RF-TX-315MHz-IH User Manual

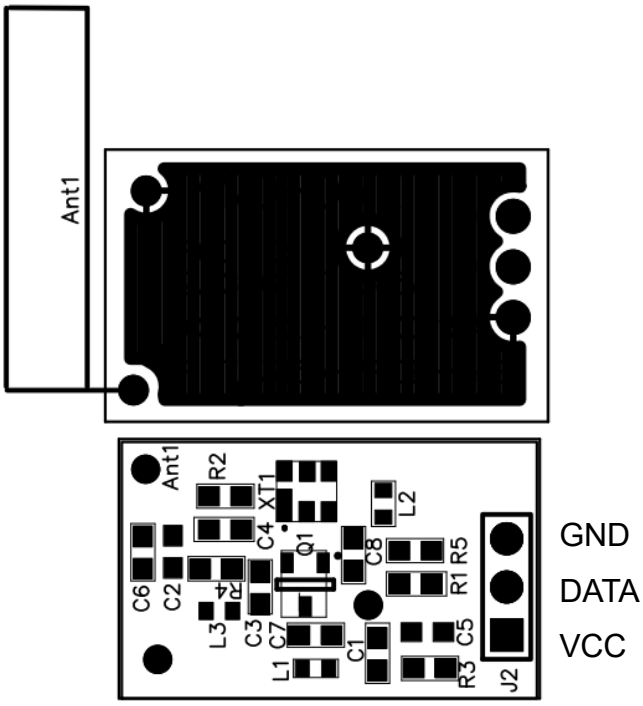
1 Product Detail

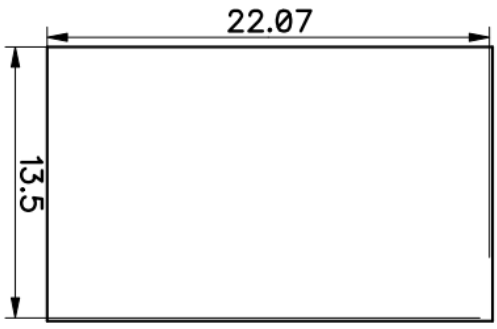
RF-TX-315MHz-IH (FCC/IC equipment product code: RFTX315A) is a low power consumption transmitter module. It has passed FCC (47 CFR 15:231, 2015) and IC (RSS-210 Issue 8, 2010, RSS-GEN Issue 4, 2014) tests, and it can be used as a transmitter in North American markets. The only current host for the module is SGS530 Intelligent Heat Sensor.

2 Technical Specifications

Operating voltage:	3 V … 6 V
Operating current:	≤15 mA (6 V), ≤10 mA (3 V)
Resonance mode:	Surface Acoustic Wave (SAW)
Modulation:	OOK/ASK
Operating frequency:	315 MHz
Frequency tolerance:	±75 kHz
Bit Rate:	≤10 kbps
Encoding format:	No
Antenna length:	32.5 ±0.1 cm (integrated coil antenna)

3 Size and Pin Definition





Unit: mm

4 Notes for usage

4.1 The power voltage needs to be stable with low ripple factor and multilevel wave filtering (such as adding magnetic ball, inductance, capacitance etc.)

4.2 When applying the module inside the module housing, the antenna should have enough free space and not touching metallic parts like batteries. For later applications, metal telescope aerial with 50 Ω coaxial line can be considered to get better transmission.

4.3 Module is tested according to intentional radiator rules of FCC and ISED. Applied rules have strict limits for transmission times. Consult the rules and limits carefully before applying the module in other applications.

5 Certifications

5.1 FCC (United States)

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.

Any changes or modifications not expressly approved by Innohome Oy could void the user's authority to operate the equipment.

5.1.1 FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter meets both portable and mobile limits as demonstrated in the RF Exposure Analysis. This transmitter must not be co-located or operating in conjunction with any other antenna.

As long as the condition above is met, further transmitter testing will not be required.

5.1.2 FCC End Product Labeling

The RFTX315A module is labeled with its own FCC ID. As the FCC ID is not visible when the module is installed inside another device, the outside of the device into which the module is installed must also display a label referring to the enclosed module. The final end product must be labeled in a visible area with the following:

Contains FCC ID: 2AG2GRFTX315A

5.2 ISED (Canada, in English)

This radio transmitter (IC: 21029-RFTX315A) has been approved by Industry Canada to operate with the integrated coil antenna. Other antenna types are strictly prohibited for use with this device.

This device complies with Industry Canada's license-exempt RSS standards. 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

5.2.1 ISED RF Exposure Statement

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1 (RSS-102 Issue5 2.5.1). RFTX315A meets the given requirements for SAR evaluation exemption as its transmission power remains below the applicable exemption level at all times.

5.2.2 ISED End Product Labeling

The RFTX315A module is labeled with its own IC ID. As the IC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. The final end product must be labeled in a visible area with the following:

Contains IC: 21029-RFTX315A

5.3 ISDE (Canada, en français)

Cet émetteur radio (IC : 21029-RFTX315A) a reçu l'approbation d'Industrie Canada pour une exploitation avec l'antenne bobine incorporée. Il est strictement interdit d'utiliser d'autres types d'antenne avec cet appareil.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1) l'appareil ne doit pas produire de brouillage;

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

5.3.1 ICDE Déclaration relative à l'exposition aux radiofréquences (RF)

L'évaluation du DAS est requise si la distance entre, d'une part, l'utilisateur et/ou une personne à proximité, et, d'autre part, l'antenne et/ou l'élément rayonnant du dispositif, est inférieure ou égale à 20 cm, sauf si le dispositif fonctionne à la puissance applicable ou à une puissance inférieure (corrigée pour tenir compte de l'incertitude du réglage) pour la distance de séparation définie au tableau 1 (CNR-102, 5e édition, 2.5.1)

RFTX315A satisfait aux exigences de l'exemption de l'évaluation DAS, car sa puissance de transmission reste en deçà du niveau d'exemption applicable en tout temps.

5.3.2 Étiquetage du produit final

L'étiquette du module RFTX315A porte son propre identifiant ICDE. Si l'identifiant ICDE n'est pas visible quand le module est installé à l'intérieur d'un autre appareil, l'extérieur de l'appareil dans lequel le module est installé doit aussi porter une étiquette faisant référence au module qu'il contient. Une étiquette comportant les informations suivantes doit être collée sur une partie visible du produit final:

Contains IC: 21029-RFTX315A