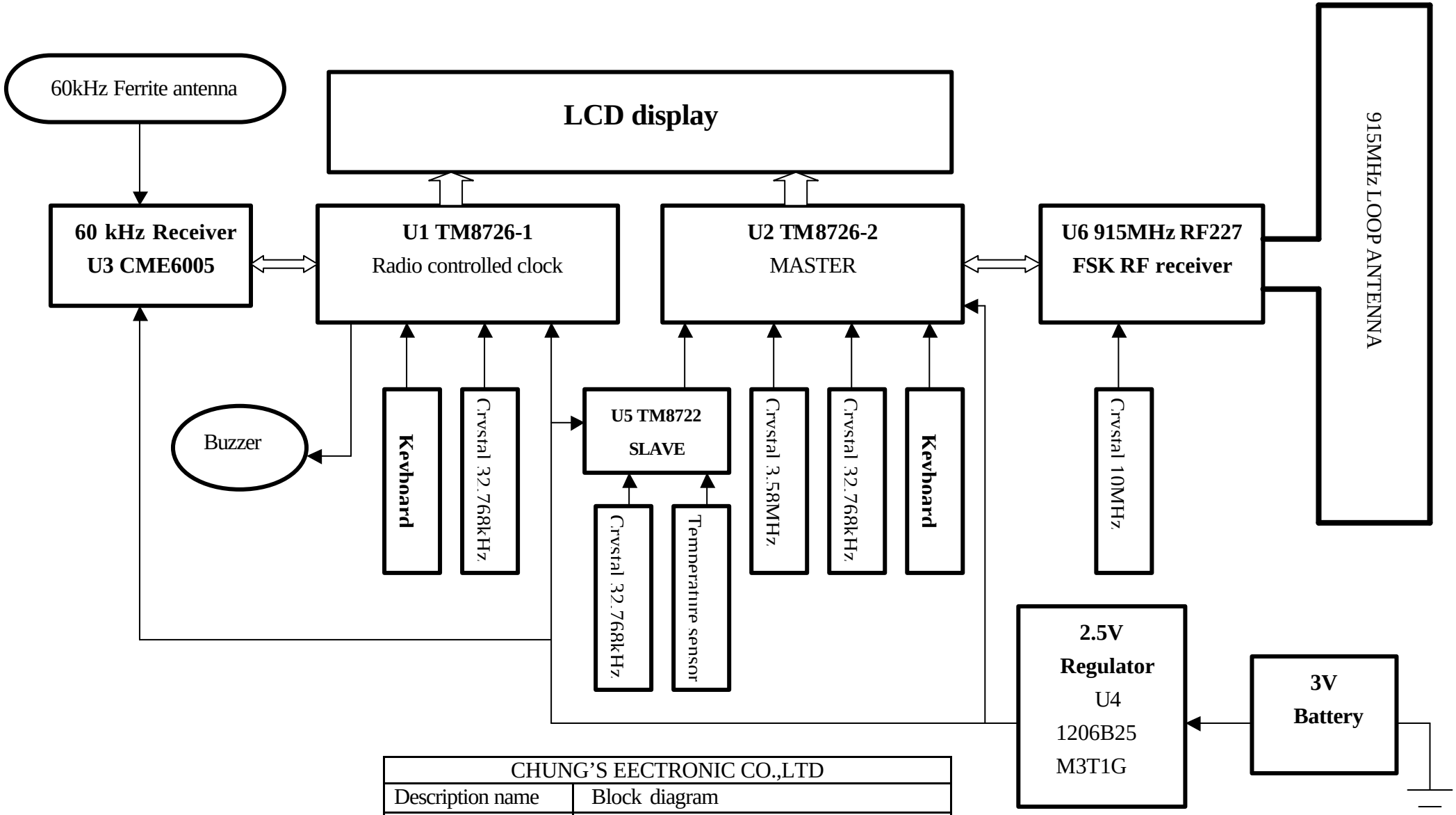
**CHUNG'S ELECTRONIC CO.,LTD.**

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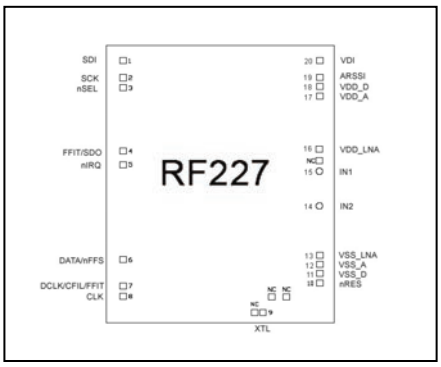
|---|---|
| Description name | Block diagram |
| Model | C8318 |
| File No | FCC8318-BN |
| Date | 1/4/09 |
| Name | KHChan |

# Universal ISM Band FSK Receiver RF227

## DESCRIPTION:

RF227




Hope's RF227 is a single chip, low power, multi-channel FSK receiver designed for use in applications requiring FCC or ETSI conformance for unlicensed use in the 315, 433, 868, and 915 MHz bands. Used in conjunction with Hope's FSK transmitters, the RF227 is a flexible, low cost, and highly integrated solution that does not require production alignments. All required RF functions are integrated. Only an external crystal and bypass filtering are needed for operation.

The RF227 has a completely integrated PLL for easy RF design, and its rapid settling time allows for fast frequency hopping, bypassing multi-path fading, and interference to achieve robust wireless links. The PLL's high resolution allows the usage of multiple channels in any of the bands. The baseband bandwidth (BW) is programmable to accommodate various deviation, data rate, and crystal tolerance requirements. The receiver employs the Zero-IF approach with I/Q demodulation, therefore no external components (except crystal and decoupling) are needed in a typical application. The RF227 is a complete analog RF and baseband receiver including a multi-band PLL synthesizer with an LNA, I/Q down converter mixers, baseband filters and amplifiers, and I/Q demodulator.

The chip dramatically reduces the load on the microcontroller with integrated digital data processing: data filtering, clock recovery, data pattern recognition and integrated FIFO. The automatic frequency control (AFC) feature allows using a low accuracy (low cost) crystal. To minimize the system cost, the chip can provide a clock signal for the microcontroller, avoiding the need for two crystals.

For low power applications, the device supports low duty-cycle operation based on the internal wake-up timer.

### BLOCK DIAGRAM