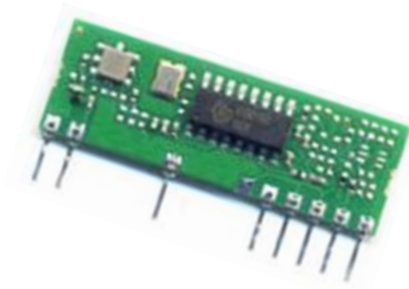


# Wireless Transparent Modules Datasheet

## 32001415

### OOK/ASK SUPER HETERODYNE RECEIVER

## Data Sheet



### Overview

Low cost, high performance OOK/ASK Super Heterodyne receiver in the 434MHZ ISM Band, manufactured in SMT technology on printed circuit board.

Typical applications are remote control system, security systems, data transmission, industrial controls, home automation.

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## 1. Description

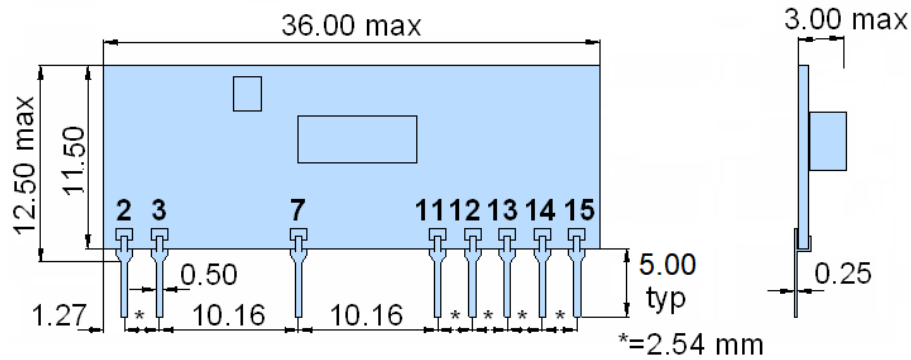
Suitable for all HCS, HT12 encodings and similar. RSSI output proportional to received signal level. RF front-end filter assures great immunity to out-of-band interferers.

CATEGORY 2 RECEIVER developed according to ETSI EN 300 220 European Standard.

The module meets with the Radio Equipment Directive (RED) 2014/53/EU.

Compliant with REACH and RoHS directives.

## 2. Mechanical Dimensions



## 3. Pin Definition

- 2 = GND
- 3 = RF Input (50 Ω)
- 7 = GND
- 11 = GND
- 12 = + Vcc
- 13 = RSSI Out
- 14 = TTL Output – Data OUT
- 15 = + Vcc

## 4. Electrical characteristics

### 4.1 Absolute Maximum Ratings

| Parameter                               | Max.      | Unit |
|---|-----------|------|
| Supply voltage, +Vcc, pin 12:           | 5.5       | V    |
| Radio Frequency Input, pin 3:           | 10        | dBm  |
| Output pins voltage with respect to GND | +Vcc      | V    |
| Storage Temperature:                    | -40 ÷ 100 | °C   |
| Operating Temperature:                  | -20 ÷ 70  | °C   |

### 4.2 Operating Condition

|  |
|--|
| GENERAL ELECTRICAL CHARACTERISTICS @ 25 °C |
|--|

| Parameter            | Min. | Typ.   | Max. | Unit | Notes        |
|----------------------|------|--------|------|------|--------------|
| Supply Voltage (Vcc) | 4.0  | 5.0    | 5.5  | V    |              |
| DC Current Drain     | -    | 7.0    | -    | mA   |              |
| Operating Frequency  | -    | 433.92 | -    | MHz  |              |
| Sensitivity          | -    | -105   | -    | dBm  | See note 1   |
| RF Bandwidth (-3dB)  | -    | 250    | -    | kHz  | See note 1,4 |
| Baud Rate            | -    | -      | 4800 | Baud |              |
| Start-up time        | -    | -      | 35   | ms   | See note 2   |
| Output Logic Low     | GND  | -      | 0.1  | V    |              |
| Output Logic High    | -    | +Vcc   | -    | V    |              |
| Output load (pin 14) | 50   | -      | -    | kΩ   |              |

