

32ch

UHF Narrowband Multi Channel Transmitter and Receiver CDP-TX-02E, CDP-RX-02E 434 MHz

The unique and compact CDP-TX-02E and CDP-RX-02E are frequency selectable radio data modules for the 434 MHz ISM band. Both CDP-TX-02E and CDP-RX-02E are equipped with a frequency synthesizer system including a microcontroller. 32 RF channels are selectable using an onboard 4-bit DIP switch.

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

The CDP-TX-02EP and CDP-RX-02EP are channel selectable using an 8 pin terminal allowing you to perform channel selection remotely.

Features

- 32 RF channels
- 1 mW / 10 mW selectable
- Low voltage operation
- High sensitivity receiver
- FSK narrowband
- CE / UKCA marking

Applications

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



General

Parameter	Specification (All ratings at 25 C unless otherwise noted)
Applicable standard	EN 300 220
Communication method	One way
Emission type	F1D (FSK narrow)
Frequency	433.875 to 434.650 MHz
Number of RF channels	32 ch (25 kHz step)
Channel spacing	25 kHz
Channel selection method	4 bit switch (CDP-TX-02E and CDP-RX-02E), 8 pin (CDP-TX-02EP and CDP-RX-02EP)
Frequency stability	+/-4.0 ppm or less (-20 to +60 C)
RF bit rate	300 to 4,800 bps (Min, pulse width 208 us, Max, pulse width 20 ms)
Operating temperature	-20 to +60 C (No dew condensation)

CDP-TX-02E

Transmitter

Parameter	Specification
Oscillation system	PLL controlled VCO
RF output power	10 mW / 1 mW selectable
Transmitter start up time	50 ms (from power on)
Data input	Digital L = GND, H = Vcc
Deviation	+/-2.1 kHz (PN9 4,800 bps LPF 20 kHz)
Spurious emission	< -54 dBm (47 to 74, 87.5 to 118, 174 to 230, 470 to 862 MHz) < -36 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 4,800 bps)
Supply voltage	3.0 to 12 V
Supply current	43 mA typ. (10 mW), 33 mA typ. (1 mW)
Dimensions	26 x 36 x 10 mm (excluding protrusion)
Weight	14 g (without antenna)

CDP-RX-02E

Receiver

Parameter	Specification
Receiver type	Double superheterodyne PLL synthesizer
Receiver category	1.5
Sensitivity (12 dB SINAD)	-120 dBm typ. at AF FM 1 kHz, Dev. +/-2.0 kHz, CCITT filter (-20 to +60 C)
Sensitivity (BER 1%)	-120 dBm typ. at DO PN9 4,800 bps (-20 to +60 C)
Adjacent channel selectivity	> -50 dBm (+/-25 kHz)
Blocking	> -20 dBm (+/-10 MHz), > -25 dBm (+/-2 MHz)
Spurious radiation	< -60 dBm (below 1 GHz), < -50 dBm (above 1 GHz)
Data output	Digital L = GND, H = Vcc
Supply voltage	3.0 to 12 V
Supply current	30 mA typ. (3 V), 33 mA typ. (12 V)
Dimensions	30 x 50 x 9 mm (excluding protrusion)
Weight	20 g

Specifications are subject to change without prior notice

CIRCUIT DESIGN, INC.

<https://www.circuitdesign.jp>
CDP-TX/RX-02E ver. 1.3 May, 2023

Sales Division

7557-1 Hotaka, Azumino, Nagano 399-8303, Japan
Tel:+81-(0)263-82-1024 Fax:+81-(0)263-82-1016