

LISTING OF REQUIRED MEASUREMENTS
SECTION 2.1033 (c) (14)

MEASUREMENT PER SECTION 2.999 OF THE RULES

SECTION 2.1033 (c) (14)

The data required by Section 2.1046 through 2.1057, inclusive, measured in accordance with the procedures set out in Section 2.1041.

RESPONSE:

The following pages include the data required for the Certification of the FCC ID: **AS5FLX-01**, measured in accordance with the procedures set out in Section 2.999 of the Rules.

Each required measurement and its corresponding exhibit number are:

Measurement: 1	Section 2.1046	RF Power Output
Measurement: 2	Section 2.1047	Modulation Characteristics
Measurement: 3	Section 2.1049	Occupied Bandwidth
Measurement: 4	Section 2.1051	Spurious Emissions at Antenna Terminals
Measurement: 5	Section 2.1053	Field Strength of Spurious Radiation
Measurement: 6	Section 2.1055	Measurement of Frequency Stability
	Section 2.1057	Frequency Spectrum to be Investigated
	Test Instrumentation List

MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

SECTION 2.1046

MEASUREMENT: 1

SECTION 2.1046

MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

RESPONSE: (No Change from Original Filing)

**MEASUREMENT OF
MODULATION CHARACTERISTICS**
SECTION 2.1047

MEASUREMENT: 2

SECTION 2.1047

MEASUREMENT OF MODULATION CHARACTERISTICS

RESPONSE: (No Change from Original Filing)

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

SECTION 2.1051

MEASUREMENT: 4

SECTION 2.1051

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

RESPONSE: (No Change from Original Filing)

FIELD STRENGTH OF SPURIOUS RADIATION
SECTION 2.1053

MEASUREMENT: 5**SECTION 2.1053****FIELD STRENGTH OF SPURIOUS RADIATION**

The preliminary field strength measurements were made at Lucent Technologies 10 meter Absorber Lined FCC approved Compliance Chamber at Nurnberg, Germany. Final field strength measurements of radiated spurious emissions were made at a ten meter Open Area Test Site (OATS) maintained by Lucent Technologies Bell Laboratories Global Product Compliance Laboratory in Holmdel, New Jersey. A complete description and full measurement data for the site is on file with the Commission (FCC File 31040/SIT).

The TRX19s were assembled in a Flexent GSM outdoor Macrocell Cabinet. Each TRX19's were operating on different frequency blocks. The TRX19's were operating at a RF output level of 29 watts. The following configurations were tested.

(a) 4x4x4, (b) 3x3x3, (c) 2x2x2 and (d) 1x1x1. The output terminals (J4) were terminated with 50 ohm load. The spectrum from 10 MHz to the 10th harmonic of the carrier was searched for spurious radiation. Measurements were made according to ANSI C63.4. All emissions more than 20 dB below the specification limit were considered not reportable (Section 2.1057(c)).

The calculated emission levels were found by:

$$\text{Measured level (dB}\mu\text{V)} + \text{Cable Loss(dB)} + \text{Antenna Factor(dB)} = \text{Field Strength (dB}\mu\text{V/m)}$$

Section 24.238 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the level of the unmodulated carrier. The reference level for the unmodulated carrier is calculated as the field produced by an ideal isotropic antenna excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 27-7, 6th edition, IT&T Corp.

$$E = [(30 \cdot P)^{1/2}] / R$$

$$20 \log (E \cdot 10^6) - (43 + 10 \log P) = 71.8 \text{ dB}\mu\text{V/meter}$$

E = Field Intensity in Volts/meter

P = Transmitted Power in Watts

R = Distance in meters = 10 m

RESULTS:

For this particular test, the field strength of any spurious radiation is required to be less than 71.8 dBμV/meter. Reportable measurements are equal to or greater than 51.8 dBμV/meter. Over the spectrum investigated, 10 MHz to 10th of the carrier, no reportable spurious emissions were detected. This demonstrates that the "Flexent GSM 1900 Transceiver (TRX19)", a single Radio Frequency Unit the subject of this application, complies with Sections 2.1053, 24.238 and 2.1057 of the Rules.

