

Announcing the new UHF FM narrow band transceiver module STD-302Z for 434 MHz

Circuit Design Inc, the leading supplier of low power radio modules, has recently developed the UHF FM narrow band transceiver module STD-302Z for industrial remote control and telemetry applications.

Like its predecessor STD-302S, the STD-302Z can be manufactured to various frequency bands / power levels while offering the same superior interference rejection and sensitivity through the use of SAW filter. Discrete design ensures long term availability and as before narrowband FM operation offers benefits such as stable operation at maximum data rate of 9600 bps. In addition, the STD-302Z receive performance has been improved to allow reliable communication in safety critical applications - even during tough RF conditions enabling category 1 (EN 300 220)*¹ receiver status to be achieved. Maintaining identical housing and pin layout to STD-302S, shock and vibration resistance has also been improved for applications involving rough handling.



As a transceiver, bi-directional communication is possible. The STD-302Z internal PLL circuitry allows own channel table to be programmed by inputting serial data. Simple DI and DO pins for user data provide transparent interface and use of own protocol.

Technical features:

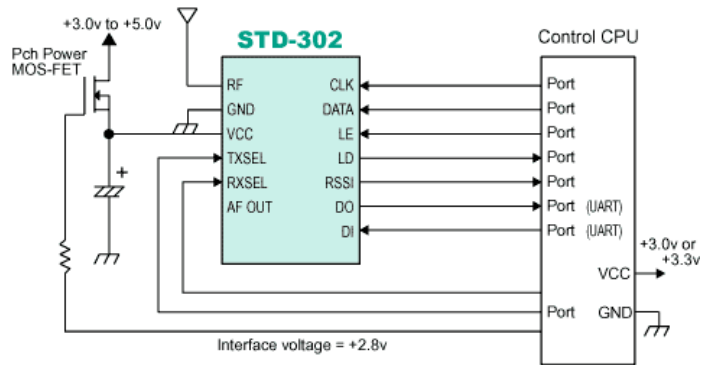
- 434 MHz / 10 mW
- Operating range 3.0 - 5.5 V
- Programmable RF channel
- PLL controlled VCO
- High receiver sensitivity
- Excellent vibration & shock resistance / Mechanical durability
- Receiver category 1
 - Blocking: -20 dBm
 - Adjacent channel selectivity: -50 dBm
 - Adjacent channel saturation: -20 dBm
 - Spurious response rejection: -44 dBm (1st, 2nd mix)
- RED (EN 300 220)
- SAW filter to avoid interference from other radio systems.
- Other frequency versions will be available (458 MHz (UK), 447 MHz (Korea), 419 MHz (China), 429 MHz (Japan), 869 MHz (EU), 480 MHz (Taiwan))

Applications

- Industrial applications
- Telemetry Systems / monitoring systems
- Remote control systems / Feedback systems
- FA data transmission

Download the image: <http://www.cdt21.com/dl2/pr/index.asp>

Example interface:



*1 Receiver category 1

Excerpt from EN300220-1 V3.1.1 (2017-02)

4.2.5 Receiver Category

4.2.5.1 Description

SRDs are used in a wide range of applications; therefore a range of receiver categories is available with different levels of performance. The performance level chosen is related to the ability of the system to operate in the presence of other signals. For the same application, the equipment level of performance may vary in different operational frequency bands.

The product family of short range radio devices is therefore divided based on receiver categories, see Table 1, each having a set of relevant receiver requirements and minimum performance criteria.

The choice of receiver category should be performed paying particular attention to the risk for interference from other systems operating in the same or adjacent bands, in particular where operation of SRD may have inherent safety of human life implications. Where risk assessment shows that equipment may not function in accordance with its intended use, information to users is to be provided.

The receiver categories are listed in Table 1.

Table 1

1	Category 1 is a high performance level of receiver. In particular to be used where the operation of a SRD may have inherent safety of human life implications.
1.5	Category 1.5 is an improved performance level of receiver category 2.
2	Category 2 is standard performance level of receiver.

About Circuit Design

Circuit Design, Inc. designs and supplies low power radio modules for various application fields such as telecontrol, telemetry, alarms, serial data transmission and audio. The products comply with European ETSI, US FCC, Industry Canada IC and Japanese ARIB standard. Quality is assured with an ISO9001-certified design and manufacturing process based in Japan.

Enquiries

Circuit Design, Inc., Sales Division
 7557-1 Hotaka Azumino-city, Nagano 399-8303, Japan
 TEL: +81 (0)263-82-1024 / FAX: +81 (0)263-82-1016
 e-mail: info@circuitdesign.jp URL: <http://www.cdt21.com>