

## X-Band Radar Front End

### ■ GENERAL DESCRIPTION

NJT1028 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 GaAs FET low noise amplifier, balanced 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 balanced mixer and local VCO.



### ■ ELECTRICAL CHARACTERISTICS < at 25 °C >

PARAMETERS	Min	Typical	Max	Units
Operating voltage	4.8	5.0	5.2	V
Operating current	-	70	90	mA
Tuning voltage (Note1)	10.0	12.0	14.0	V
Local frequency	VT= 6V	-	9.41	GHz
	VT=24V	9.53	-	GHz
Noise figure (Note2)	-	1.5	4.0	dB
Conversion gain (Note2)	8.0	10.0	12.0	dB
RF single pulse burnout (Note3)			600	mW
RF repetitive pulse burnout (Note4)	-	-	400	mW

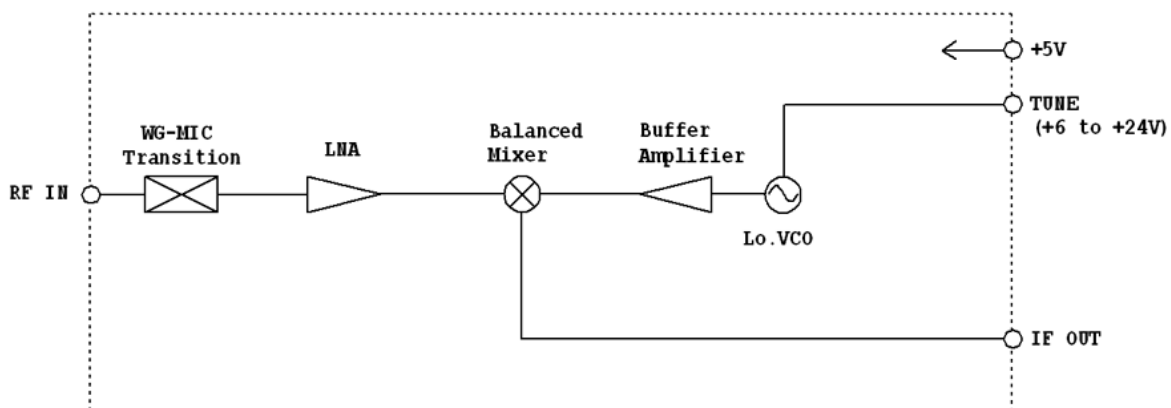
Note1: fLO=9.47GHz

Note2: DSB measurement.

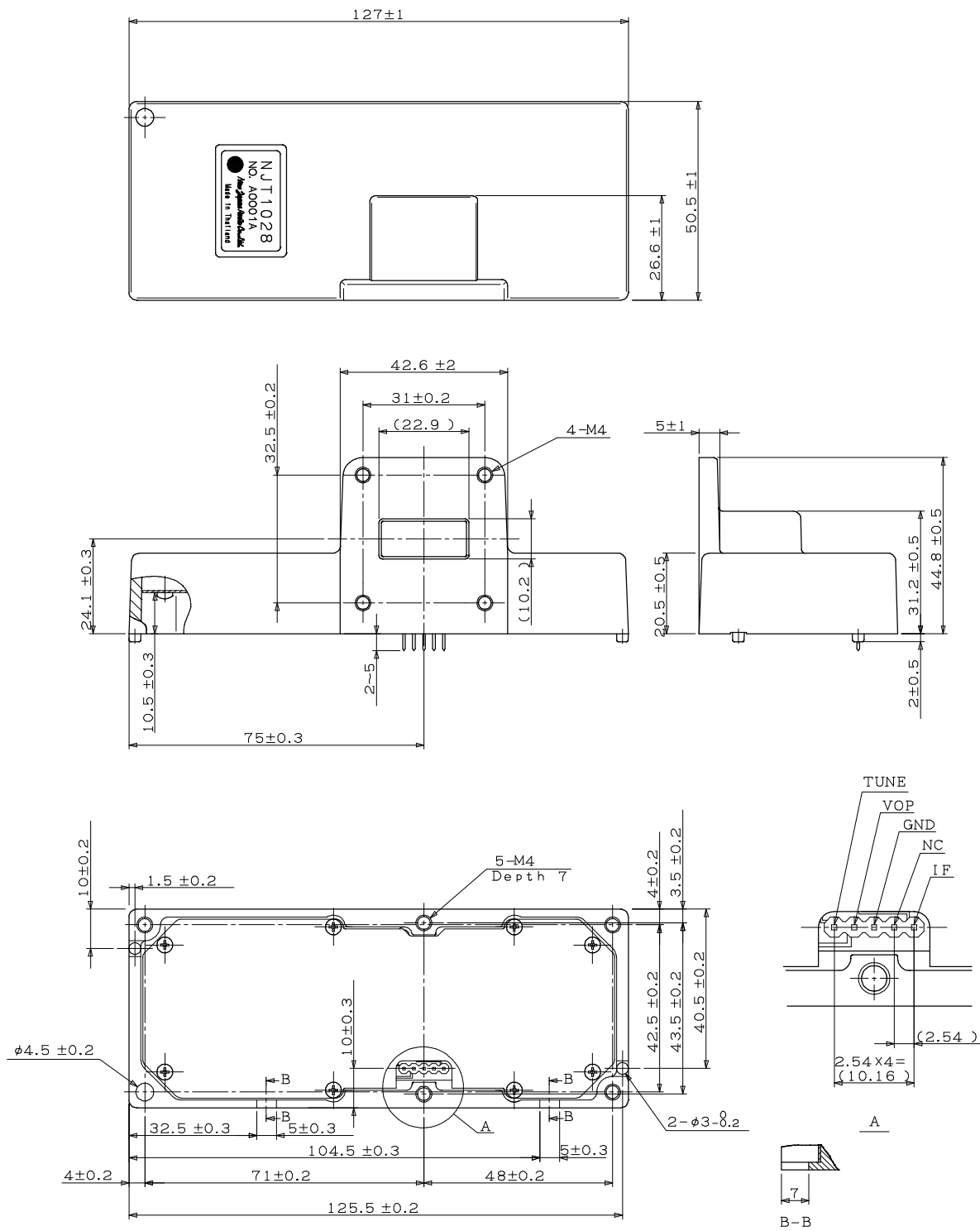
Note3: fRF=9.41GHz, Pd=10nsec

Note4: fRF=9.41GHz, Pd=1μsec, Duty=0.001

### ■ BLOCK DIAGRAM



■ OUTLINE



(Dimensions are expressed in "mm".)

\*Note : The contents of this sheet are subject to change without notice.