X-Band Rader Front End

NJT 1946A

The NJT1946A is a small size and light weight front end module for use in marine rader systems.

This front end includes a GaAs FET low noise amplifier, image rejection mixer, local VCO with buffer amplifier, FET operation monitor circuit in a single package.

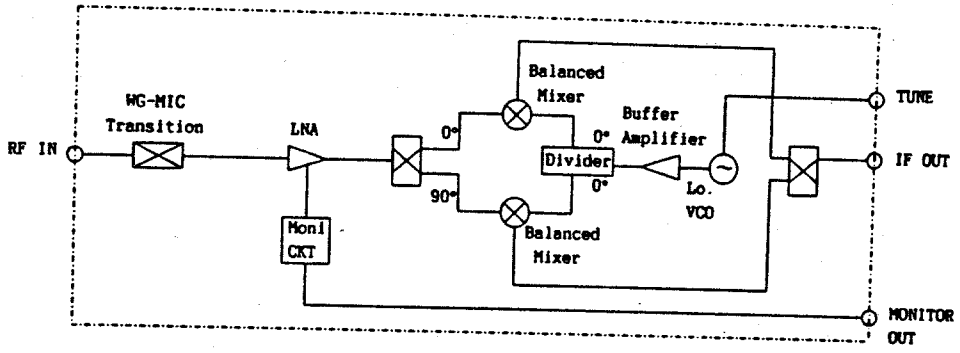
The stability of the local VCO frequency by the input RF power is increased effectively by the buffer amplifier which is located between image rejection mixer and local VCO.

—— ELECTRICAL ——

	Min	Typical	Max	Unit
Operating voltage	4.8	5.0	5.2	V
Operating current	—	—	80	mA
Receiving frequency	9.32	—	9.50	GHz
Local frequency V_T -4V	—	—	9.38	GHz
V_T -24V	9.56	—	—	GHz
Noise figure	—	—	3.5	dB
Conversion gain	3.0	—	7.0	dB
1dB Gain compression point(IF Port)	—	—	-5	dBm
Monitor voltage	—	50	—	mV
RF single pulse bur nout(Note1)	—	—	600	mW
RF repetitive pulse burnout(Note2)	—	—	400	mW

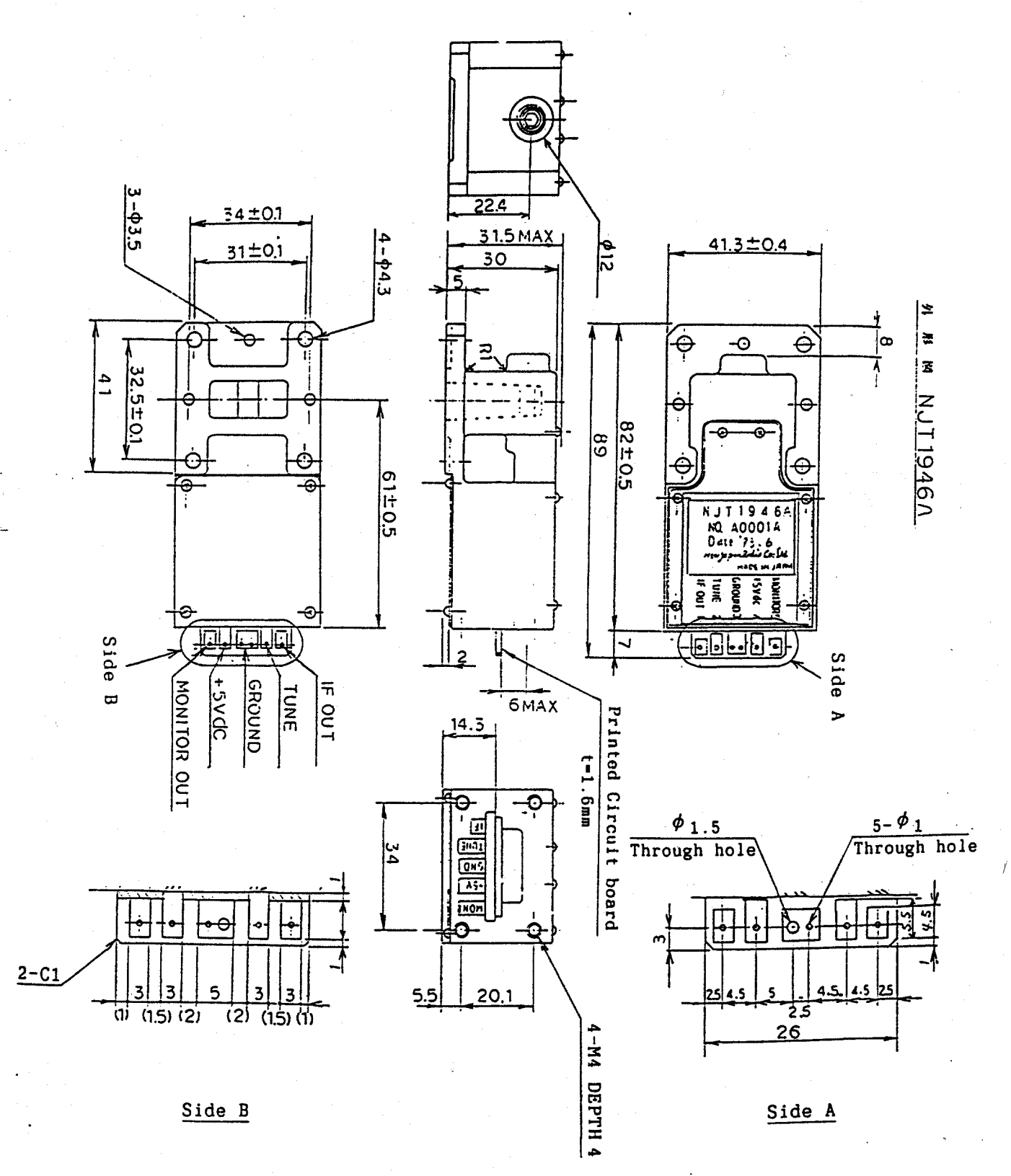
Note1. f=9.41GHz Pd=10nsec Note2. f=9.41GHz Pd=1μs Duty=0.001

