

1.1 Test Data

1.2 Effective Radiated Power Output

A. POWER: Low (Analog Mode)

Freq. Tuned (MHz)	REF. LEVEL (dBm)	POL (H/V)	ERP (W)	ERP (dBm)
824.04	-40.850	V	0.001	0.423
835.89	-40.220	V	0.001	1.201
848.97	-39.951	V	0.001	1.634

B. POWER: High (Analog Mode)

Freq. Tuned (MHz)	REF. LEVEL (dBm)	POL (H/V)	ERP (W)	ERP (dBm)	BATTERY
824.04	-20.850	H	0.110	20.423	Standard
836.49	-20.220	H	0.132	21.209	Standard
848.97	-19.951	H	0.146	21.634	Standard

Note: Standard batteries are the only options for this phone

NOTES:

Effective Radiated Power Output Measurements by Substitution Method
according to ANSI/TIA/EIA-603-A-2001, Aug. 15, 2001:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 the dipole is measured. The ERP is recorded.

PCTEST® PT. 22/24 SUPPLEMENT	 FCC MEASUREMENT SUPPLEMENT 			Reviewed By: Quality Manager
Test Report S/N: 0512300875	Test Dates: December 30, 2005	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPHA420	Page 1 of 6

2.1 Test Data

2.2 A MPS Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.04 MHz
 CHANNEL: 0991 (Low)
 MEASURED OUTPUT POWER: 21.634 dBm = 0.146 W
 MODULATION SIGNAL: FM (Internal)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.63 dBc

FREQ. (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1648.08	-47.38	6.10	-41.28	H	62.9
2472.12	-61.68	6.70	-54.98	H	76.6
3296.16	-50.08	6.80	-43.28	H	64.9
4120.20	-60.78	6.50	-54.28	H	75.9
4944.24	-62.68	7.00	-55.68	H	77.3

NOTES:

Radiated Spurious Emission Measurements by Substitution Method
according to ANSI/TIA/EIA-603-A-2001, Aug. 15, 2001:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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.

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Test Report S/N: 0512300875	Test Dates: December 30, 2005	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPHA420	Page 2 of 6

2.1 Test Data (Continued)

2.3 A MPS Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.52 MHz
 CHANNEL: 0384 (Mid)
 MEASURED OUTPUT POWER: 21.634 dBm = 0.146 W
 MODULATION SIGNAL: FM (Internal)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.63 dBc

FREQ. (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1673.04	-44.38	6.10	-38.28	H	59.9
2509.56	-57.78	6.70	-51.08	H	72.7
3346.08	-58.68	6.80	-51.88	H	73.5
4182.60	-59.88	6.50	-53.38	H	75.0
5019.12	-61.28	7.00	-54.28	H	75.9

NOTES:

Radiated Spurious Emission Measurements by Substitution Method
according to ANSI/TIA/EIA-603-A-2001, Aug. 15, 2001:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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.

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Test Report S/N: 0512300875	Test Dates: December 30, 2005	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPA420	Page 3 of 6

2.1 Test Data (Continued)

2.4 A MPS Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.97 MHz
 CHANNEL: 0799 (High)
 MEASURED OUTPUT POWER: 21.634 dBm = 0.146 W
 MODULATION SIGNAL: FM (Internal)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.63 dBc

FREQ. (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1697.94	-41.08	6.10	-34.98	H	56.6
2546.91	-61.88	6.70	-55.18	H	76.8
3395.88	-54.78	6.80	-47.98	H	69.6
4244.85	-57.68	6.50	-51.18	H	72.8
5093.82	-61.68	7.00	-54.68	H	76.3

NOTES:

Radiated Spurious Emission Measurements by Substitution Method

according to ANSI/TIA/EIA-603-A-2001, Aug. 15, 2001:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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.

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Test Report S/N: 0512300875	Test Dates: December 30, 2005	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPA420	Page 4 of 6

