

General description

The RF signal sent by the remote is being picked-up by the receiver section which converts it into data via an on-board data slicer. Depending on the data received, the PARAKEY will disarm a panel via the green and yellow wires, and may trigger one or more of the 4 on-board PGMs (programmable output).

Device operation

The UAA3201 is a fully integrated single chip receiver, primarily intended for use in VHF or UHF systems employing direct AM return-to-zero (RZ) Amplitude Shift Keying (ASK) modulation.

A 318MHz RF signal is being picked-up with an external antenna. The antenna consists of two one quarter elements, one to the input of the receiver, the second is connected to the ground plane of the printed circuit board. A one stage low-noise transistor is used as an RF amp to the input of the UAA3201. The 317.5MHz signal is being generated by an external SAW resonator via an onboard oscillator, which is also injected directly in the UAA3201.

An on-board mixer will produce a 500KHz signal which is being applied to the IF amp. The IF amp is a differential input, single ended output emitter and also provides some additional gain. The IF filter is an external elliptic filter and consists of an LC circuit. The limiter amplifier consists of three DC coupled amplifier stages, with a total gain of 60dB. The signal is removed by the first order low pass filter, after passing a buffer stage the signal is split into two paths and is fed to the comparator which will produce the data output. Finally the data is injected to the micro-controller to process.

