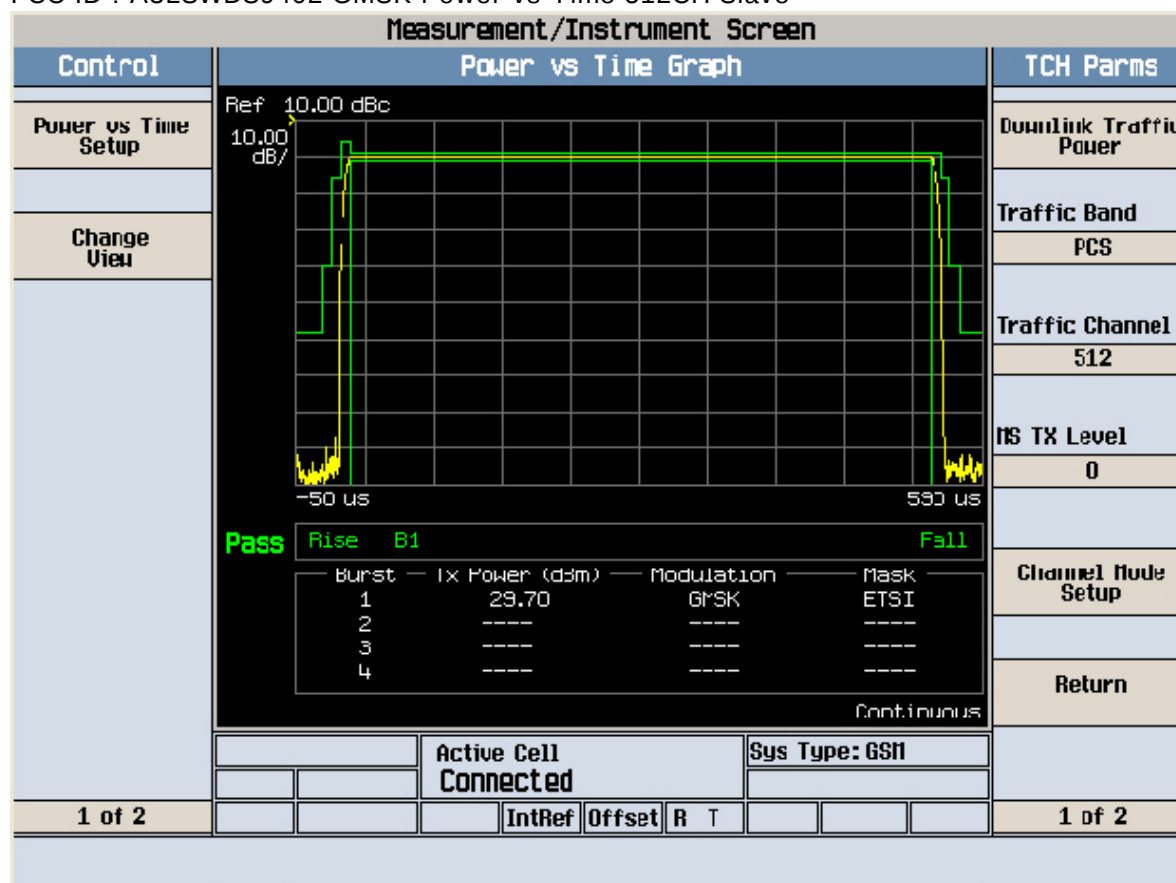
Measurement/Instrument Screen									
Control	Transmit Power						TCH Parms		
Transmit Power Setup							Downlink Traffic Power		
		Burst 1	Burst 2	Burst 3	Burst 4		Traffic Band		
	Burst Power	29.70	----	----	----		PCS		
	Estimated Carrier Power	29.70	----	----	----		Traffic Channel		
						Single	512		
	Phase & Frequency Error						MS TX Level		
		Peak Phase °	RMS Phase °	Frequency Hz			0		
	Minimum	4.60	1.99	-45.93					
	Maximum	6.93	2.33	15.06			Channel Mode Setup		
	Average	5.59	2.15	-13.29					
	Pass/Fail	Pass	Pass	Pass			Return		
						Single			
		Active Cell Connected			Sys Type: GSM				
1 of 2		IntRef	Offset	R T			1 of 2		

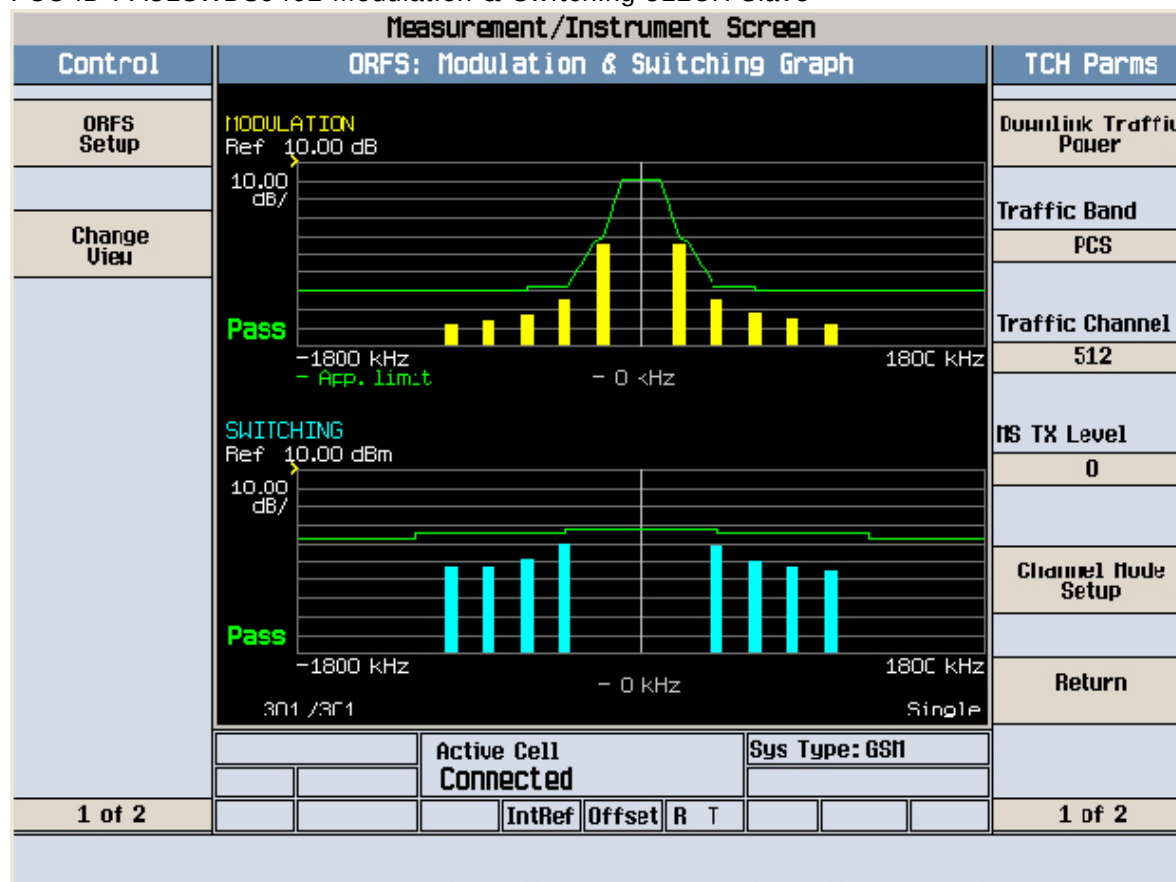
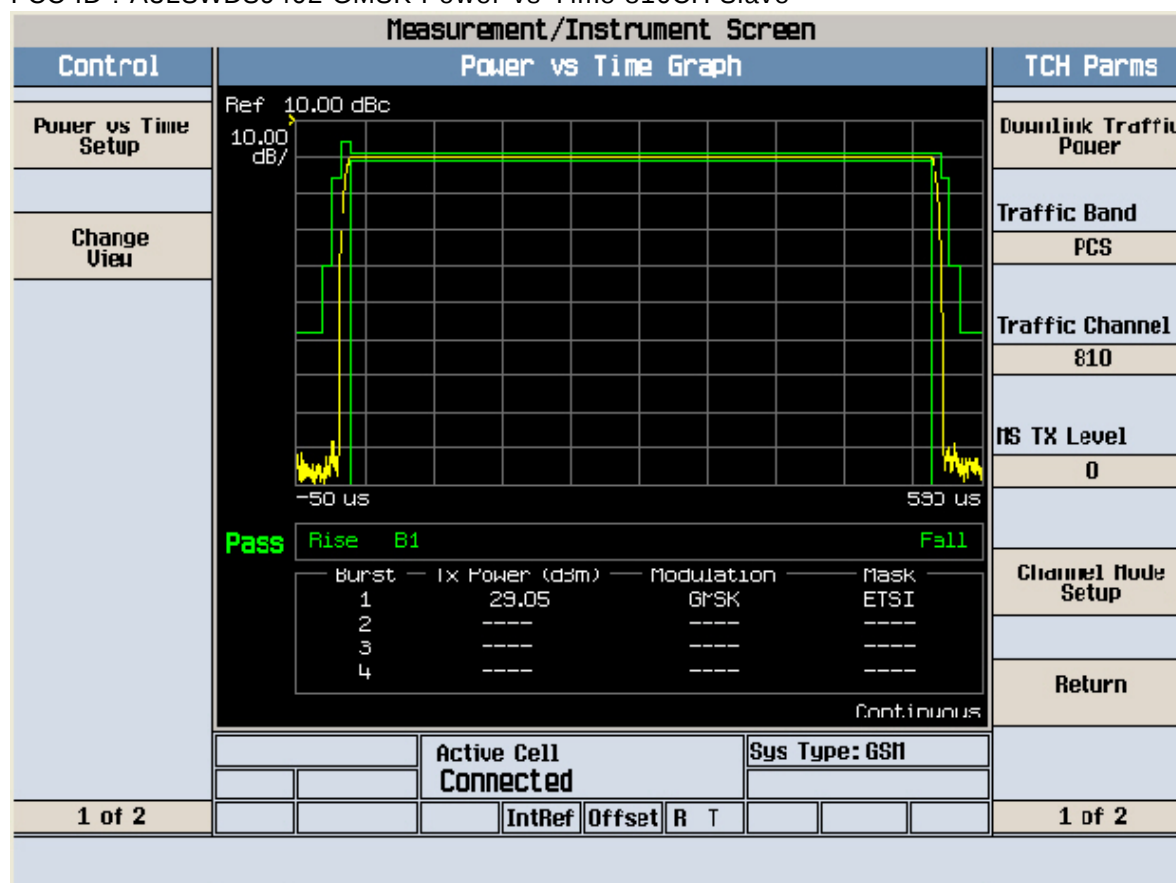
001214342600101 Transmit Power 00104 Slave

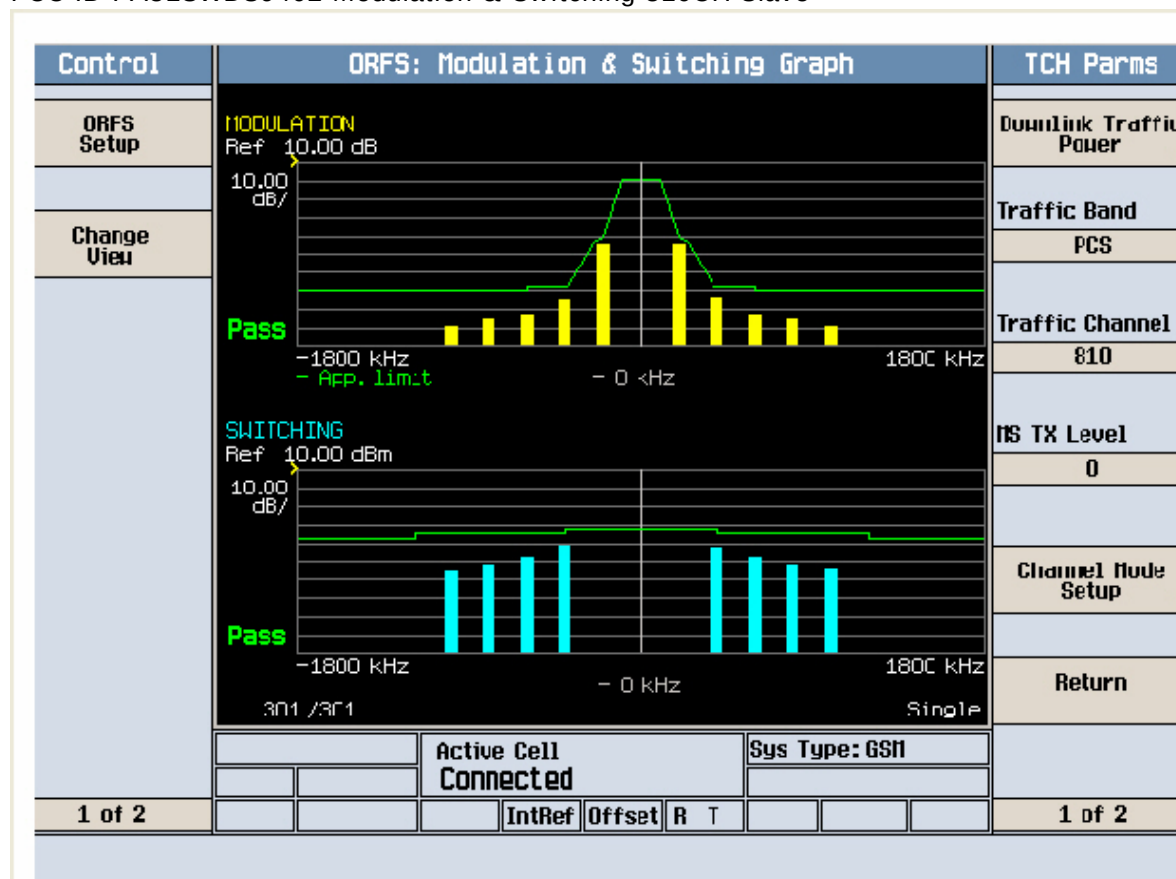
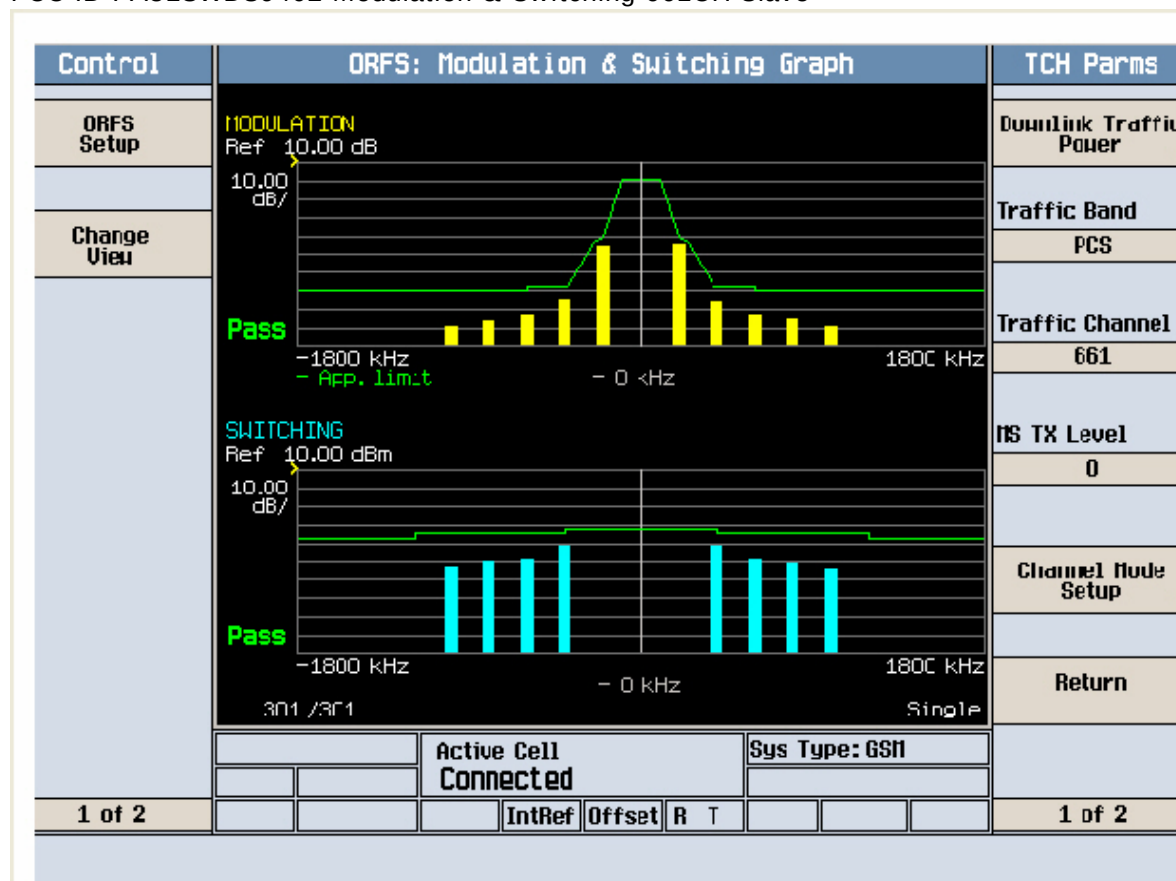
Measurement/Instrument Screen																																							
Control		Transmit Power						TCH Parms																															
Transmit Power Setup ▾		<table><tr><td></td><td>Burst 1</td><td>Burst 2</td><td>Burst 3</td><td>Burst 4</td></tr><tr><td>Burst Power</td><td>29.55</td><td>----</td><td>----</td><td>----</td></tr><tr><td>Estimated Carrier Power</td><td>29.55</td><td>----</td><td>----</td><td>----</td></tr></table>							Burst 1	Burst 2	Burst 3	Burst 4	Burst Power	29.55	----	----	----	Estimated Carrier Power	29.55	----	----	----	Downlink Traffic Power																
	Burst 1							Burst 2	Burst 3	Burst 4																													
Burst Power	29.55							----	----	----																													
Estimated Carrier Power	29.55							----	----	----																													
Swap Window Positions		Traffic Band																																					
		PCS																																					
		Traffic Channel																																					
		Single						661																															
		Phase & Frequency Error						MS TX Level																															
		<table><tr><td></td><td>Peak Phase °</td><td colspan="2">RMS Phase °</td><td colspan="2">Frequency Hz</td></tr><tr><td>Minimum</td><td>4.63</td><td colspan="2">1.89</td><td colspan="2">-32.99</td></tr><tr><td>Maximum</td><td>6.78</td><td colspan="2">2.32</td><td colspan="2">-7.11</td></tr><tr><td>Average</td><td>5.44</td><td colspan="2">2.08</td><td colspan="2">-21.99</td></tr><tr><td>Pass/Fail</td><td>Pass</td><td colspan="2">Pass</td><td colspan="2">Pass</td></tr></table>							Peak Phase °	RMS Phase °		Frequency Hz		Minimum	4.63	1.89		-32.99		Maximum	6.78	2.32		-7.11		Average	5.44	2.08		-21.99		Pass/Fail	Pass	Pass		Pass		Channel Mode Setup	
	Peak Phase °							RMS Phase °		Frequency Hz																													
Minimum	4.63							1.89		-32.99																													
Maximum	6.78							2.32		-7.11																													
Average	5.44							2.08		-21.99																													
Pass/Fail	Pass	Pass		Pass																																			
		50 / 50						Return																															
		Active Cell Connected				Sys Type: GSM																																	
1 of 2				IntRef	Offset	R	T	1 of 2																															

