

3.4.2 Circuit Description – per 2.1033(b)4

This module is the 902-920MHz ISM band transmitter used to transmit the audio signal to the headphone receiver device. This device is an integrated module that contains all of the circuitry needed to create the carrier and modulate the carrier from the base-band stereo audio signal. The 902-928MHz carrier is developed from a 14.4MHz TCXO oscillator on the board. This 14.4MHz oscillator is multiplied to the desired frequency using the LMX2332 PLL and VCO. The loop response of the VCO/PLL is set slow enough that the VCO can be modulated with an MPX type FM stereo signal. This MPX type stereo signal is created using a separate analog base-band processor section on the transmitter module board. This circuit limits the modulation signal if the input signal exceeds the recommended input signal range of the transmitter module. This circuit also provides the necessary 19KHz pilot tone required in the base-band MPX signal. The power supply within the transmitter module is regulated using a linear regulator. This allows the power supply to vary between 9V DC and 18V DC without affecting power or modulation.

