

MCT243

2.4GHz RECEIVER

The information, specifications, and illustrations in this manual are those in effect at the time of printing. We reserve the right to change specifications or design at any time without notice.

Kar-Tech, Inc.

January 26, 2016
TH

2.4GHz Macro transceiver

DESCRIPTION

The MCT243 is a direct sequence spread spectrum transceiver unit, designed to be compatible with US (FCC Part 15.247), Canadian (RSS-247), EU(EN 60950-1, EN 300 328, EN 301 489) and Australian(AS/NZS 4268) regulations for license free use in the 2.4 GHz ISM band. The MCT2412 is designed for mobile applications in accordance to Part 2.1091(b).

The MCT243 is not designed for multiple antenna applications and should not be used to transmit simultaneously with any other transmitter.

OPERATION

The MCT243 equipped a radio transceiver module for the 2.4 GHz ISM bands. The transceiver microcontroller includes a CPU, GPI/O, a fully integrated frequency synthesizer, a power amplifier, a modulator and a receiver unit. The MCT243 microcontroller monitors the input data. The data is sent to the RF processor and then to RF circuit, and then to the antenna. The data received from antenna is sent to the microcontroller for processing. The microcontroller is responsible for the control of the entire communication. The MCT243 transceiver contains a DC regulator which generates a constant 1.8 VDC for the digital circuitry. The RF section runs on the 3.3V supply.

2.4GHz Macro transceiver

The MCT243 is Direct Sequence Spread Spectrum that can use one of 16 channels, where Channel 1 is 2.405GHZ and Channel 16 is 2.480GHZ.

Where Used

Typical applications for the MCT243 are to controlling valves, relays and lights on agricultural equipment, construction equipment, and other similar equipment.

PARTS LIST

<i>PART NUMBER</i>	<i>DESCRIPTION</i>
021871A	WIRE ANTENNA
021872A	REMOVEABLE ANTENNA

BEFORE APPLYING POWER!

- Check power and ground for proper polarity.

Specification

Power supply 3.7VDC NOMINAL
Operating temperature 0°C to +45°C
Storage temperature.....-40°C to +60°C
RF Frequency 2.405-2.480 GHz
RF Transmit power (EIRP) 100 mW
RF Receive Sensitivity -126 dBm

2.4GHz Macro transceiver

FCC Statement

FCC Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. User should avoid un-intended operation of usage when it is collocated with other transmitters or antenna. The distance between user and products should be no less than 20cm.

2.4GHz Macro transceiver

IC Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes :

- (1) Ce dispositif ne peut causer d'interférences ; et
- (2) Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. User should avoid un-intended operation of usage when it is collocated with other transmitters or antenna. The distance between user and products should be no less than 20cm