CC-ID: FASELOWD00102 Transmit Power: 3100m Slave

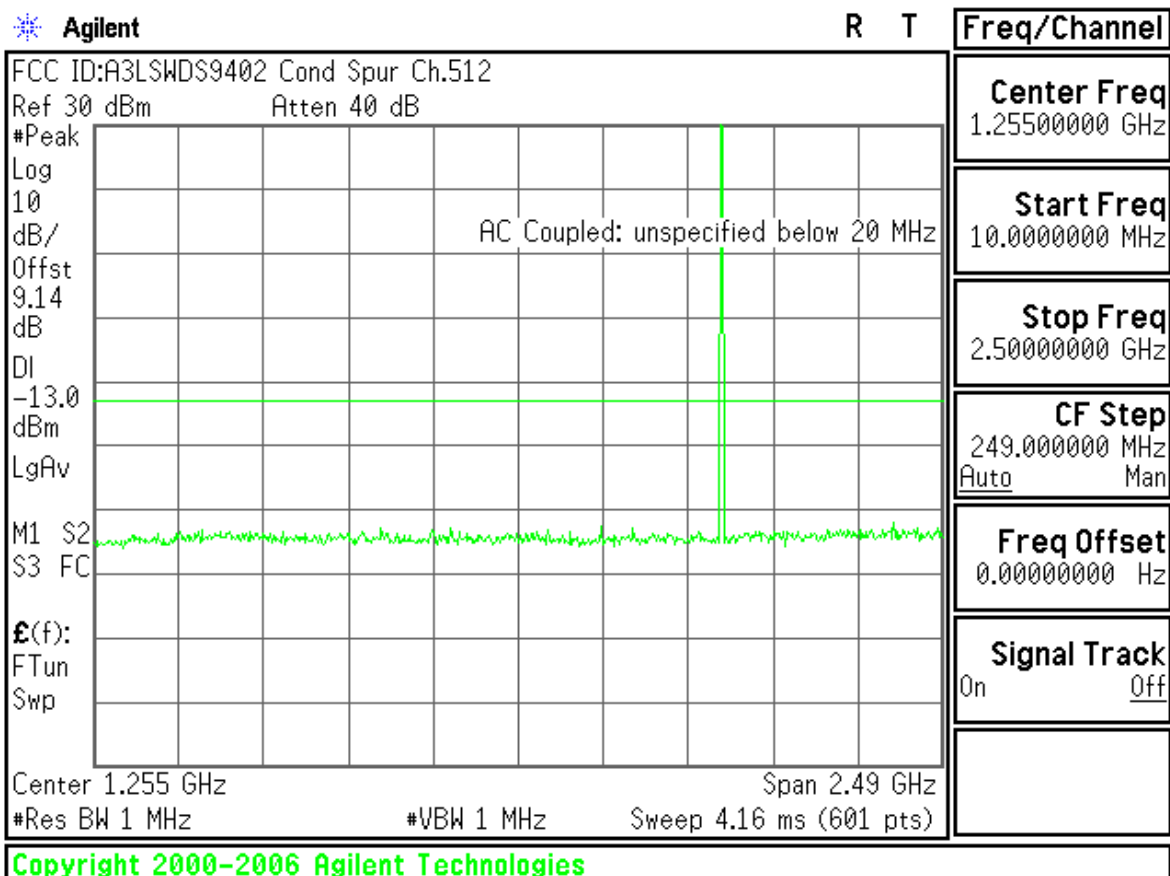
Measurement/Instrument Screen																																		
Control		Transmit Power						TCH Parms																										
Transmit Power Setup ▾		<table><tr><td></td><td>Burst 1</td><td>Burst 2</td><td>Burst 3</td><td>Burst 4</td></tr><tr><td>Burst Power</td><td>29.06</td><td>----</td><td>----</td><td>----</td></tr><tr><td>Estimated Carrier Power</td><td>29.06</td><td>----</td><td>----</td><td>----</td></tr></table>							Burst 1	Burst 2	Burst 3	Burst 4	Burst Power	29.06	----	----	----	Estimated Carrier Power	29.06	----	----	----	Downlink Traffic Power											
	Burst 1							Burst 2	Burst 3	Burst 4																								
Burst Power	29.06							----	----	----																								
Estimated Carrier Power	29.06							----	----	----																								
Swap Window Positions		Traffic Band																																
		PCS																																
		Traffic Channel																																
		Single						810																										
		Phase & Frequency Error						MS TX Level																										
		<table><tr><td></td><td>Peak Phase °</td><td colspan="2">RMS Phase °</td><td>Frequency Hz</td></tr><tr><td>Minimum</td><td>4.44</td><td colspan="2">1.77</td><td>-46.65</td></tr><tr><td>Maximum</td><td>7.07</td><td colspan="2">2.32</td><td>29.79</td></tr><tr><td>Average</td><td>5.57</td><td colspan="2">2.05</td><td>4.38</td></tr><tr><td>Pass/Fail</td><td>Pass</td><td colspan="2">Pass</td><td>Pass</td></tr></table>							Peak Phase °	RMS Phase °		Frequency Hz	Minimum	4.44	1.77		-46.65	Maximum	7.07	2.32		29.79	Average	5.57	2.05		4.38	Pass/Fail	Pass	Pass		Pass	Channel Mode Setup	
	Peak Phase °							RMS Phase °		Frequency Hz																								
Minimum	4.44							1.77		-46.65																								
Maximum	7.07							2.32		29.79																								
Average	5.57							2.05		4.38																								
Pass/Fail	Pass	Pass		Pass																														
		50 / 50						Return																										
		Active Cell Connected				Sys Type: GSM																												
1 of 2				IntRef	Offset	R	T		1 of 2																									