3.1 Test Data

3.2 FREQUENCY STABILITY AMPS

OPERATING FREQUENCY: 836,490,008 Hz

CHANNEL: 383

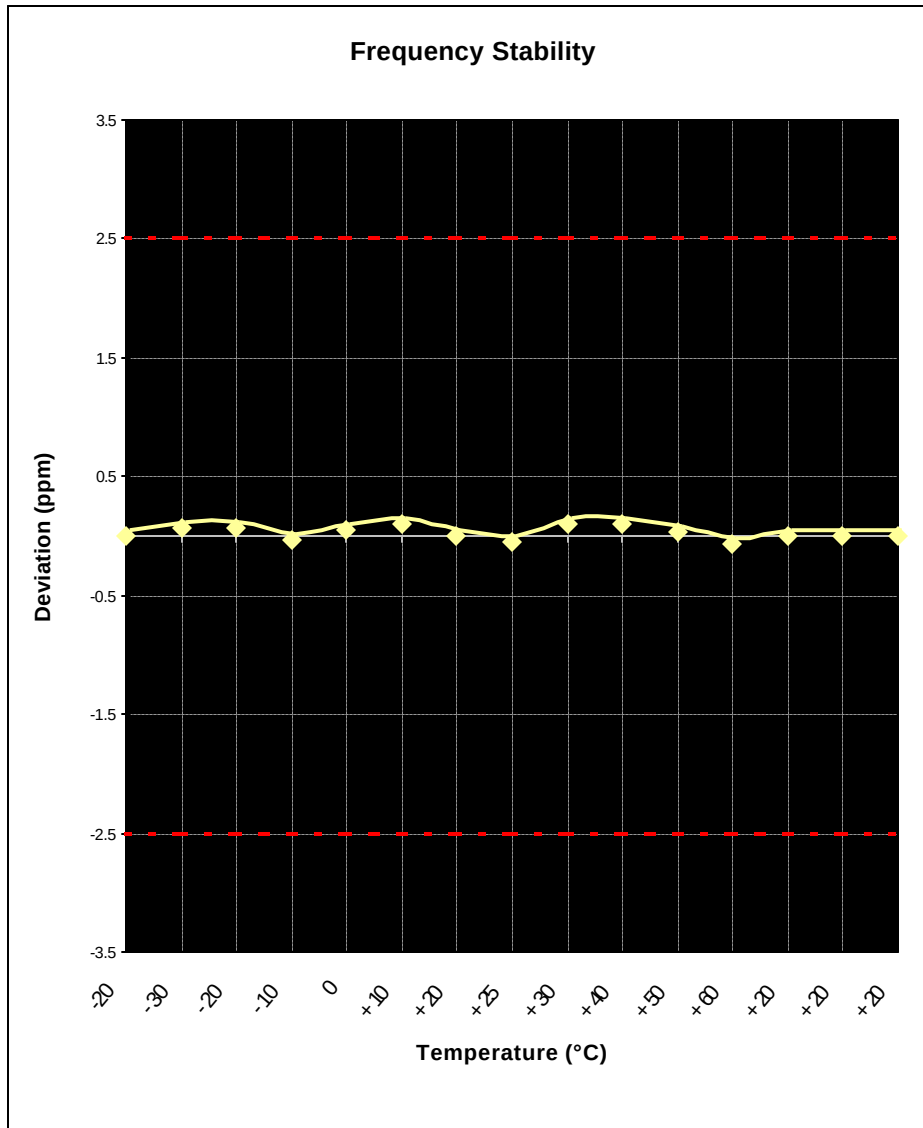
REFERENCE VOLTAGE: 3.7 VDC

