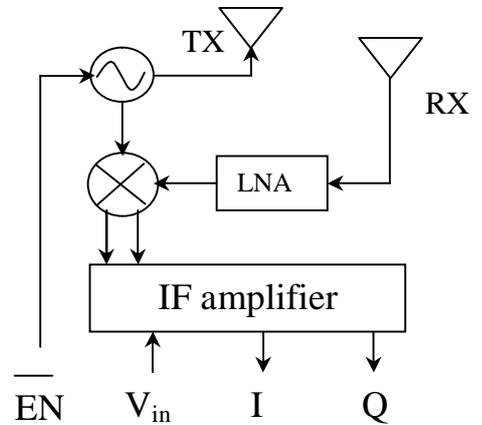
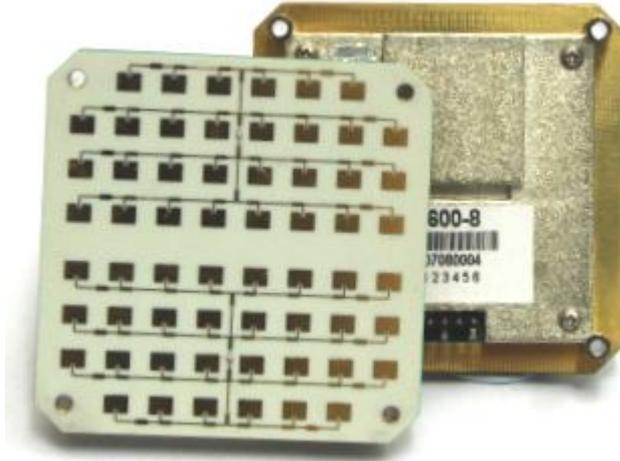


K-Band Doppler RF Transceiver Module



Block diagram

Description

DF600-8 / DF600-9 is a K-Band Bi-Static Doppler transceiver module with built-in Low-Noise Amplifier (LNA) and pre-amplifier for higher sensitivity, making it ideal for long-range motion detection. It has I-Q outputs for direction of motion identification.

These modules are suitable for traffic applications such as vehicle counters and speed sensing.

Features

- Low current consumption
- High sensitivity
- Flat profile

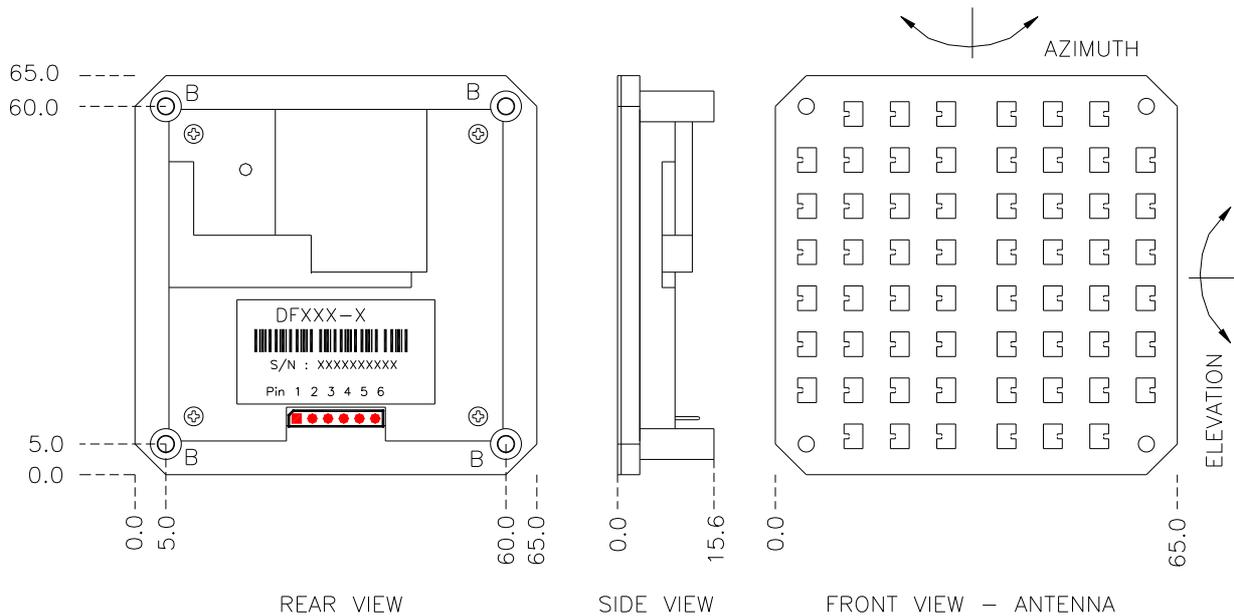
Applications

- Traffic counters
- Speed measurement
- Vehicle-actuated sign/messaging



Technical Specifications

Outline diagram (All dimensions in mm)



User interface pin definition: 1: \overline{EN} , 2: V_{in} , 3: GND, 4: I, 5: Q, 6: RESERVED,
 Mounting screw through-hole (B) either size M2.5 self-tap screw or M2 screw with nut

Unless noted otherwise, the specifications are measured in CW operation at ambient temperature of +25°C.

| Parameter | Notes | Min | Typ | Max | Units | |
|---|---------|-----|----------|--------|--------|-----|
| Frequency Setting | DF600-8 | 1 | 24.120 | 24.125 | 24.130 | GHz |
| | DF600-9 | 1 | 24.195 | 24.200 | 24.205 | GHz |
| Radiated Power (EIRP) | 1 | | 20 | | dBm | |
| Spurious Emission | 1 | | | -30 | dBm | |
| Antenna Beam-width (3 dB) - Azimuth | | | 24 | | ° | |
| Antenna Beam-width (3 dB) - Elevation | | | 12 | | ° | |
| Antenna sidelobes | | | -19 | | dB | |
| Supply Voltage, V_{in} | 2 | 2.6 | 2.7 | 5.5 | VDC | |
| Current Consumption (\overline{EN} on/off) | | | 45/1 | 50/2 | mA | |
| I&Q Amplitude balance | | | 0.5 | 3 | dB | |
| I&Q phase difference | | 70 | 90 | 110 | ° | |
| IF amplifier gain | | | 37 | | dB | |
| IF amplifier bandwidth | | | 310 -18k | | Hz | |
| Operating Temperature | | -40 | | 80 | °C | |
| Weight | | | 40 | | gm | |

Note 1 : The radiated emissions is designed to meet the requirements of EN 300 440

Note 2 : Built-in voltage regulation ensures performance of the sensor is independent of voltage supply

Note 3 : The design, manufacturing process and specifications of this device are subject to change without prior notice.



Attention:
 Observe precautions for
 handling electrostatic
 sensitive devices.

VER 2.01

