

New K-band Doppler Module: NJR4262

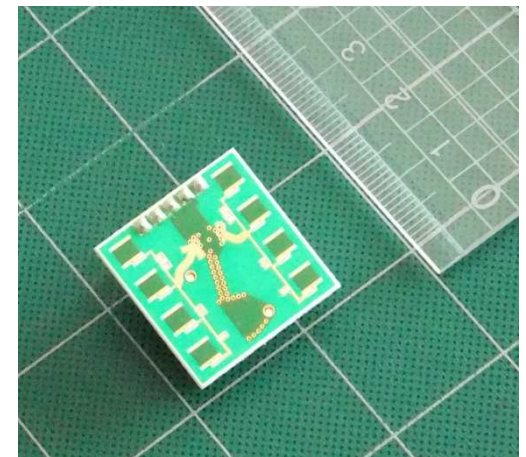
● Design Concept

<Electrical>

- ✓ **One chip MMIC for RF section**
 - * Employment of original designed MMIC
 - * High reliability and low deviation of electrical performance
- ✓ **High precision IQ mixer is standard equipped**
 - * Excellent phase / amplitude balance
- ✓ **Built-in Low Noise Voltage Regulator**
 - * Stable characteristics at wide supply voltage range
 - * Suppression of exogenous noise on operating voltage line
- ✓ **Long-term frequency stability**
 - * Frequency drift occurred from PCB oxidization is stabilized by resonator
- ✓ **Built-in patch antenna**
 - * Easy to use for various application

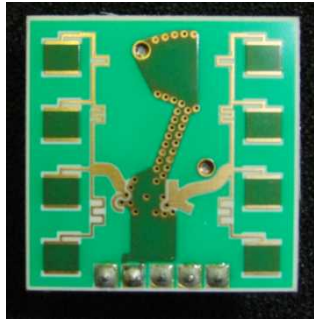
<Mechanical>

- ✓ **Light Weight**
 - * 5 g
- ✓ **Small Size**
 - * 25 x 25 x 7.3 mm

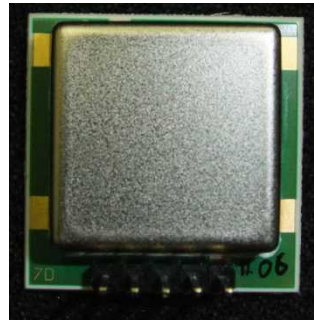


Outline / Antenna Radiation Pattern

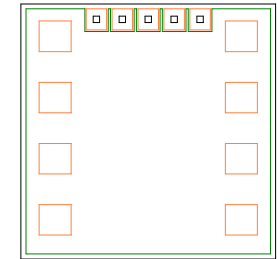
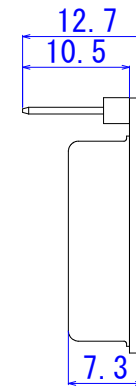
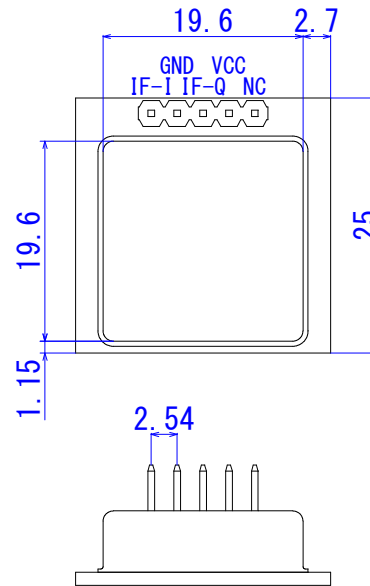
● Overview and Outline



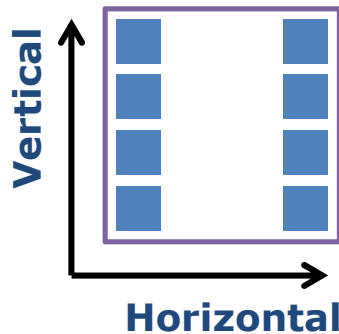
(Antenna Side)



