

Chris,

Please see responses below:

1. The Confidentiality letter requests that the entire application be held confidential, which is not allowed per FCC rules. The letter must reference both 0.459 and 0.457 and specify the exact exhibits that are being requested for confidentiality of the exhibits that the FCC allows to be held confidential.

Revised. Please see file: Confidentiality_Rev2.pdf

2. The report does not indicate that the orientation of this hand-held transmitter was changed between x, y, and z for measurements and the photos only show unit flat on table. Please ensure that this device was measured in all 3 orthogonal axis and update the report accordingly.

All three axis measurements were performed. During the maximization, we alternate the antenna polarization with the combination of the rotation of turn table. So laying flat on the table has covered both X & Y axis. Then I put the EUT in vertical position and tested with the same procedure which covers my Z axis orientation. We found that laying flat on the table with the combination of horizontal polarity of receive antenna are the worst case and only the worst case was put on the report.

3. The schematic shows a wired interface option and the photos show a connector on the PCB. If this transmitter has the ability to transmit the RF signal when the optional cable is attached, was this investigated during the compliance testing to determine worst case emissions?

The enclosure was sealed and provides no external access to user. Attachments are the picture of the enclosure seams along all 4 sides which illustrate the integrity of the unit. From the front, looks like you can open a cover and get access to the board. I have included an inner picture to show that it is not accessible.

4. The Duty-Cycle calculation on page 16 of 39 in the test report incorrectly uses the Tx-off time in the denominator instead of using the full Pulse duration in the denominator. A 33.85% Duty Cycle would calculate to -9.4dB, not -5.82dB. There are also typos in the units used in all the field-strength limits in the table (should be uV/m & dBuV/m @ 3 meters). It appears as though the measure data was not corrected for the Duty-Cycle factor. The rows for measurement data indicate average or peak, but the column for uncorrected data indicates the use of a QP detector. Was a QP detector used? Was the duty cycle correction factor used? Please update the report to clarify these points.

All data have been applied with duty cycle correction factor. The measurements were performed in Peak and Average mode. QP detector was not used. (Report revised, please see file: EMCS20284-FCC231_Rev1.pdf)

Carrier Emissions Limit:	260 - 470 MHz : 3750 to 12500 :V/m (linearly interpolated) = 4543.2 :V/m = 73.15 dBuV @ 3m
Duty Cycle Duration:	Pulse train =TX _{ON} + TX _{OFF} = 11.995ms + 23.444ms = 35.440ms FCC Part 15.35(c) : for pulse trains > 0.1 sec., use 0.1 sec Duty Cycle Correction = 20 Log (11.995ms/35.440ms) = -9.41 dB
Spurious Emission Limits:	@ 3m with carrier = 315 MHz:454.3 :V/m = 53.14 dBuV
Restricted Band Limits:	Limit = 20 Log (500uv/m) = 53.97 dB @ 3m

Radiated Emissions limits from Sections 15.205(a), 15.209(a), and 15.231(b).

	Frequency (MHz)	Antenna Polarity (H/V)	EUT Azimuth (Degrees)	Antenna Height (m)	Uncorrected Amplitude QP Detector (dBuV)	Amplitude corrected with Duty Cycle Factor (dBuV)	Antenna Correction Factor0020 (dB/m) (+)	Cable Loss (dB) (+)	Corrected Amplitude (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Peak	315	H	267	1	40.69	13.77	14.25	3.01	31.03	93.15	-62.12
Average	315	H	267	1	32.24	10.91	14.25	3.01	28.17	73.15	-44.98

Fundamental Radiated Emissions Test Results

If you need any additional information, please let me know.

Thanks!

Jennifer

From: Chris Harvey [mailto:charveyemc@verizon.net]

Sent: Thu 4/19/2007 1:54 PM

To: Samantha Sharbonda; Jennifer Sanchez

Subject: Additional Information needed Linak, FCC ID: UXR-MAHB, MT#20284

4/30/2007

Sam and Jennifer, I have reviewed the above referenced TCB application and find that the following items need to be addressed before the review can be continued:

1. The Confidentiality letter requests that the entire application be held confidential, which is not allowed per FCC rules. The letter must reference both 0.459 and 0.457 and specify the exact exhibits that are being requested for confidentiality of the exhibits that the FCC allows to be held confidential.
2. The report does not indicate that the orientation of this hand-held transmitter was changed between x, y, and z for measurements and the photos only show unit flat on table. Please ensure that this device was measured in all 3 orthogonal axis and update the report accordingly.
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4. The Duty-Cycle calculation on page 16 of 39 in the test report incorrectly uses the Tx-off time in the denominator instead of using the full Pulse duration in the denominator. A 33.85% Duty Cycle would calculate to -9.4dB, not -5.82dB. There are also typos in the units used in all the field-strength limits in the table (should be uV/m & dBuV/m @ 3 meters). It appears as though the measure data was not corrected for the Duty-Cycle factor. The rows for measurement data indicate average or peak, but the column for uncorrected data indicates the use of a QP detector. Was a QP detector used? Was the duty cycle correction factor used? Please update the report to clarify these points.
5. The test report contains blank sections for Exhibit A, Hopping Capability Requirement and Exhibit B, Non-Coordination Requirement which do not appear to be applicable to a 15.231 device.

Please provide a single comprehensive response, but feel free to ask questions if needed.

Best regards,

Chris Harvey