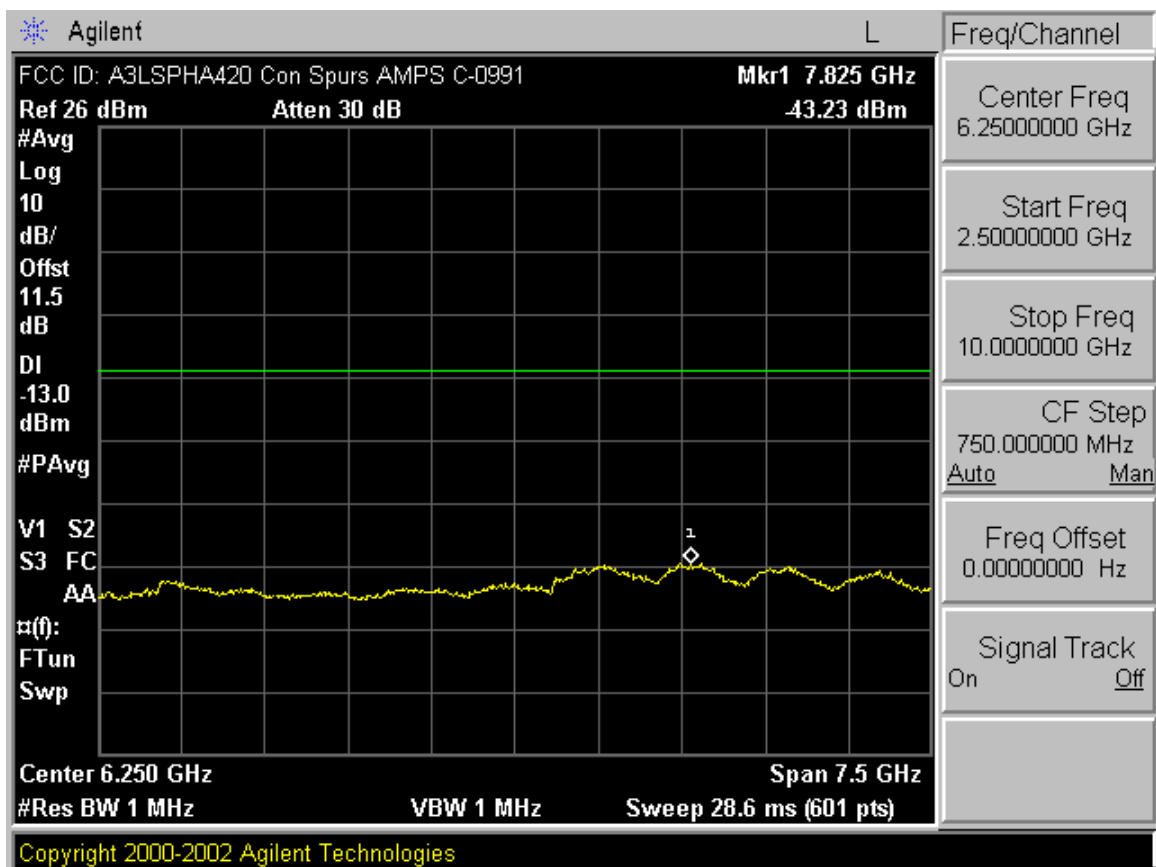
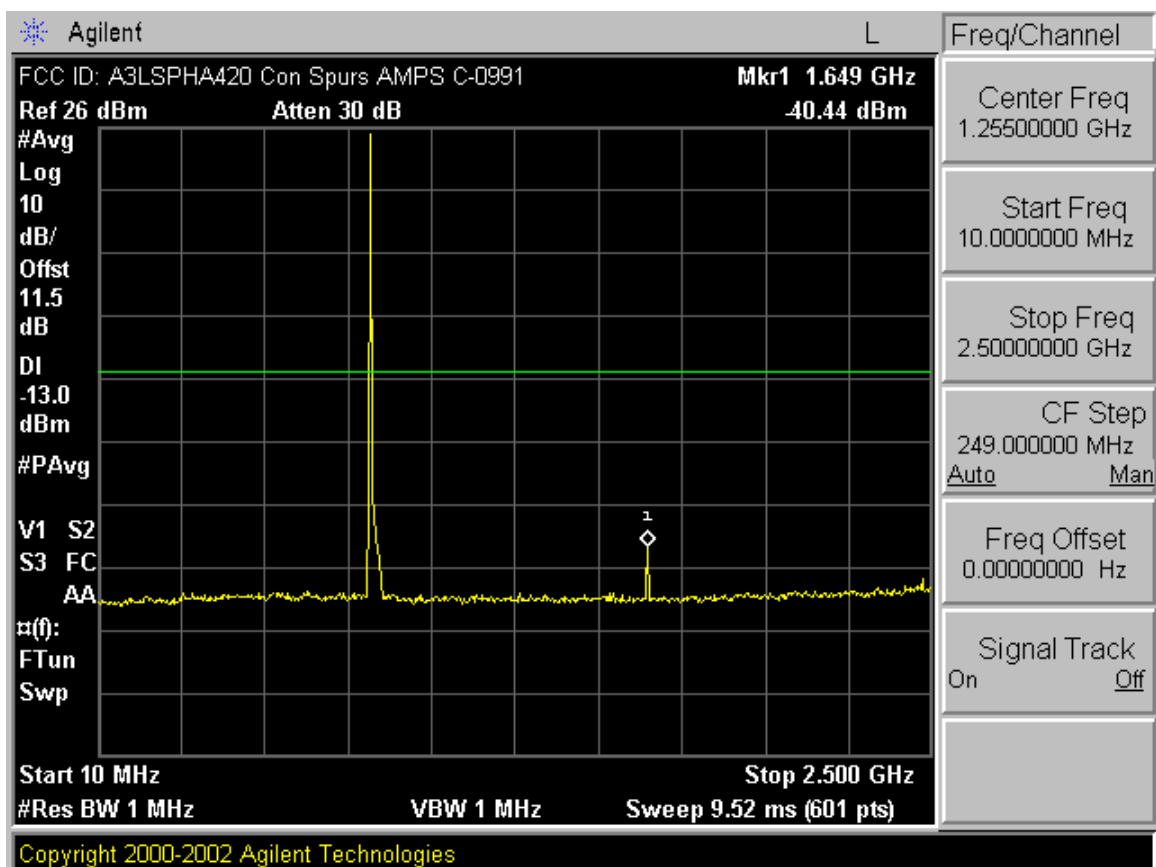
DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

