

# UHF Narrowband Multi Channel Transceiver STD-302Z 869 MHz

The UHF FM narrowband semi-duplex radio module STD-302Z 869 MHz is suitable for industrial remote control and telemetry applications operating in the 869 MHz ISM band. The SAW filter and narrowband technique provides reliable data communication in industrial applications where interference rejection and practical distance range is required. Suitable for feedback systems.

## Features

- 5mW RF power
- Programmable RF channel
- Receiver sensitivity -116 dBm
- Excellent vibration and shock resistance / Mechanical durability
- FSK narrowband
- 419 MHz (China) / 429 MHz (Japan) / 434 MHz (EU) / 447 MHz (Korea) / 448 MHz (UK) available

## Applications

- Industrial remote control system
- Telemetry system
- Data transmission



## General

Parameter	Specification
Communication method	Simplex, Half duplex
Emission type	F1D (FSK narrow)
Frequency	868.025 to 870.975 MHz
Channel step	25 kHz (Programmable)
Frequency stability	+/-3.5 ppm or less (-20 to +60 C)
RF bit rate	9,600 bps max. (pulse width min. 100 us, max. 15 ms)
PLL reference frequency	21.25 MHz
PLL response	30 ms typ. (from PLL setting to LD out)
Supply voltage	3.0 to 5.5 V
Supply current	43 mA (TX), 28 mA (RX)
Operating temperature	-20 to +60 C
TX / RX switching time	15 ms typ. (DI vs valid DO at the same frequency)
Dimensions	30 x 50 x 9 mm
Weight	25 g

## Transmitter part

Parameter	Specification
Oscillation system	PLL controlled VCO
RF output power	5 mW at 50 ohm
Deviation	+/-2.75 kHz (PN9 9,600 bps)
Data input	Digital L = GND, H = 3 V to Vcc

## Receiver part

Parameter	Specification
Receiver type	Double superheterodyne
Receiver category	1.5
IF frequency	21.7 MHz (1st), 450 kHz (2nd)
Maximum input level	+10 dBm
Sensitivity (12 dB SINAD)	-116 dBm
Sensitivity (BER 1%)	-113 dBm (PN9 9,600 bps)
Spurious response rejection	> -50 dBm (1st mix, 2nd mix)
Adjacent channel saturation	> -20 dBm
Blocking	> -20 dBm
Data output	Digital L = GND, H = 2.8 V
Adjacent channel selectivity	> -50 dBm (+/-25 kHz)

Specifications are subject to change without prior notice