Nomura Engineering Co., Ltd.

Low Power Radio Module

426MHz , 429MHz , 315MHz , 2.4GHz , 920MHz , 1.2GHz

TS Series

・TS01E・TS02E・TS03
・TS24A・TS92 NEW・TS12 NEW

Low Power Radio Mudule ---TS series ---

Please select the best wireless module from 6 types of modules.

The module can be deployed for applications such as on-off control and data comunication. The firmware can be customized according to the customer's requirement.

Small transmission module
Constant voltage
Low current consumption

426MHz ・**TS01E**

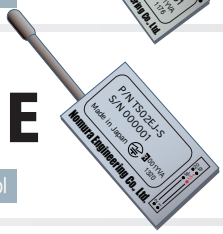
data communication | on-off control

・Ideal for miniaturization of the transmitter.
・Power saving with only 1mW output power.
・Applications: Mat sensor transmitter, Staff call, Measuring instrument data transmission etc.

Heavy duty
Long-distance communication
Module type / remote control type

429MHz ・**TS02E**

data communication | on-off control



・Various kinds of firmware are available such as 8sw on-off control, 8sw loopback, 8sw answerback, 16sw on-off control, data communication etc.
・Applications: Industrial remote control, Factory automation M2M, Wireless sensor networks etc.

Low cost
Low current consumption
Module type / remote control type

315MHz ・**TS03**

on-off control

・Ideal for low-cost wireless systems at close range.
・4sw on-off control.
・Low power operation
・Applications: Remote Control for Gate Opener, Dimming control system, Sensor tags etc.

High-speed data transmission

2.4GHz ・**TS24A**

data communication

・High-speed data communication.
・Power saving with only 1mW output power.
・It is suitable for applications requiring high communication speed and compactness.
・Applications: Measuring instrument data transmission, Winch control etc.

High-speed and Long-distance communication.

920MHz ・**TS92**

data communication | on-off control

・Transmission power (1 mW/ 10mW/ 20 mW) and modulation speed (2.4 kbps to 100 kbps) can be switched.
・Selectable from 4 types of antennas.
・It can be used in place of TS24A.

Electrical Specifications

Product name	frequency	Modulation scheme	Communication distance (Outlook)	RF output power	Communication speed or response	Supply voltage	Supply current	Operating temperature range	Dimension (mm)	Remarks
TS01E	426MHz	FSK	standard：100m Long distance：1km	1mW	standard：1,800bps Long distance：200bps	TX：2.1～3.6V RX：2.1～7.0V	TX：11mA RX：15mA RX(Long distance)：18mA	-20℃～70℃	TX：27×17×3 RX：53×30×6.5	Technical Regulations Conformity Certification ARIB STD-T67
TS02E	429MHz	FSK	standard：800m Long distance：2～3km	10mW	standard：1,800bps Long distance：100～200bps	2.1～7.0V	TX：26mA RX：15mA RX(Long distance)：18mA	-20℃～70℃	53×30×6.5	Technical Regulations Conformity Certification ARIB STD-T67 RoHS、CE (R&TTE Directive)
TS03	315MHz	ASK	50m (max100m)	250μW (eirp)	ON：80msec OFF：240msec	TX：2.1～3.6V RX：2.2～3.5V	TX：2.5mA RX：11mA	-10℃～60℃	TX：29×40×3.5 RX：29×40	Technical Regulations Conformity Certification ARIB STD-T93
TS24A	2.4GHz	GFSK	Chip antenna：50m External antenna：100m	1mW	250kbps (max 1Mbps)	2.1～3.6V	TX：14mA RX：16mA	-10℃～60℃	27×25×3.5	Technical Regulations Conformity Certification ARIB STD-T66 RCR STD-33
NEW TS12	1.2GHz	FSK	TBD	10mW	9,600bps (max)	2.4～5V	TX：35mA RX：30mA	-20℃～70℃	53×30×6.5	ARIB STD-T67
NEW TS92	920MHz	FSK	TBD	10mW	100kbps (max)	2.1～3.6V	TX：38mA RX：26mA	-10℃～60℃	27×25×3.5	ARIB STD-T108

NEW

429MHz (Japan) ・**TS02F**

It can be used in place of TS02E.

data communication | on-off control

Universal RF module.
Japan, EU, US, Australia, Korea, China, Taiwan can be used.

1.2GHz ・**TS12**

It can be used in place of TS02E.

data communication | on-off control

Transmission speed is 4 times faster than TS02E.

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