

# Wireless Transparent Modules Datasheet

## 32001414

### OOK/ASK SUPER HETERODYNE COMPACT 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

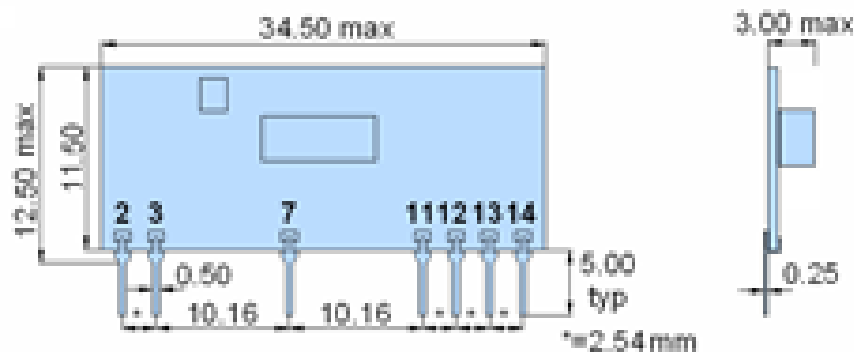
Thanks to an efficient integrated noise cancellation filter, you get a good noise reduction and restoration of the integrity of the received signal, providing excellent performances. Suitable for all HCS, HT12 encodings and similar. RSSI output proportional to received signal level. RF front-end filter 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  $\Omega$ )
- 7 = GND
- 11 = GND
- 12 = + Vcc
- 13 = RSSI Out
- 14 = TTL Output – Data OUT

## 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	-	8.1	-	mA	
Operating Frequency	-	433.92	-	MHz	
Sensitivity	-	-105	-	dBm	See note 1
RF Bandwidth (-3dB)	-	405	-	kHz	See note 1,4
Selectivity (-6dB)	-	520	-	kHz	See note 1,4
Selectivity (-60dB)	-	1.25	-	MHz	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.

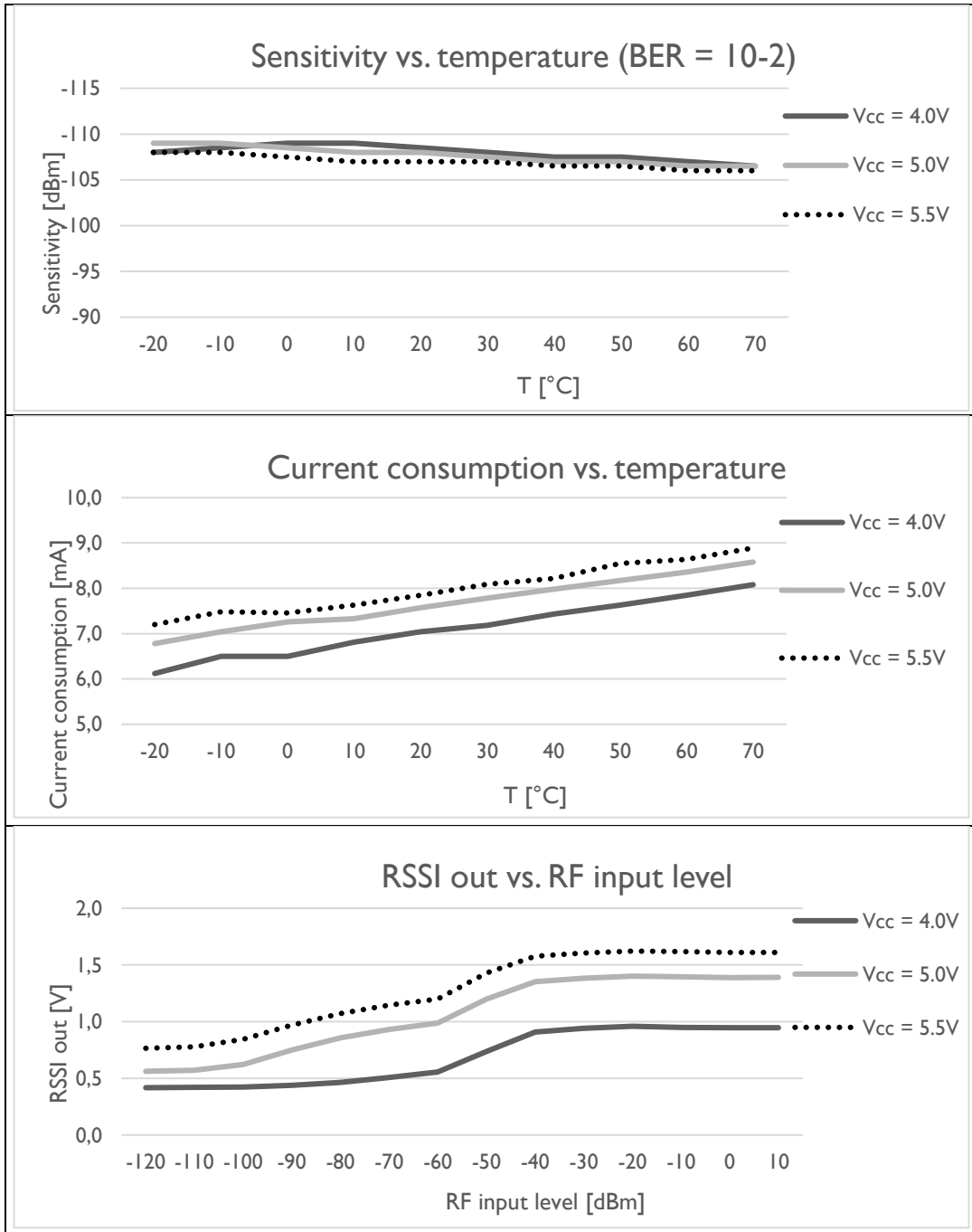
**Note 2:** Time by power on to valid data reception

**Note 3:** Time by test signal at RF input 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
32001414_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
2.0	27.08.2019	Final Release