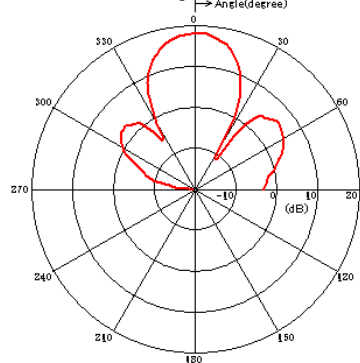
(Mounting Side)



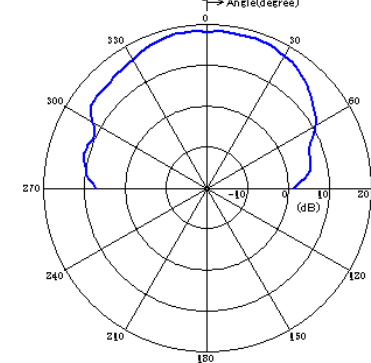
● Antenna Radiation Pattern



Vertical
approx. 30 degree
(+/- 15 degree)

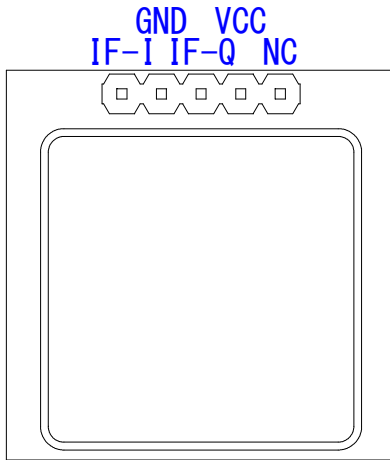


Horizontal
approx. 80 degree
(+/- 40 degree)



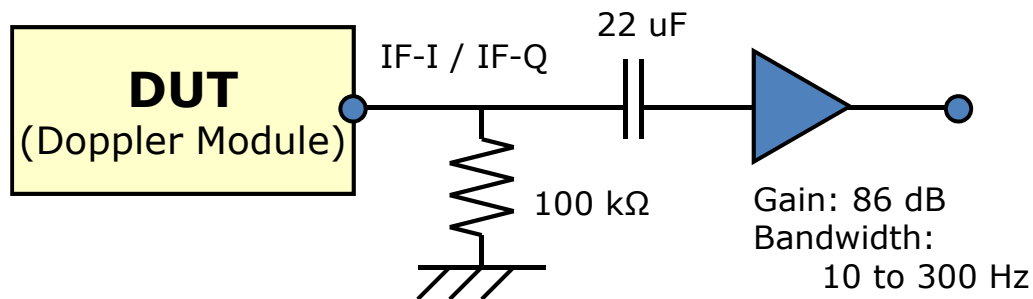
Pin Assignment / Example Circuit

● Pin Assignment



Pin No.	Description
IF-I	Doppler Signal Output (I) ● Offset Voltage: 1.35 V typ. / Impedance: approx. 1.5 kΩ
GND	GND
IF-Q	Doppler Signal Output (Q) ● Offset Voltage: 1.35 V typ. / Impedance: approx. 1.5 kΩ
VCC	Operating Voltage Input ● Voltage: +3.3 to 5.0 V DC / Current: 50 mA typ.
NC	No Contact

● Example Circuit for Human Motion Detection



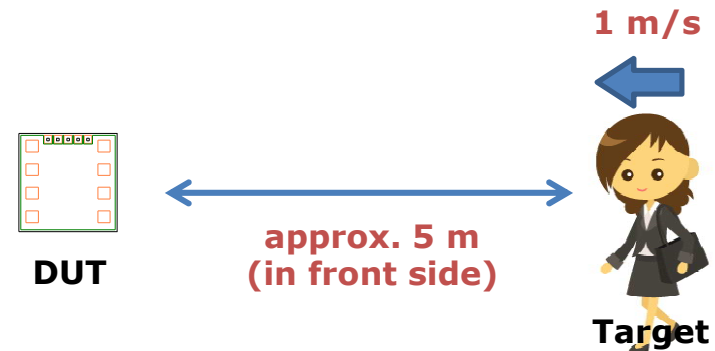
(e.g.)

Output Level: approx. 2.5 Vp-p

<Condition>

Target: Human body walking with 1m/s

Distance: 5 m at front direction



1 m/s

approx. 5 m
(in front side)

Target