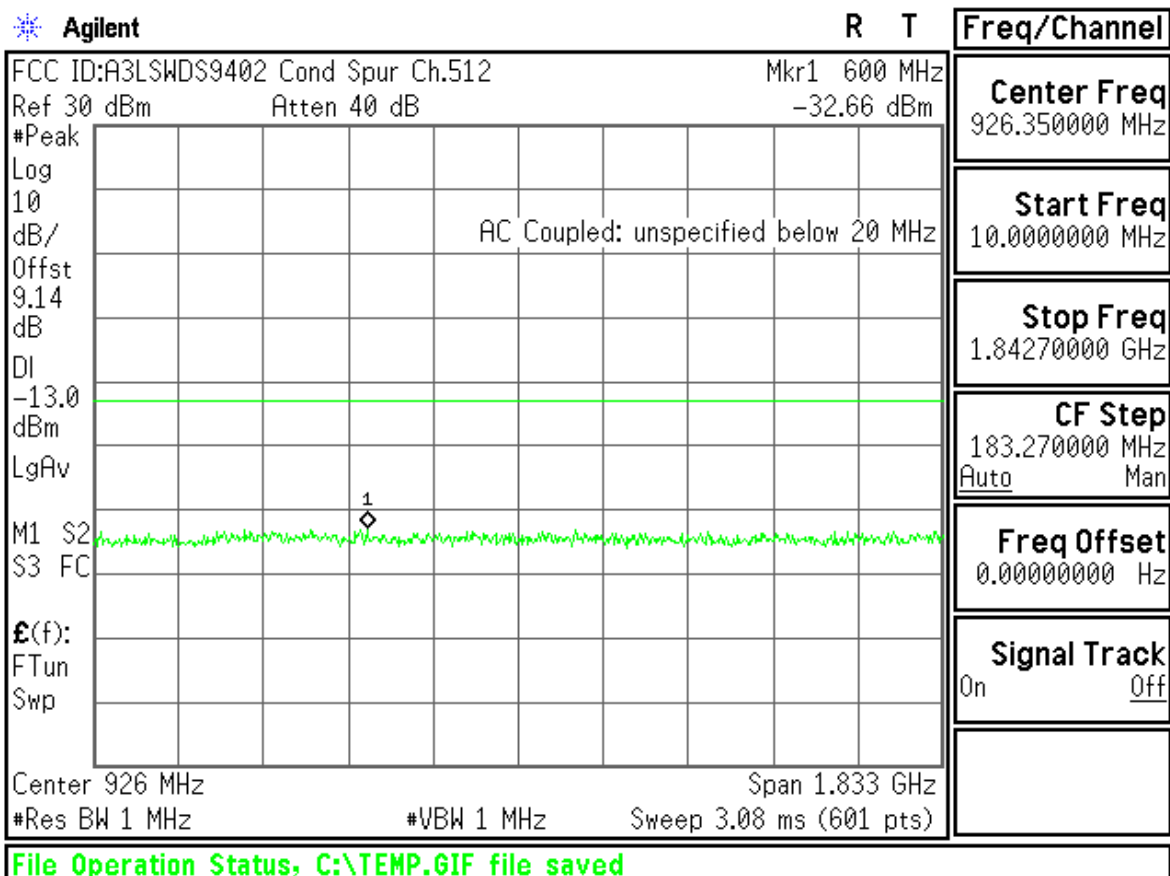




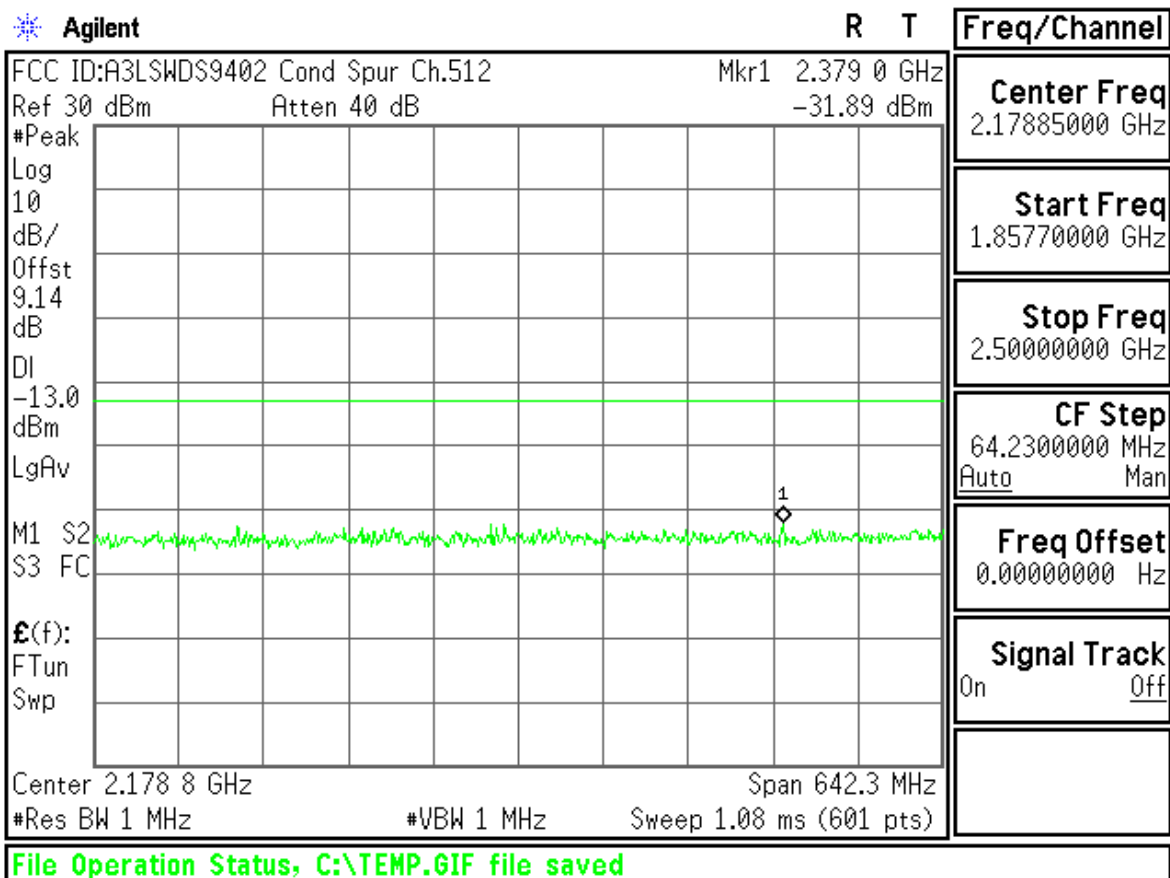
Slave



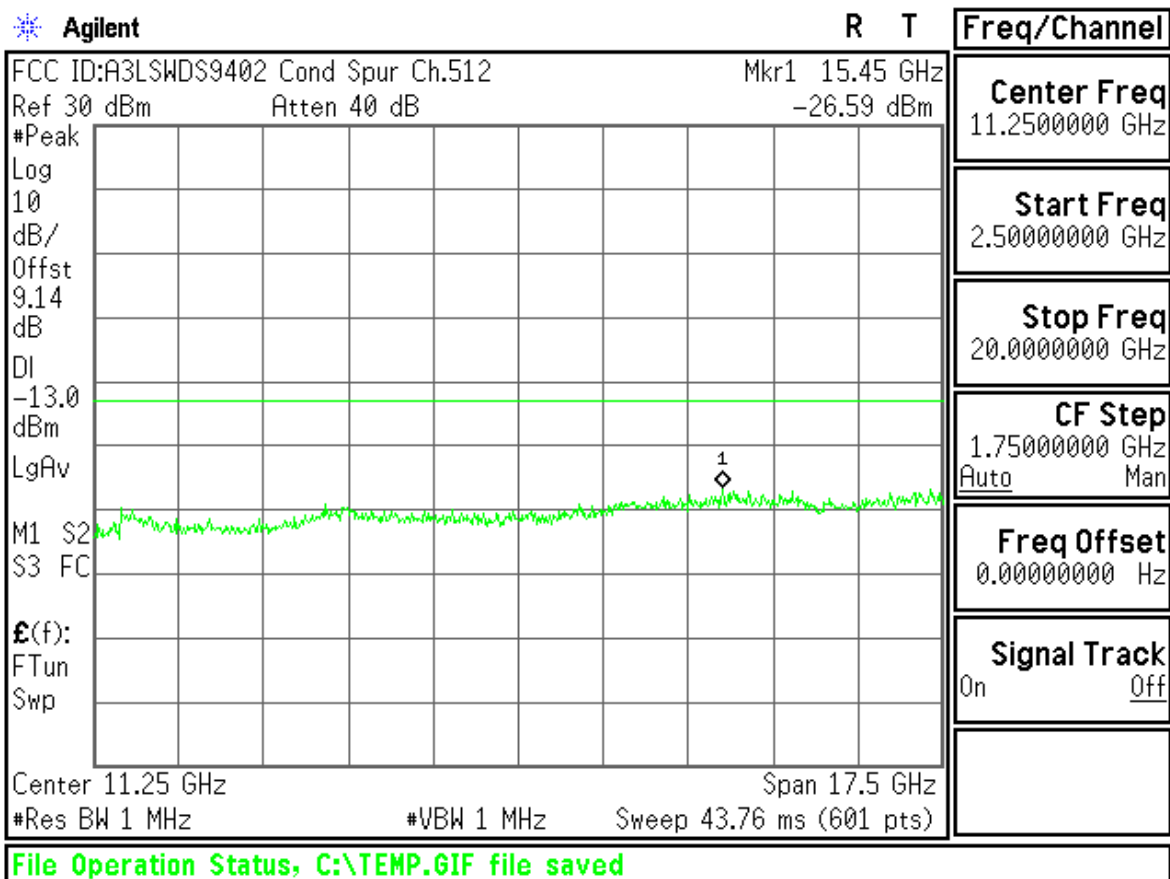
Slave



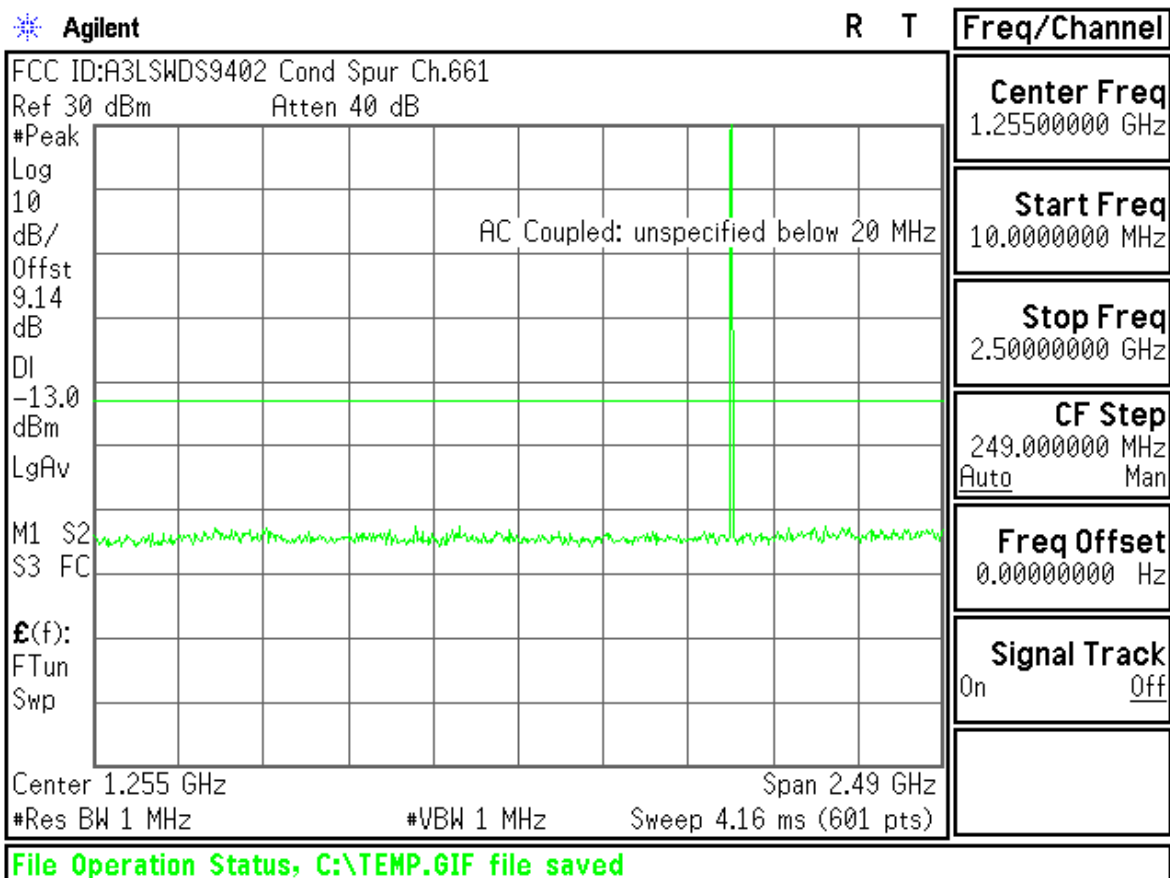
Slave



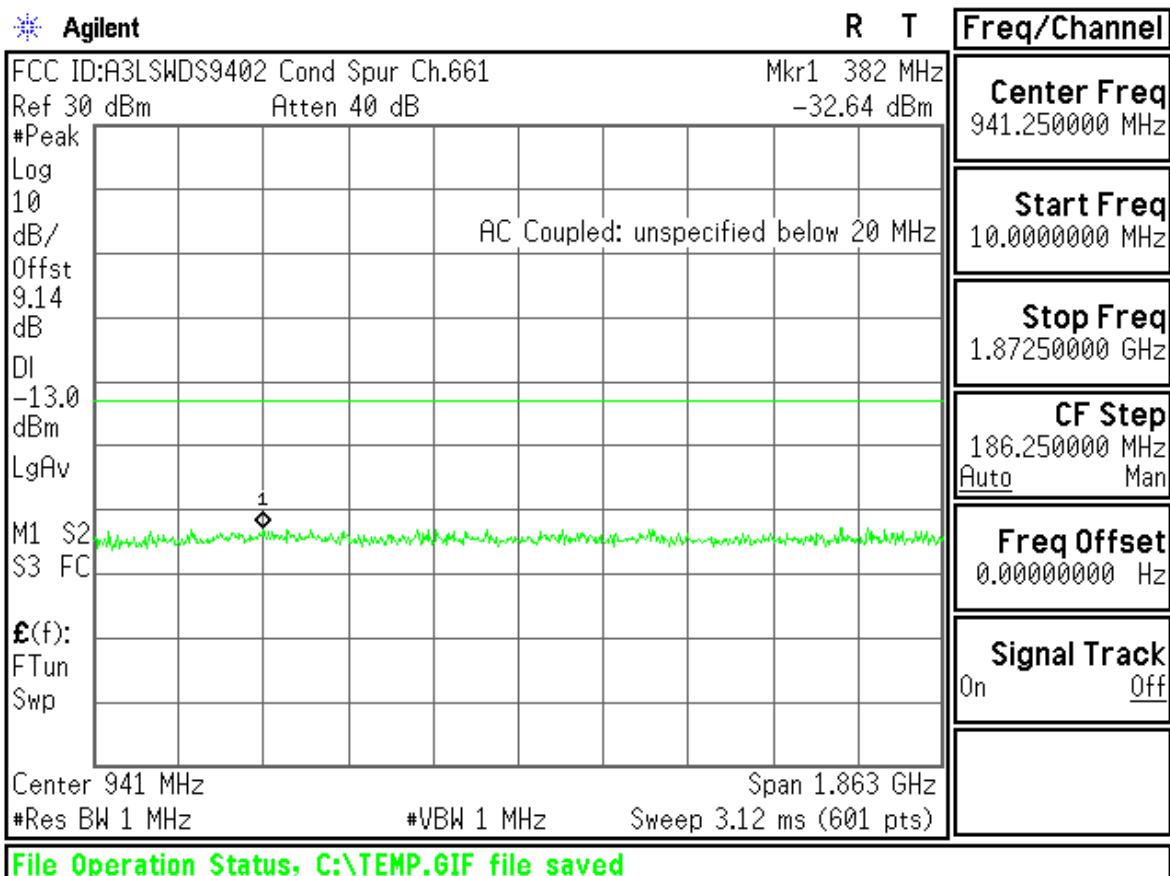
Slave



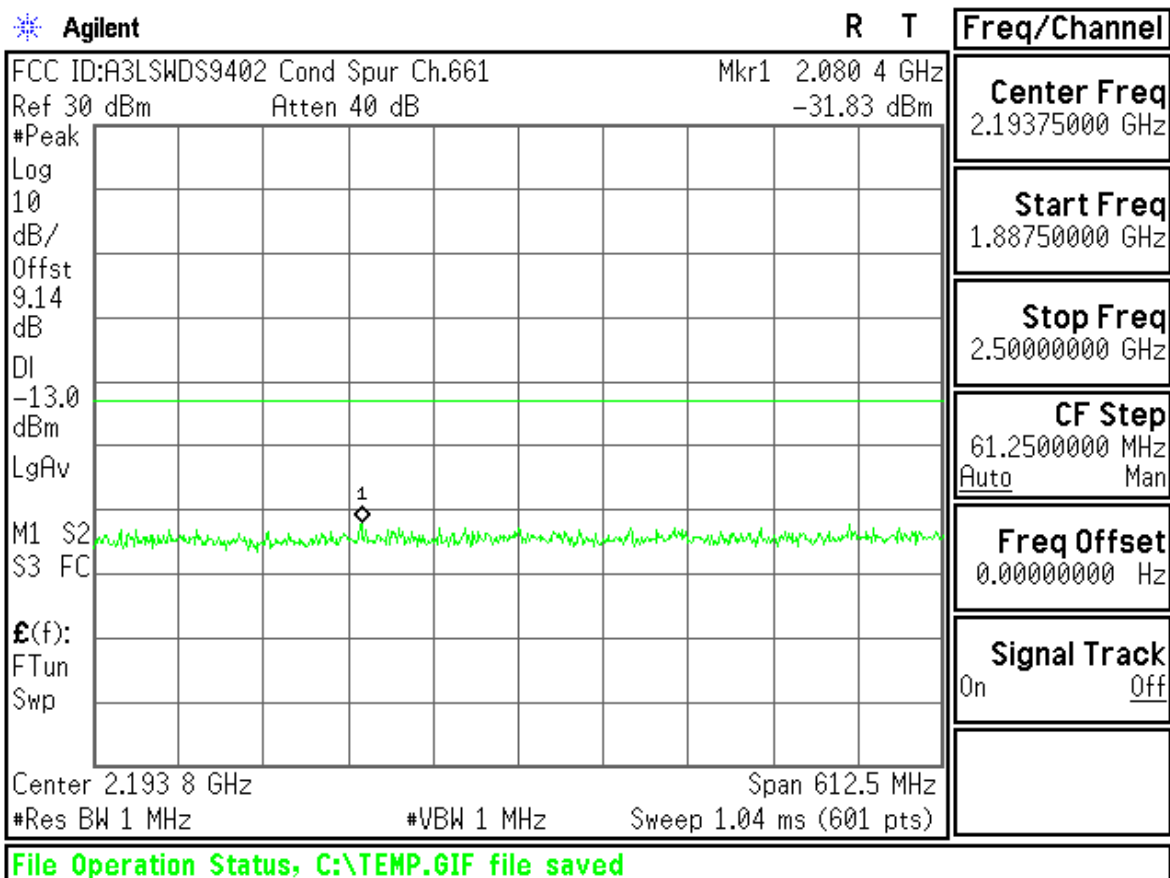
Slave



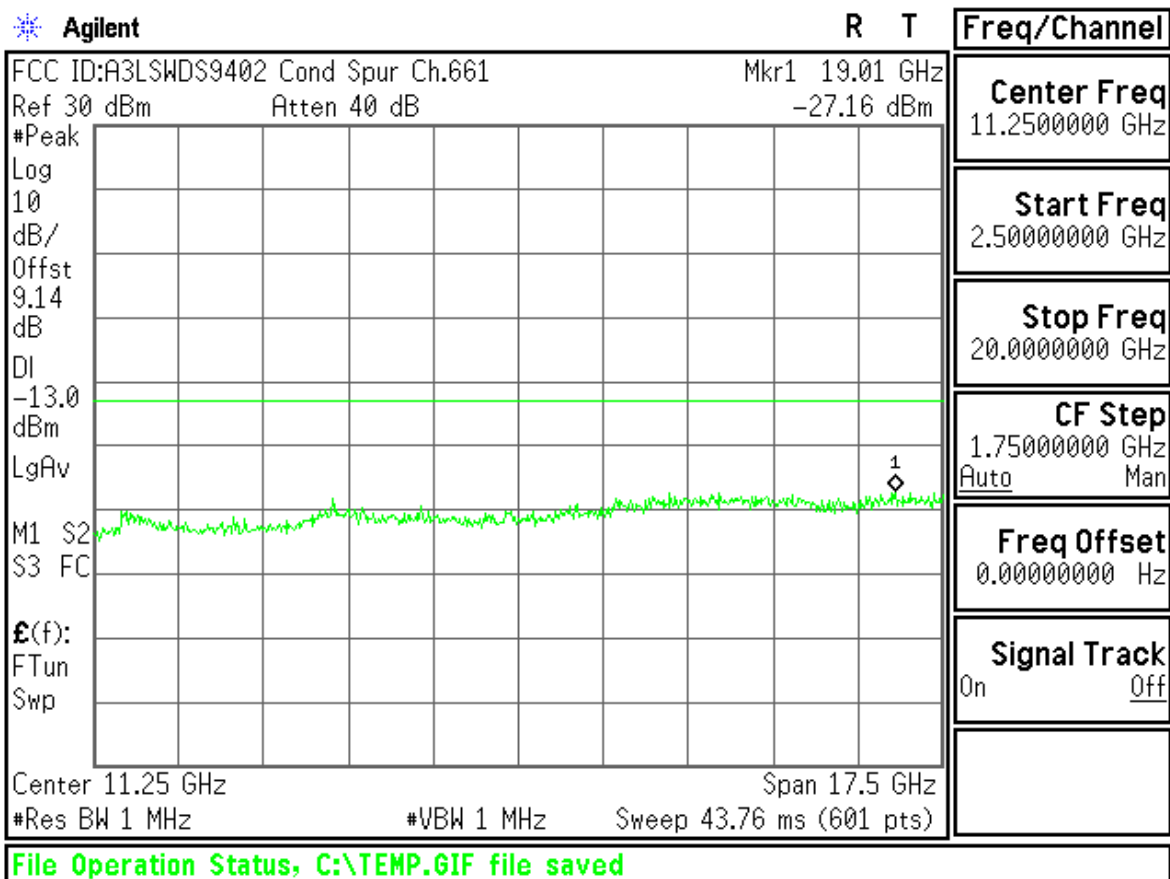
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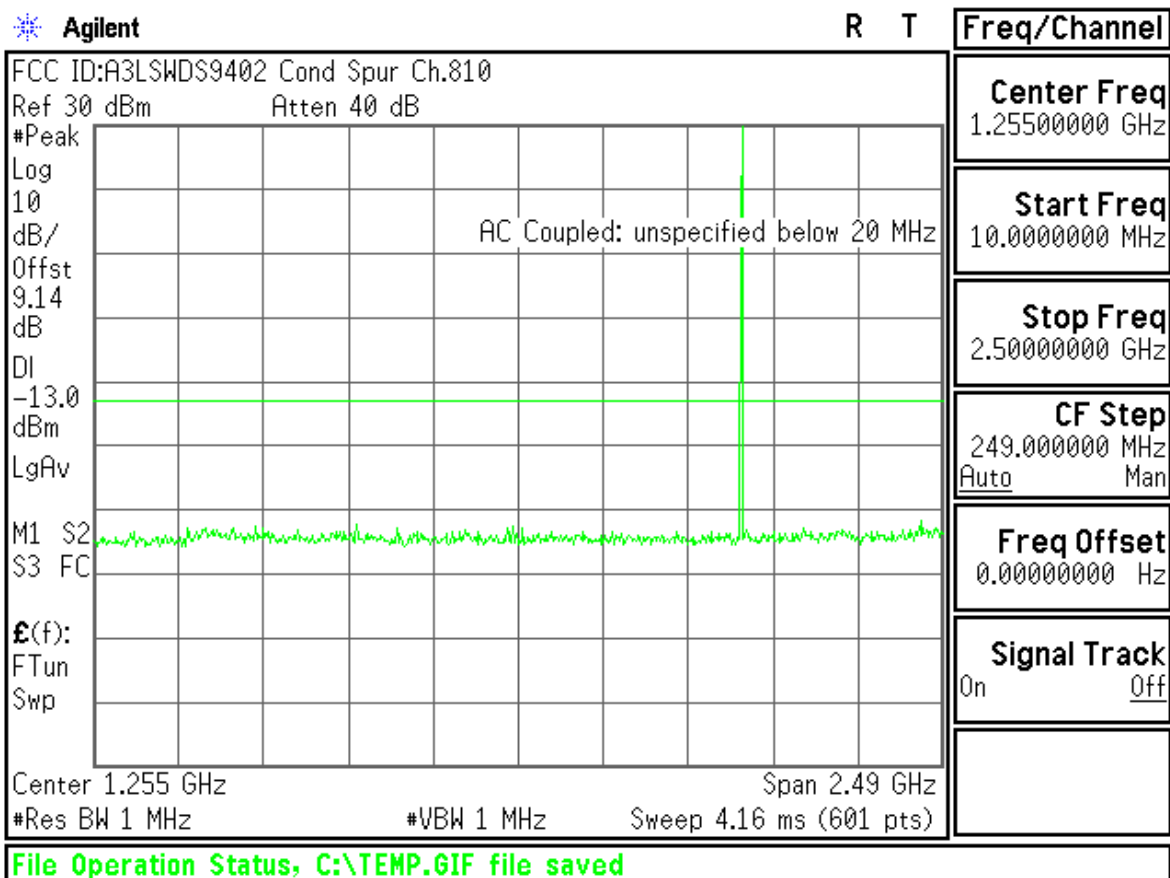
Slave



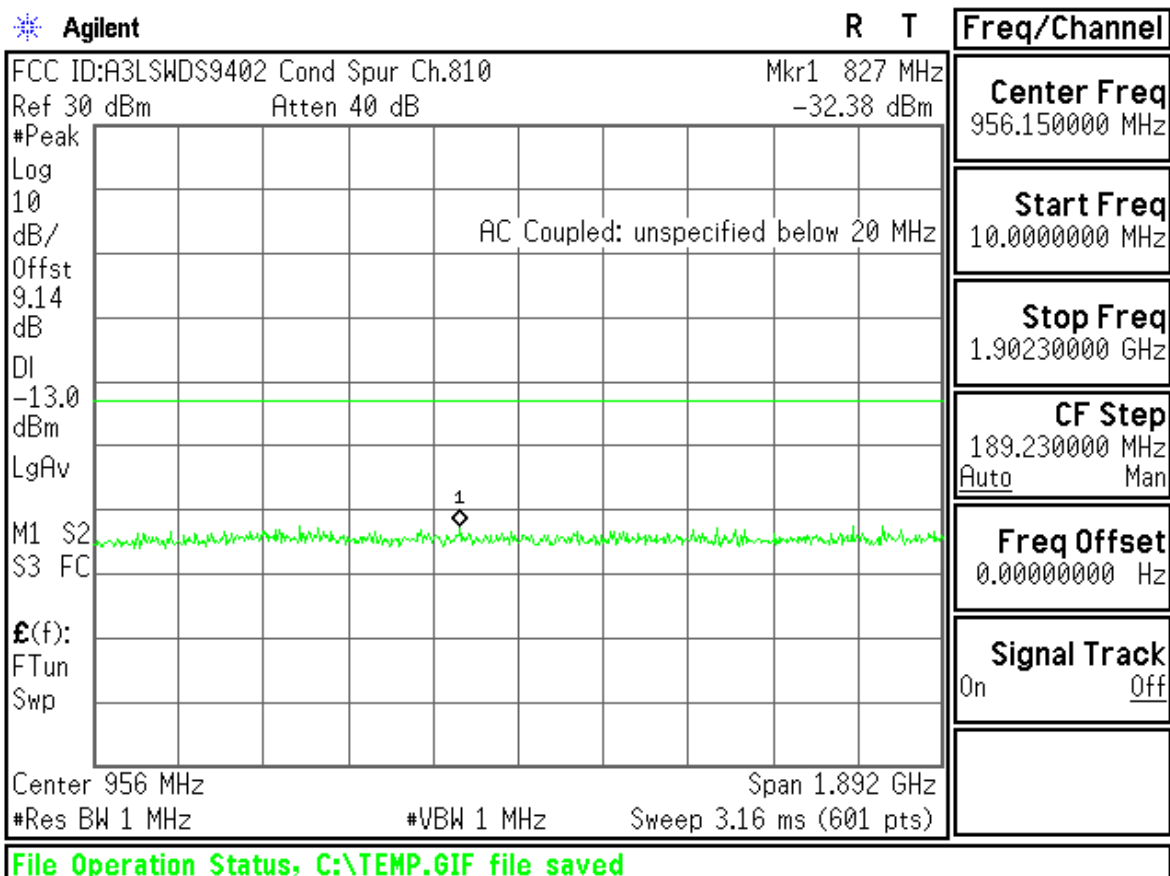
Slave



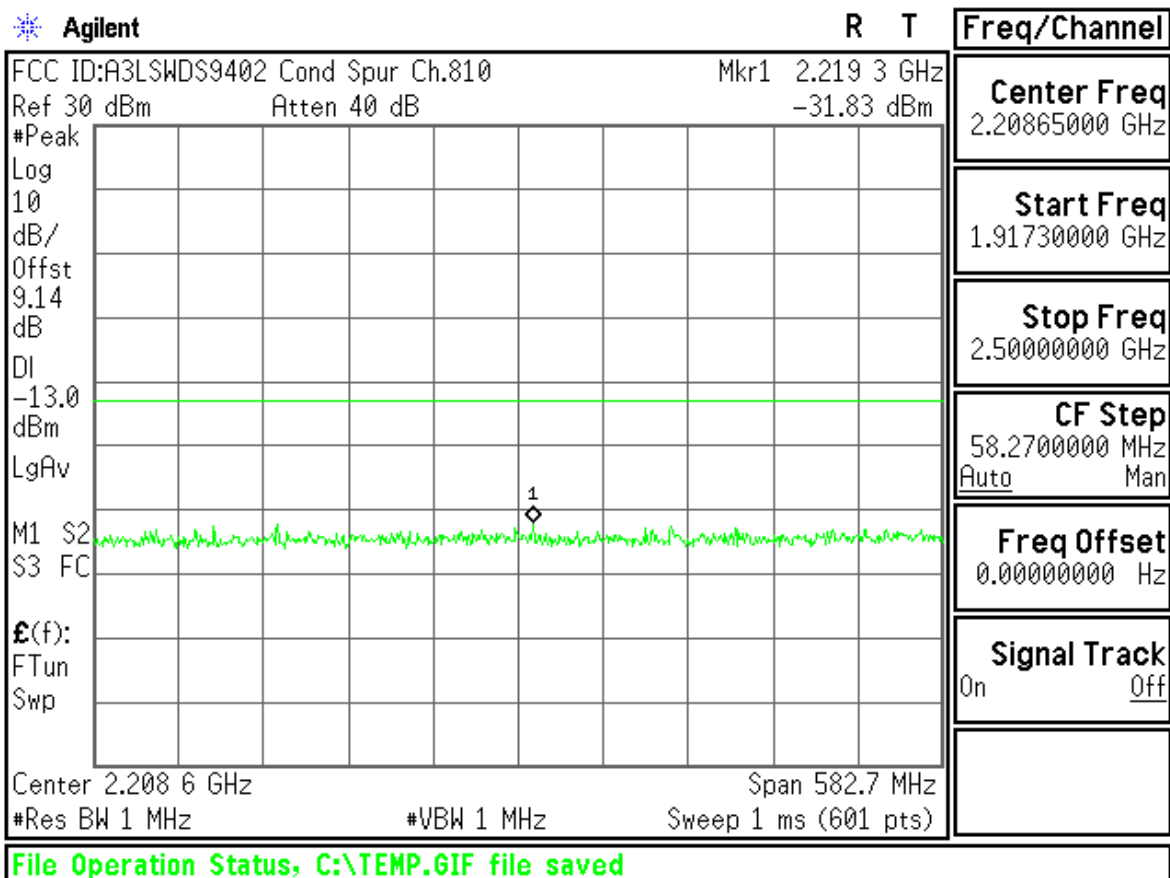
Slave



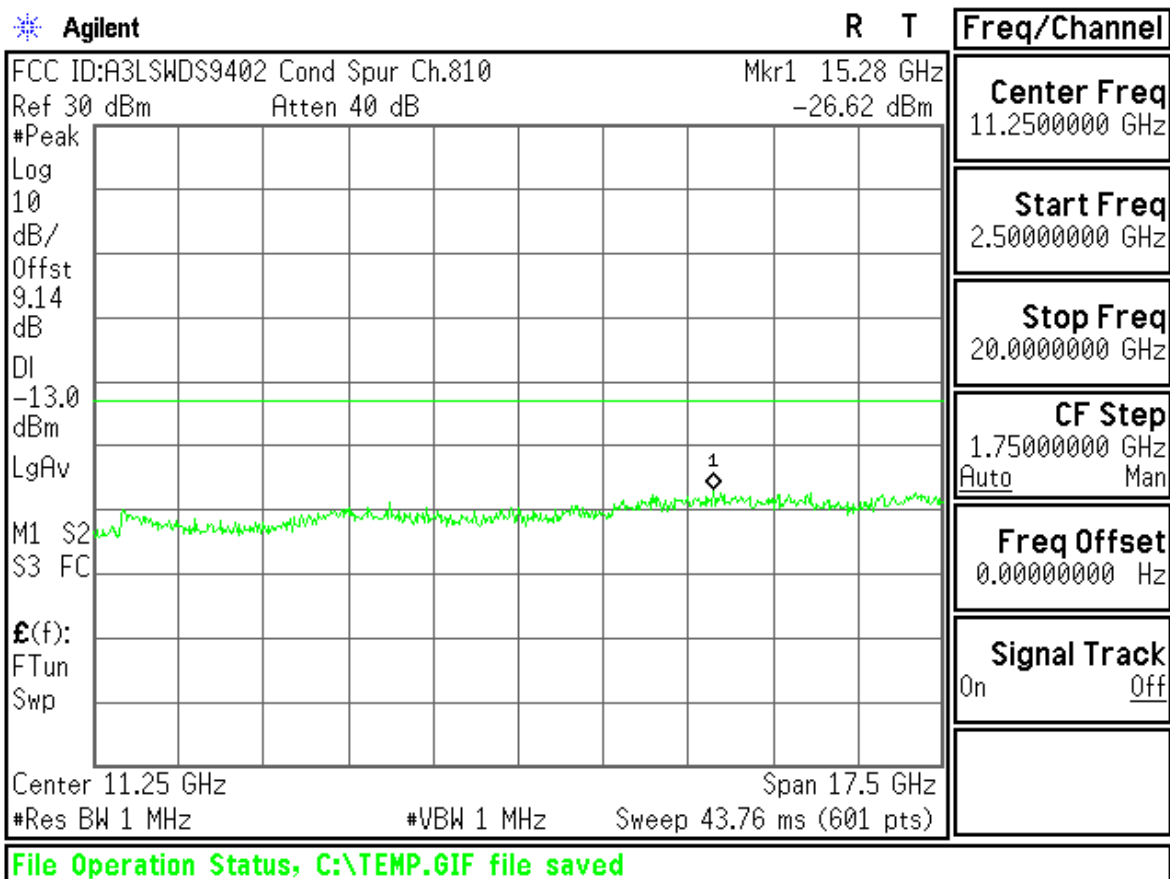
Slave



Slave



Slave



Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.512

Ref 30 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

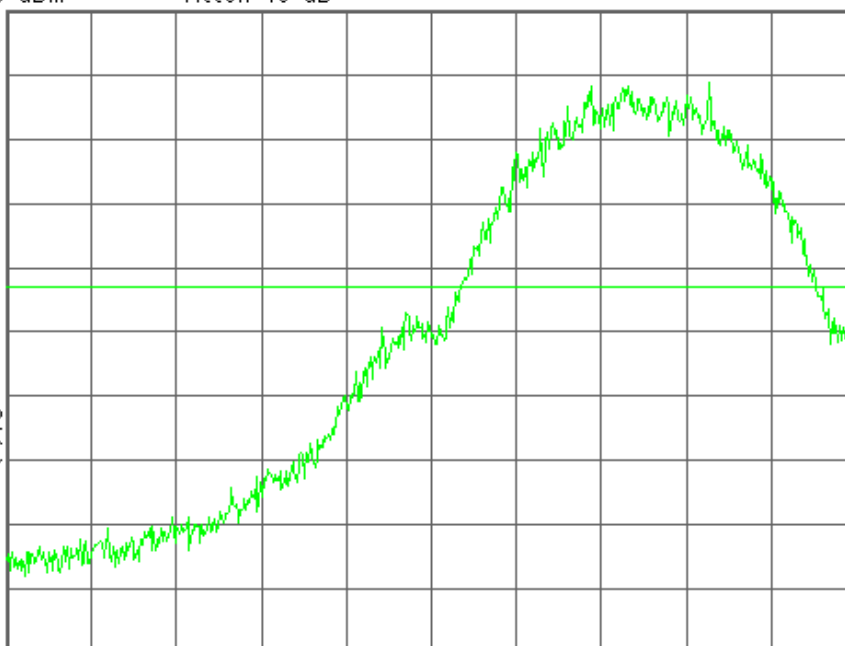
M1 S2

S3 FC

$E(f)$:

f>50k

Swp



Center 1.850 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.85000000 GHz

Start Freq
1.84959500 GHz

Stop Freq
1.85040500 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.512

Mkr1 1.849 985 3 GHz

Ref 30 dBm

Atten 40 dB

-16.31 dBm

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

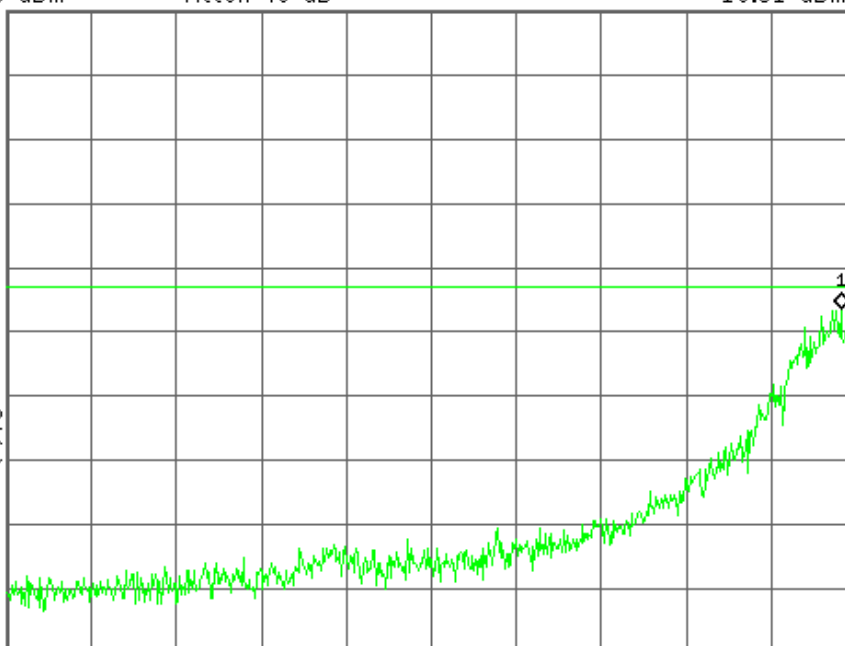
M1 S2

S3 FC

$E(f)$:

f>50k

Swp



Center 1.849 595 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.84959500 GHz