MEASUREMENT OF FREQUENCY STABILITY

SECTION 2.1055

MEASUREMENT: 6**SECTION 2.1055****MEASUREMENT OF FREQUENCY STABILITY****RESPONSE:**

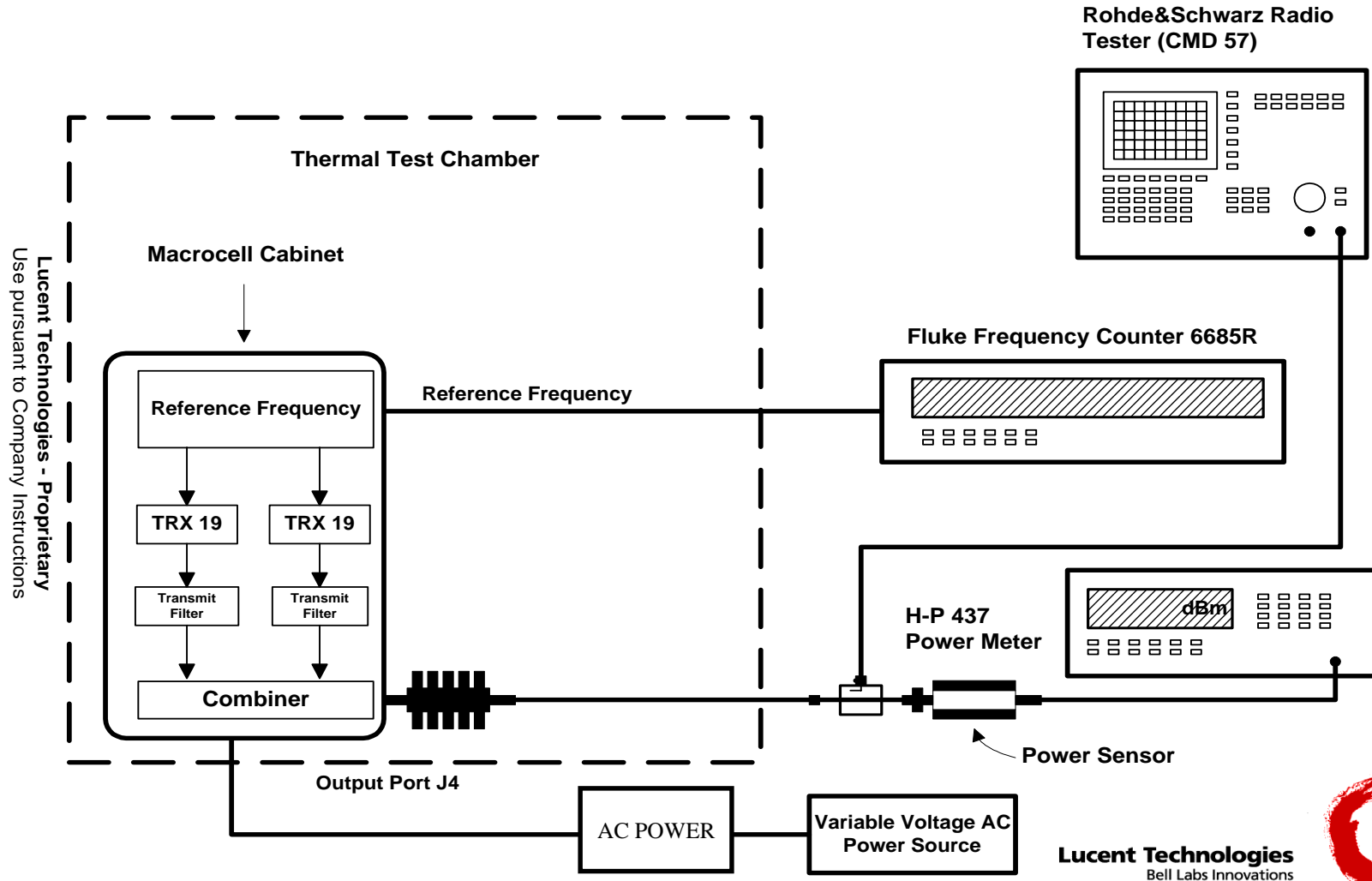
The frequency stabilization and accuracy of the GSM signal amplified by the TRX19 is a function of reference frequency generator used by the Voltage Controlled Oscillator (VCO). The reference frequency generator is highly accurate frequency unit which is phase-locked with VCO of the TRX19. Any change reference frequency generator will affect the output frequency of TRX19.

The frequency stability test data was measured TRX19 installed and tested in a fully configured Flexent Macrocell outdoor Cabinet. The entire Macrocell Cabinet was subjected to the FCC specified environments while operating at full rated power. The 13 MHz reference oscillator deviations TRX19 output power frequency deviations were measured. The measurement setup is depicted in Figure 6 A. The Flexent Macrocell outdoor cabinet operates from 240V or 208V 60 Hz AC. Therefore voltage variation tests were performed 176.8V to 276V.

RESULTS:

The attached data documents that the worse case frequency stability over temperature and voltage were 0.014 ppm or 0.18 Hz for reference generator and 0.019 ppm or 36 Hz for TRX19 RF output.

