

UHF Narrowband Radio Transceiver Module

STD-602-429 429 MHz

The UHF FM narrowband compact radio module STD-602-429 is suitable for industrial remote control and telemetry applications operating in the 429 MHz band. This module which is targeted for use in Japan, has the Type Certification of Construction Design (Giteki mark) meaning no radio licence or registration is required to use it. The STD-602-429 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.

As required by the Japanese regulations, the carrier sensing function is also implemented and automatically executed.

Features

- Small 36 x 26 x 6.1 mm
- Low power operation
 - 27 mA (TX 3.0 V)
 - 17 mA (RX 3.0 V)
- Transparent interface for data input and output
- Contains the Type Certification of Construction Design (Giteki mark)

Applications

- Industrial remote control system
- Telemetry system
- Monitoring system



General

Parameter	Specification
Applicable standard	ARIB STD-T67
Communication method	Simplex, Half duplex
Emission type	F1D (FSK narrow)
Frequency	429.246875 to 429.915625 MHz
Number of RF channels	40 ch (4,800 bps), 96 ch (2,400 bps)
Channel step	12.5 or 6.25 kHz
RF bit rate	4,800 / 2,400 bps
Supply voltage	3.0 to 5.0 V
Supply current	27 mA typ. (TX), 17 mA typ. (RX)
Operating temperature	-20 to +65 C
Antenna	Only to be used with the specified antennas
Dimensions	36 x 26 x 6.1 mm
Weight	13 g

Transmitter part

Parameter	Specification
RF output power	10 / 5 / 1 mW at 50 ohm
Spurious emission	< -27 dBm
Adjacent channel leakage power	> 40 dBc (PN9 2,400 / 4,800 bps)

Receiver part

Parameter	Specification
Sensitivity (BER 1%)	-114 dBm (PN9 4,800 bps)
Adjacent channel selectivity	50 dB (+/- 12.5 kHz, 4,800 bps)
Blocking	75 dB (+/- 1 MHz)

Timing

Parameter	Specification
Power on to TX / RX	350 ms typ.
TX / RX switching time	20 ms typ. (TX to RX), 30 ms typ. (RX to TX)

Interface

Parameter	Specification
Data interface (DI / DO)	Digital L = GND, H = Vcc (Asynchronous)
Command interface (TXD / RXD)	UART 19,200 bps
	Data length: 8 bit, Parity: None, Stop bit: 1

Specifications are subject to change without prior notice