New Japan Radio Co.,Ltd.

Technical Information

Rev.1

S-Band Radar Front End

NJS4310D

NJS4310D is designed for the front end of marine radar system.
It features a small size and a light weight operable at any frequency between 3.02GHz and 3.08GHz.
This front end module consists of GaAs FET low noise amplifier, Image rejection mixer, Local VCO with buffer amplifier.
FET monitoring circuit is included in the design 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 ºC >

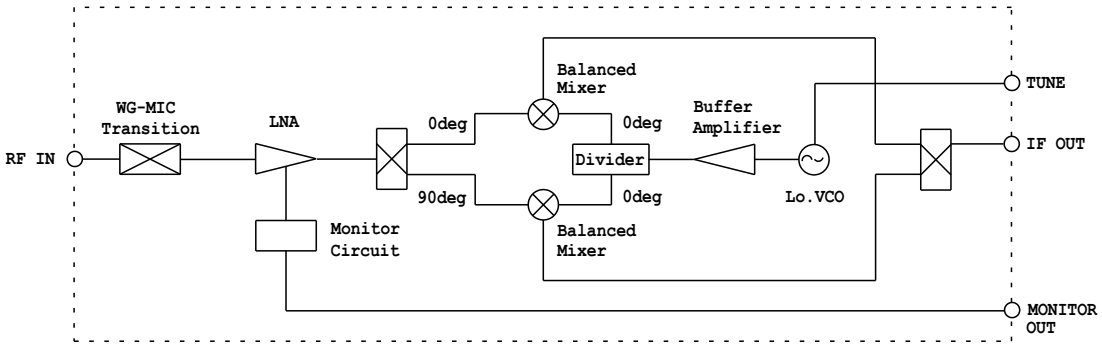
		Min	Typical	Max	Unit
Operating voltage		11.8	12.0	12.2	V
Operating current		－	－	100	mA
Local frequency	VT= 4V	－	－	3.05	GHz
	VT=24V	3.17	－	－	GHz
Noise figure(Note3)		－	－	3.0	dB
Conversion gain(Note3)		6.0	－	－	dB
1dB Gain compression point(IF Port)		－5.0	－	－	dBm
Monitor voltage		－	50	－	mV
RF single pulse burnout (Note1)		－	－	600	mW
RF repetitive pulse burnout (Note2)		－	－	400	mW

Note1: f=3.05GHz, Pd=10nsec

Note2: f=3.05GHz, Pd=1μs, Duty=0.001

Note3: Temperature Range Ta=－30deg. ～ ＋90deg.

－ 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. 12.06

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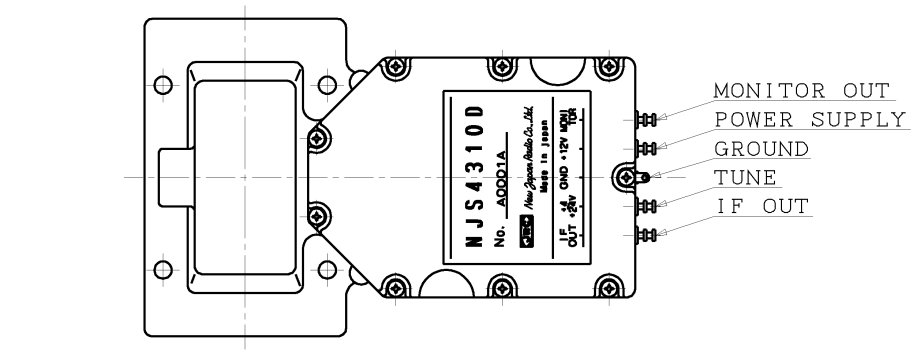

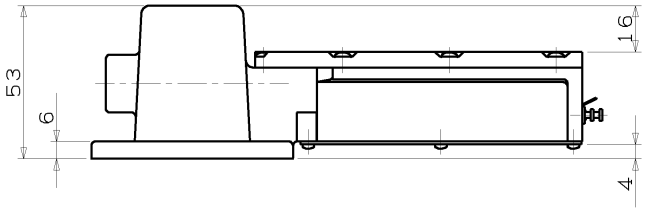

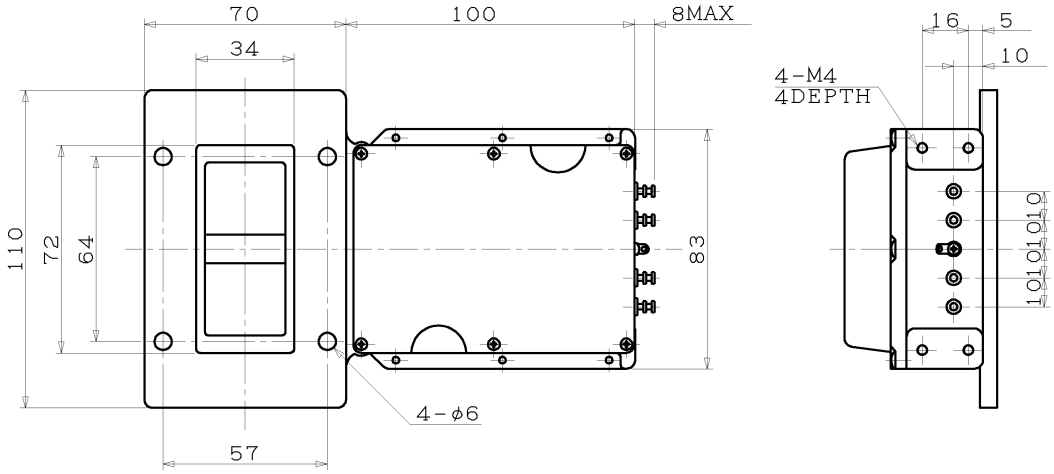

Unit:mm

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