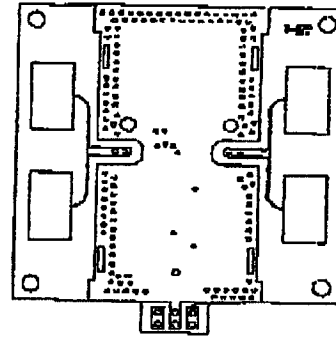
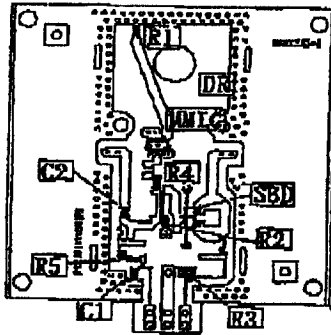


NJR4170 Layout

Pattern Layouts

The Surface

The Reverse Side



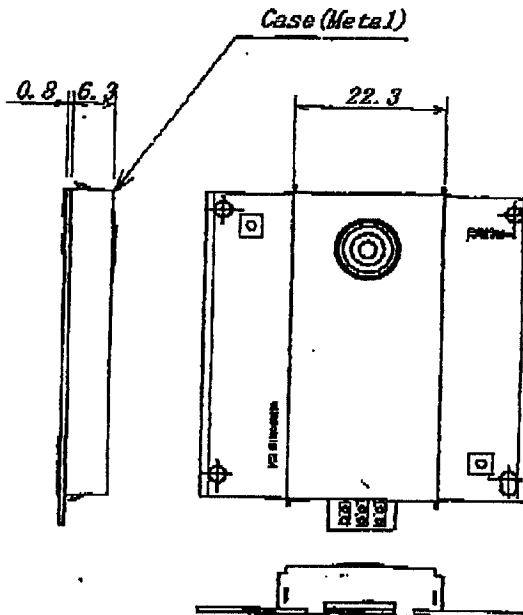
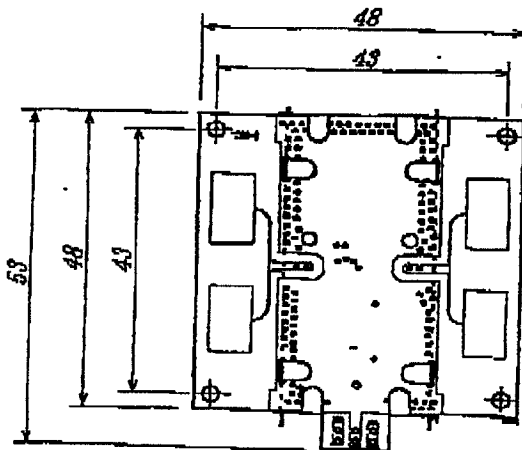
Substratum

Parts List

Parts Name	QTY	TYPE	Resistance/Capacitance
R (Chip Resistors)	5	CRXXXX	R1, R2 : 51Ω R3 : 1.2kΩ R4, R5 : 0Ω
C (Chip Capacitors)	2	GRMXXXX	C1 : 1000pF C2 : 2pF
MMIC (Microwave Monolithic Integrated Circuit)	1	FMM5202MLT	—
SBD (Shotkey Barrier Diode)	1	HSMS8202	—
Substratum	1	—	—
Case	1	—	—
DR (Dielectric Resonator)	1	φ6	—