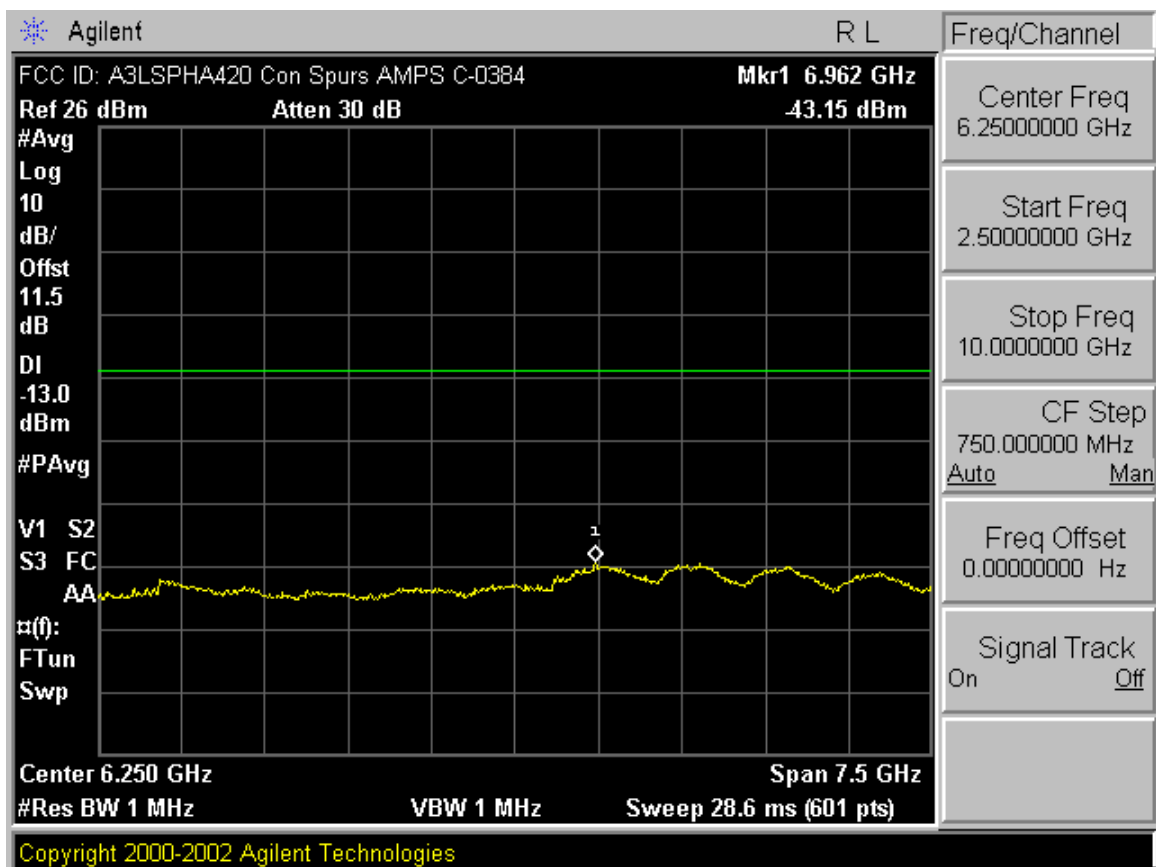
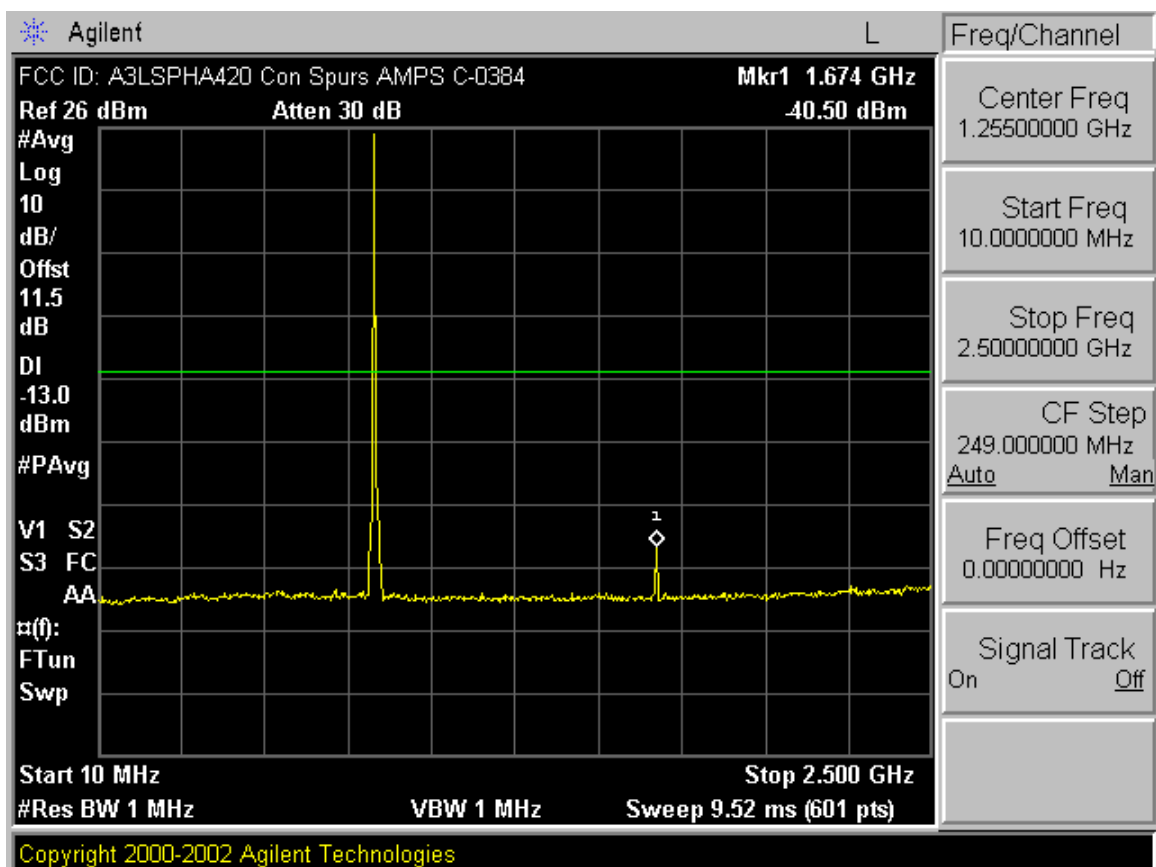
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQ. (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	836,490,008	0.00	0.000000
100 %		- 30	836,489,949	58.55	0.000007
100 %		- 20	836,489,958	50.19	0.000006
100 %		- 10	836,490,041	-33.46	-0.000004
100 %		0	836,489,966	41.82	0.000005
100 %		+ 10	836,489,924	83.65	0.000010
100 %		+ 20	836,490,008	0.00	0.000000
100 %		+ 25	836,490,050	-41.82	-0.000005
100 %		+ 30	836,489,924	83.65	0.000010
100 %		+ 40	836,489,924	83.65	0.000010
100 %		+ 50	836,489,975	33.46	0.000004
100 %		+ 60	836,490,058	-50.19	-0.000006
85 %	3.17	+ 20	836,490,008	0.00	0.000000
115 %	4.26	+ 20	836,490,008	0.00	0.000000
BATT. ENDPOINT	3.15	+ 20	836,490,008	0.00	0.000000

