

X-Band Radar Front End

NJT1947B

NJT1947B is designed for the front end of radar system.

It features a small size and a light weight operable at any frequency between 9.345GHz and 9.475GHz. This front end module consists of PIN diode Limiter, GaAs FET low noise amplifier, Image rejection mixer, Local VCO with buffer amplifier.

FET monitoring circuit is included to monitor FET drain current.

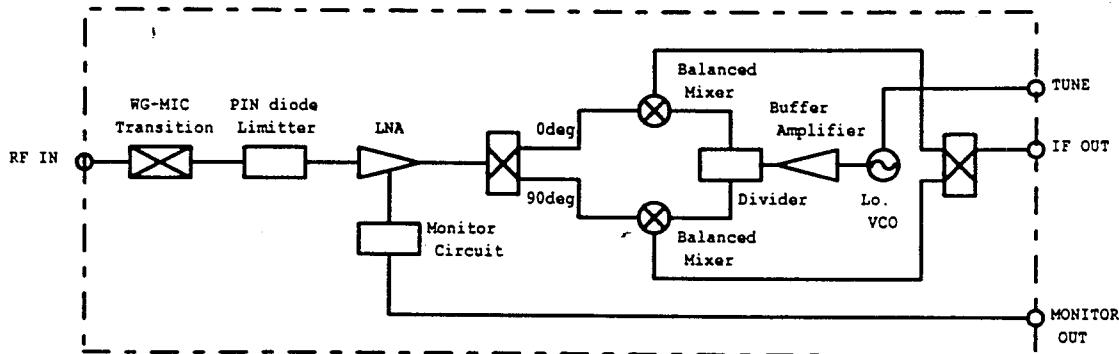
The stability of the local VCO frequency by the input RF power is increased effectively by the buffer amplifier which is located between image rejection mixer and local VCO.

- ELECTRICAL - < at 25 °C >

	Min	Typical	Max	Unit
Operating voltage	4.8	5.0	5.2	V
Operating current	-	50	80	mA
Local frequency	VT= 4V	-	9.38	GHz
	VT=24V	9.56	-	GHz
Noise figure	-	3.5	5.5	dB
Conversion gain	1.0	3.5	-	dB
1dB Gain compression point(RF Port)	-5.0	-3.0	-	dBm
Monitor voltage	30	50	70	mV
RF repetitive pulse burnout(Note1)	-	-	800	W