Start Freq
1.84919000 GHz

Stop Freq
1.85000000 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810

Ref 30 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

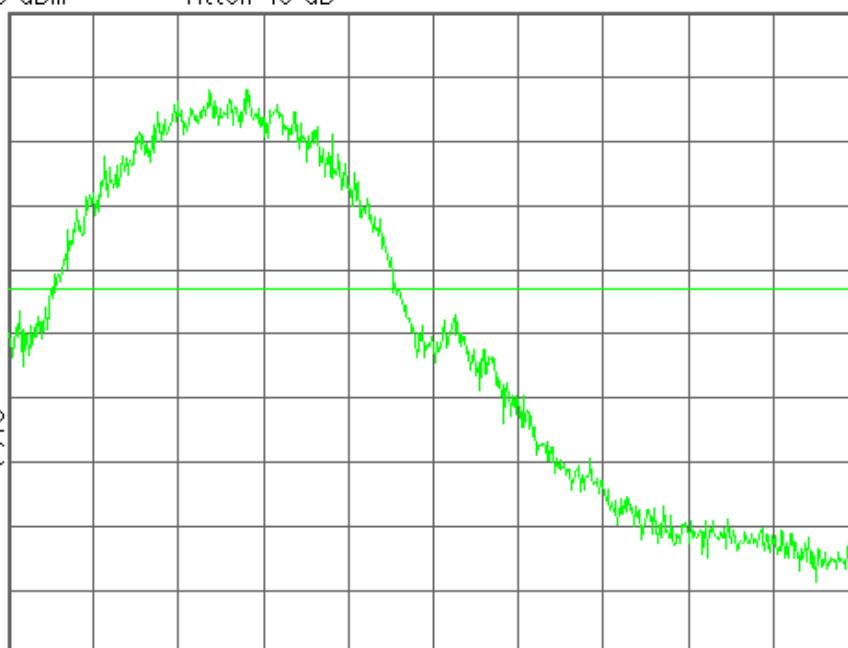
M1 S2

S3 FC

$\mathcal{E}(f)$:

f>50k

Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91000000 GHz

Start Freq
1.90959500 GHz

Stop Freq
1.91040500 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810

Mkr1 1.910 021 8 GHz

Ref 30 dBm

Atten 40 dB

-17.89 dBm

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

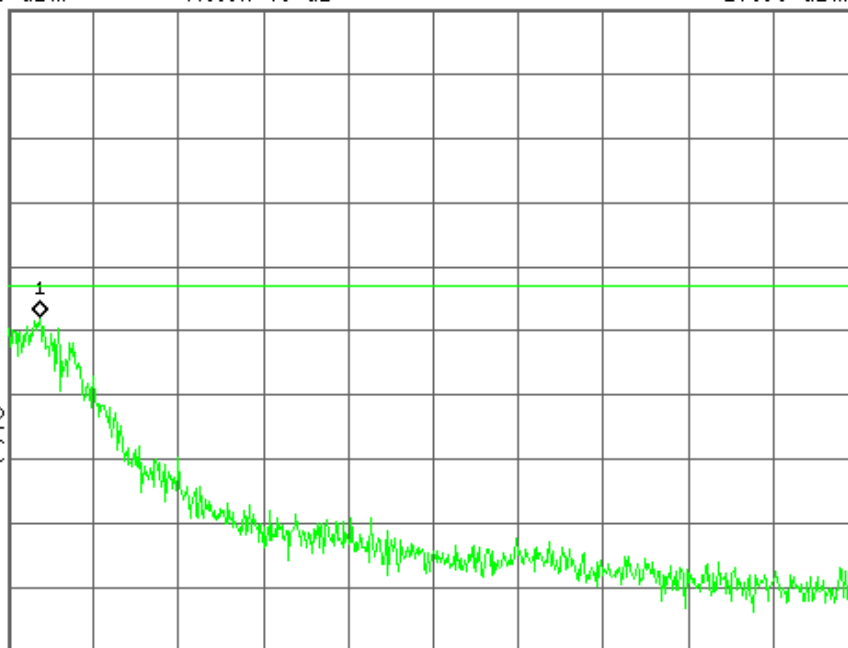
M1 S2

S3 FC

$\mathcal{E}(f)$:

f>50k

Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91040500 GHz

Start Freq
1.91000000 GHz

Stop Freq
1.91081000 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

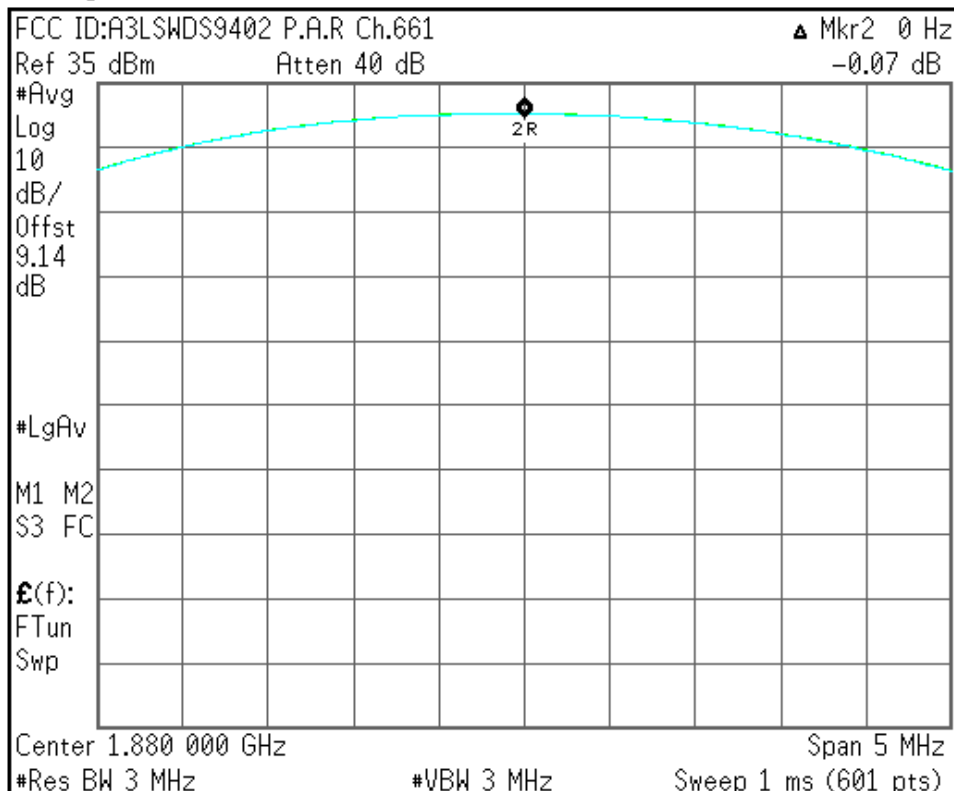
Signal Track
On Off

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

PAR Slave



R T



Freq/Channel

Center Freq
1.88000000 GHz

Start Freq
1.87750000 GHz

Stop Freq
1.88250000 GHz

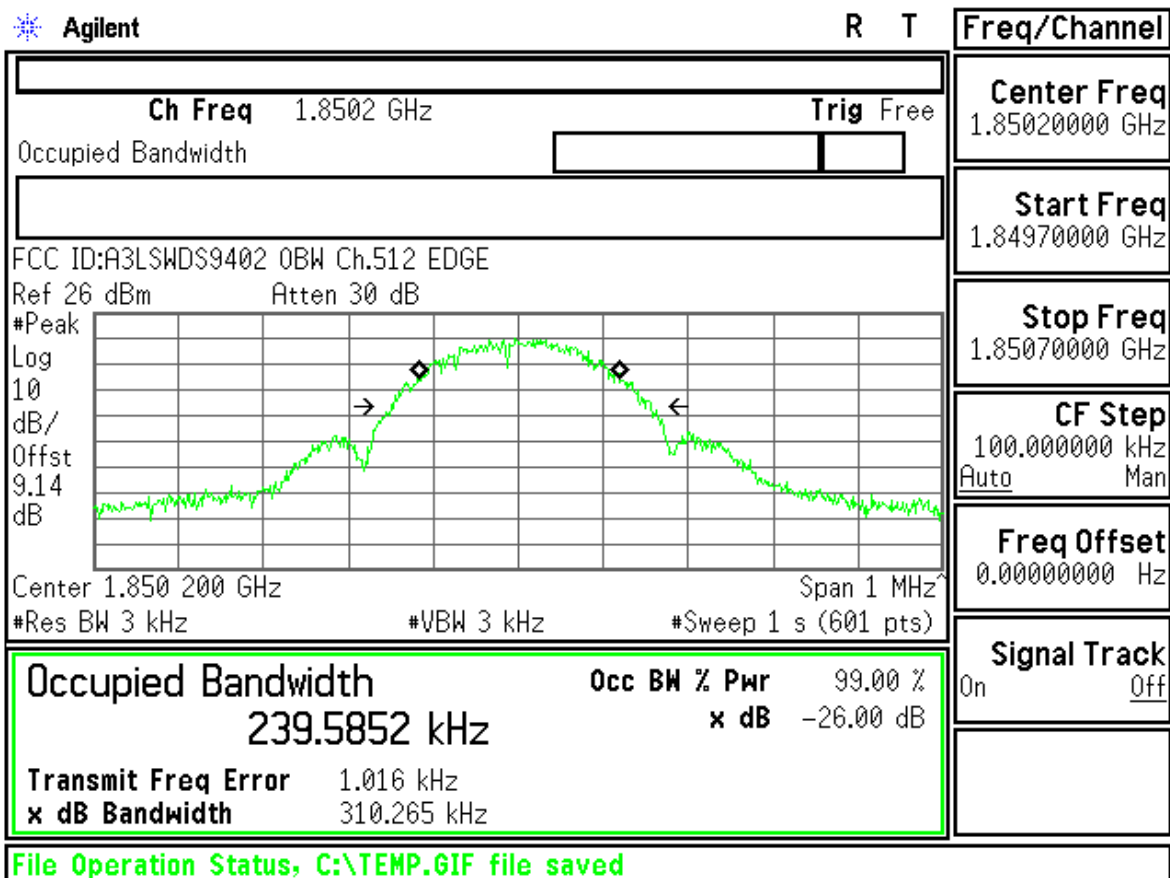
CF Step
500.000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

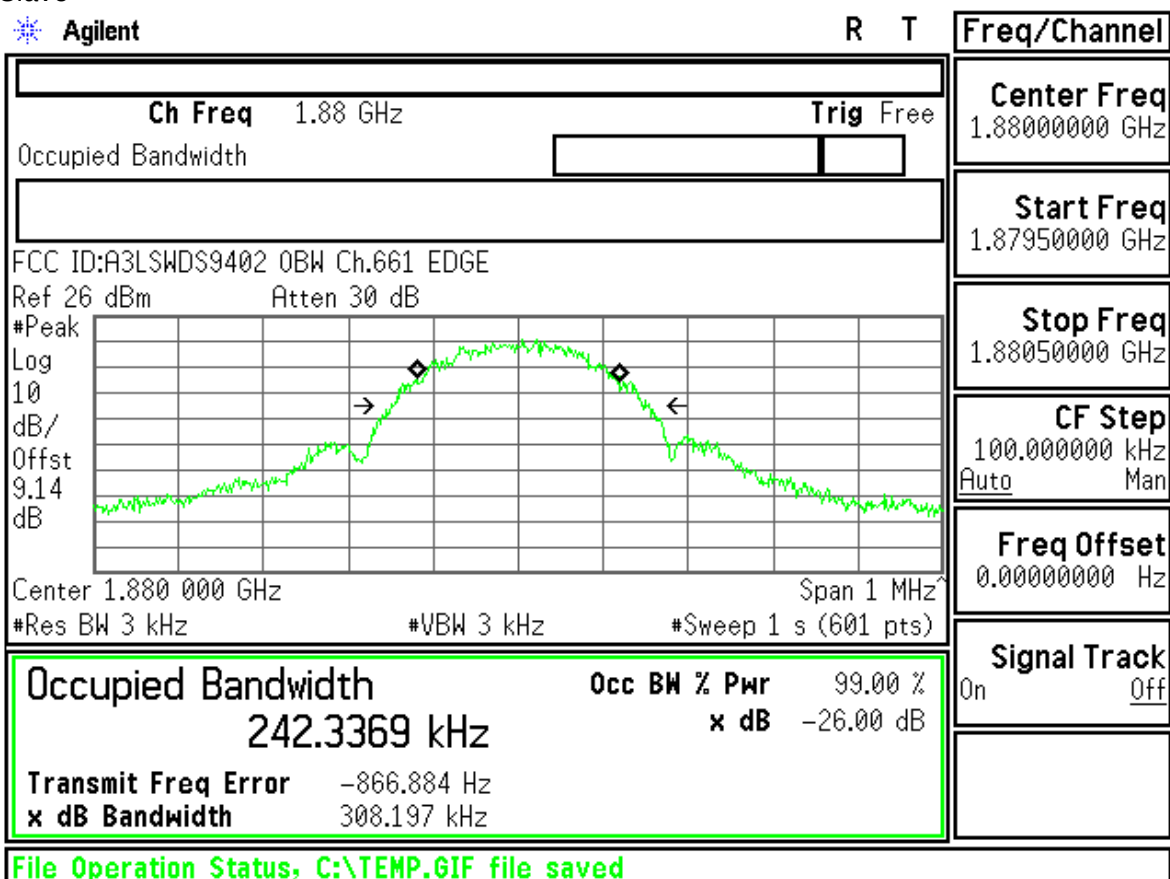
Signal Track
On Off

Copyright 2000-2006 Agilent Technologies

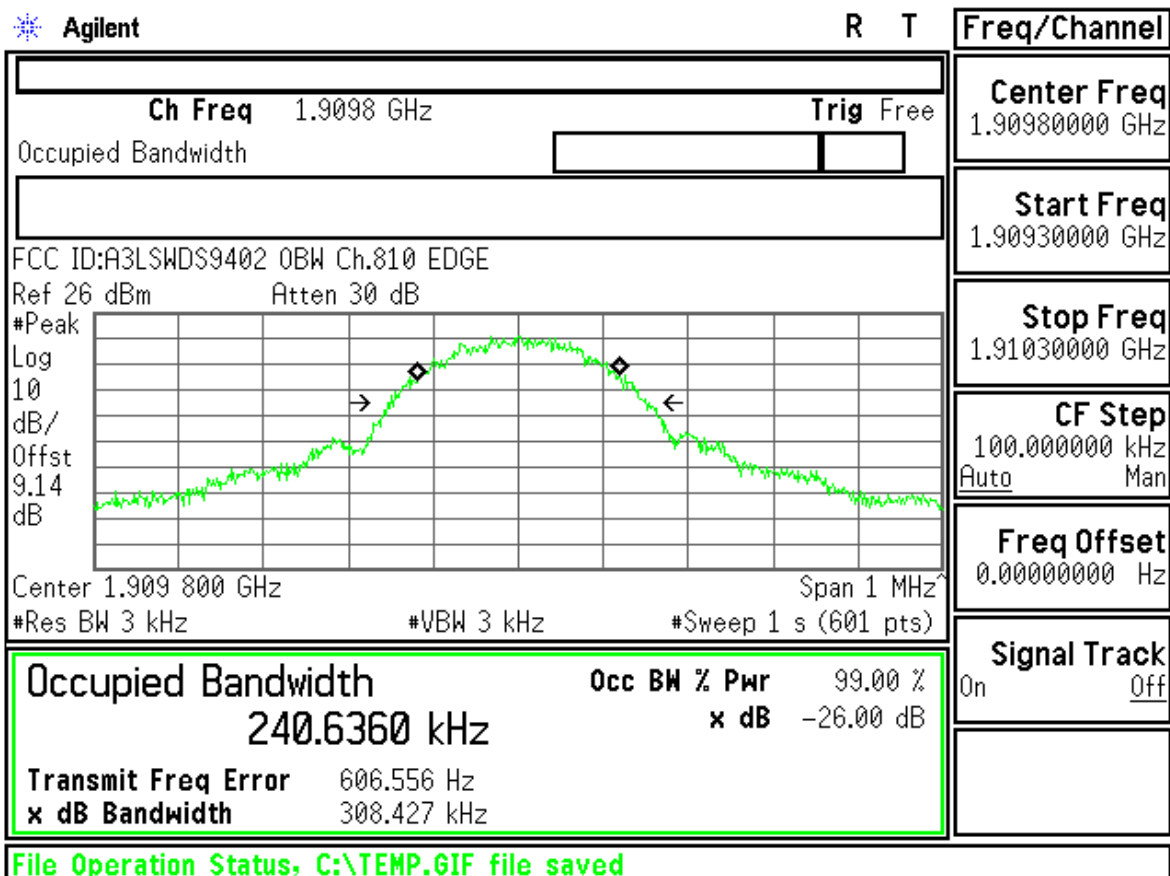
EDGE1900 Slave



Slave



Slave



ID : A3LSWDS9402 Transmit Power 512CH EDGE Slave

Measurement/Instrument Screen											
Control		EGPRS Transmit Power							PDCH Parms		
EGPRS Transmit Power Setup ▾		EP5K Burst Power			EP5K Est Carrier Power				Downlink Traffic Power		
		Minimum		Maximum		Minimum		Maximum		Traffic Band	
		24.31 dBm		25.81 dBm		25.04 dBm		25.28 dBm		PCS	
		Average		Std Dev		Average		Std Dev		Traffic Channel	
		25.10 dBm		0.26 dBm		25.17 dBm		0.05 dBm		512	
		200 /200						Single			
				Active Cell Transferring				Sys Type: EGPRS			
1 of 2						IntRef	Offset	R	T		
										1 of 2	

Measurement/Instrument Screen															
Control		EGPRS Transmit Power								PDCH Parms					
EGPRS Transmit Power Setup ▾	EPK Burst Power				EPK Est Carrier Power				Downlink Traffic Power						
	Minimum		Maximum		Minimum		Maximum		Traffic Band						
	24.33 dBm		25.93 dBm		25.03 dBm		25.17 dBm		PCS						
	Average		Std Dev		Average		Std Dev		Traffic Channel						
	25.04 dBm		0.25 dBm		25.08 dBm		0.03 dBm		661						
	200 /200								Single						
									HS TX Level						
									Modulation Coding Scheme						
								Return							
		Active Cell Transferring					Sys Type: EGPRS								
1 of 2						IntRef		Offset		R T				1 of 2	

Measurement/Instrument Screen															
Control		EGPRS Transmit Power								PDCH Parms					
EGPRS Transmit Power Setup ▾		EPK Burst Power				EPK Est Carrier Power				Downlink Traffic Power					
		Minimum		Maximum		Minimum		Maximum		Traffic Band					
		24.57 dBm		25.82 dBm		25.13 dBm		25.30 dBm		PCS					
		Average		Std Dev		Average		Std Dev		Traffic Channel					
		25.13 dBm		0.23 dBm		25.20 dBm		0.03 dBm		810					
		200 / 200						Single							
				Active Cell Transferring				Sys Type: EGPRS							
1 of 2						IntRef		Offset		R T				1 of 2	

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.512 EDGE

Ref 26 dBm

Atten 30 dB

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

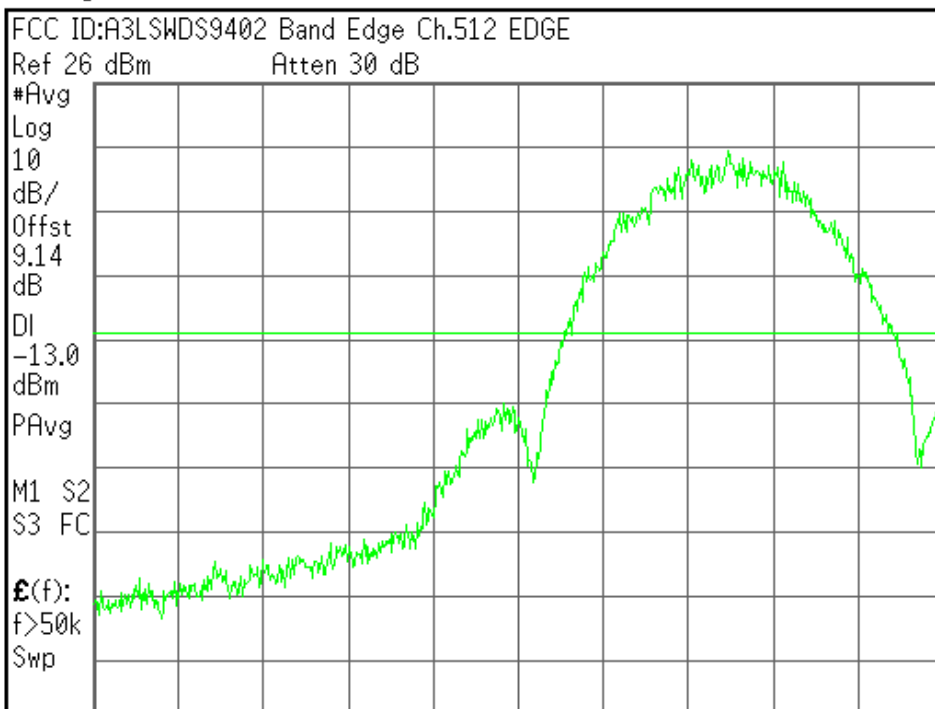
M1 S2

S3 FC

$E(f)$:

f>50k

Swp



Center 1.850 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.85000000 GHz

Start Freq
1.84959500 GHz

Stop Freq
1.85040500 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.512 EDGE

