

Date

Jan. 11, 2019

Released

X band Radar Front End

Model No. NJT1947B

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Microwave Division

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Microwave Division

Title:

Datasheet of NJT1947B

Reference No.:

DS-T1947B

Rev.:

03E

Sheet:

1/3

■ GENERAL DESCRIPTION

NJT1947B is designed for the front end of marine radar system.

It features a small size and a light weight operable at any frequency between 9.38GHz and 9.44GHz.

This front end module consists of PIN diode Limiter, GaAs FET low noise amplifier, Image rejection mixer, Local VCO with buffer amplifier.

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.



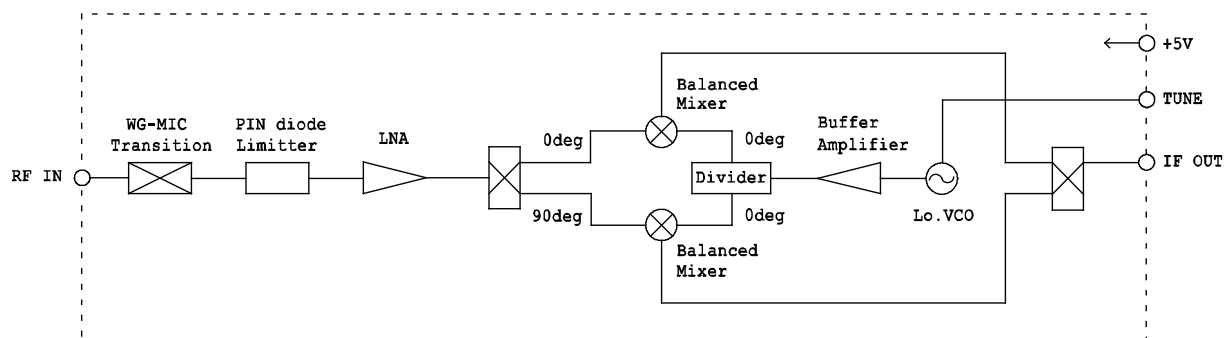
■ ELECTRICAL CHARACTERISTICS < at 25 °C >

PARAMETERS	MINIMUM	TYPICAL	MAXIMUM	UNITS
Operating voltage	4.8	5.0	5.2	V
Operating current	-	85	100	mA
Tuning Voltage (note 1)	10.5	12.0	13.5	V
Local frequency	VT= 4V	-	9.41	GHz
	VT=24V	9.53	-	GHz
Noise figure	-	3.5	5.5	dB
Conversion gain	1.0	4.0	-	dB
1dB Gain compression point (RF Port)	-8.0	-5.0	-	dBm
RF repetitive pulse burnout (note 2)	-	-	800	W

Note1: $f_{LO}=9.47\text{GHz}$

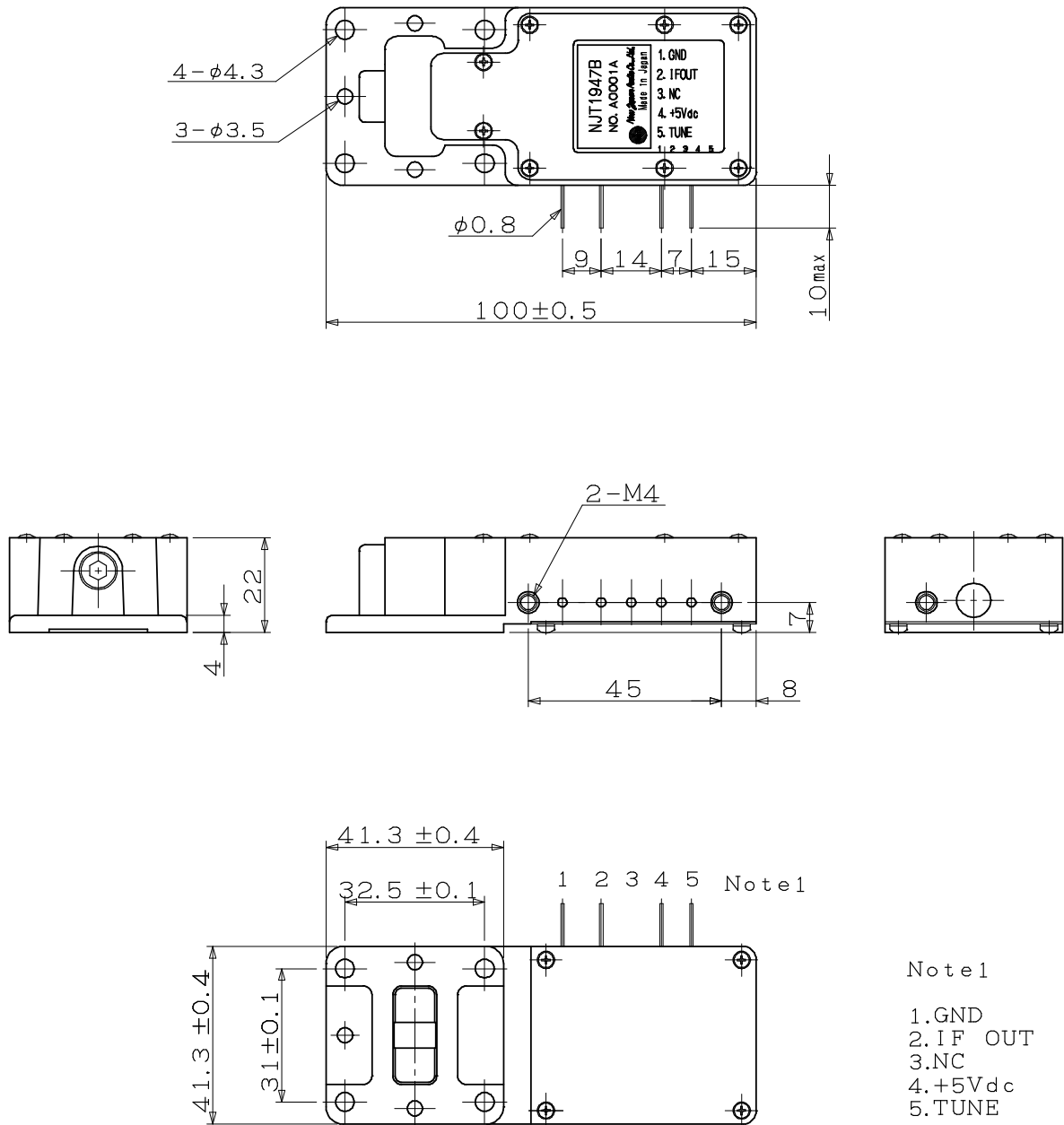
Note2: $f_{RF}=9.41\text{GHz}$, $P_d=1\mu\text{sec}$, $\text{Duty}=0.001$

■ BLOCK DIAGRAM



* Above Specifications are subject to change without notice.

■ OUTLINE



Note 1

- 1. GND
- 2. IF OUT
- 3. NC
- 4. +5Vdc
- 5. TUNE

(Dimensions are expressed in "mm".)

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