Radio Receiver

# RR8-XXX

## 3V Supply Voltage - Very Low Consumption Super Regenerative Radio Receiver

### General description

The RR8-XXX is a super regenerative data receiver.

Sensitivity typically exceedes -90dBm when matched to 50 ohm.

Typical current consumption is 0.5 mA.

Low Turn-on Time (150 msec).

It shows high frequency stability also in presence of mechanical vibrations, manual handling and in a wide range of temperature.

The frequency accuracy is very high thanks to laser trimming process. PATENTED.

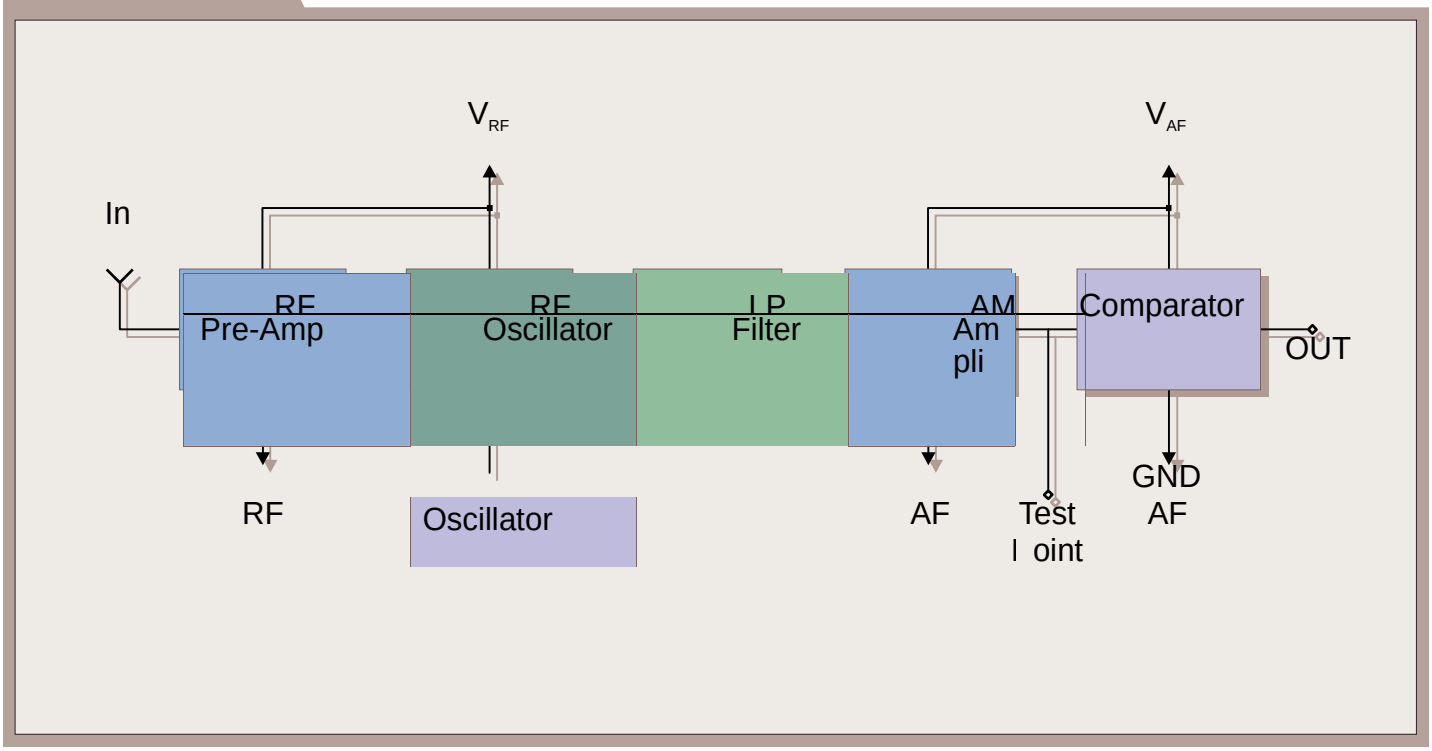
**XXX:** custom-specified working frequency (200 ÷ 450 MHz)

Standard European and U.S. frequencies (315MHz, 418MHz, 433.92MHz) are readly available from stock.

### Applications

- Battery powered portable devices
- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting

### BLOCK DIAGRAM



## Electrical Characteristics

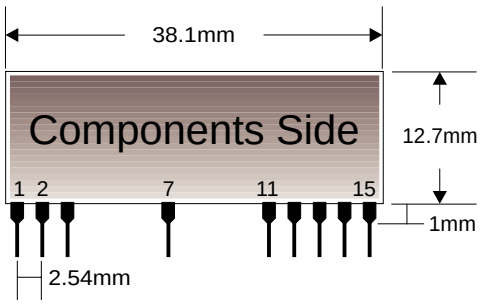
Ta = 25°C unless otherwise specified

| | CHARACTERISTICS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|
| $V_{RF}$,$V_{AF}$ | Supply Voltage | 2.7 | 3 | 3.3 | VDC |
| $I_S$ | Supply Current | | 0.5 | | mA |
| $F_W$ | Working Frequency | 280 | | 450 | MHz |
| | Tuning Tolerance | | ±0.2 | ±0.5 | MHz |
| $B_W$ | -3dB Bandwidth | | ±2 | ±3 | MHz |
| | Max Data Rate | | | 2 | KHz |
| | RF Sensitivity (100% AM) | | -90 | | dBm |
| | Level of Emitted Spectrum | | -65 | -60 | dBm |
| $T_{ON}$ | Turn-on Time | | 150 | | msec |
| $T_{OP}$ | Operating Temperature Range | -25 | | +80 | °C |

## Pin Description

| | | | |
|---|---|---|---|
| 1 | RF +$V_{CC}$ | 9 | NC |
| 2 | RF GND | 10 | NC |
| 3 | IN | 11 | AF GND |
| 4 | NC | 12 | AF +$V_{CC}$ |
| 5 | NC | 13 | Test Point |
| 6 | NC | 14 | OUT |
| 7 | RF GND | 15 | AF +$V_{CC}$ |
| 8 | NC | | |

## Mechanical Dimensions




## TYPICAL APPLICATION