CIRCUIT DESIGN, INC.

32ch

UHF Narrowband Multi Channel Transmitter / Receiver

CDP-TX-02E, CDP-RX-02E 434 MHz

The unique and compact CDP-TX/RX-02E is a frequency selectable radio data module for the 434 MHz UHF band.
Both CDP-TX-02E (transmitter) and CDP-RX-02E (receiver) are equipped with a frequency synthesizer system including microprocessor.
32 RF channels are selectable using an onboard 4-bit DIP switch.

The CDP-TX-02EP and CDP-RX-02EP versions are channel selectable using 8 pin terminal allowing you to perform channel selection remotely.
Its small size, low voltage operation, and frequency selectability of CDP-02E make it ideal for various applications in sites where many radio transmitters are operated.



Features

- 32 frequency synthesized RF channels
- 1 mW / 10 mW selectable
- Low voltage operation
- High sensitivity receiver
- FSK narrowband
- RED EN 300 220
- Receiver category 1

Applications

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

CE RoHS Narrow ISM Band FSK Category1

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)
Oscillation system	PLL controlled VCO
Frequency range	433.875 MHz 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), 8 pin (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 CDP-TX-02EP (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 = 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 DC
Supply current	43 mA typ. at 3 V/10 mW 33 mA typ. at 3 V/1 mW
Dimensions	26 x 36 x 10 mm (excluding protrusion)
Weight	14 g (without antenna)

CDP-RX-02E CDP-RX-02EP (Receiver)

Parameter	Specification
Receiver type	Double Superheterodyne PLL synthesizer
Receiver Category	1
Sensitivity (BER 1%)	-120 dBm typ. at DO PN9 4,800 bps (-20 to +60 C)
Sensitivity (12 dB SINAD)	-120 dBm typ. at AF Dev. +/- 2.0 kHz, CCITT filter (-20 to +60 C)
Adjacent channel selectivity	-50 dBm (+/- 25 kHz)
Blocking	-20 dBm
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 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

CIRCUIT DESIGN, INC.
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CDP-TX/RX-02E ver. 1.1 Jan. 2021

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