

GENERAL INFORMATION REQUIREMENTS

Paragraph 2.983(a)

Name of Applicant: **Wittis Golden Eagle Technology Limited**

Address of Applicant: **Flat A-B, 11/Floor, Wah Lik Industrial Centre,
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Name of Manufacturer: **Wittis Golden Eagle Technology Limited**

Address of Manufacturer: **Flat A-B, 11/Floor, Wah Lik Industrial Centre,
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Paragraph 2.983(b)

Equipment
Identification: **FCC ID: P67WG-5M5BS**

Paragraph 2.02(c)(1)

Necessary Bandwidth Determination:

The necessary bandwidth was calculated utilizing the following formula:

$$B_n = 2M + 2D \quad \begin{array}{l} M = 3.0 \text{ kHz} \\ D = 1.4 \text{ kHz} \end{array}$$

$$B_n = 2(3.0) + 2(1.4) = 8.8 \text{ kHz}$$

Paragraph 2.1046

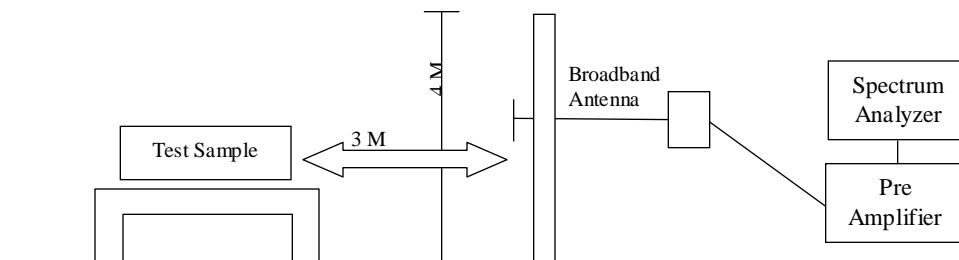
Power Output, Effective Radiated Power

POWER OUTPUT, EFFECTIVE RADIATED POWER (Para. 2.1046)

A. Measurement Procedure:

The transmitter under test was placed on an 80 cm. high non-metallic table on the Open Air Test Site with its antenna polarized vertically. A receive dipole antenna was placed three meters away from the transmitter. The turntable was rotated 360 degrees and the receive antenna was raised and lowered from 1 to 4 meters until a maximum reading was obtained. This reading was recorded. The transmitter under test was replaced with a dipole and signal generator. The signal generator was set to the frequency of the transmitter under test. The level of the signal generator was increased until the level was equal to that previously measured. The required input level from the signal generator in dBm was recorded and converted into milliwatts. This was the Effective Radiated Power of the transmitter.

Setup of the test is shown below:



B. Test Results:

See the following single data sheet for complete results obtained.

Paragraph 2.1047

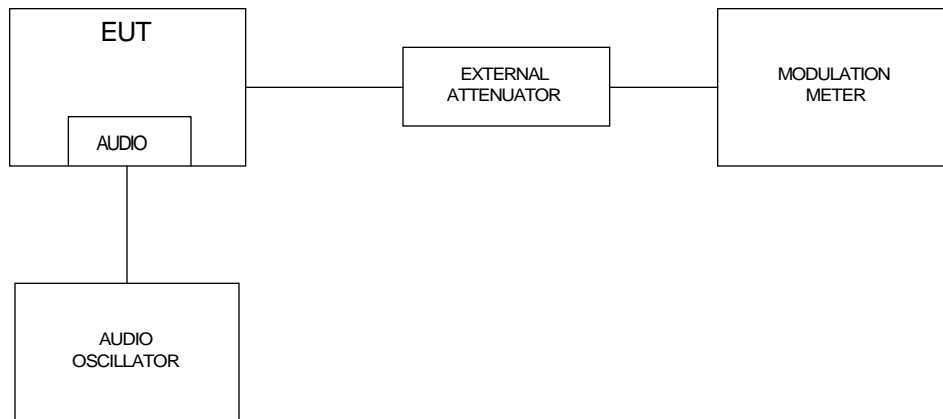
Modulation Characteristics

MODULATION CHARACTERISTICS (2.1047)

A. Measurement Procedure:

An Audio Oscillator was coupled to the Audio Input of the transmitter under test. The RF Output at the antenna terminals was loosely coupled to a modulation meter as shown below. The Audio Input level was adjusted from -60dBm to 0dBm at each frequency listed herein. At each test frequency and level, the FM modulation was recorded.

