

# Narrowband radio transceiver

## STD-601 434 MHz

The STD-601 434 MHz is a miniature 434 MHz band transceiver designed for industrial remote control applications. This module conforms to the EN 300 220 standard.

The STD-601 434 MHz has a simple serial interface and allows own communication protocol to be used. The RF power, data rate and channel can be set through the use of dedicated serial commands.

### Features

- Small 20 x 32 x 5 mm SMD
- Low current consumption
  - 26 mA (TX 10 mW, 3 V)
  - 19 mA (RX)
- Transparent interface for data input and output
- RED EN 300 220

### Applications

- Industrial telecontrol
- Telemetry Systems



### General

Parameter	Specification	Remarks
Applicable standard	EN 300 220	
Communication method	One Way, Half Duplex	
Emission type	F1D ( 2-GFSK )	
Supply voltage	3.0 to 5.0 V	
Operating temperature	-20 to +65 C	(-30 to +75 C) <sup>*1</sup>
Frequency stability	+/- 3 ppm (-20 to +65 C)	
Dimensions	20 x 32 x 5 mm	
Weight	4.5 g	

### RF

Parameter	Specification	Remarks
Frequency	433.0750 to 434.7750 MHz	
No. of RF channels	137 ch	
RF bit rate	4,800 / 9,600 bps	
Supply current (TX)	26 mA typ.	TX: 10 mW
Supply current (RX)	19 mA typ.	
RF output power	10 / 5 / 1 mW	Nominal
Spurious emission (TX)	< -54 dBm (47 to 74, 87.5 to 118, 174 to 230, 470 to 862 MHz) < -37 dBm ( Other frequencies below 1000 MHz ) < -30 dBm ( Frequencies above 1000 MHz )	
Adjacent channel leakage power	< -37 dBm	(CH 25 kHz / BW 16 kHz / PN9 9,600 bps)
Receiver sensitivity		
- 9,600 bps	-113 dBm BER (1% error)	PN9
- 4,800 bps	-117 dBm BER (1% error)	PN9
Adjacent channel selectivity	50 dB (+/- 12.5 kHz) @ 4,800 bps 50 dB (+/- 25 kHz) @ 9,600 bps	2 signal method, PN9, 1% error 2 signal method, PN9, 1% error
Spurious emission (RX)	-57 dBm (Frequencies below 1000 MHz) -47 dBm (Frequencies above 1000 MHz)	
Blocking	70 dB	+/- 2 MHz, +/- 10 MHz

### Timing

Parameter	Specification	Remarks
Power on to TX/RX	350 ms typ.	
TX/RX switching time	10 ms typ.	

### Interface

Parameter	Specification	Remarks
Data Interface ( DI / DO )	Digital L = GND H = Vcc, Asynchronous	Transparent interface
Command interface ( TXD / RXD )	UART 9,600 / 19,200 / 38,400 bps, 8 data bit, No parity, 1 stop bit	

- \* Unless otherwise specified, specifications are typical values obtained under 9,600 bps, 10 mW, 25 C, 434 MHz, 3 V
- \* Specifications are subject to change without prior notice
- \*1 Possible but operation to specification not guaranteed