

July 19, 2004

Applicant: Inovonics Wireless Corp.
FCC ID: HCQ3B6ETICRM

Correspondence Reference Number: 27228
731 Confirmation Number: EA689243

Re: Action Items regarding Grant approval

- 1) Please provide average radiated measurements for harmonic and spurious emissions that fall in the restricted bands of section 15.205 of the FCC Rules. The test report shows only peak measurements were made.

As the device in question uses pulsed operation, section 15.35(c) states, “Unless otherwise specified, e.g. § 15.255(b), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.”

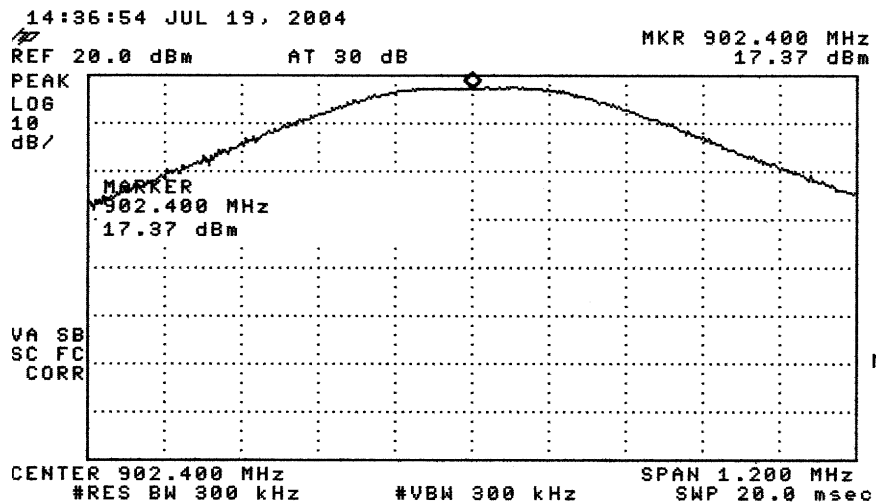
This device transmits for 20 ms out of every 100 ms and therefore has a duty cycle of 20%. Per section 15.35 the peak harmonic and spurious emissions may exceed the General Radiation Limit found in 15.209(a) by the ratio of the duty cycle, which in this case results in a 14 dB relaxation of the limit from 54 $\mu\text{V}/\text{m}$ to 68 dB $\mu\text{V}/\text{m}$ (above 1000 MHz) for the peak measurements shown in the report.

2) Please provide peak conducted RF power output measurements.

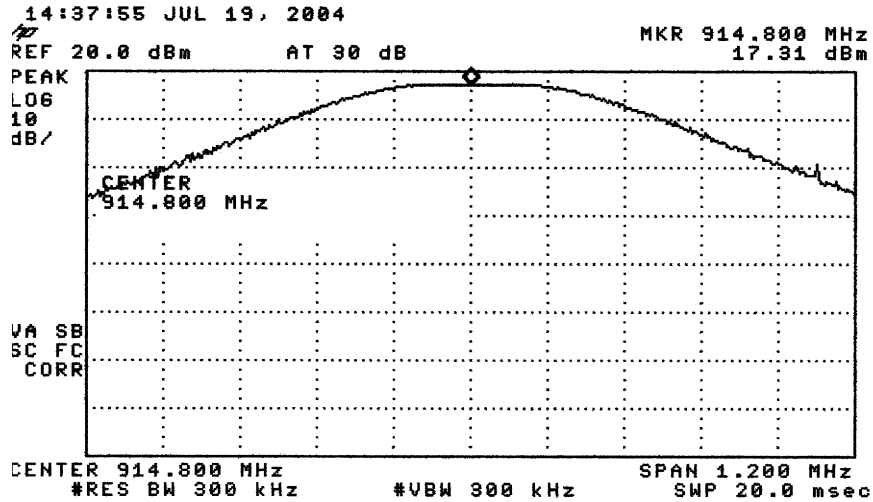
Pursuant to FCC Public Notice DA 00-705, the following measurements were made using an Agilent 8594E spectrum analyzer having the following settings:

Span: 1250 kHz (approximately 5 times the 20 dB bandwidth)
RBW: 300 kHz (RBW > the 20 dB bandwidth)
VBW: 300 kHz (VBW \geq RBW)
Sweep: auto
Detector: peak
Trace: max hold

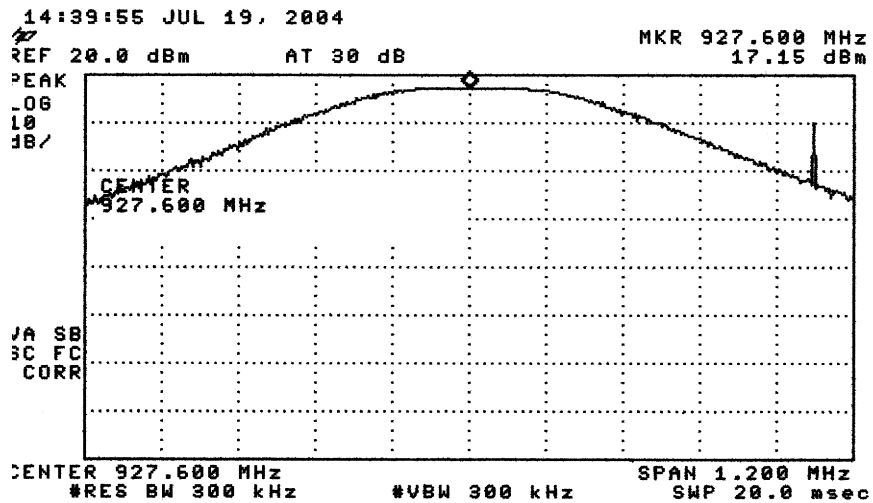
The device is modified so that the antenna is removed and a 3" semi-rigid coaxial cable having negligible insertion loss connects it to the spectrum analyzer. Please note that the device in question is designed to have an output power of +17 dBm (50 mW) however a variation of +1, -2 dB is anticipated.



Plot 1: RF output at the low channel



Plot 2: RF output at the middle channel



Plot 3: RF output at the high channel

3) Please provide conducted spurious and harmonic emissions measurements.

There is no way to measure conducted spurious and harmonic emissions without altering the device. The device was taken to an accredited and listed lab, International Approvals Laboratories, and the relevant radiated measurements were taken using their 3-meter Open-Air Test Site.