—— BLOCK DIAGRAM ——

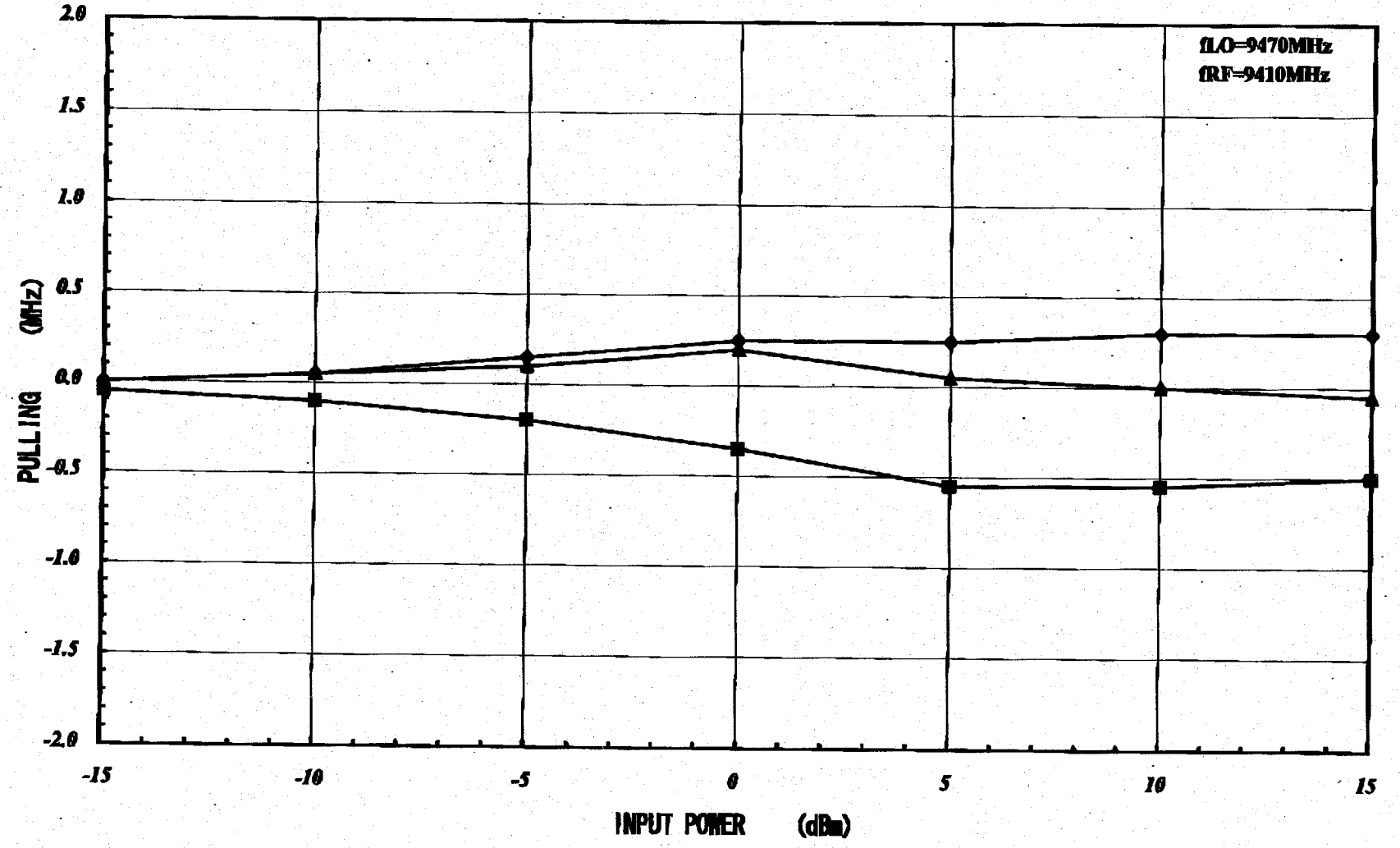


For futher information on the use of the front end, please contact New JRC.

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


外形図 NJT1946A
3-φ3.5
34±0.1
31±0.1
4-φ4.3
41
32.5±0.1
61±0.5
Side B
MONITOR OUT
+5VDC
GROUND
TUNE
IF OUT
22.4
31.5MAX
30
5
R1
φ12
2
6MAX
Printed Circuit board
t=1.6mm
14.3
34
5.5
20.1
4-M4 DEPTH 4
41.3±0.4