Mkr1 1.849 981 3 GHz

Ref 26 dBm

Atten 30 dB

-23.90 dBm

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

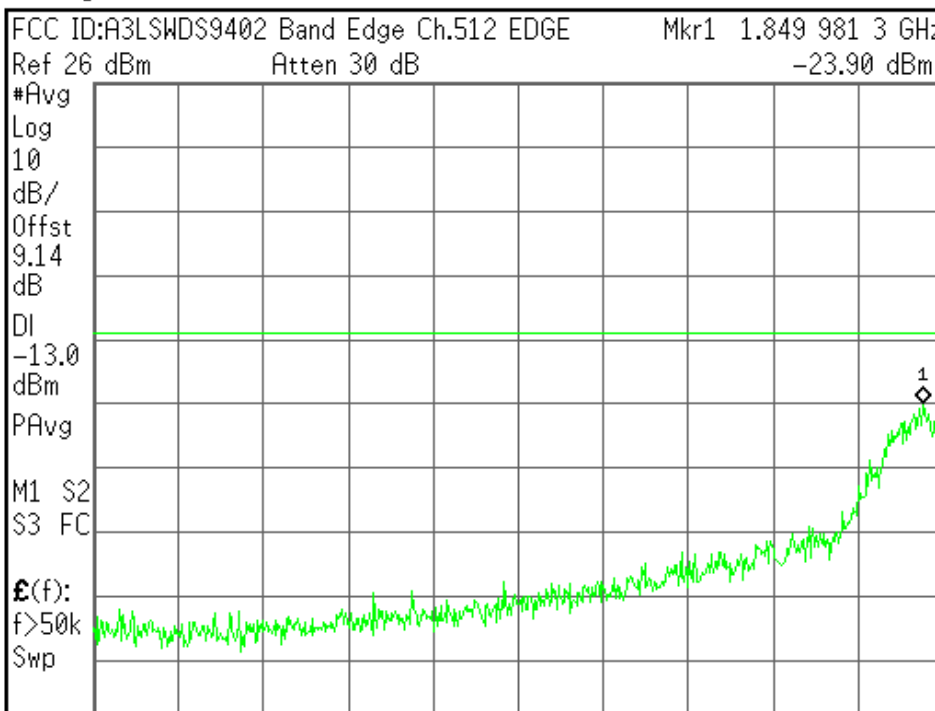
M1 S2

S3 FC

$E(f)$:

f>50k

Swp



Center 1.849 595 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.84959500 GHz

Start Freq
1.84919000 GHz

Stop Freq
1.85000000 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810 EDGE

Ref 26 dBm

Atten 30 dB

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

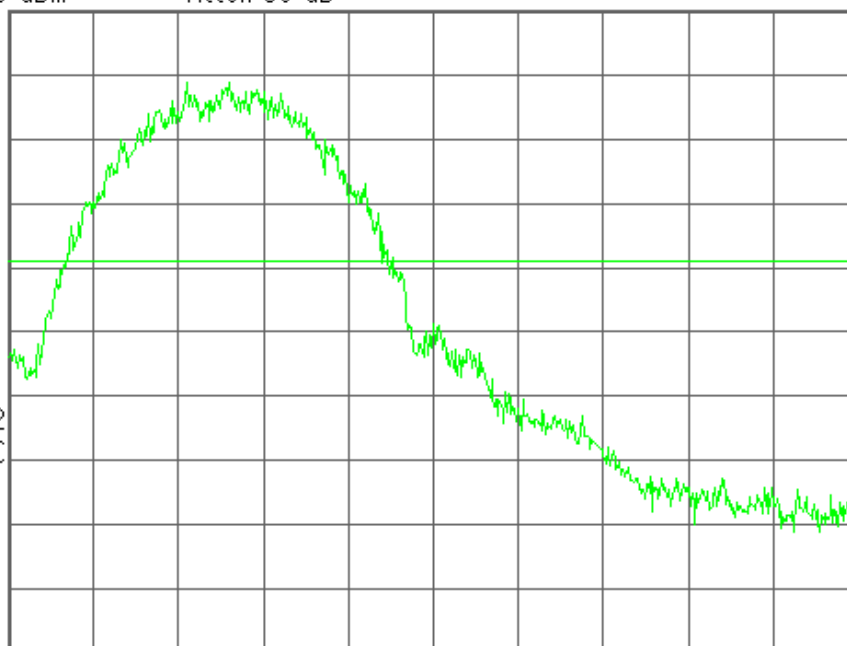
M1 S2

S3 FC

$\mathcal{E}(f)$:

f>50k

Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91000000 GHz

Start Freq
1.90959500 GHz

Stop Freq
1.91040500 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Slave

 Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810 EDGE

Mkr1 1.909 999 5 GHz

Ref 26 dBm

Atten 30 dB

-22.62 dBm

#Avg

Log

10

dB/

Offst

9.14

dB

DI

-13.0

dBm

PAvg

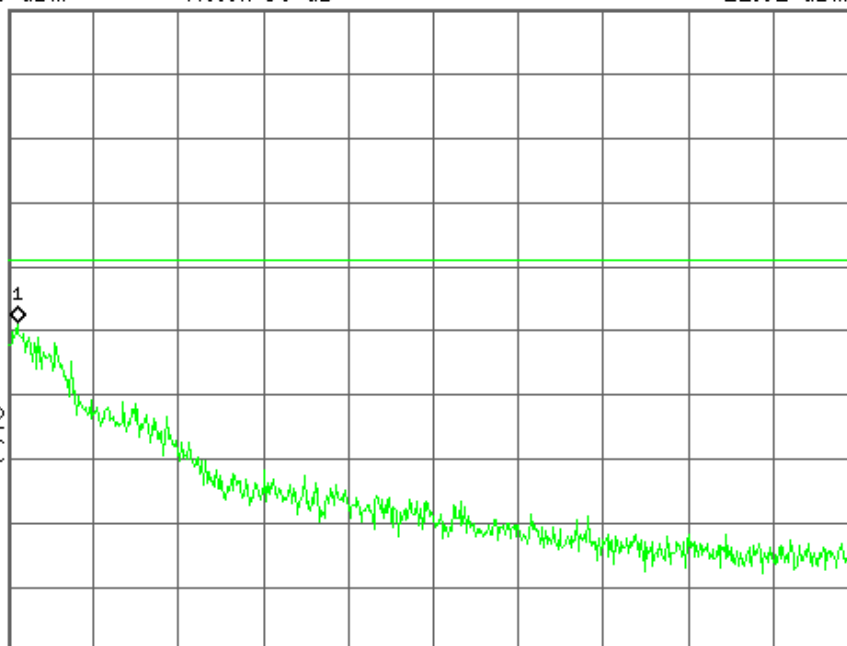
M1 S2

S3 FC

$\mathcal{E}(f)$:

f>50k

Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91040500 GHz

Start Freq
1.91000000 GHz

Stop Freq
1.91081000 GHz

CF Step
81.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

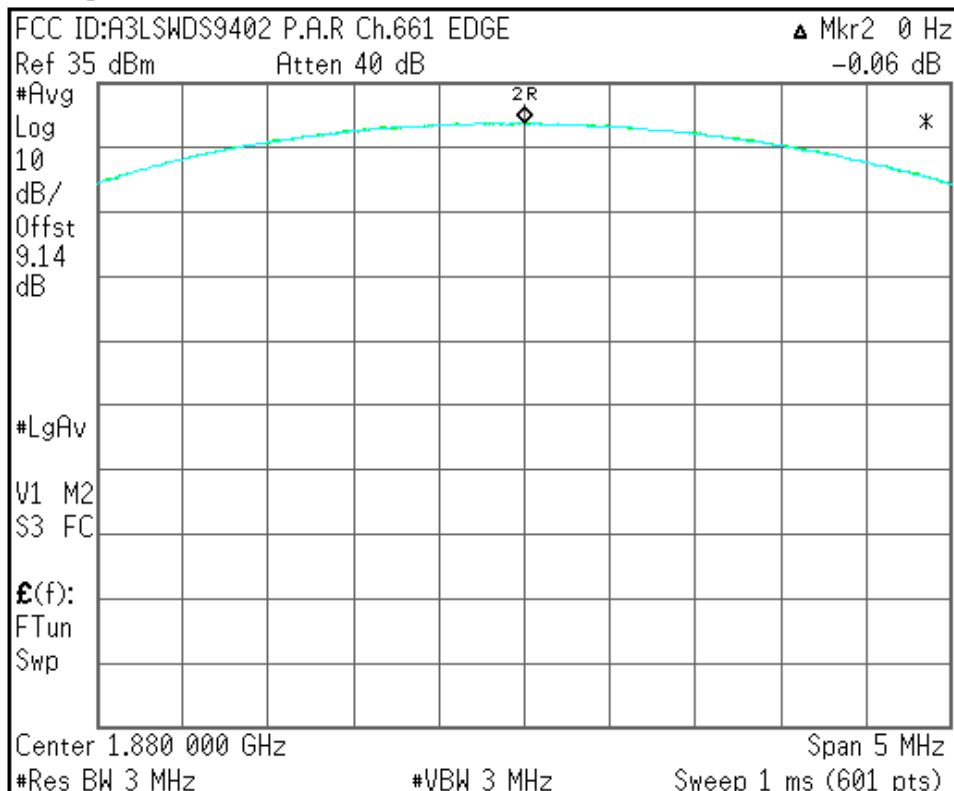
File Operation Status, C:\TEMP.GIF file saved

PAR EDGE Slave

 Agilent

R T

Freq/Channel



Center Freq
1.88000000 GHz

Start Freq
1.87750000 GHz

Stop Freq
1.88250000 GHz

CF Step
500.000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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- Master

