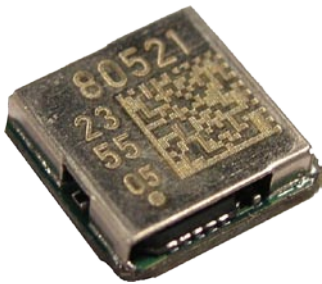


ISM Transceiver PAN2357



(Picture shows similar module)

OUTLINES - ENW59614N3B

This extremely compact and high-functionality module is mainly intended for the ISM (Industrial, Scientific and Medical) frequency bands at 433MHz. Other frequency bands are possible on request. It provide a wireless radio transceiver and can be linked to a wide range of devices including home appliances, keyless entry and many other applications through SPI or UART.

Programming of the vast functionalities of the transceiver are done via SPI. The PAN2357 is made for all applications where a wide band bidirectional data transfer with high speed is needed.

It is focussed on small size with a 8.0x8.2mm footprint and very low power consumption for battery driven applications.

FEATURES

- Programmable datarate up to 500 kBaud (NRZ mode)
- Very low current consumption
- Frequency range 390 - 460 MHz
- High sensitivity (typ. -104 dBm at 38.4 kBaud, GFSK)
- Programmable output power -30 dBm to +10 dBm
- Low supply voltage (1.8 V to 3.6 V)
- Operating temperature range -40°C to +85°C
- Small size (8.0mm x 8.2mm x 1.9mm) incl. shielding
- Digital RSSI output
- Single port 50 Ω antenna connection
- Programmable frequency in 400 Hz steps makes crystal temperature drift compensation possible

APPLICATIONS

- RKE - Two-way Remote Keyless Entry
- Home Automation Systems
- AMR - Automatic Meter Reading
- Low Power Telemetry
- Toys
- Remote Control Systems

MODULES
Panasonic Electronic Devices (Europe) GmbH
WIRELESS

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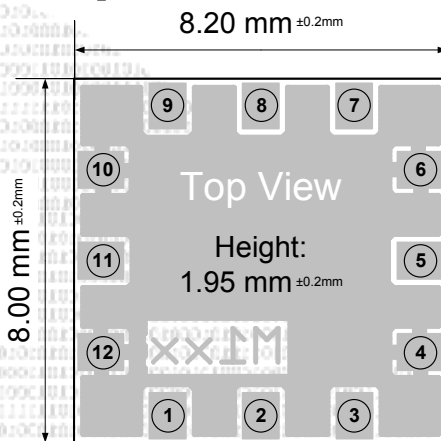
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DIMENSIONS



Pin no.	Pin name
4,6,10,12	GND
1	SPI SI
2	SPI SCLK
3	SPI SO
5	GDO 0
7	SPI CSN
8	Vcc
9	GDO 2
11	50 Ω RF

TECHNICAL CHARACTERISTICS

Parameter	Value	Condition / Note
Receiver Sensitivity, at 1.2 kBaud, GFSK at 38.4 kBaud, GFSK at 250 kBaud, MSK	-112 dBm -104 dBm -95 dBm	more details in datasheet
Output Power	-30 to 10 dBm	Delivered to 50 Ω load. The output power is programmable.
RSSI dynamic range	-136 to -8 dBm	
PLL lock time (Rx /Tx turn time)	10 μs	for 1x IF frequency step
PLL turn-on time, crystal oscillator on in power down mode	80 μs	Crystal oscillator running
Power Down Mode	1.0 μA max. 0.2 μA typ. 0.5 μA typ.	Sleep State Sleep State Sleep State with WOR enabled
Current Consumption receive mode @250kBaud	17.1 mA typ. 15.7 mA typ.	Input at sensitivity level Input well above sensitivity level
Current Consumption transmit mode P = +5dBm P = 0dBm	27.1 mA typ. 16.0 mA typ.	Delivered to 50 Ω load.

Note:

All parameters are valid for $V_{cc} = 3.0\text{V}$, $T_{amb} = 25^\circ\text{C}$ and 433MHz

According to EN300220 requirements, you can transmit with the maximum output power of +10dBm.

In this module the CC1101 from Chipcon / TI is used.

For other frequencies, e.g. 315MHz, 868/915MHz and 2.4GHz please contact your sales channel.