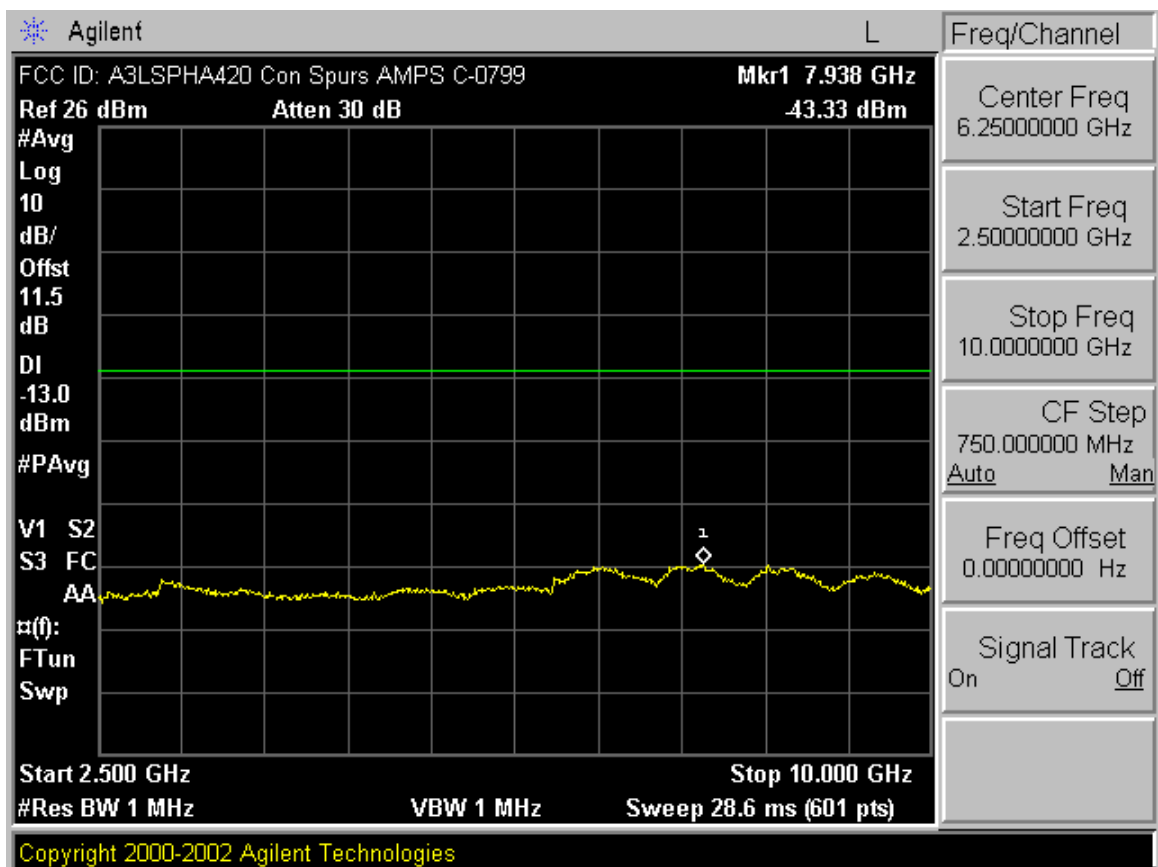
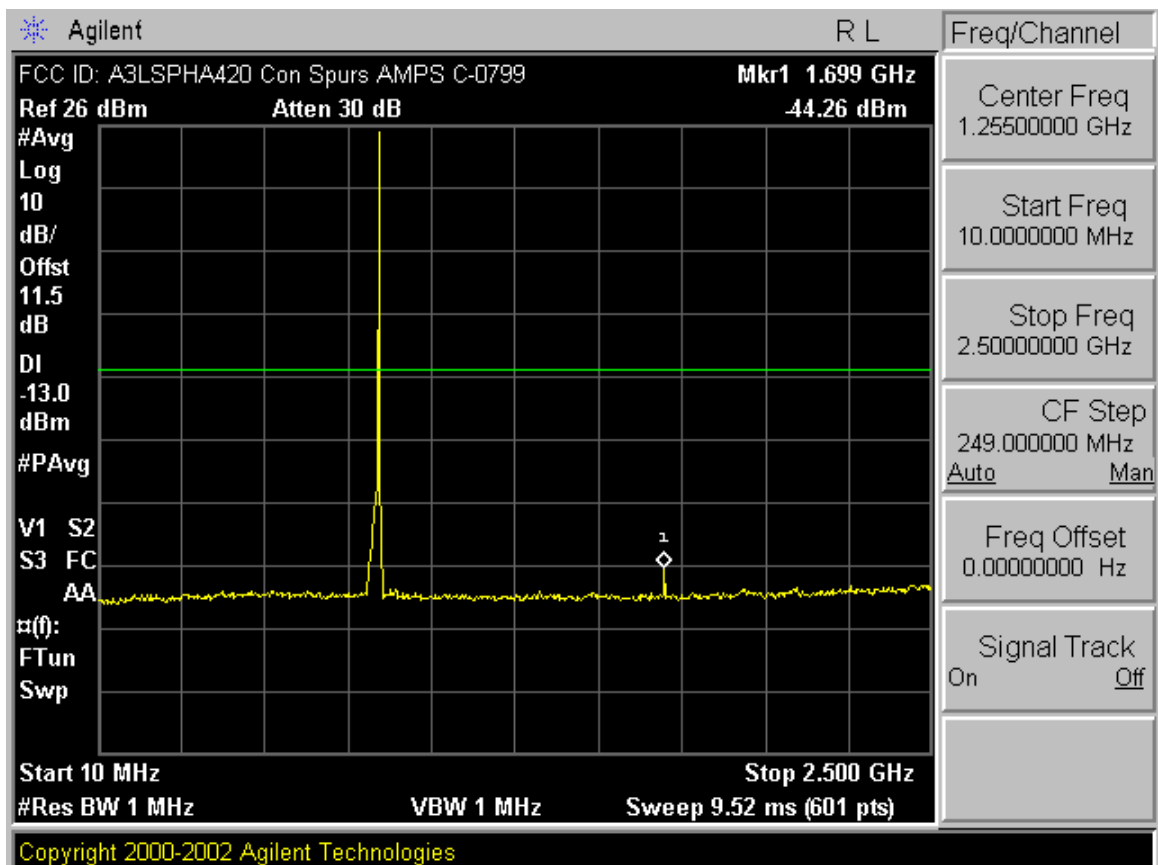
3.1 Test Data (Continued)