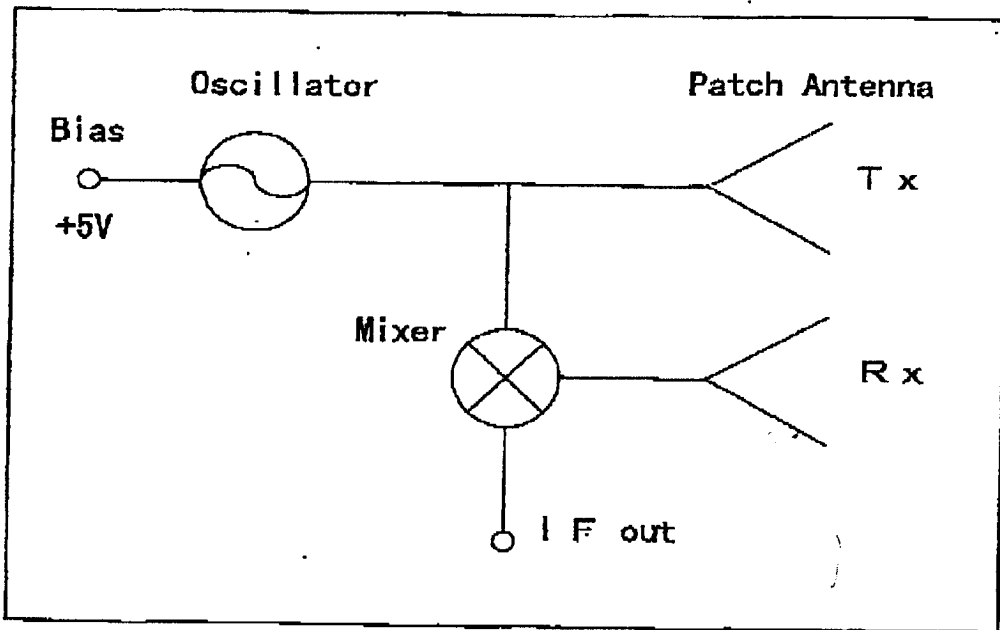
Component Layouts

The External Form

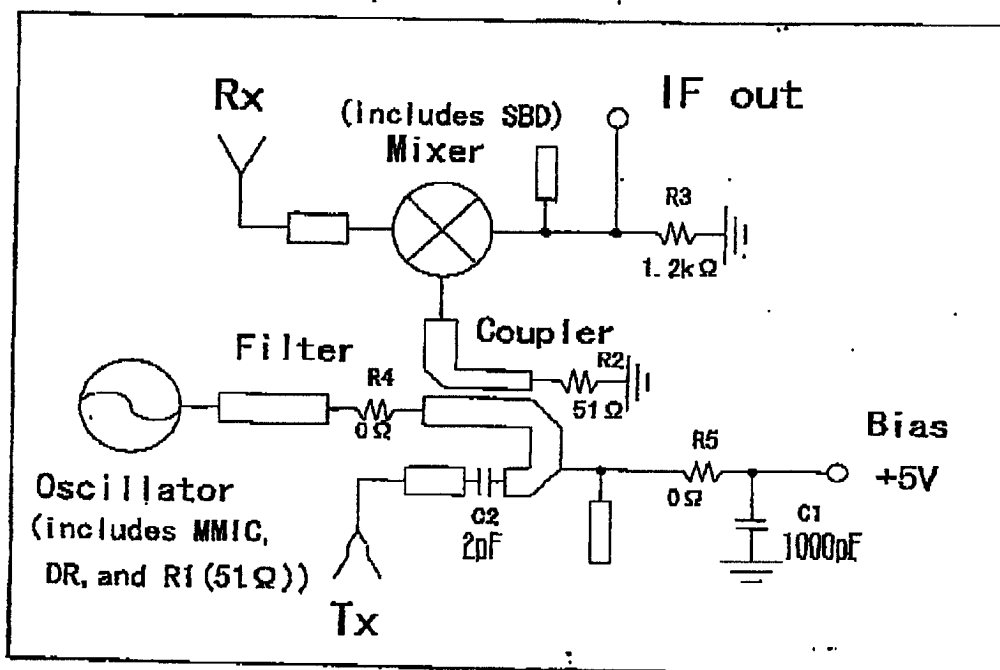


unit : mm

●NJR4170 Block Diagram



●NJR4170 Circuit Diagram





X-band Doppler Module (MIC Type)

