CIRCUIT DESCRIPTION

Device: Narrow Band Receiver

Model: RF5108 -433

ETSI Identifier:

Schematic Diagram: see UA634_REVB_SCH.pdf

Description:

This device is a narrow band ASK receiver for 433.92MHz. It receives signals in the area covered, demodulates the signals then sends them to the control unit of the wireless security system.

The unit consists of two main circuit sections, a control section with a microprocessor (ST72F324) and an ASK receiver (TDA5200).

ASK Receiver: The antenna receives the incoming signals and feeds them to the front RF amplifier and LNA of TDA5200 to achieve good sensitivity and selectivity. The mixer mixes signals from LNA and the VCO. The reference frequency of 6.6128125MHz for the PLL is provided by the control section to lock the free running VCO to 423.22MHz. After mixing, an IF filter passes the desired signals to the IF amplifier and the demodulator. The demodulated signal then is sent to the control unit for further processing.

The Control Section: This section provides the reference frequency and the channel enable signals to switch antennas. It also controls the activities of the Keybus interface.

Abbreviations:
LNA = Low Noise Amplifier
PLL = Phase Locked Loop
IF = Intermediate Frequency
VCO = Voltage Controlled Oscillator