3.3 FREQUENCY STABILITY AMPS









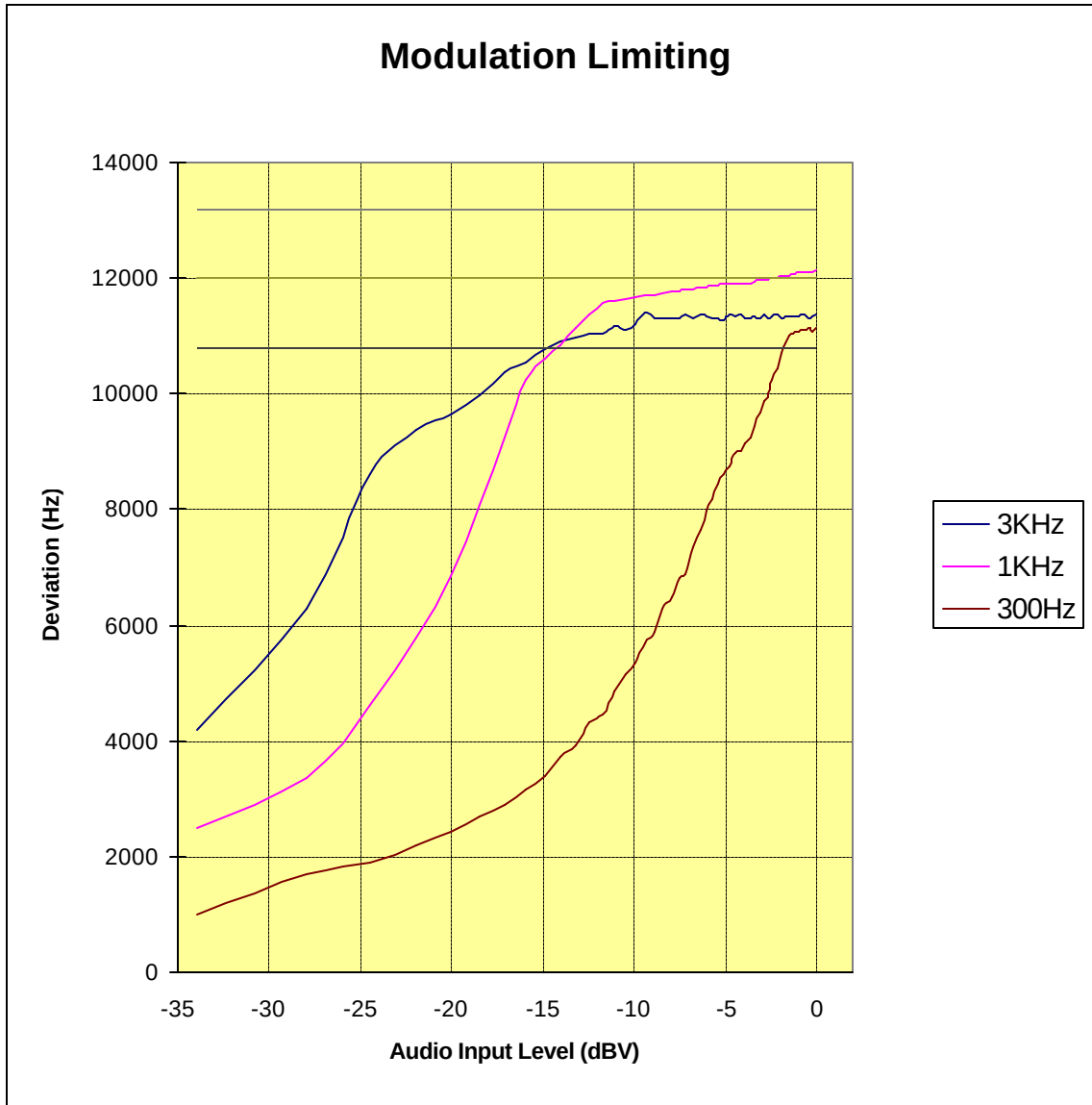
PCTEST Engineering Lab., Inc.

