

## Introduction

LW310 is a low-cost, highly integrated RF IC designed for AM communication systems. It includes an RF oscillator, a microphone amplifier and a speaker driver. It is particularly suitable for walkie-talkie application in the frequency band from 27MHz to 49MHz. By changing a few external components, energy saving LW310 can also support other applications such as interactive radio-controlled toy and short distance voice/data communicator.

## Features

- Half Duplex Transceiver
- Frequency range from 27 MHz to 49 MHz
- Low power consumption: TX - 25mA, RX - 2.8mA
- Operate from 0 °C to 70 °C
- Only require a few inexpensive external components
- Built-in microphone amplifier
- Built-in speaker driver
- Low cost, small size
- TQFN-32 package or die form for PCB bonding
- Full ESD protection

## Applications

- Baby monitor
- Radio-controlled car, toys
- Short distance voice/data communicator
- Walkie-talkie

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LW310 49 MHz AM Transceiver  
Preliminary DataSheet  
(subject to change)

Rev 0.3, December, 2008

## Electrical Characteristics

### Maximum ratings

Rating	Symbol	Value	Unit
Power Supply Voltage	$V_{BATT}$	7	Vdc
Junction Temperature	$T_J$	125	°C
Storage Temperature Range	$T_{STg}$	-55 to 125	°C

### Recommended Operating Conditions

Characteristics	Value	Unit
Supply voltage	5 – 6.5	V
RF frequency range	27 – 49	MHz

### DC Electrical Characteristics

Characteristics	Minimum	Typical	Maximum	Unit
Operating current				
Receiving mode	-	2.8	-	mA
Transmit mode	-	25	-	

### AC Electrical Characteristics

Characteristics	Minimum	Typical	Maximum	Unit
Output power		-10		dBm
Receiving sensitivity	-	-70	-	dBm

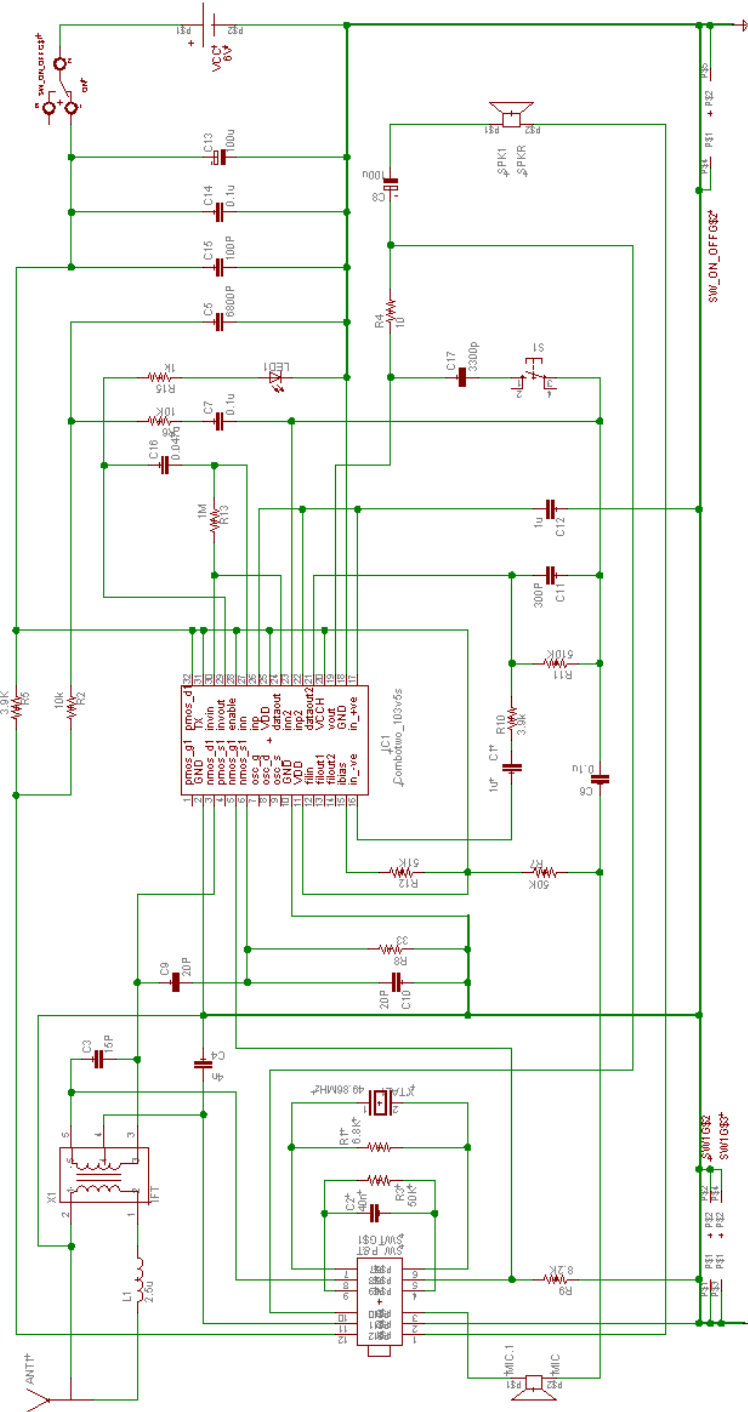
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## Application Example

