

FCC ID: T9UVRFM6

To these problems, We had revised the data, please see the reply as follows:

1: Block Diagram: Please provide a more detailed block diagram, particularly of the FM transmitter block. The block diagram should include frequencies of internal oscillators and LOs.

Reply: Please see the upload data T9UVRFM6_Block Diagram_rev1.pdf

2: Test Report: The data in the test report shows the following fundamental level:

107.9 MHz, Vertical, Peak, = 36.9 dBuV

The report also indicates a spurious emission of :

86.332 MHz, Vertical, Peak = 38.28 dBuV

ALSO... The test report shows the following fundamental level:

88.1 MHz, Vertical, Peak, = 30.3 dBuV

The report also indicates a spurious emission of :

176.3 MHz, Vertical, Peak = 33.1 dBuV

FCC Rules do not allow spurious emissions to be higher than the fundamental signal. This will have to be addressed.

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf

See section 4.2.2. test data

3: The bandwidth plots for the fundamental do not show compliance.

Please note that the FCC rules (correctly stated in the test report) indicates that the entire width of the fundamental must be within a 200kHz band centered around the operating frequency. For example, this means that if the device is operating on 88.3 MHz, the level of the fundamental must be a minimum of 20 dB below carrier at 88.2MHz and 88.4MHz.

This does not mean that the measurement resolution bandwidth should be 200kHz, in fact, if it is, there is no way to show passing data. The resolution bandwidth for this measurement should be around 1% of the expected signal bandwidth. If the signal is expected to be between 100kHz and 200kHz wide, a measurement bandwidth of 3 kHz might be a good choice. Please be sure to set the VBW = RBW*3

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf

See bandwidth test.

Please note also while operating on 88.1 MHz, the level of the signal at 88MHz (only 100kHz away) will have to be below the limits in 15.249. This is also true when operating on 107.9MHz for the band edge at 108.0MHz. Further, there is a restricted band that begins at 108MHz. Therefore any emissions within the 108 - 121.94MHz band are subject to the limits in 15.205. (15.209 refers to 15.205 for restricted bands)

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf

See the frequency range test.

One more note. When providing the bandwidth plots, please ensure and verify in the test report that the device used for an input signal (for example a portable CD player or MP3 Player were turned up the highest volume so that the worst case RF bandwidth is measured.

. Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf
See the section 3.2.

4: There are spurious emissions indicated in the report that are subject to the restricted band limits in 15.205. They are:

Fundamental : 107.9, Horz
Emission at 281.23 MHz
Emission at 324.88 MHz

Fundamental : 107.9, Vert
Emission at 172.6 MHz
Emission at 279.1 MHz

Fundamental : 88.1, Horz
Emission at 111.48 MHz

Fundamental : 88.1, vert
Emission at 133.79 MHz

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf
See radiation test

5: It is not clear how the information in the table indicates bandwidth compliance. Perhaps I am not interpreting it correctly. Please provide an explanation of the data in the table.

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf
See bandwidth test.

6: Please provide additional information regarding the modulating characteristics of this device. From analog music to FM RF. How is this accomplished?

Reply: Please see the upload data T9UVRFM6_Operational description_rev1.pdf

7: Please confirm that the device was tested in three different axis (X,Y and Z) and the data provided is for the axis that produced the worst case emissions.

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf
See the section 3.2.

8: User Manual. The user manual indicates that this device will tune to 87.7 MHz. This is outside of the allowed band of operation. It is noted that the test report states 88.1 MHz. This is allowed. Please outline how the device will be prevented from tuning to 87.7 MHz within the United States and correct the user manual for those units that will be shipped into the United States.

Reply: Please see the upload data T9UVRFM6_User manual_rev1.pdf

9: The photos of the test setup do not show any device connected to the input, thus it is unclear what the unit was transmitting or that it was tested in its worst case configuration. Please describe the transmitted signal from the device (what the modulating signal) or repeat the radiated emissions tests with a music source.

Reply: Please see the upload data T9UVRFM6_Test setup photos_rev1.pdf

10: There was no confidentiality requested with this application. Please verify that the schematic, block diagram and operational description DO NOT need to be confidential. If they do need to be confidential, please provide a confidentiality request letter.

Reply: Not required

FYI: the cover of the test report refers to FCC part 15 Subpart B. This device is subject to FCC rule, 15.239. This rule is in part 15, subpart C.

Reply: Please see the upload data T9UVRFM6_Test report_rev1.pdf