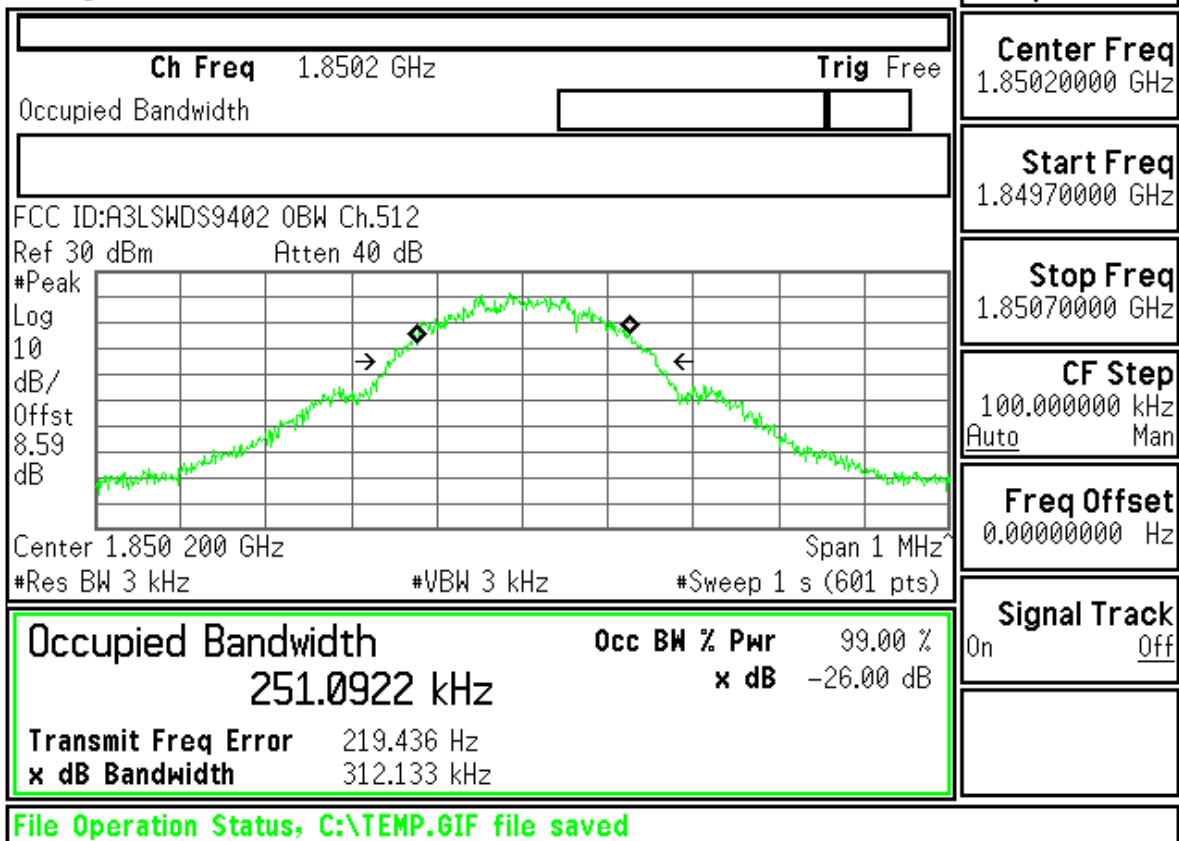
GSM1900 Master



Agilent

R T

Freq/Channel



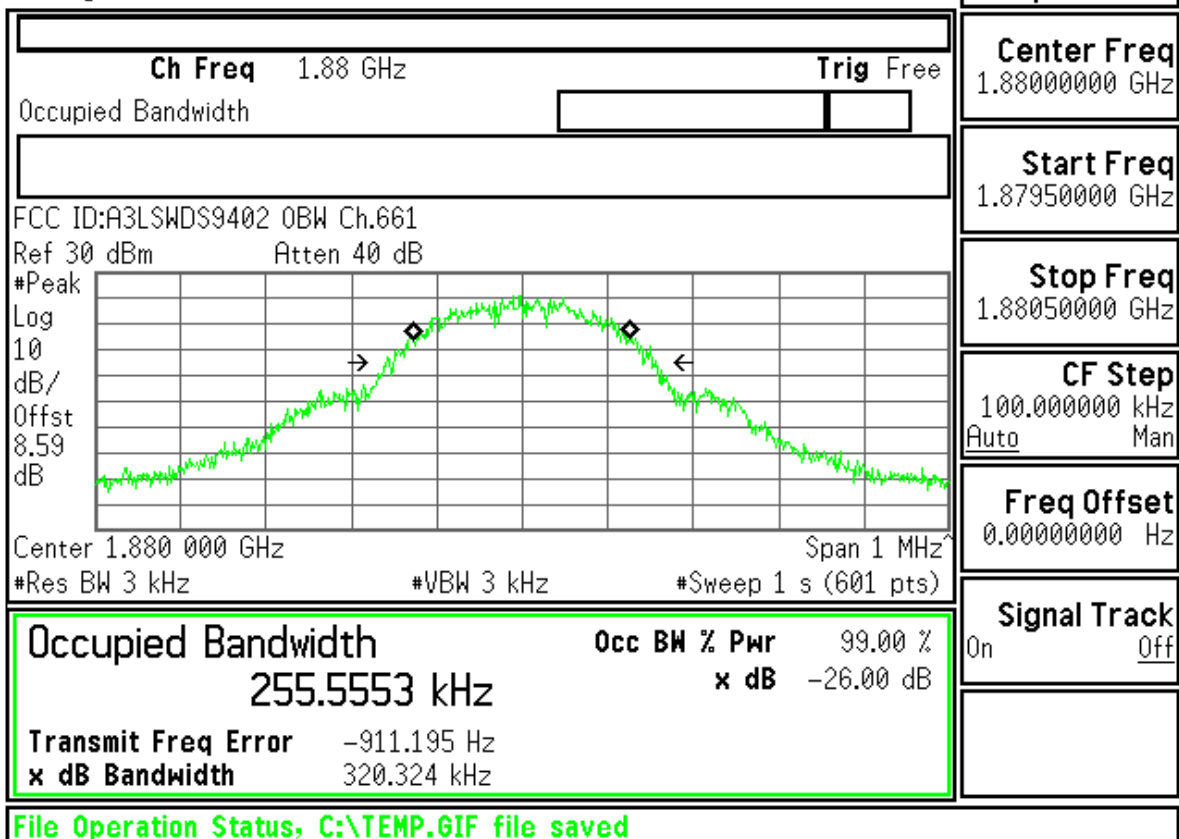
Master



Agilent

R T

Freq/Channel



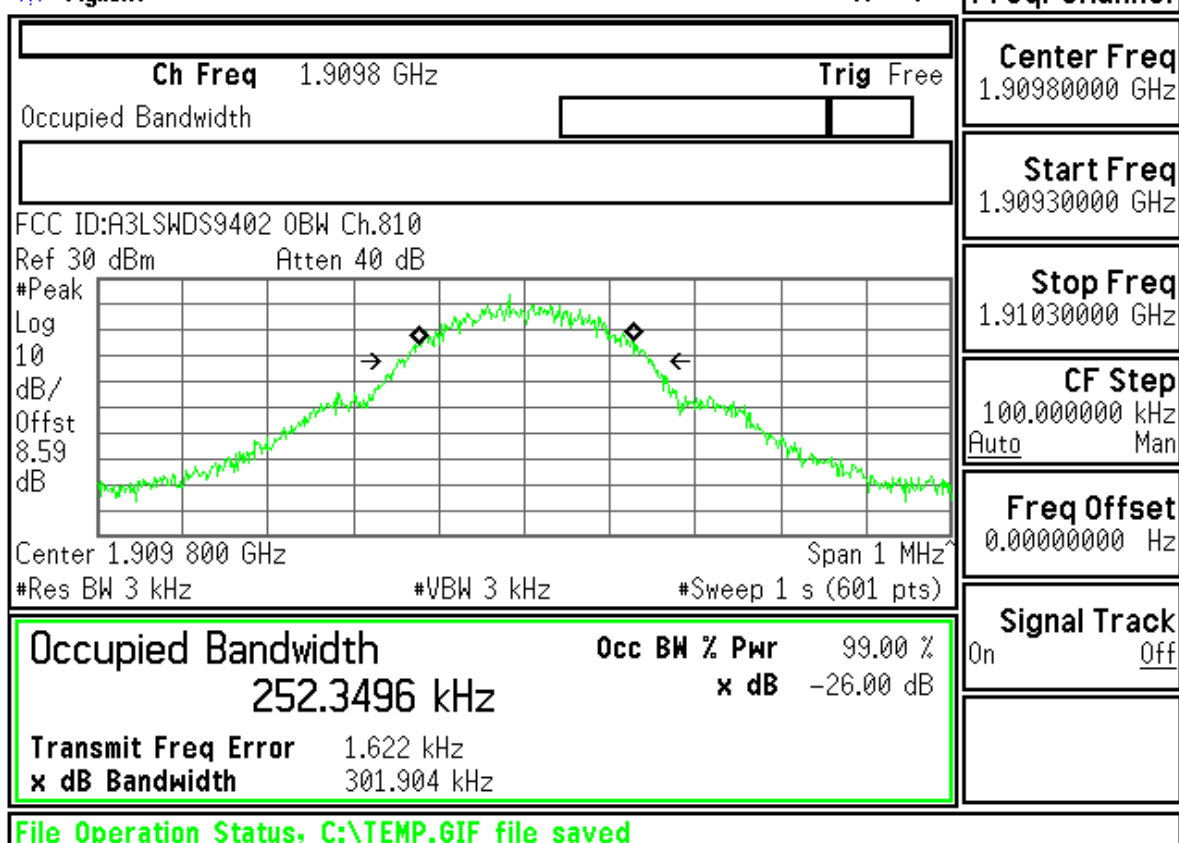
Master



Agilent

R T

Freq/Channel

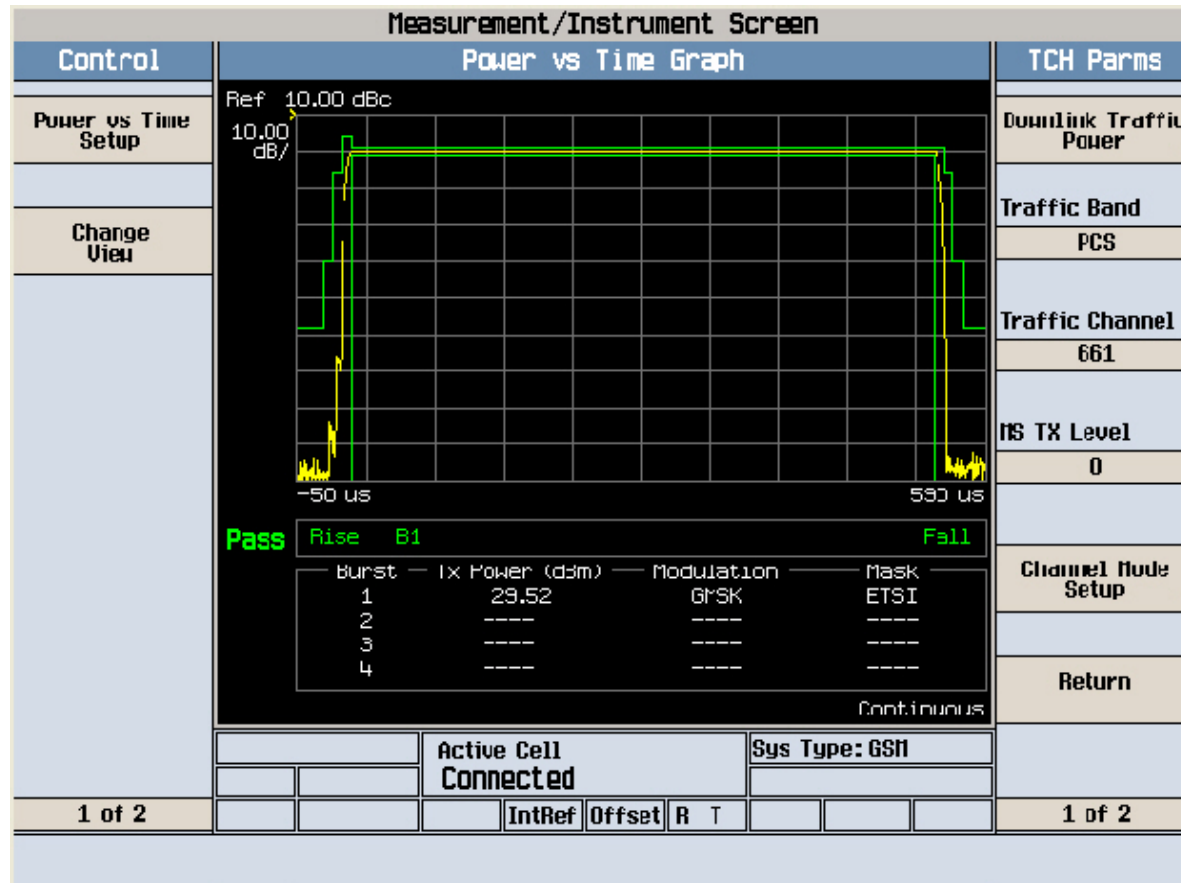
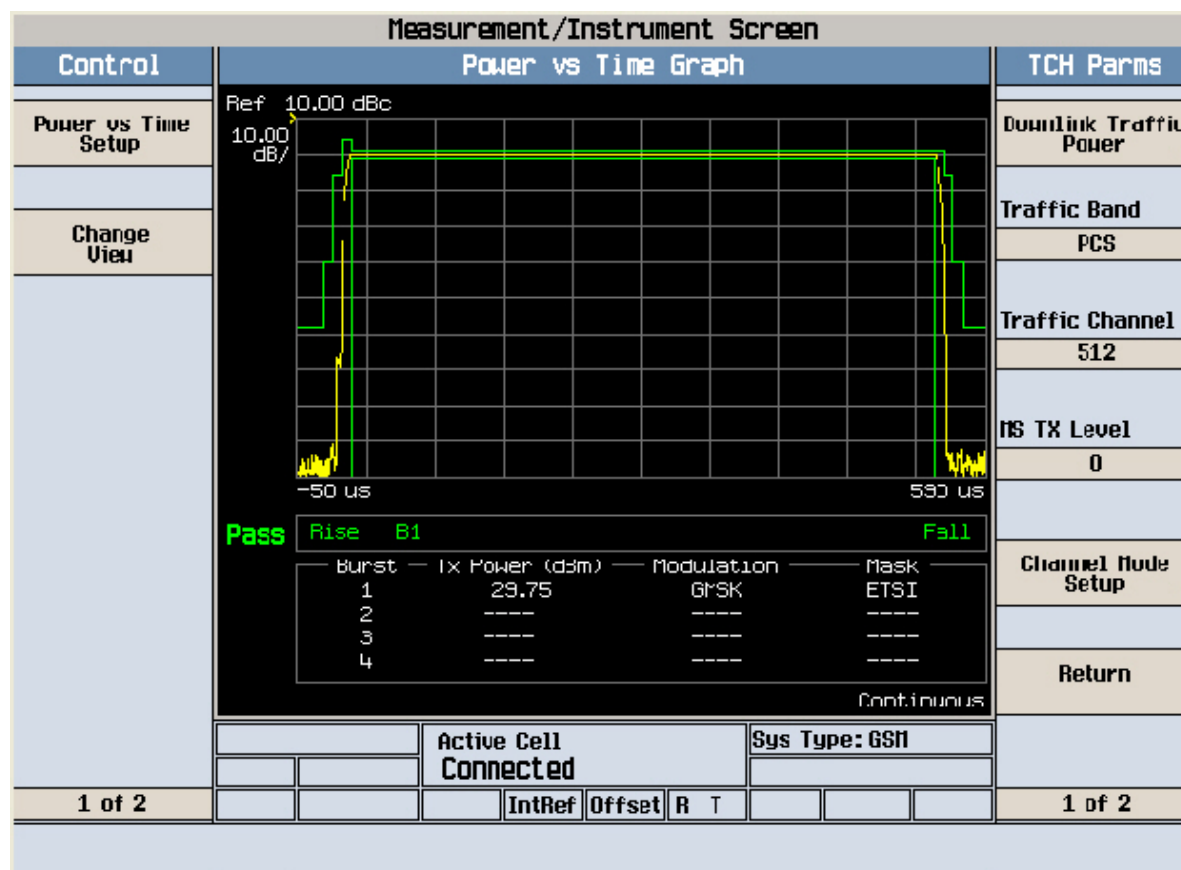


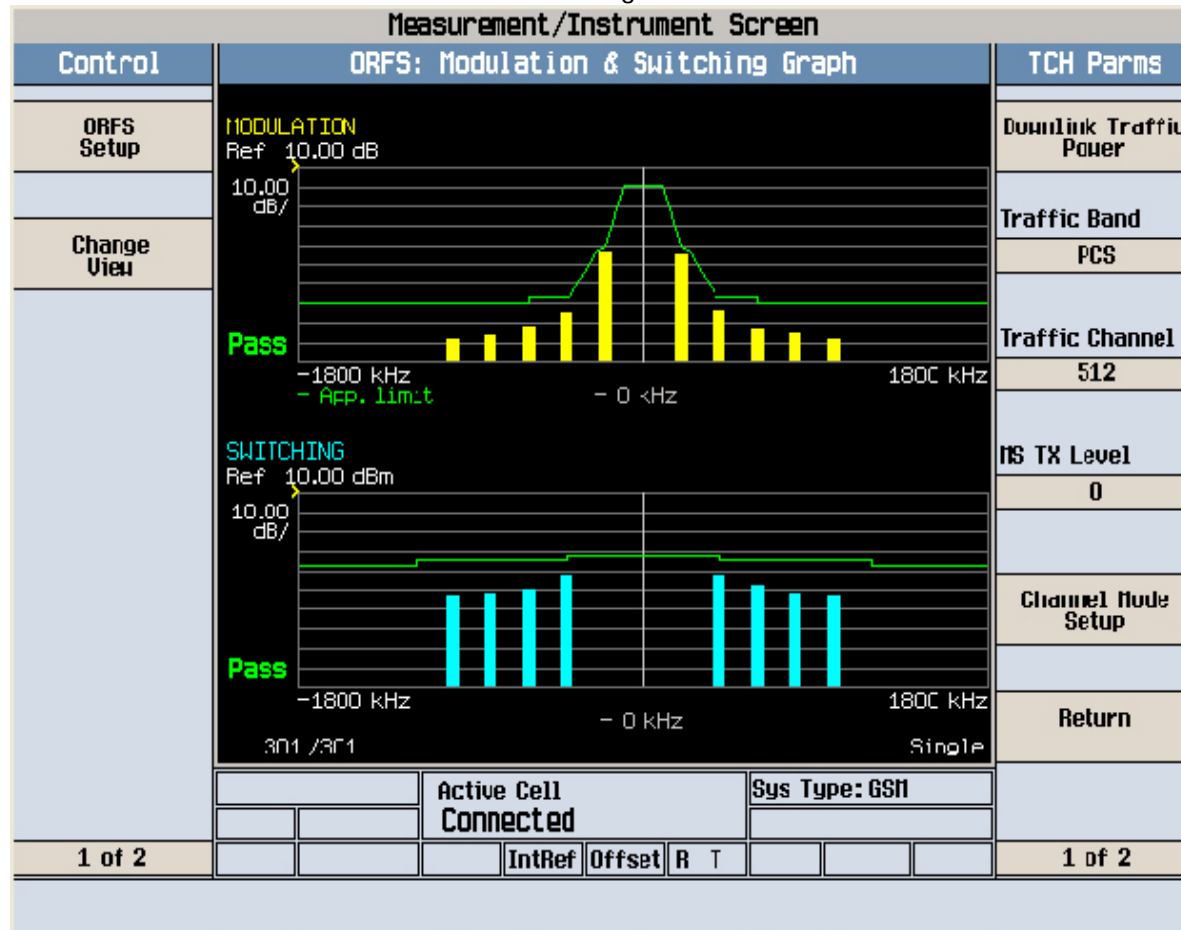
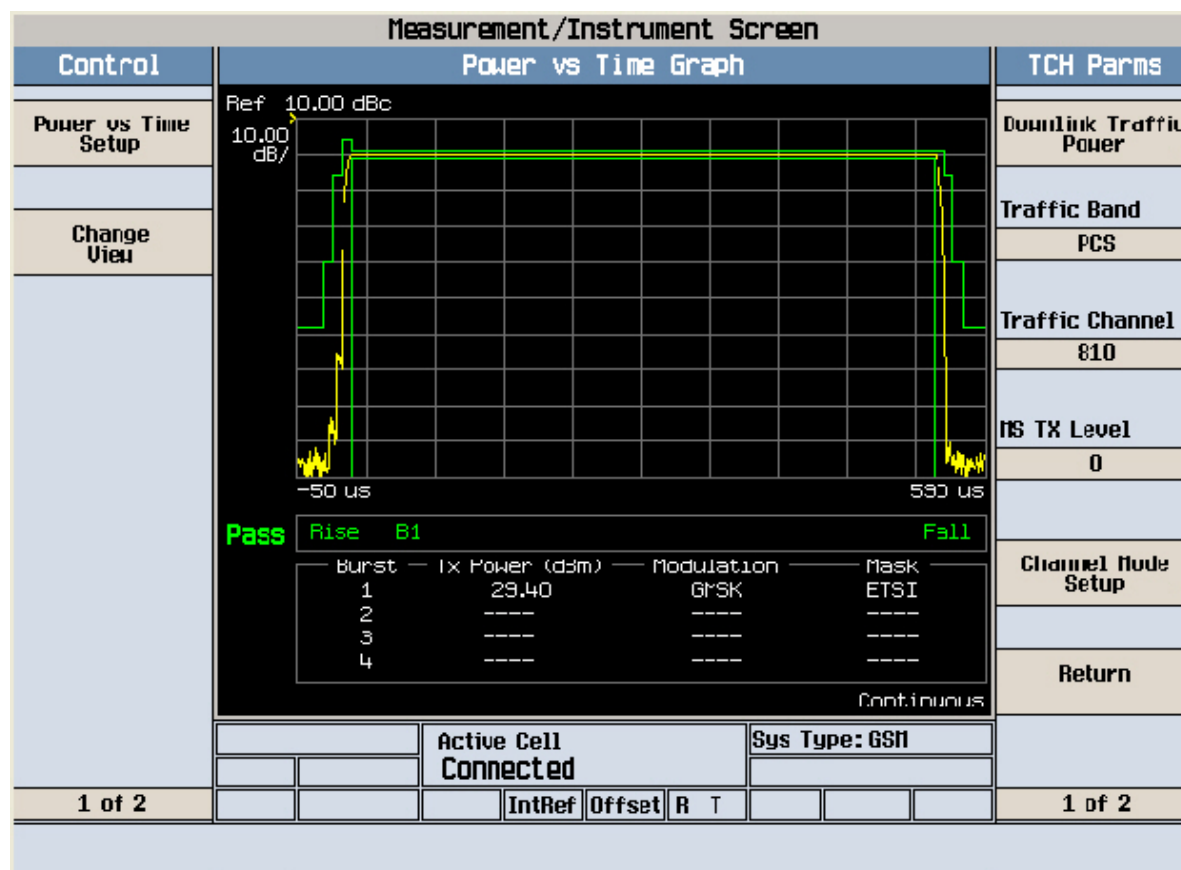
FCC ID : A3LSWDS9402 Transmit Power 512CH Master

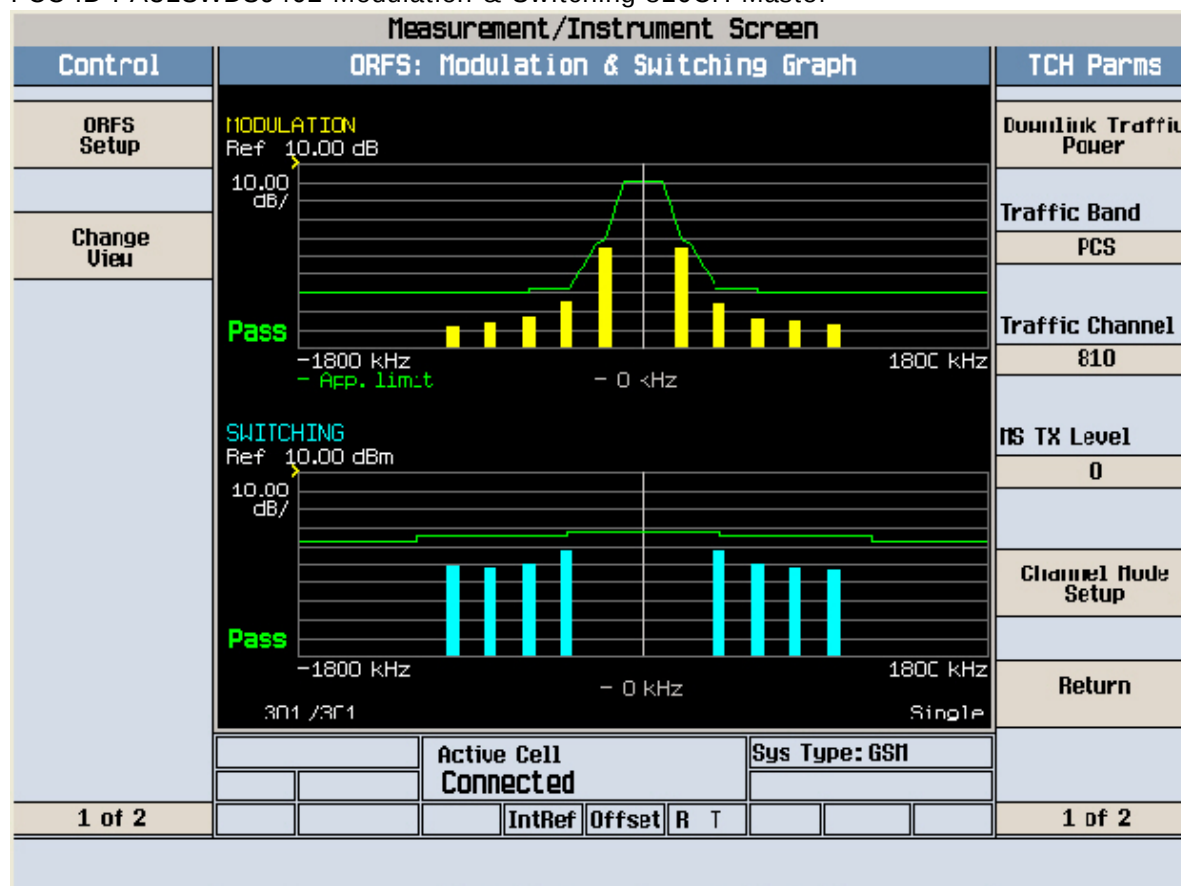
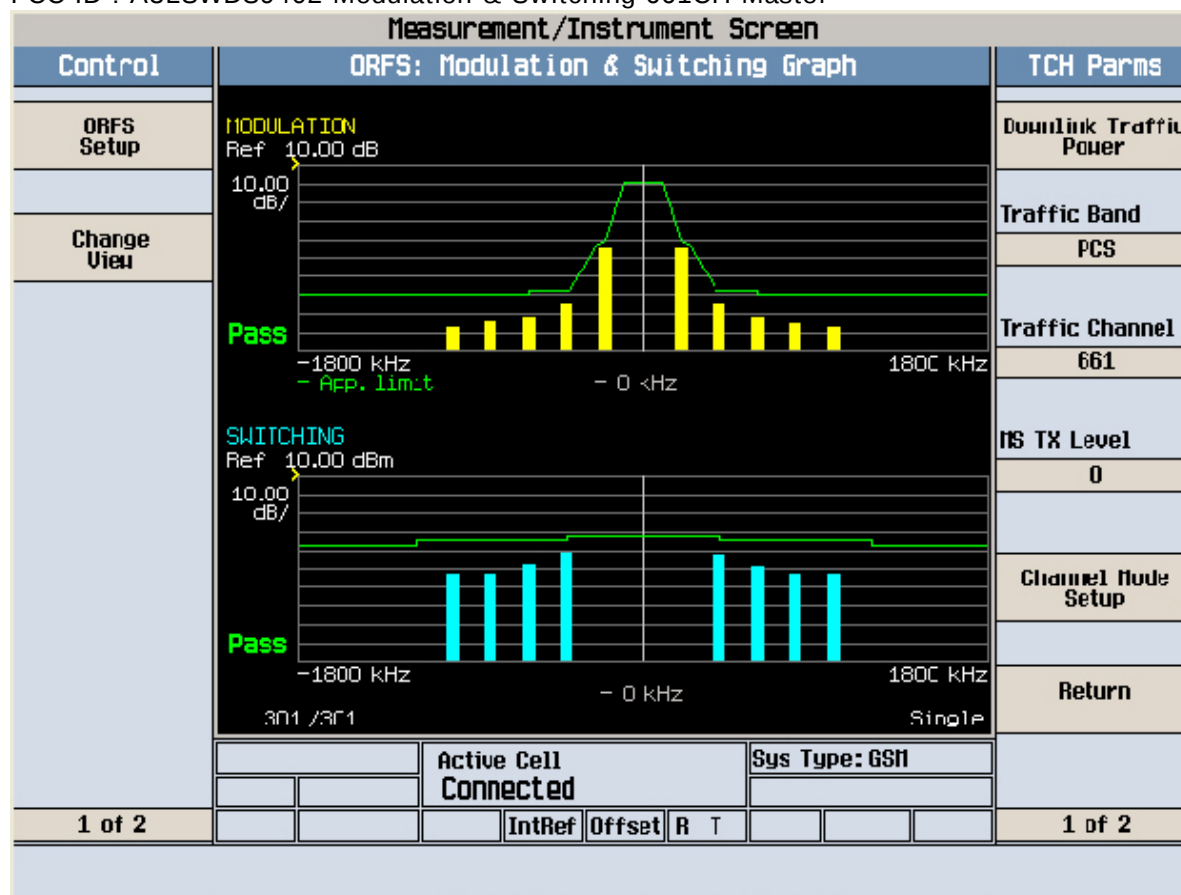
Measurement/Instrument Screen																																		
Control		Transmit Power									TCH Params																							
Transmit Power Setup ▾		<table><tr><td></td><td>Burst 1</td><td>Burst 2</td><td>Burst 3</td><td>Burst 4</td></tr><tr><td>Burst Power</td><td>29.77</td><td>----</td><td>----</td><td>----</td></tr><tr><td>Estimated Carrier Power</td><td>29.77</td><td>----</td><td>----</td><td>----</td></tr></table>										Burst 1	Burst 2	Burst 3	Burst 4	Burst Power	29.77	----	----	----	Estimated Carrier Power	29.77	----	----	----	Downlink Traffic Power								
												Burst 1	Burst 2	Burst 3	Burst 4																			
											Burst Power	29.77	----	----	----																			
											Estimated Carrier Power	29.77	----	----	----																			
		Traffic Band																																
PCS																																		
Snap Window Positions		<table><tr><th></th><th>Peak Phase °</th><th>RMS Phase °</th><th>Frequency Hz</th></tr><tr><td>Minimum</td><td>4.66</td><td>1.77</td><td>-41.44</td></tr><tr><td>Maximum</td><td>7.43</td><td>2.31</td><td>-0.05</td></tr><tr><td>Average</td><td>5.77</td><td>2.09</td><td>-23.50</td></tr><tr><td>Pass/Fail</td><td>Pass</td><td>Pass</td><td>Pass</td></tr></table>										Peak Phase °	RMS Phase °	Frequency Hz	Minimum	4.66	1.77	-41.44	Maximum	7.43	2.31	-0.05	Average	5.77	2.09	-23.50	Pass/Fail	Pass	Pass	Pass	Traffic Channel			
												Peak Phase °	RMS Phase °	Frequency Hz																				
											Minimum	4.66	1.77	-41.44																				
											Maximum	7.43	2.31	-0.05																				
		Average	5.77	2.09	-23.50																													
Pass/Fail	Pass	Pass	Pass																															
512																																		
MS TX Level																																		
0																																		
1 of 2		<table><tr><td colspan="2"></td><td colspan="3">Active Cell Connected</td><td colspan="2">Sys Type: GSM</td></tr><tr><td colspan="2"></td><td colspan="3"></td><td colspan="2"></td></tr><tr><td></td><td></td><td>IntRef</td><td>Offset</td><td>R T</td><td></td><td></td><td></td></tr></table>											Active Cell Connected			Sys Type: GSM											IntRef	Offset	R T				Channel Mode Setup	
													Active Cell Connected			Sys Type: GSM																		
													IntRef	Offset	R T																			
		Return																																
1 of 2																																		

Measurement/Instrument Screen																														
Control		Transmit Power						TCH Parms																						
Transmit Power Setup ▾		<table border="1"> <thead> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> </tr> </thead> <tbody> <tr> <td>Burst Power</td> <td>29.53</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>Estimated Carrier Power</td> <td>29.53</td> <td>----</td> <td>----</td> <td>----</td> </tr> </tbody> </table>							Burst 1	Burst 2	Burst 3	Burst 4	Burst Power	29.53	----	----	----	Estimated Carrier Power	29.53	----	----	----	Downlink Traffic Power ▾							
									Burst 1	Burst 2	Burst 3	Burst 4																		
								Burst Power	29.53	----	----	----																		
		Estimated Carrier Power	29.53	----	----	----																								
		Traffic Band																												
PCS																														
Swap Window Positions		Single <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>4.72</td> <td>1.80</td> <td>-23.95</td> </tr> <tr> <td>Maximum</td> <td>6.39</td> <td>2.28</td> <td>1.95</td> </tr> <tr> <td>Average</td> <td>5.60</td> <td>2.03</td> <td>-10.03</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> 50 / 50 Single							Peak Phase °	RMS Phase °	Frequency Hz	Minimum	4.72	1.80	-23.95	Maximum	6.39	2.28	1.95	Average	5.60	2.03	-10.03	Pass/Fail	Pass	Pass	Pass	Traffic Channel		
									Peak Phase °	RMS Phase °	Frequency Hz																			
								Minimum	4.72	1.80	-23.95																			
		Maximum	6.39	2.28	1.95																									
		Average	5.60	2.03	-10.03																									
Pass/Fail	Pass	Pass	Pass																											
661																														
MS TX Level																														
0																														
1 of 2		Active Cell Connected Sys Type: GSM						Channel Mode Setup ▾																						
								Return																						
								1 of 2																						

