X-Band Radar Front End **NJT 1959**

NJT1959 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 HEMT 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.

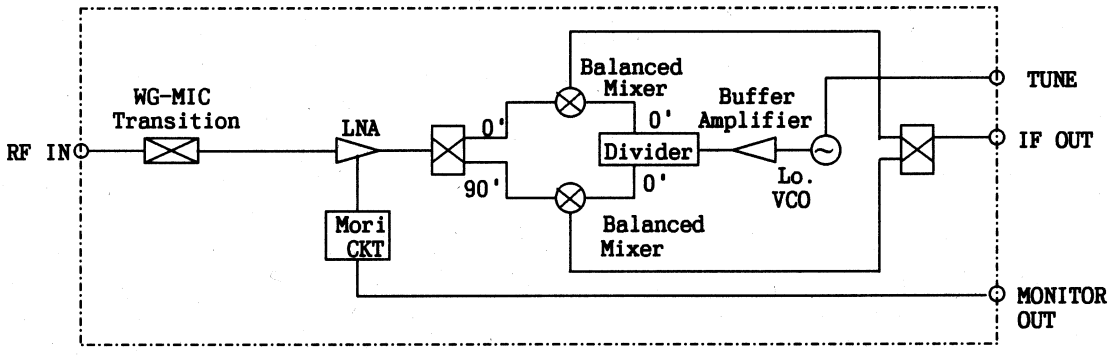
The gain compression level of the RF input port is improved.

--- ELECTRICAL --- < at 25 °C >

	Min	Typical	Max	Unit
Operating Voltage	4.8	5.0	5.2	V
Operating current	-	-	80	mA
Local frequency V_T = 4V	-	-	9.38	GHz
V_T = 24V	9.56	-	-	GHz
Noise figure	-	3.5	4.0	dB
Conversion gain	0	2.0	-	dB
1dB Gain compression point(RF Port)	-3.0	0	-	dBm
Monitor voltage	-	50	-	mV
RF single pulse burnout(Note1)	-	-	600	mW
RF repetitive Pulse burnout(Note2)	-	-	400	mW

Note1, f=9.41GHz Pd10nsec
NOte2, 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.

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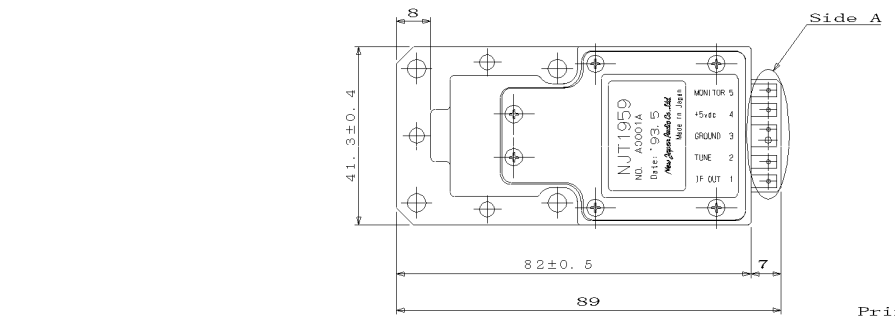
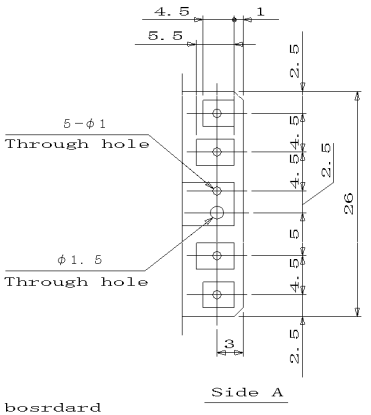
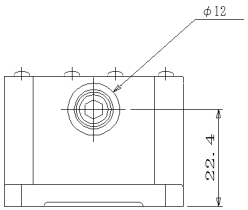
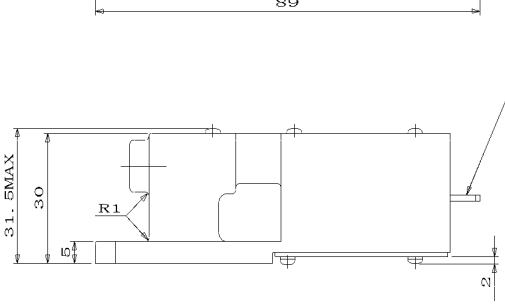
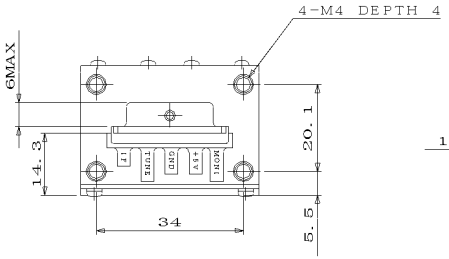
NJT1959

