

128ch

# UHF Narrow Band Multi Channel Transmitter / Receiver CDP-TX-02F, CDP-RX-02F 434MHz

The unique and compact CDP-TX/RX-02F is a frequency selectable radio data module for the 434MHz UHF band. Both CDP-TX-02F (transmitter) and CDP-RX-02F (receiver) are equipped with a frequency synthesizer system including microprocessor. 128 RF channels are selectable using an onboard 7-bit DIP switch.

Its small size, low voltage operation, and frequency selectability of CDP-02F make it ideal for various applications in sites where many radio transmitters are operated.

## Features

- 128 frequency synthesized RF channels
- 1 mW / 10 mW selectable
- Low voltage operation
- High sensitivity receiver
- FM narrow band modulation
- RED EN 300 220 / RoHS
- Receiver category 1

## Applications

- Industrial remote control
- Factory automation (Machine to machine)
- Security systems
- Alarms
- Telemetry systems



## General

Parameter	Specification (All ratings at 25 degree C unless otherwise noted)
Communication form	One way
Oscillation system	PLL controlled VCO
Modulation / Demodulation	FSK
Frequency range	433.1875 MHz to 434.7750 MHz
Number of RF channels	128 ch (12.5 kHz step)
Channel spacing	25 kHz
Channel selection method	7 bit switch
Frequency stability	+/- 4.0 ppm or less (-20 to + 60 degree C)
Data rate	300 to 4800 bps (Min. pulse width 208 us, Max. pulse width 20 ms)
Operating temp. range	-20 to +60 degree C (No dew condensation)

## CDP-TX-02F (Transmitter)

Parameter	Specification
Transmitter type	PLL synthesizer
RF output power	10 mW / 1 mW selectable
Transmitter start up time	50 ms (from power on)
Data input	Digital (L = GND H = 3.0 V to Vcc)
Deviation	+/- 2.1 kHz (PN9 4800 bps LPF 20 kHz)
Spurious emission	<-54 dBm (47M - 74M, 87.5M - 118M, 174M - 230M, 470M - 862M) <-36 dBm (Other frequencies below 1000MHz) <-30 dBm (Frequencies above 1000MHz)
Adjacent channel leakage power	-37 dBm (CH 25 KHz, BW 16 KHz, PN9, 4800 bps)
Supply voltage	3.0 to 12 V DC
Supply current	43 mA typ. at 3 V/10 mW 33 mA typ. at 3V/1 mW
Dimensions	26 x 36 x 10 mm (excluding protrusion)
Weight	14 g (without antenna)

## CDP-RX-02F (Receiver)

Parameter	Specification
Receiver type	Double Superheterodyne PLL synthesizer
Receiver Category	1
Bit Error rate (0 error/2556 bits)	- 116 dBm typ. at DO 4800 bps PN9 (-20 to +60 degree C)
Bit Error rate (1% bit error)	- 120 dBm typ. at DO 4800 bps PN9 (-20 to +60 degree C)
Sensitivity (12 dB SINAD)	- 120 dBm typ. At AF fm 1 kHz, Dev. +/- 2.0 kHz, CCITT filter (-20 to +60 degree C)
Adjacent CH selectivity	- 50 dBm (+/- 25 kHz)
Blocking	- 20 dBm
Spurious radiation	-60 dBm (below 1 GHz) -50 dBm (above 1GHz)
Data output	Digital (L = GND H = Vcc)
Supply Voltage	3.0 to 12 V DC
Supply current	30 mA typ. at 3 V 33 mA typ. at 12 V
Dimensions	30 x 50 x 9 mm (excluding protrusion)
Weight	20 g

Specifications are subject to change without prior notice