MODEL NO. NJR4170

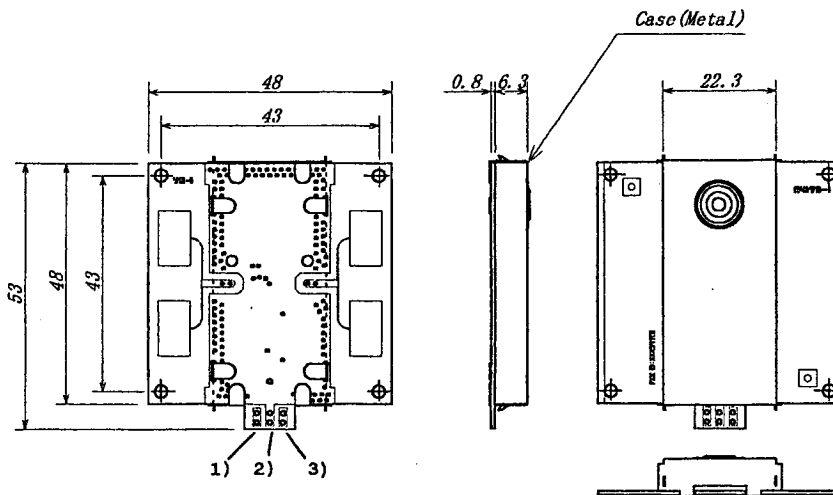
<Description>

This specification covers the general requirements for microwave doppler module. This module is designed for motion sensing applications. This module consists of DRO (Dielectric Resonator Oscillator), balanced Schottky Barrier Diode Mixer and Micro-strip Patch Antennas.

<Specifications>

Electrical Characteristics (at +25 degree C, +5VDC)	Specifications
Operating Voltage	5.0 +/- 0.2VDC
Operating Current	30 mA typ.
Center Frequency	10.525GHz +/- 5MHz
Output Power	8mW E.I.R.P. typ.
Return Loss Sensitivity	-90 dBc
Second Harmonic Emission	< 25 mV/m [at3m]
Antenna Beamwidth (-3dB)	E-Plane 36 deg. H-Plane 72 deg.
Pulse Mode Operation	Specifications
Pulse Width	5 micro sec.
Duty Cycle	0.01
Absolute Maximum Ratings	Specifications
DC Input Voltage	+8 VDC
Operating Temperature Range	-30 to +70 degree C
Storage Temperature Range	-40 to +80 degree C

<Outline Drawing>

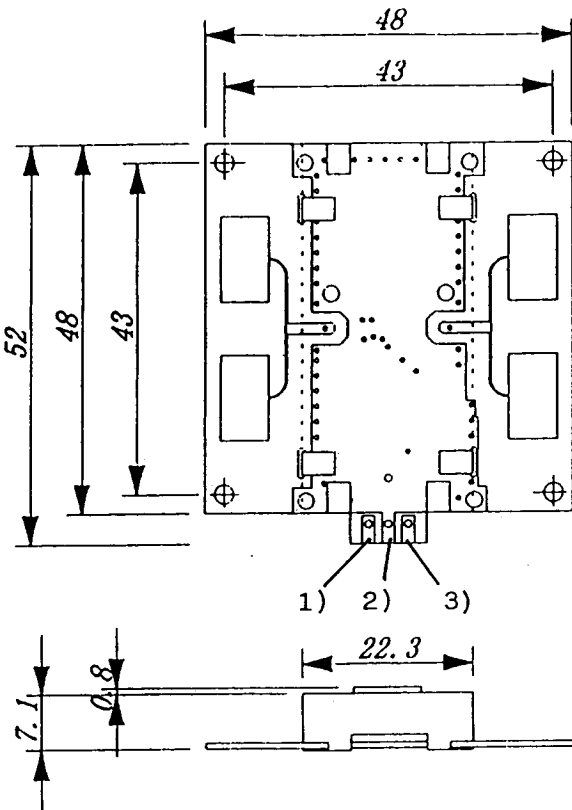


Pin Assignment
 1) Output
 2) GND
 3) +5VDC

UNIT: mm

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 Microwave Component Division
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 World-wide web : <http://www.njr.co.jp>

Front view : Microwave output
and receiving



Side view

Back view

Pin Assignment

- 1) Doppler signal output
- 2) Ground
- 3) +5VDC

- 1 Connect "Ground" to minus connector of power supply.
- 2 Connect "+5VDC" to plus connector of power supply.
- 3 Drive +5VDC.
- 4 This module outputs microwave from antennas on the front of it.