TEST CONFIGURATION FOR FREQUENCY STABILITY



MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at -40 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation (Hz)
0	13.000,000.07	13
0.5	13.000,000.07	12
1.0	13.000,000.06	-1
1.5	13.000,000.06	12
2.0	13.000,000.06	10
2.5	13.000,000.07	18
3.0	13.000,000.07	-6
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at -40 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	13,000,000.06	4
186.8	13,000,000.07	14
196.8	13,000,000.09	3
206.8	13,000,000.07	6
216.8	13,000,000.07	12
226.8	13,000,000.06	10
236.8	13,000,000.07	15
246.8	13,000,000.06	14
256.8	13,000,000.07	5
266.8	13,000,000.07	11
276.0	13,000,000.06	8
SPECIFICATIONS	+/- 0.000,000,650MHz or 0.65 HZ (+/- 0.05 PPM)	+/- 97.04 Hz (+/- 0.05 PPM)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 661 [1940.8 MHz]

**MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET**

Reference and Transmit Frequency Deviation at -30 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.99	-7 Hz
0.5	12.999,999.98	-9 Hz
1.0	12.999,999.99	-5 Hz
1.5	12.999,999.98	-11 Hz
2.0	12.999,999.98	- 8 Hz
2.5	12.999,999.98	-16 Hz
3.0	12.999,999.99	- 9 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at -30 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.99	- 8 Hz
186.8	12.999,999.98	- 2 Hz
196.8	12.999,999.98	- 19 Hz
206.8	12.999,999.98	- 5 Hz
216.8	12.999,999.97	- 11 Hz
226.8	12.999,999.98	- 14 Hz
236.8	12.999,999.98	- 8 Hz
246.8	12.999,999.99	- 7 Hz
256.8	12.999,999.98	- 10 Hz
266.8	12.999,999.99	- 14 Hz
276.0	12.999,999.98	- 9 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at –20 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.94	-10 Hz
0.5	12.999,999.93	-15 Hz
1.0	12.999,999.95	-8 Hz
1.5	12.999,999.95	-20 Hz
2.0	12.999,999.94	- 21Hz
2.5	12.999,999.94	-18 Hz
3.0	12.999,999.94	- 11 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at -20 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.92	- 21 Hz
186.8	12.999,999.93	- 21 Hz
196.8	12.999,999.92	- 20 Hz
206.8	12.999,999.94	- 14 Hz
216.8	12.999,999.94	- 20 Hz
226.8	12.999,999.94	- 11 Hz
236.8	12.999,999.92	- 20 Hz
246.8	12.999,999.93	- 25 Hz
256.8	12.999,999.93	- 25 Hz
266.8	12.999,999.92	- 25 Hz
276.0	12.999,999.94	- 25 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

**MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET**

Reference and Transmit Frequency Deviation at -10 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.88	-22 Hz
0.5	12.999,999.89	-34 Hz
1.0	12.999,999.88	-25 Hz
1.5	12.999,999.87	-15 Hz
2.0	12.999,999.88	- 29 Hz
2.5	12.999,999.88	-16 Hz
3.0	12.999,999.89	- 30 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at -10 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.92	- 16 Hz
186.8	12.999,999.93	- 23 Hz
196.8	12.999,999.92	- 18 Hz
206.8	12.999,999.94	- 30 Hz
216.8	12.999,999.94	- 22 Hz
226.8	12.999,999.94	- 17 Hz
236.8	12.999,999.92	- 29 Hz
246.8	12.999,999.93	- 33 Hz
256.8	12.999,999.93	- 23 Hz
266.8	12.999,999.92	- 26 Hz
276.0	12.999,999.94	- 26 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 25 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.90	-23 Hz
0.5	12.999,999.89	-20 Hz
1.0	12.999,999.89	-25 Hz
1.5	12.999,999.90	-24 Hz
2.0	12.999,999.90	- 19 Hz
2.5	12.999,999.89	-21 Hz
3.0	12.999,999.90	- 25 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 25 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.89	-26 Hz
186.8	12.999,999.91	- 22 Hz
196.8	12.999,999.89	- 20 Hz
206.8	12.999,999.91	- 26 Hz
216.8	12.999,999.91	- 21 Hz
226.8	12.999,999.90	- 26 Hz
236.8	12.999,999.91	- 19 Hz
246.8	12.999,999.90	-18 Hz
256.8	12.999,999.91	- 15 Hz
266.8	12.999,999.91	- 25 Hz
276.0	12.999,999.90	- 24 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at 0 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.99	-5 Hz
0.5	12.999,999.98	-9 Hz
1.0	12.999,999.99	-5 Hz
1.5	12.999,999.98	-11 Hz
2.0	12.999,999.98	- 8 Hz
2.5	12.999,999.98	- 8 Hz
3.0	12.999,999.99	- 11 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at 0 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.99	- 14 Hz
186.8	12.999,999.99	- 5 Hz
196.8	12.999,999.99	- 14 Hz
206.8	12.999,999.98	- 11 Hz
216.8	12.999,999.99	- 7 Hz
226.8	12.999,999.99	- 8 Hz
236.8	12.999,999.99	- 10 Hz
246.8	12.999,999.99	- 8 Hz
256.8	12.999,999.98	- 7 Hz
266.8	12.999,999.99	- 11 Hz
276.0	12.999,999.98	- 8 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 10 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.99	-5 Hz
0.5	12.999,999.99	-2 Hz
1.0	12.999,999.99	6 Hz
1.5	12.999,999.99	-8 Hz
2.0	12.999,999.99	- 7 Hz
2.5	12.999,999.98	8 Hz
3.0	12.999,999.98	- 10 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 10 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.99	1 Hz
186.8	12.999,999.99	- 6 Hz
196.8	12.999,999.99	- 5 Hz
206.8	12.999,999.98	- 7 Hz
216.8	12.999,999.99	- 3 Hz
226.8	12.999,999.99	- 10 Hz
236.8	12.999,999.99	- 8 Hz
246.8	12.999,999.99	5 Hz
256.8	12.999,999.98	- 6 Hz
266.8	12.999,999.99	- 10 Hz
276.0	12.999,999.98	- 3 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 20 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.97	-6 Hz
0.5	12.999,999.96	-9 Hz
1.0	12.999,999.97	-12 Hz
1.5	12.999,999.98	-20 Hz
2.0	12.999,999.97	- 5 Hz
2.5	12.999,999.98	-14 Hz
3.0	12.999,999.98	- 21 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 20 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.97	-4 Hz
186.8	12.999,999.96	- 14 Hz
196.8	12.999,999.97	- 15 Hz
206.8	12.999,999.98	- 14Hz
216.8	12.999,999.98	- 19 Hz
226.8	12.999,999.98	- 11 Hz
236.8	12.999,999.97	- 10 Hz
246.8	12.999,999.97	-13 Hz
256.8	12.999,999.97	-10 Hz
266.8	12.999,999.98	- 14 Hz
276.0	12.999,999.97	- 10 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 30 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.92	-21 Hz
0.5	12.999,999.92	-16 Hz
1.0	12.999,999.89	-29 Hz
1.5	12.999,999.91	-21 Hz
2.0	12.999,999.92	- 19 Hz
2.5	12.999,999.92	-18 Hz
3.0	12.999,999.91	- 24 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 30 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.89	-26 Hz
186.8	12.999,999.91	- 11 Hz
196.8	12.999,999.89	- 24 Hz
206.8	12.999,999.91	- 24 Hz
216.8	12.999,999.91	- 23 Hz
226.8	12.999,999.90	- 20 Hz
236.8	12.999,999.91	- 29 Hz
246.8	12.999,999.90	-20 Hz
256.8	12.999,999.91	- 16 Hz
266.8	12.999,999.91	- 10 Hz
276.0	12.999,999.90	- 15 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 40 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.93	-16 Hz
0.5	12.999,999.94	-17 Hz
1.0	12.999,999.93	-19 Hz
1.5	12.999,999.93	-11 Hz
2.0	12.999,999.93	-16 Hz
2.5	12.999,999.92	-14 Hz
3.0	12.999,999.94	-13 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 40 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.99	-16 Hz
186.8	12.999,999.99	- 18 Hz
196.8	12.999,999.99	- 12 Hz
206.8	12.999,999.98	- 10 Hz
216.8	12.999,999.99	- 13 Hz
226.8	12.999,999.99	- 22 Hz
236.8	12.999,999.99	- 17 Hz
246.8	12.999,999.99	-23 Hz
256.8	12.999,999.98	- 18 Hz
266.8	12.999,999.99	- 11 Hz
276.0	12.999,999.98	- 18 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 50 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.82	-25 Hz
0.5	12.999,999.83	-31 Hz
1.0	12.999,999.82	-28 Hz
1.5	12.999,999.82	-21 Hz
2.0	12.999,999.82	-24 Hz
2.5	12.999,999.83	-29 Hz
3.0	12.999,999.82	-27Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 50 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.89	-23 Hz
186.8	12.999,999.82	- 31 Hz
196.8	12.999,999.82	- 31 Hz
206.8	12.999,999.83	- 36 Hz
216.8	12.999,999.90	- 25 Hz
226.8	12.999,999.90	- 18 Hz
236.8	12.999,999.89	- 18 Hz
246.8	12.999,999.90	-22 Hz
256.8	12.999,999.89	- 23 Hz
266.8	12.999,999.90	- 18 Hz
276.0	12.999,999.90	- 27 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 55 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.84	-32 Hz
0.5	12.999,999.85	-24 Hz
1.0	12.999,999.84	-26 Hz
1.5	12.999,999.85	-21 Hz
2.0	12.999,999.85	-20 Hz
2.5	12.999,999.85	-28 Hz
3.0	12.999,999.84	-25 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 55 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.85	-24 Hz
186.8	12.999,999.84	- 27 Hz
196.8	12.999,999.85	- 28 Hz
206.8	12.999,999.84	- 22 Hz
216.8	12.999,999.84	- 26 Hz
226.8	12.999,999.85	- 28 Hz
236.8	12.999,999.84	- 25 Hz
246.8	12.999,999.85	-29 Hz
256.8	12.999,999.85	- 30 Hz
266.8	12.999,999.84	- 21 Hz
276.0	12.999,999.84	- 19 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

