Wireless Remote Key

MX03KEYCA001S01

Product Specification

MX03KEYCA001S01

Product introduction

MX03KEYCA001S01 is a low-power wireless transmission module that supports OOK/(G)FSK two debugging modes and high-performance MCU. It supports 3D low-frequency receiving and wake-up,and is suitable for ISM band 27-960MHz wireless transmission applications. The module has built-in 512bits EEPROM, supports AES-128 acceleration engine, true random number generator, three-way key control and one LED light status display, and supports customization of customer functions.

MX03KEYCA001S01

Product function

Supply voltage input range: 2.4V~3.6V
Operating frequency:
TX: 433.92MHz
RX: 125kHz Default firmware

Application scenario

Electric motorcycle and car remote control（PKE）
Remote control entrance control system（PKE）
Consumer wireless remote control
Smart home
Home security

Mechanical information

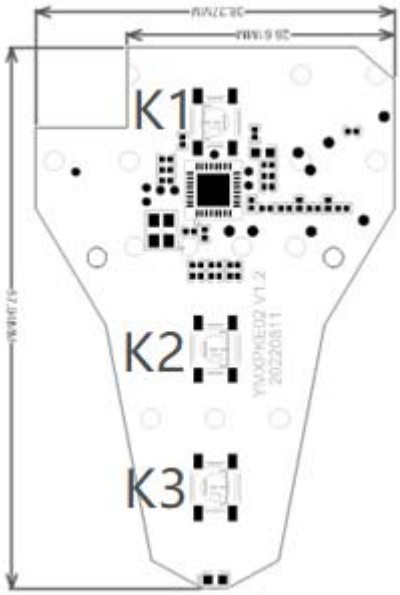

Figure 1. MX03KEYCA001S01 Main view of module

Table 1.MX03KEYCA001S01 Key function definition

Key	Operator	Operational description
K1	Short press	Open the seat lock
	Long press	Car finding function
K2	Short press	starting up
K3	Short press	Shutdown
K2+K3	Key combination, press at the same time	Key pairing

Electrical specification

Test conditions: 3V power supply, temperature 25℃

Table 2. Electrical parameter list

Parameter	Symbol	State	Minimum value	Typical value	Maximum value	Unit
Part number	Fc	MX03KEYCA001S01		433.92		MHz
Modulation mode	MOD		OOK G/FSK			
Receiving sensitivity	S	MX03KEYCA001S01		-		dBm
Data rate	DR		1	2.4	40	Kbps
Receiving bandwidth	BW		50		330	KHz
Operating voltage	V_{DD}		2.4	3.0	3.6	V
Emission working current	I_{Tx}	+13dBm 433.92MHz		18	20	mA
Receiving working current	I_{Rx}	MX03KEYCA001S01				mA
Dormant current	I_{Sleep}	With 125KHz low frequency wake up		5	7	uA
	I_{RTC}	RTC Mode		0.8	1	uA
	$I_{shutdown}$	Shutdown current		0.3	1	uA
Mirror frequency suppression	IMR			30		dB
Operating temperature	T_{OP}		0		+45	℃
Module size		38.37*57.94*6.2mm				
Power supply mode		Support CR2302 button battery power				
Antenna		Onboard PCB antenna +3D low frequency antenna				
Intraplate function		supports three-way buttons and an in-board LED light				

FCC Statements:

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: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

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 a 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.

The device has been evaluated to meet general RF exposure requirement, The device can be used in portable exposure condition without restriction.

FCC ID:2BAAA-MX03KEY

IC Statements:

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

The device has been evaluated to meet general RF exposure requirement, The device can be used in portable exposure condition without restriction.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes (1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

L’appareil a été évalué pour répondre aux exigences générales d’exposition RF, l’appareil peut être utilisé dans des conditions d’exposition portable sans restriction.

IC:30073-MX03KEY

Document Change log

Part number	Version	Remarks	Date
MX03KEYCA001S01	V1.2	Release version	2023-02-24