

## Circuit description of SPEAR4000R Remote Unit

### 1. SPEAR4000 Remote Board

When the button of the remote unit is pressed, the power is applied to the stage of the Encoder IC and FM modulation oscillator (Q3, L4, C27, L10, C32, L6, C29, D2), and modulated to FSK signal which frequency is 49.75277 MHz, and converted to the triple frequency of 149.2593 MHz. The signal is fed to the LC tuning circuit (L9, C25) and filtered the unwanted signals, and fed to the Tripler Amplifier Stage (Q2, L3, C24). The final frequency is converted to 447.775 MHz and also tuned through the L.C tuning circuit (L8,C22) and fed to the final Power Amplifier Stage (Q1, L2, C21). The signal is filtered and matched there Impedance by the Antenna Matching circuit (L5, C10, C11, L12) and applied to the low pass filter stage (L7, C19, C20) through the output signal is radiated from the antenna.