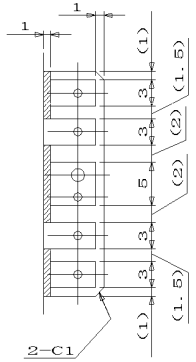




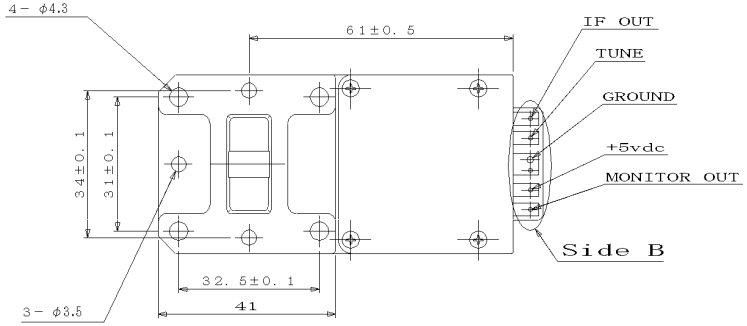








Side B



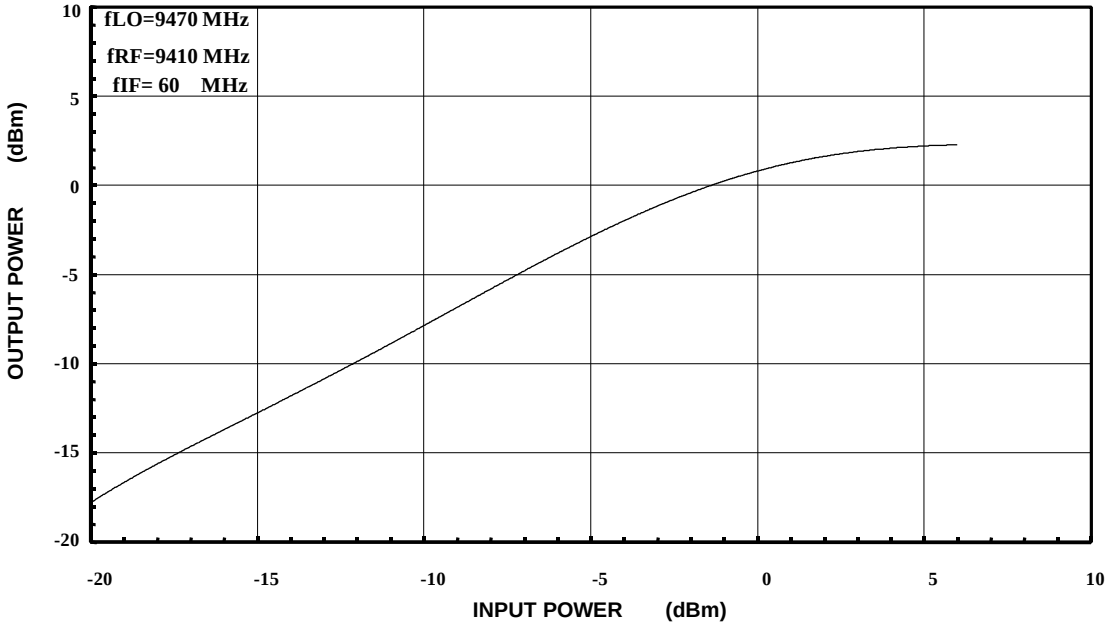
Unit:mm

Technical Information

NJT1959

X-band Radar Front End

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



(2) Tuning frequency characteristic