Setup of the above test is shown below:



B. Test Results:

See the following three data sheets (1 for Audio Frequency Response and 2 for Modulation Characteristics) for complete results obtained.

Paragraph 2.1049

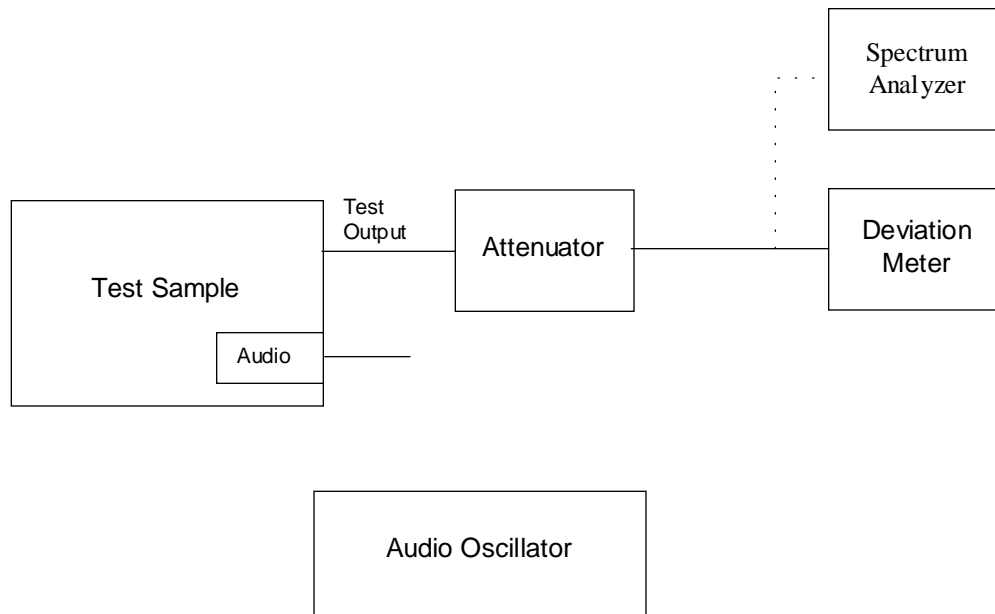
Occupied Bandwidth

OCCUPIED BANDWIDTH (PARA.2.1049)

A. Measurement Procedure:

An audio signal was electrically coupled to the audio input terminals of the test sample. The RF output was monitored using a deviation meter. The audio input level was increased to produce 50% modulation. The RF output was then loosely coupled through external attenuators to a spectrum analyzer and the audio level was increased by 16 dB. The occupied bandwidth of the RF carrier, modulated at 50% plus 16 dB, was then measured. The above procedure was performed with the audio input frequencies of 500, 2500, and 3125 kHz. The modulated signal must be within the template as specified by the applicable paragraph in Part 95. The above was performed at the low and high frequencies.

Setup of the test is shown below:



B. Test Results:

See the following six data sheets for complete results obtained.