MEASUREMENT OF FREQUENCY STABILITY
MACROCELL/12 OD CABINET

Reference and Transmit Frequency Deviation at + 25 degrees C @ 208 Volts		
Time (Minutes)	Measured Reference Frequency (Reference Frequency = 13 MHz)	TX frequency Deviation
0	12.999,999.90	-26 Hz
0.5	12.999,999.89	-21 Hz
1.0	12.999,999.89	-19 Hz
1.5	12.999,999.90	-24 Hz
2.0	12.999,999.90	- 18 Hz
2.5	12.999,999.89	-17 Hz
3.0	12.999,999.90	- 27 Hz
Specification	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

Reference and Transmit Frequency Deviation at + 25 degrees C over voltage/frequency range

Voltage AC	Measured Reference Frequency	TX Frequency Deviation (Hz)
176.8	12.999,999.89	-25 Hz
186.8	12.999,999.91	- 21 Hz
196.8	12.999,999.89	- 26 Hz
206.8	12.999,999.91	- 23 Hz
216.8	12.999,999.91	- 22 Hz
226.8	12.999,999.90	- 27 Hz
236.8	12.999,999.91	- 25 Hz
246.8	12.999,999.90	-15 Hz
256.8	12.999,999.91	- 10 Hz
266.8	12.999,999.91	- 22 Hz
276.0	12.999,999.90	- 21 Hz
SPECIFICATIONS	+/- .000,000,650 MHz or 0.65 Hz [+/- 0.05 ppm]	+ / - 97.04 Hz (+ / - 0.05 ppm)
RESULTS	PASS	PASS

J1 TX Power Deviation = 0.3 dB, Transmit Channel monitored : 565 [1940.8 MHz]

FREQUENCY SPECTRUM TO BE INVESTIGATED
SECTION 2.1057

SECTION 2.1057

FREQUENCY SPECTRUM TO BE INVESTIGATED

Frequency Spectrum to be investigated, Measurement Bandwidth and detector function used meet or exceed the Specification contained in Section 2.1057, 22.917, ANSI C63.4, IS95A, and IS97. All instrumentation used were calibrated according to our Quality Procedure, laid down by NAVLAP.

TEST INSTRUMENTATION LIST

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Manufacturer	Model Number	Serial Number	Description	Last Calibrated mm/dd/yy	Cal Cycle Month
Rohde & Schwarz	CMD57	827519-005	Radio Communication Tester	5/1/00	12
HP	772D	2839A01006	Dual Directional Coupler	6/22/00	12
HP	8563E	3728A07536	Spectrum Analyzer	5/22/00	12
HP	437B	3110A03795	Power Meter	8/11/00	12
HP	8482A	3318A26143	Power Sensor	6/7/00	12
Fluke	PM6685R	SM668747	Frequency Counter	2/16/00	12
Rohde & Schwarz	HFH2-Z6	863544/015	Rod Antenna Monopole	4/13/00	12
Eaton	96002	2436	Biconical Antenna	7/31/00	12
Electro-Metrics	EM-2135/EMC-60	44174	Test Receiver	11/19/99	12
EMCO	3146	1459	Log-Periodic Antenna	7/14/00	12
Rohde & Schwarz	ESVP	879807/049	Test Receiver	9/14/00	12
Rohde & Schwarz	EPM	883613/014	Panorama Monitor	N/A	N/A
EMCO	3115	9006-3460	Double Ridged Horn 1-18 GHz	5/22/00	12