SUBJECT: Modulation Characteristics
FCC Part 24/22

Test Report No.: 0512300875
Test Date: 12.30.2005

EUT: Tri-Mode Dual-Band Analog/PCS Phone (AMPS/CDMA)
Model: SPH-A420
FCC ID: A3LSPHA420

REFERENCE: 1 kHz = 0 dB



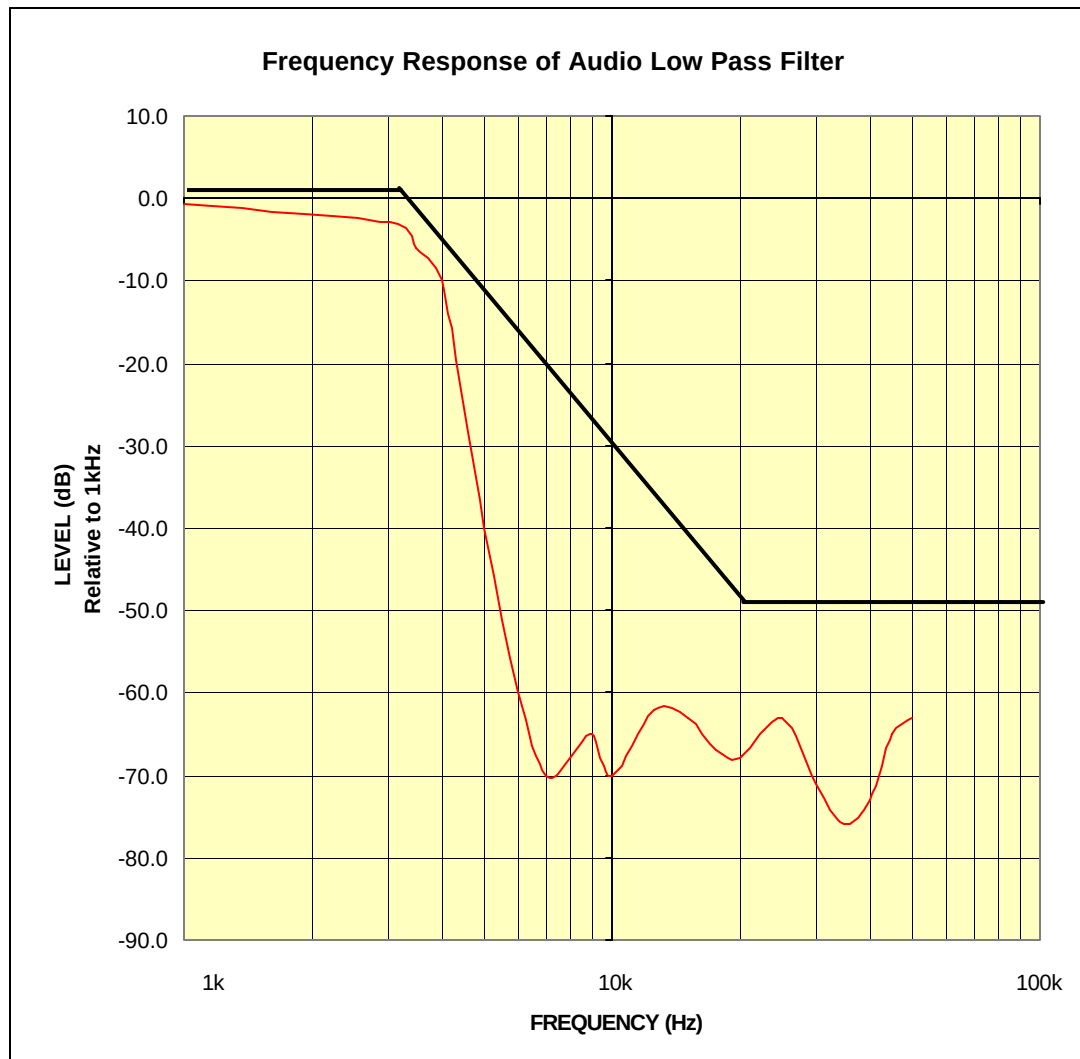