Note1: f=9.41GHz, Pd=1μS, Duty=0.001

- BLOCK DIAGRAM -

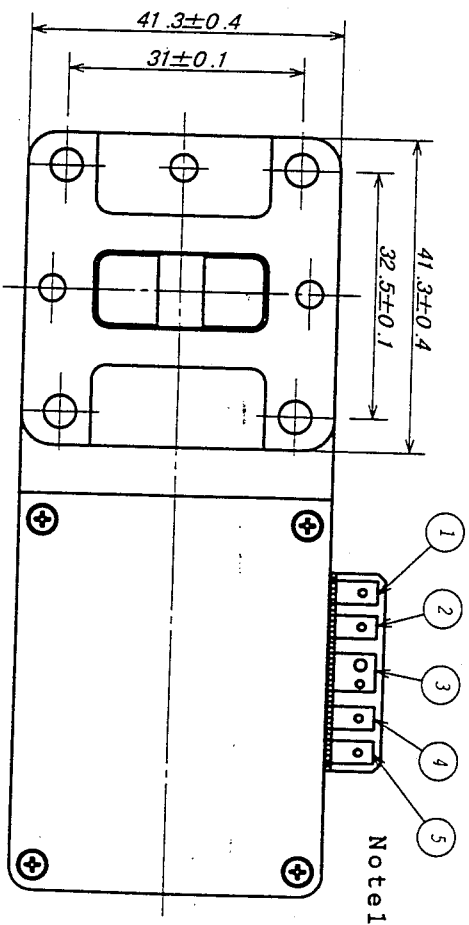
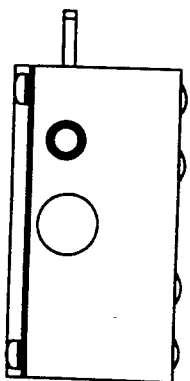
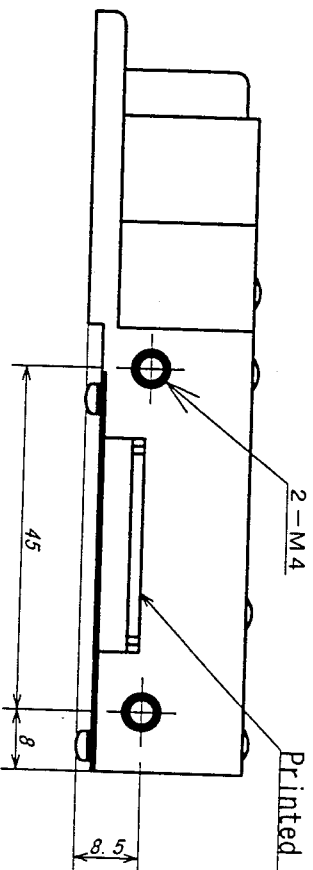
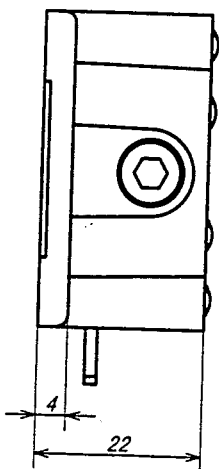
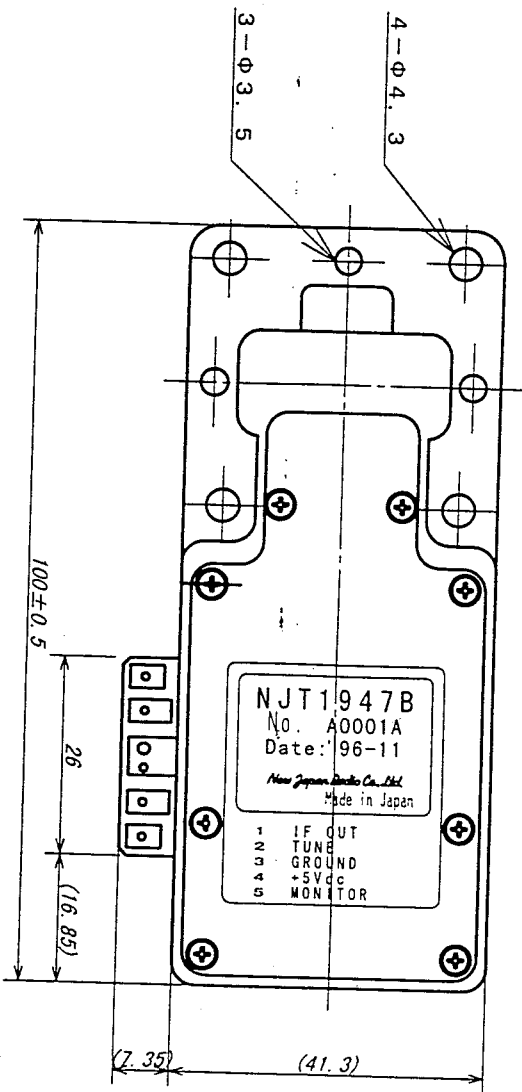


For further information on the use of the front end, please contact New JRC.

New JRC reserves the right to change the specification of goods without notice. 96-12

NJT1947B

(Unit: mm)



- Note1
1. IF OUT
 2. TUNE
 3. GROUND
 4. +5Vdc
 5. MONITOR OUT

Printed Circuit board. (t=1.6mm)