1.1.1 Frequencies, power

Bluetooth Low Energy f=2402MHz ÷ 2480MHz
Maximum transmitter output power -1,4dBm

1.1.2 Function description

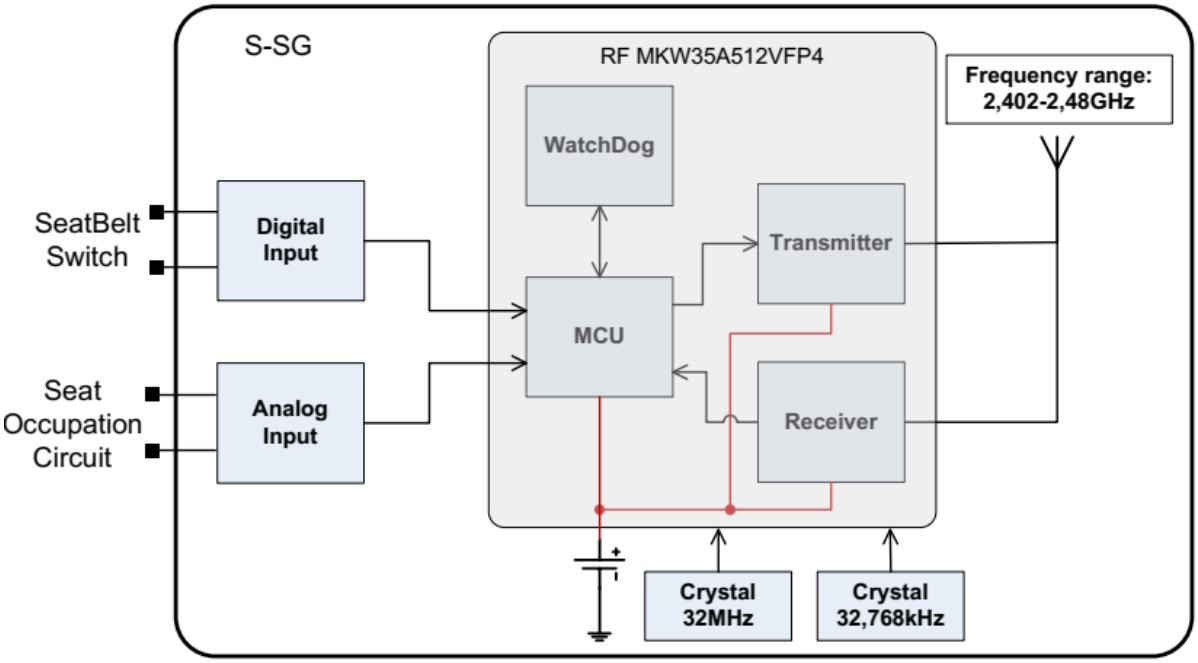

Image1 S-SG

The S-SG in the car seat is powered by a built-in battery. The mechanical construction enabling the exchange of the battery without special tools or soldering. The S-SG sends the status information of the belt buckles and the status of seat occupancy sensors. The information is sent either at the time when a change is detected, or every 25 seconds cyclically. The reading period of the AD value of the resistance circuit in the seat occupancy sensor is 200 ms, it can be changed by software. The battery voltage is read once a day. The algorithm for the evaluation of the battery status then sends the current value in every Bluetooth message. The S-SG is contacted only at the time of data transmission with the F-SG, otherwise it is in the (low power mode) power saving mode.

1.1.3 Error conditions

The device can not detect faulty state of belt buckle, the analog value is not measured at the entrance, there is only detected a logic signal. The device detects error state values at the inputs to determine the seat occupancy. The following error conditions are detected:

Table1 Limit values of the sitting sensor

error signal	value	tolerance	description
delivery status			After switching on the device, the value is not read (not used in practice)
Low resistance value	R <60 Ω	60 ± 4 Ω	The wires are connected or shorted to GND
Seat occupied	60 Ω <= R <= 250 Ω	60 ± 4 Ω 250 ± 8 Ω	Correct value is expected
Average resistance value	Is not used		unexpected invalid resistance
Vacant seat	250 Ω <R <= 620 Ω	250 ± 8 Ω 620 ± 15 Ω	Expected valid value
High resistance value	R> 620 Ω	620 ± 15 Ω	Wires broken or high resistance

Image2 Error detection algorithm on the input of the occupied seat

1.1.4 Temparature or voltage operating range

temperature: -40°C ÷ +80°C
voltage: battery 3 V; CR2477

The manufacturer of this radio equipment declare that devicecomply with the ISED regulation:
IC: 25953-WSBRS001

NOTICE:
This device complies with Part 15 of the FCC Rules [and contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS standard(s)].
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.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

NOTICE:
Changes or modifications made to this equipment not expressly approved by (manufacturer name) may void the FCC authorization to operate this equipment.

R 215-JCD044

Complies with
IMDA Standarts
DA105282

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