



WALKI-TALKI SOC

1. GENERAL DESCRIPTION

The Conwise Walki-Talki is a highly integrated system on chip incorporating all base-band signal processing and system control functions that are required for a family radio or walkie-talkie system. The chip provides some functions such as 38 standard code for CTCSS tone generator and CTCSS detector, VOX(Voice Activity Detection) and ALC(Auto-Level Control) for TX path, Music call tone generator, 4 Ω speaker/ear driver, micro-processor with FRS MMI (Man-Machine Interface) software and LCD driver. In the meantime, It provides circuit for external microphone control. In addition, it is easy to connect RF module by setup PLL synthesizer I/O control, power switch and RSSI detection circuit. This chip allows half-duplex operation over a 3 volt voltage and 5 volt for speaker driver. Moreover, its low power consumption makes it ideal for battery applications. Moreover, this chip also consists of some OP amplifiers integrated with different filter to allow for easy control of the analog interface.

In particular, this chip is very suitable for Walki-Talki with CTCSS systems.

2. FEATURES

- 3.0 volt power supply for system except for speaker driver and 5V for speaker driver
- Master clock rate: 12.288 MHz crystal typically.
- Support CTCSS Tone Generator/Detector with 38 standard codes (from 67.0 Hz to 250.3 Hz)
- Integrated audio suppression filter for sub-band tone injection on Transmission path
- Integrated tone elimination for quality audio on RX path
- Built-in RX detection time to speaker on less than 200 ms
- Built-in TX time less than 200 ms (EEPROM can setup it)
- Built-in VOX(Voice Activity Detection) for hand-free microphone input
- Built-in 4-Level ALC(auto-level control) for transmission path
- Provide Battery detector, RSSI detection
- Provide 8 Key Input Controls
- Provide gain/volume control with 8 level for speaker driver
- Built-in High-power speaker driver with min 4 Ω load
- Built-in Monitor, Auto-Power OFF(APO), Roger Tone, Key Beeper
- Built-in Call Tone Music with 6 group
- Built-in LCD driver for 4X 14 LCD panel
- Built-in AUX /MIC with Comparator to provide internal and external microphone input without glue logic
- Easy to connect RF module with internal 6 power switches and 3-pin control to PLL synthesizer
- Very low external components for full function
- Complete FRS' s MMI(Man-Machine Interface) with external serial EEPROM for configuration
- Packaged in 80-pin LQFP