Measurement/Instrument Screen																														
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									Burst 1	Burst 2	Burst 3	Burst 4																		
								Burst Power	29.42	----	----	----																		
		Estimated Carrier Power	29.42	----	----	----																								
		Traffic Band																												
PCS																														
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									Peak Phase °	RMS Phase °	Frequency Hz																			
								Minimum	4.56	1.59	-22.86																			
		Maximum	6.68	2.21	5.01																									
		Average	5.64	1.98	-6.20																									
Pass/Fail	Pass	Pass	Pass																											
810																														
MS TX Level																														
0																														
1 of 2		Active Cell Connected Sys Type: GSM						Channel Mode Setup ▾																						
								Return																						
								1 of 2																						







Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.512

Ref 30 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

8.59

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 GHzStart Freq
10.0000000 MHzStop Freq
2.50000000 GHzCF Step
249.000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.512

Mkr1 505 MHz

Ref 30 dBm

Atten 40 dB

-32.77 dBm

#Peak

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

LgAv

M1 S2

S3 FC

E(f):

FTun

Swp

AC Coupled: unspecified below 20 MHz

Center 926 MHz

Span 1.833 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 3.08 ms (601 pts)

Center Freq
926.350000 MHzStart Freq
10.0000000 MHzStop Freq
1.84270000 GHzCF Step
183.270000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.661

Ref 30 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

8.59

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 GHzStart Freq
10.0000000 MHzStop Freq
2.50000000 GHzCF Step
249.000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.661

Ref 30 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

LgAv

M1 S2

S3 FC

E(f):

FTun

Swp

Mkr1 150 MHz

-33.09 dBm

AC Coupled: unspecified below 20 MHz

Center 941 MHz

Span 1.863 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 3.12 ms (601 pts)

Center Freq
941.250000 MHzStart Freq
10.0000000 MHzStop Freq
1.87250000 GHzCF Step
186.250000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

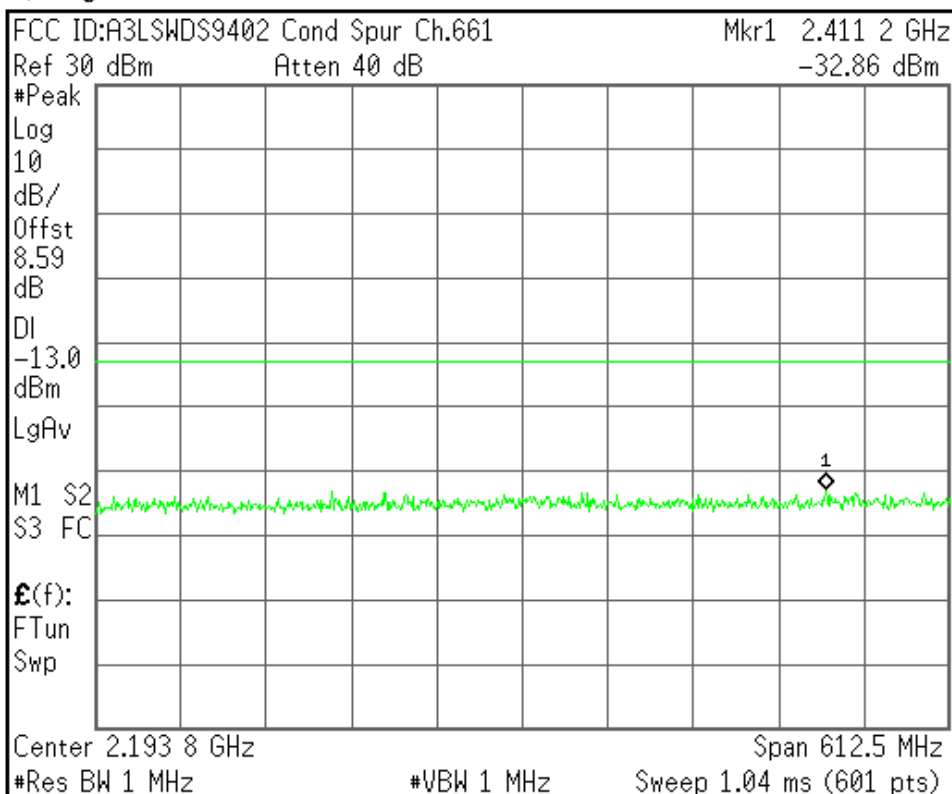
Master



Agilent

R T

Freq/Channel

Center Freq
2.19375000 GHzStart Freq
1.88750000 GHzStop Freq
2.50000000 GHzCF Step
61.2500000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

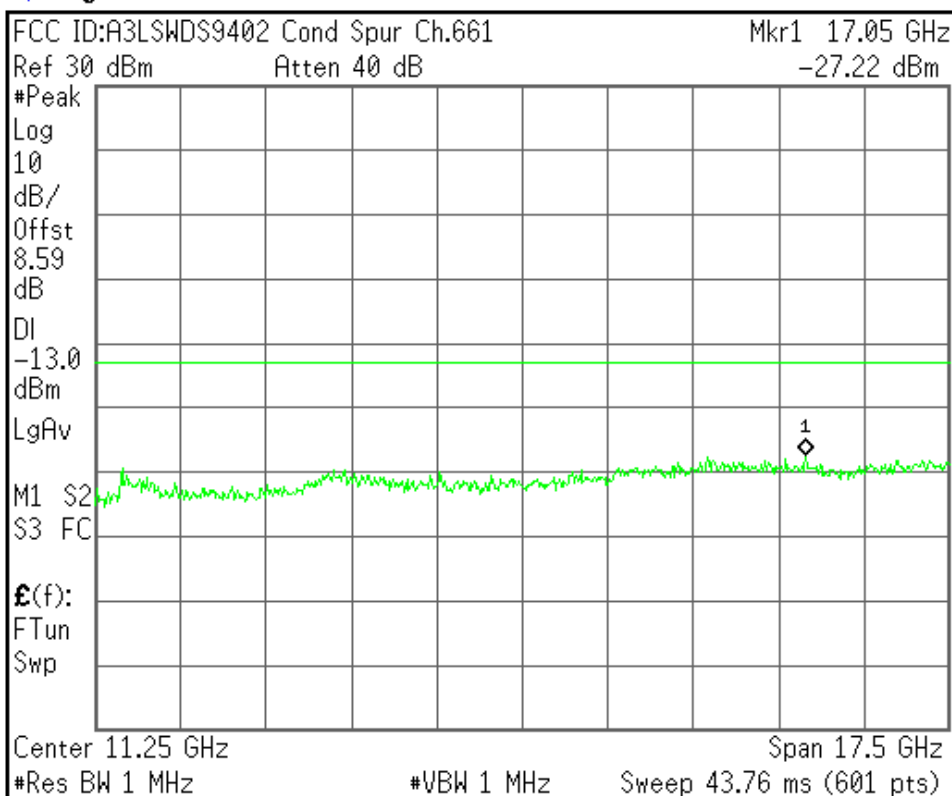
Master



Agilent

R T

Freq/Channel

Center Freq
11.2500000 GHzStart Freq
2.50000000 GHzStop Freq
20.0000000 GHzCF Step
1.75000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.810

Ref 30 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

8.59

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 GHzStart Freq
10.0000000 MHzStop Freq
2.50000000 GHzCF Step
249.000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master



Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Cond Spur Ch.810

Mkr1 1.208 GHz

Ref 30 dBm

Atten 40 dB

-32.27 dBm

#Peak

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

LgAv

M1 S2

S3 FC

E(f):

FTun

Swp

AC Coupled: unspecified below 20 MHz

1

Center 956 MHz

Span 1.892 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 3.16 ms (601 pts)

Center Freq
956.150000 MHzStart Freq
10.0000000 MHzStop Freq
1.90230000 GHzCF Step
189.230000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

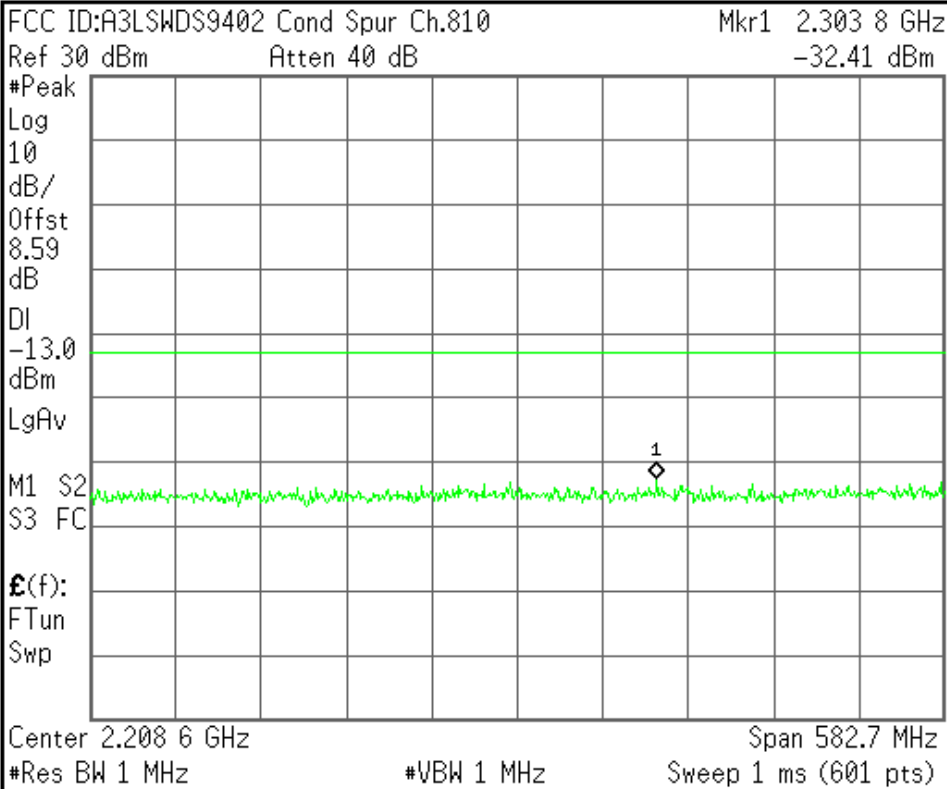
File Operation Status, C:\TEMP.GIF file saved

Master

 **Agilent**

R T

Freq/Channel



Center Freq
2.20865000 GHz

Start Freq
1.91730000 GHz

Stop Freq
2.50000000 GHz

CF Step
58.2700000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

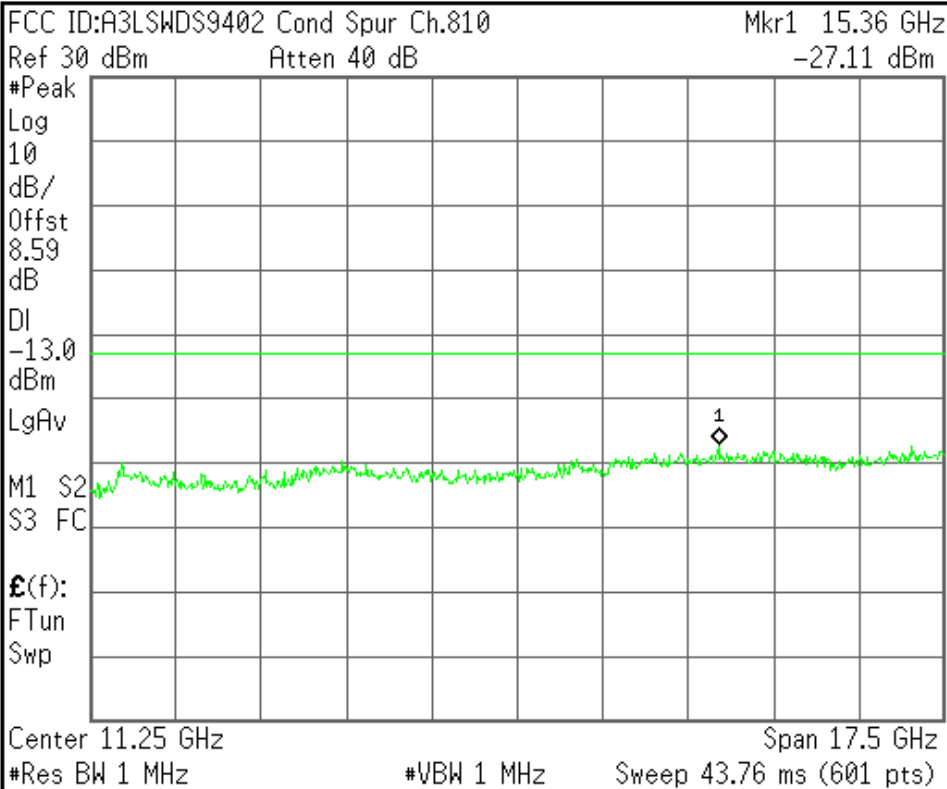
File Operation Status, C:\TEMP.GIF file saved

Master

 **Agilent**

R T

Freq/Channel



Center Freq
11.2500000 GHz

Start Freq
2.50000000 GHz

Stop Freq
20.0000000 GHz

CF Step
1.75000000 GHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

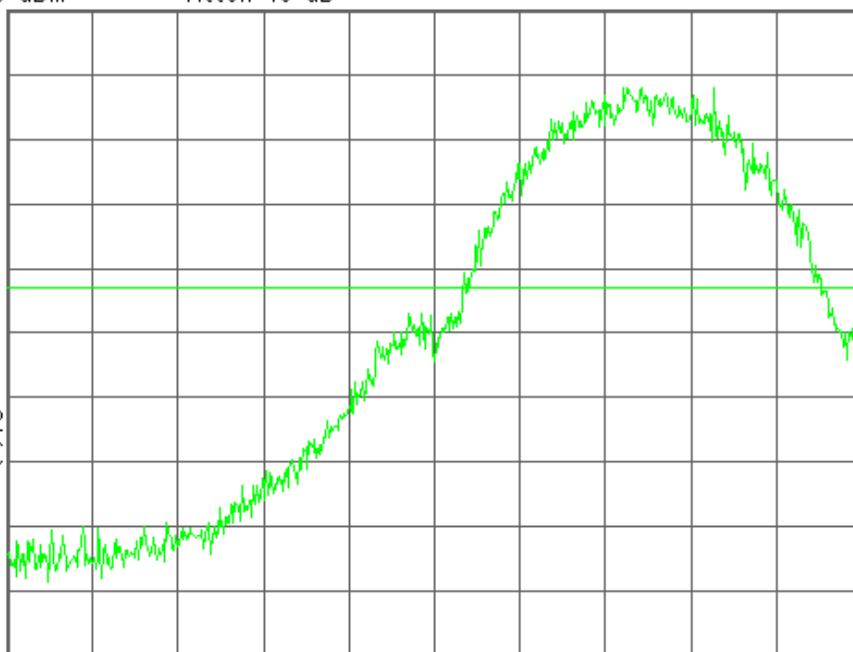
File Operation Status, C:\TEMP.GIF file saved

R T

Freq/Channel	
1	144.000
2	144.000
3	144.000
4	144.000
5	144.000
6	144.000
7	144.000
8	144.000
9	144.000
10	144.000
11	144.000
12	144.000
13	144.000
14	144.000
15	144.000
16	144.000
17	144.000
18	144.000
19	144.000
20	144.000
21	144.000
22	144.000
23	144.000
24	144.000
25	144.000
26	144.000
27	144.000
28	144.000
29	144.000
30	144.000
31	144.000
32	144.000
33	144.000
34	144.000
35	144.000
36	144.000
37	144.000
38	144.000
39	144.000
40	144.000
41	144.000
42	144.000
43	144.000
44	144.000
45	144.000
46	144.000
47	144.000
48	144.000
49	144.000
50	144.000
51	144.000
52	144.000
53	144.000
54	144.000
55	144.000
56	144.000
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64	144.000
65	144.000
66	144.000
67	144.000
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75	144.000
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77	144.000
78	144.000
79	144.000
80	144.000
81	144.000
82	144.000
83	144.000
84	144.000
85	144.000
86	144.000
87	144.000
88	144.000
89	144.000
90	144.000
91	144.000
92	144.000
93	144.000
94	144.000
95	144.000
96	144.000
97	144.000
98	144.000
99	144.000
100	144.000

Atten 40 dB

1



Span 810 kHz

Sweep 343.2 ms (601 pts)

1.850000000 GHz

1.84959500 GHz

1.85040500 GHz

81.00000000 kHz

Man

0.000000000 Hz

On

Off

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

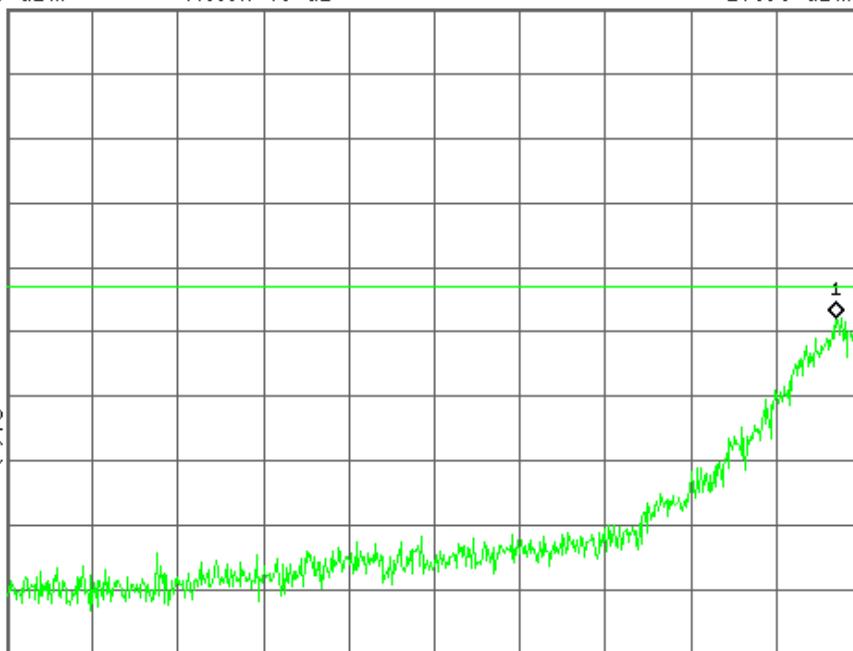
R T

[illegible]

-17.80 dBm

Atten 40 dB

Swp



Span 810 kHz

Sweep 343.2 ms (601 pts)

1.84959500 GHz

1.84919000 GHz

1.850000000 GHz

81.00000000 kHz

Auto

Man

0.000000000 Hz

On

Off

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

Master

Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810

Ref 30 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

PAvg

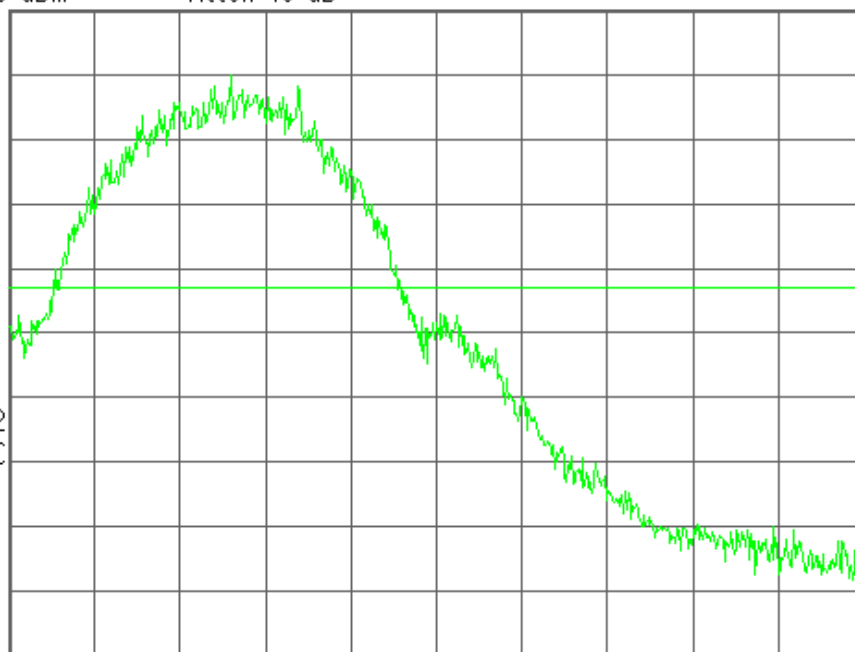
M1 S2

S3 FC

E(f):

f>50k

Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91000000 GHzStart Freq
1.90959500 GHzStop Freq
1.91040500 GHzCF Step
81.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master

Agilent

R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810

Mkr1 1.910 014 8 GHz

Ref 30 dBm

Atten 40 dB

-17.49 dBm

#Avg

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

PAvg

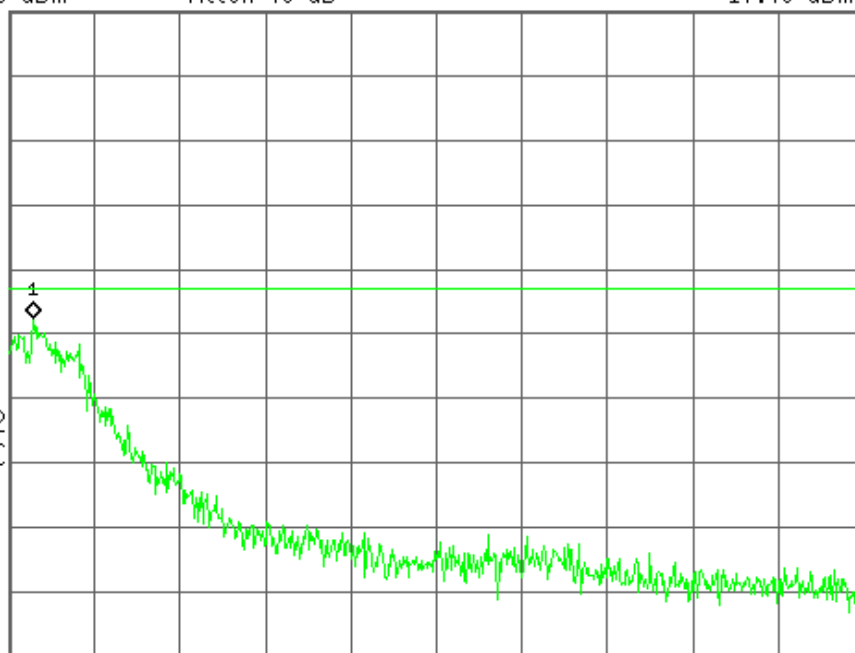
M1 S2

S3 FC

E(f):

f>50k

Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91040500 GHzStart Freq
1.91000000 GHzStop Freq
1.91081000 GHzCF Step
81.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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