Para. 2.1053

Field Strength of Spurious Radiation

FIELD STRENGTH OF SPURIOUS RADIATION (PARA 2.1053)

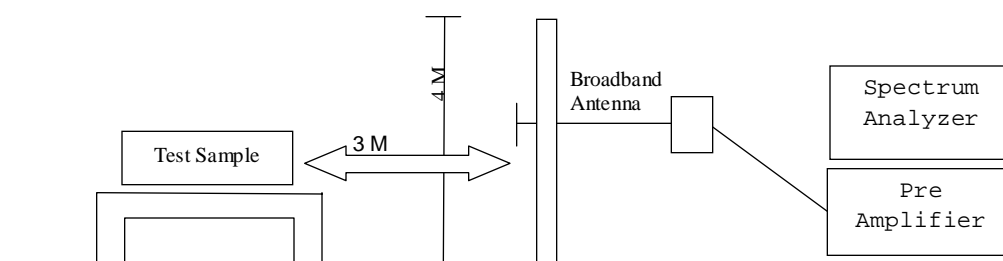
A. Measurement Procedure:

The test sample was then placed on an 80cm high wooden test stand, which was located three meters from the test antenna on an FCC listed test site. The frequency range scanned was from the lowest frequency generated by the test sample to its tenth harmonic. In order to maximize the level of each emission observed from the test sample, the broadband antenna was tuned to the frequency of each emission and the test sample was rotated 360 degrees. To further maximize the each emission observed, the test antenna was both horizontally and vertically polarized, and then was raised and lowered from one to four meters from the ground plane. The limits for all of the spurious emissions was calculated utilizing the measured output power and the following equation:

$$\text{Limit <dB:V/M>} = 20 \log \left[\left\{ (49.2 \times P_T)^{1/2} / 3 \right\} \times 10^6 \right] - (43 + 10 \log P_T)$$

The above procedure was performed at the lower and upper frequencies of the device's range.

Setup of the test is shown below:



B. Test Results:

See the following three data sheets for complete results obtained.

Paragraph 2.1055

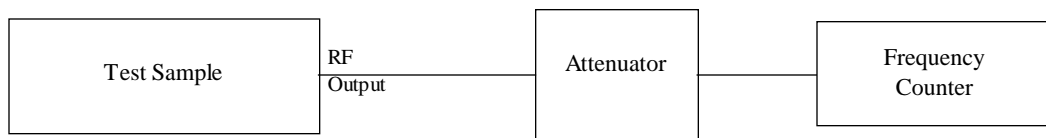
Frequency Stability

FREQUENCY STABILITY MEASUREMENTS (PARA 2.995)

A. Measurement Procedure (Frequency vs. Voltage):

The RF output of the test sample was coupled to a frequency counter through external attenuation. Using a Variable power supply and voltmeter, the input voltage was varied. Measurements were taken with the device being supplied with 85, 100, and 115 percent of its rated input voltage and set to transmit the unmodulated carrier frequency.

Setup of the test is shown below:



B. Test Results:

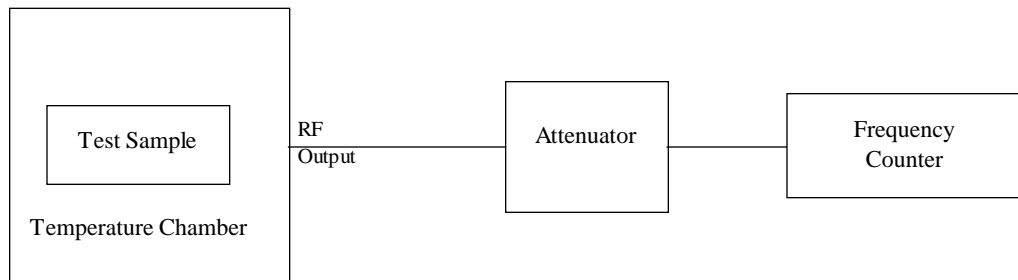
See the following single data sheet for complete results obtained.

FREQUENCY STABILITY MEASUREMENTS (PARA 2.995)

A. Measurement Procedure (Frequency vs. Temperature)

The RF output of the test sample was coupled to a frequency counter through external attenuators. With the counter connected, the test sample was activated and placed into a temperature chamber. The temperature was then programmed to start at -30 degrees Celsius and reach +50 degrees Celsius in 10 degrees increments. Each increment was held for 30 minutes in order to let the test sample stabilize at that temperature.

Setup of the test is shown below:



B. Test Results:

See the following single data sheet for complete results obtained.