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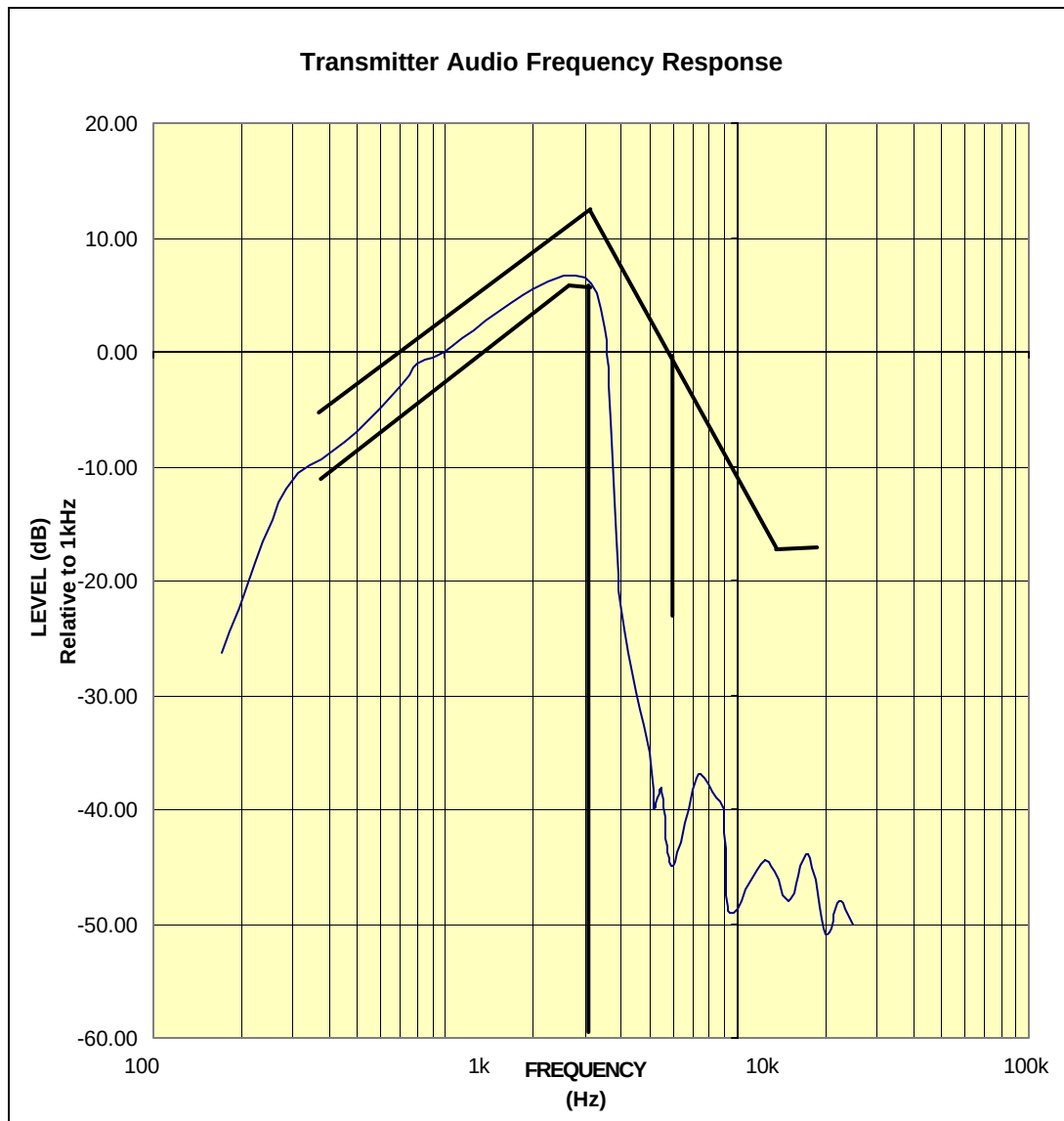
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Model: SPH-A420
FCC ID: A3LSPHA420

REFERENCE: 1 kHz = 0 dB



SAMSUNG Tri-Mode Dual-Band Analog/PCS Phone (AMPS/CDMA)
FCC ID: A3LSPHA420