R T

Freq/Channel

FCC ID:A3LSWDS9402 P.A.R Ch.661

▲ Mkr2 0 Hz

Ref 35 dBm

Atten 40 dB

-0.06 dB

#Avg

Log

10

dB/

Offst

8.59

dB

#LgAv

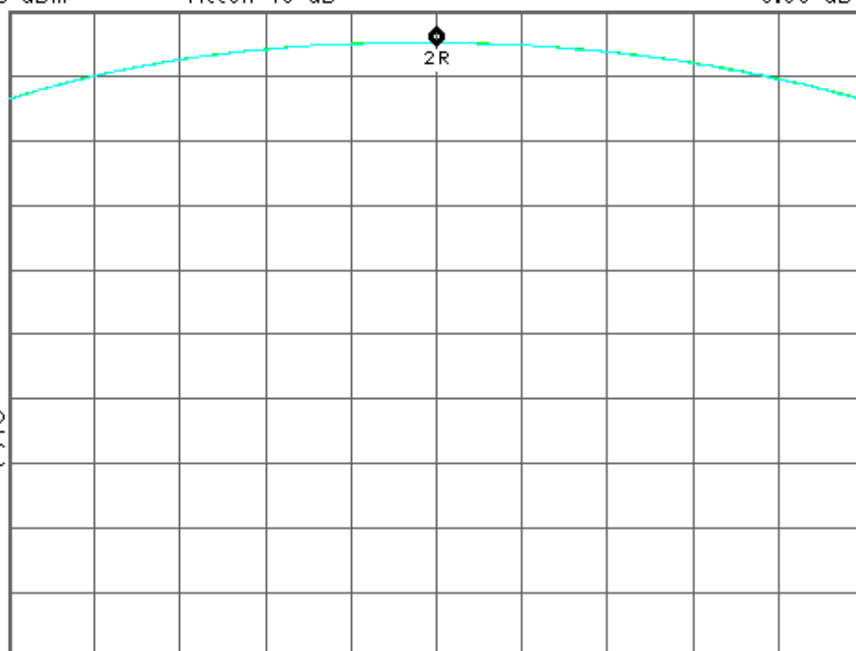
M1 M2

S3 FC

E(f):

FTun

Swp



Center 1.880 000 GHz

Span 5 MHz

#Res BW 3 MHz

#VBW 3 MHz

Sweep 1 ms (601 pts)

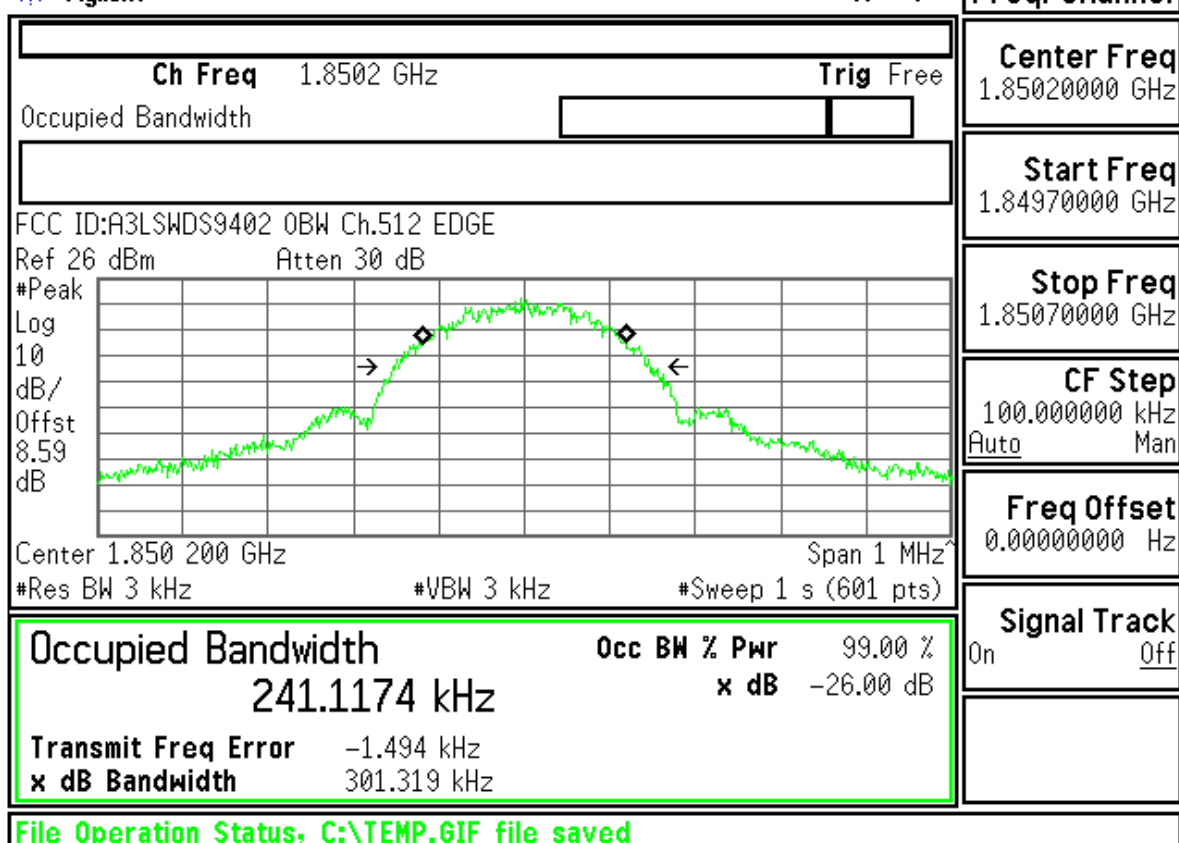
Center Freq
1.88000000 GHzStart Freq
1.87750000 GHzStop Freq
1.88250000 GHzCF Step
500.000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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Agilent

R T

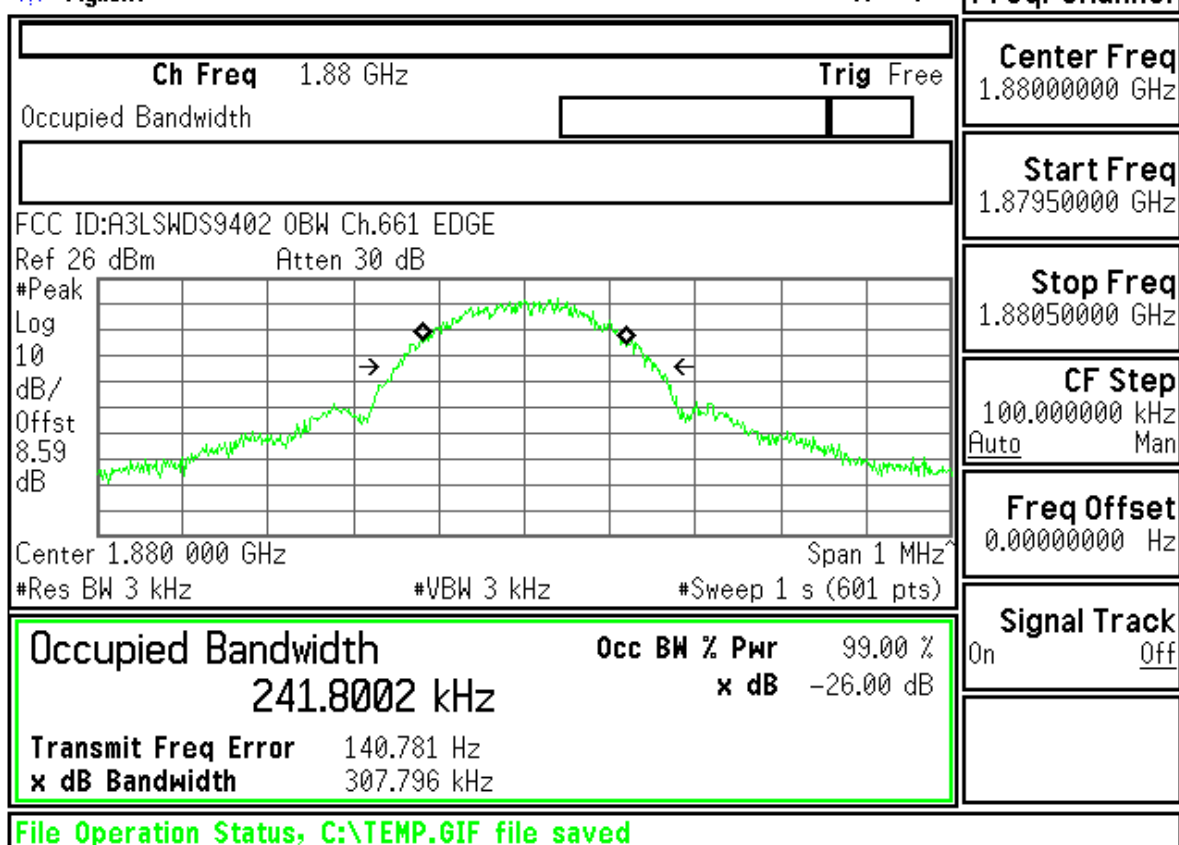


Master



Agilent

R T



Master



Agilent

R T

Freq/Channel

Ch Freq 1.9098 GHz		Trig Free	
Occupied Bandwidth			
FCC ID:A3LSWDS9402 0BW Ch.810 EDGE			
Ref 26 dBm		Atten 30 dB	
#Peak			
Log			
10			
dB/			
Offst			
8.59			
dB			
Center 1.909 800 GHz		Span 1 MHz	
#Res BW 3 kHz		#Sweep 1 s (601 pts)	
Occupied Bandwidth		Occ BW % Pwr 99.00 %	
241.3546 kHz		x dB -26.00 dB	
Transmit Freq Error 677.898 Hz			
x dB Bandwidth 298.488 kHz			
Signal Track On Off			

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

ID : A3LSWDS9402 Transmit Power 512CH EDGE Master

Measurement/Instrument Screen									
Control	EGPRS Transmit Power						PDCH Params		
EGPRS Transmit Power Setup ▾	EPK Burst Power				EPK Est Carrier Power		DownLink Traffic Power ▾		
	Minimum	Maximum	Minimum	Maximum					
	24.90 dBm	26.28 dBm	25.62 dBm	25.85 dBm	Traffic Band				
					PCS				
	Average	Std Dev	Average	Std Dev	Traffic Channel				
	25.64 dBm	0.24 dBm	25.71 dBm	0.05 dBm	512				
	200 / 200				Single				
							HS TX Level ▾		
							Modulation Coding Scheme ▾		
							Return		
	Active Cell Transferring				Sys Type: EGPRS				
1 of 2				IntRef	Offset	R T			1 of 2

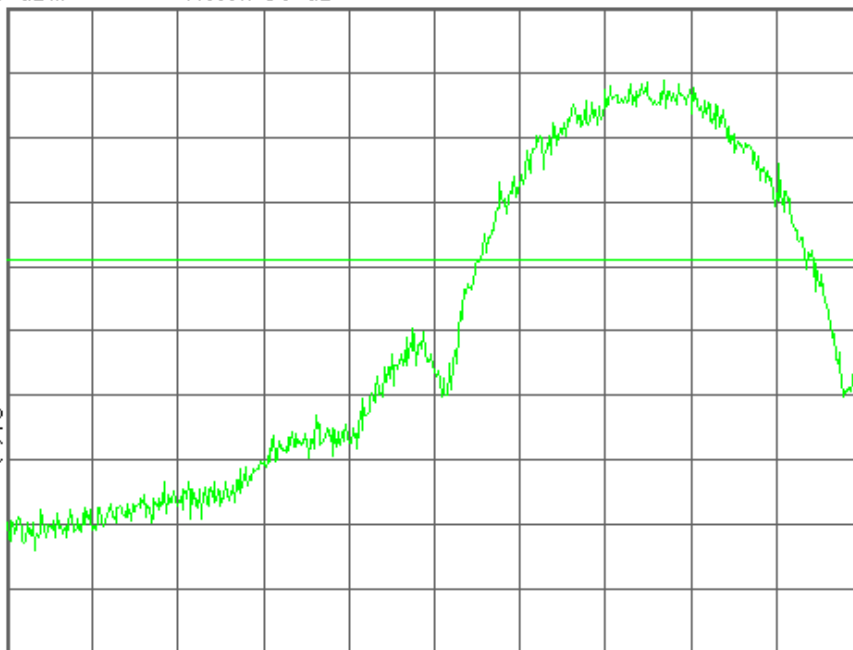
Measurement/Instrument Screen												
Control		EGPRS Transmit Power								PDCH Params		
EGPRS Transmit Power Setup ▾	EP SK Burst Power				EP SK Est Carrier Power				Downlink Traffic Power			
	Minimum		Maximum		Minimum		Maximum		Traffic Band			
	25.42 dBm		26.77 dBm		25.97 dBm		26.22 dBm		PCS			
	Average		Std Dev		Average		Std Dev		Traffic Channel			
	26.01 dBm		0.23 dBm		26.09 dBm		0.05 dBm		661			
	200 / 200								Single			

R T

Freq/Channel	
1	144.000
2	144.000
3	144.000
4	144.000
5	144.000
6	144.000
7	144.000
8	144.000
9	144.000
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11	144.000
12	144.000
13	144.000
14	144.000
15	144.000
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39	144.000
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43	144.000
44	144.000
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46	144.000
47	144.000
48	144.000
49	144.000
50	144.000
51	144.000
52	144.000
53	144.000
54	144.000
55	144.000
56	144.000
57	144.000
58	144.000
59	144.000
60	144.000
61	144.000
62	144.000
63	144.000
64	144.000
65	144.000
66	144.000
67	144.000
68	144.000
69	144.000
70	144.000
71	144.000
72	144.000
73	144.000
74	144.000
75	144.000
76	144.000
77	144.000
78	144.000
79	144.000
80	144.000
81	144.000
82	144.000
83	144.000
84	144.000
85	144.000
86	144.000
87	144.000
88	144.000
89	144.000
90	144.000
91	144.000
92	144.000
93	144.000
94	144.000
95	144.000
96	144.000
97	144.000
98	144.000
99	144.000
100	144.000

Atten 30 dB

1



Span 810 kHz

Sweep 343.2 ms (601 pts)

1.850000000 GHz

1.84959500 GHz

1.85040500 GHz

81.00000000 kHz

Man

0.000000000 Hz

On

Off

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

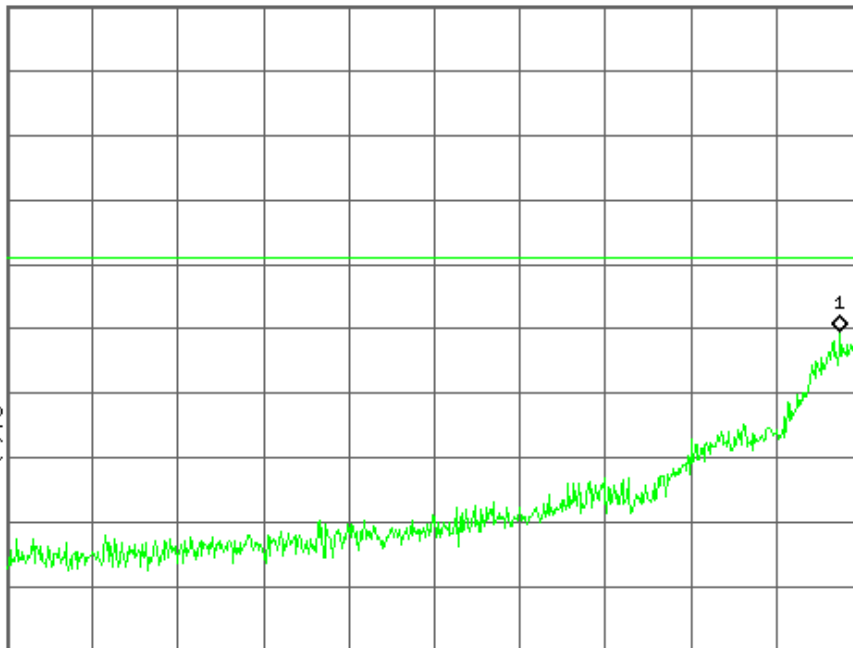
R T

Freq/Channel

-24.52 dBm

Atten 30 dB

Swan



Span 810 kHz

Sweep 343.2 ms (601 pts)

1.84959500 GHz

1.84919000 GHz

1.850000000 GHz

81.00000000 kHz

Man

0.000000000 Hz

On

Off

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

Master



R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810 EDGE

Ref 26 dBm

Atten 30 dB

#Avg

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

PAvg

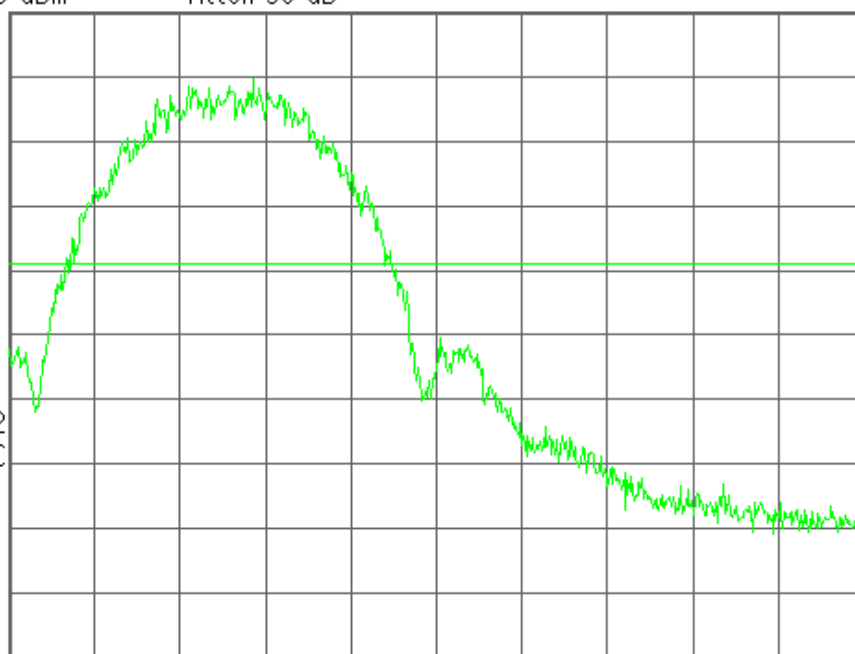
M1 S2

S3 FC

E(f):

f>50k

Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91000000 GHzStart Freq
1.90959500 GHzStop Freq
1.91040500 GHzCF Step
81.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

Master



R T

Freq/Channel

FCC ID:A3LSWDS9402 Band Edge Ch.810 EDGE

Mkr1 1.910 006 5 GHz

Ref 26 dBm

Atten 30 dB

-24.41 dBm

#Avg

Log

10

dB/

Offst

8.59

dB

DI

-13.0

dBm

PAvg

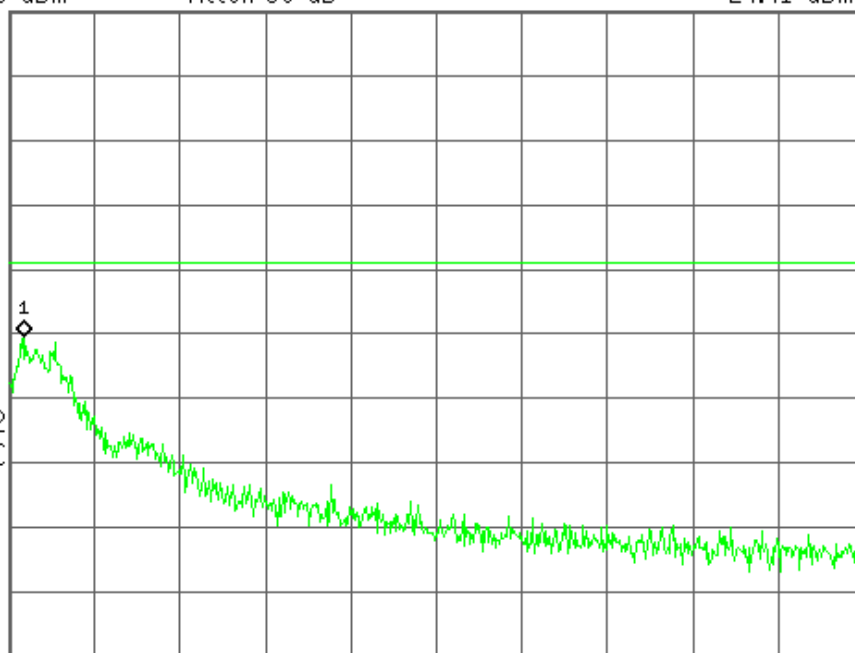
M1 S2

S3 FC

E(f):

f>50k

Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq
1.91040500 GHzStart Freq
1.91000000 GHzStop Freq
1.91081000 GHzCF Step
81.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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

