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DEVICE DESCRIPTION FOR VIDEO TRANSMITTER MODEL 1 (QL7SSIVTX01)

The DUT is a FM modulated video transmitter that has a 6.0 MHz FM subcarrier which carries audio modulation.

The DUT consists of a 4.00 MHz quartz crystal controlled reference oscillator that drives a PLL frequency synthesizer. The synthesizer consists of a PLL integrated circuit, a loop filter, and a voltage controlled oscillator. The frequency synthesizer has a very low loop bandwidth that allows a video signal to modulate the frequency of the VCO without loosing phase lock.

The audio signal is amplified, limited, and preemphasized. This signal is applied to a 6MHz subcarrier generator where it produces a 6MHz FM audio subcarrier.

The video signal is preemphasized using a network that conforms to the standard practice. This signal is then amplified and summed with the audio subcarrier. The summed modulation signal is applied to the VCO control input.

The output of the VCO is applied to a driver amplifier and then filtered . This signal is then applied to the power amplifier. The RF output if the power amplifier is applied to a low-pass filter followed by a bandpass filter. The filtered RF signal is then applied to the output connector.