### A. Schematic of 27/49MHz Walkie-Talkie with Microphone

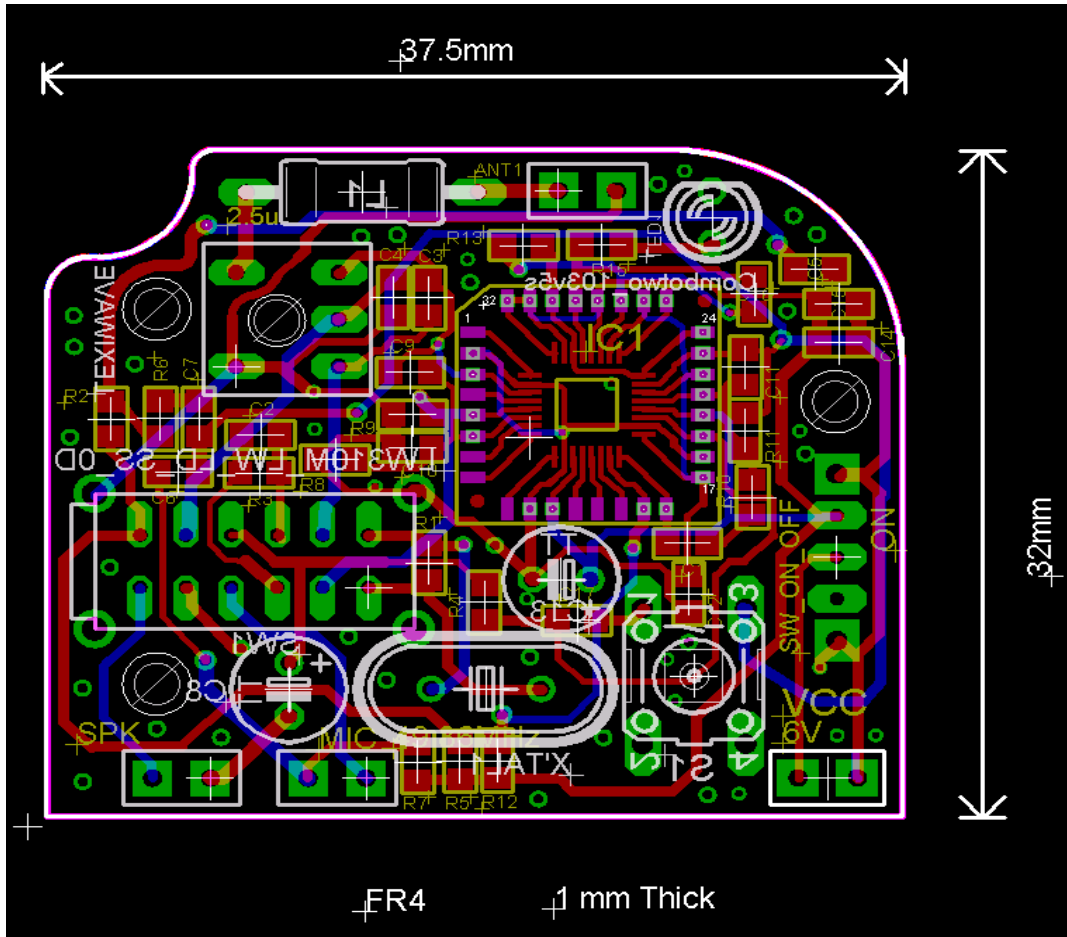


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## B. Layout of 27/49MHz Walkie-Talkie with Microphone



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