#### 4.2.1 Notes:

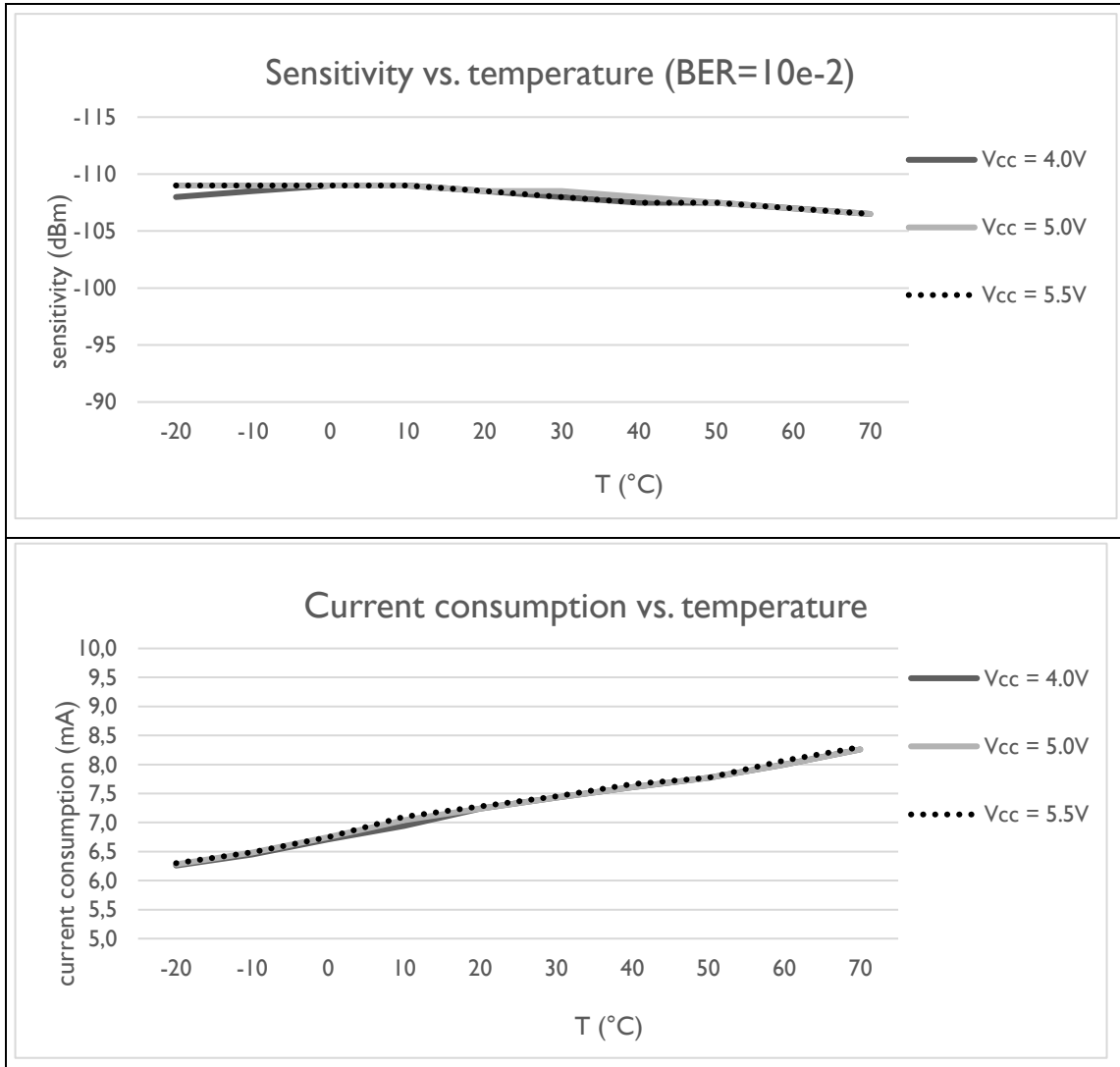
**Note 1:** Test signal AM pseudo random code NRZ (mod. depth 100%) 2400 Baud. Result at BER=10<sup>-2</sup> or better.

**Note 2:** Time by power on to valid data reception

**Note 4:** All RF parameters measured with input (pin 3) connected to 50-Ω impedance signal source or load

### 4.3 Temperature Range Curves

**Note:** All RF parameters measured with input (pin 3) connected to a 50-Ω impedance signal source or load.



## 5. Application Notes

| Title                 | Description                        | Doc           |
|-----------------------|------------------------------------|---------------|
| PCB Layout Guidelines | Hints how to make a good RF design | AN_RF_001.pdf |
|                       |                                    |               |

## 6. Regulatory Approvals

| Doc              | Title                     | Description  |
|------------------|---------------------------|--|
| 32001415_DoC.pdf | Declaration of Conformity | Declaration of the conformity with the essential requirements of the European Directive 2014/53/EU |
|                  |                           |  |
|                  |                           |  |

## 7. Revision History

| Revision | Date       | Description       |
|----------|------------|-------------------|
| 1.0      | 20-07-2018 | Release           |
| 1.1      | 19-12-2018 | Pin length adjust |
| 2.0      | 03-11-2020 | Final release     |