8
89
82±0.5
7
NJT1946A
NO A00014
Side A
φ1.5
Through hole
5-φ1
Through hole
2-C1
3 3 5 3 3
(1) (1.5) (2) (2) (1.5) (1)
Side B
2.5 4.5 5 4.5 4.5 2.5
26
Side A

NJT1946A PULLING (Sample amounts:3)



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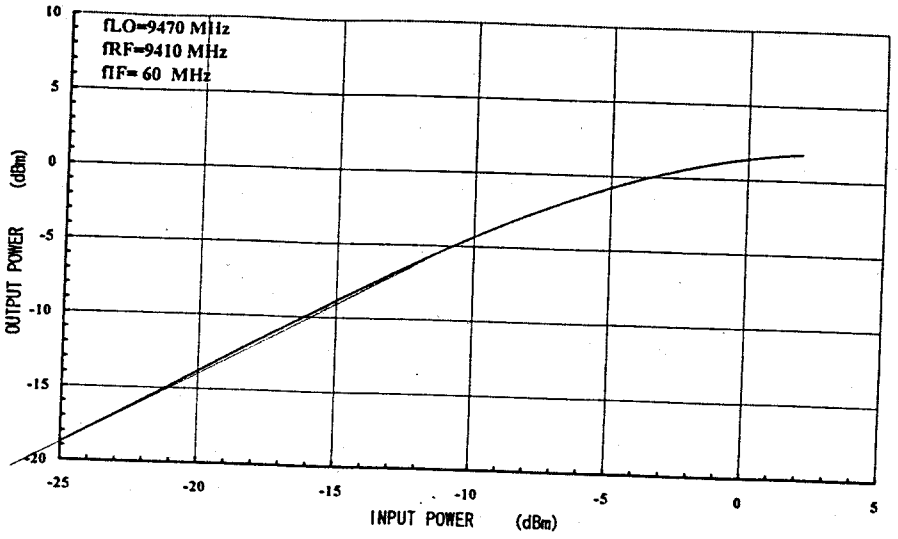
(1) Input power level vs output power level characteristic (P1dB)



(2) Tuning frequency characteristic