

Palapa C band PLL LNB
Model No. NJS8476H

C band PLL LNB
Model No. NJS8477H

Insat C band PLL LNB (LO: 5.76 GHz)

Model No. NJS8478H

Insat C band PLL LNB (LO: 5.95 GHz)

Model No. NJS8479H

Specifications

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New Japan Radio Co., Ltd.

Microwave Components Division

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1. Scope

This specification defines the low noise amplifier and block downconverter intended for the satellite data communication downlink application in the 3.4 to 4.2 GHz, Palapa C-band, 3.625 to 4.2 GHz, C-band and 4.5 to 4.8 GHz, Insat C-band.

This LNB has a combined 3-stage HEMT amplifier and block downconverter with 5.15 GHz, 5.76GHz or 5.95 GHz Phase Locked Local Oscillator which is constituted with S-Band VCO, Multiplier, Loop Filter and TCXO providing high stability and low phase noise.

All specifications shall apply throughout the full range of the specified environmental conditions unless otherwise specified.

2. Electrical Specifications

#	Item	Specification
2-1.	Input Frequency Band	3.400 to 4.200 GHz <Model No. NJS8476H> 3.625 to 4.200 GHz <Model No. NJS8477H> 4.500 to 4.800 GHz <Model No. NJS8478H> 4.500 to 4.800 GHz <Model No. NJS8479H>
2-2.	Input Waveguide Flange	CPR-229G
2-3.	Input V.S.W.R.	3:1 max.
2-4.	Noise Temp. (Ta: +25 C)	35 K typ. 45 K max.
2-5.	Output Frequency	950 to 1,750 MHz <Model No. NJS8476H> 950 to 1,525 MHz <Model No. NJS8477H> 960 to 1,260 MHz <Model No. NJS8478H> 1,150 to 1,450 MHz <Model No. NJS8479H>
2-6.	Conversion Gain (Ta: +25 C)	60 dB min. 66 dB max.
2-7.	Conversion Gain Ripple (Ta: +25 C)	2.0 dB max. at 50 MHz segments.
2-8.	Conversion Gain Flatness (Ta: +25 C)	8.0 dB max. at 800 MHz BW <Model No. NJS8476H> 5.0 dB max. at 575 MHz BW <Model No. NJS8477H> 5.0 dB max. at 300 MHz BW <Model No. NJS8478H> 5.0 dB max. at 300 MHz BW <Model No. NJS8479H>
2-9.	Output Power for 1 dB Gain Compression	+3 dBm min.
2-10.	Intermodulation Products (3rd order Intermodulation rejection with two -75 dBm input carriers separated by 10 MHz.)	45 dB min
2-11.	Output Intercept Point	+13 dBm min.
2-12.	Local Oscillator Frequency (Ta: -40 to +60 C)	5.15 GHz +/- 10.0 ppm <Model No. NJS8476H> 5.15 GHz +/- 10.0 ppm <Model No. NJS8477H> 5.76 GHz +/- 10.0 ppm <Model No. NJS8478H> 5.95 GHz +/- 10.0 ppm <Model No. NJS8479H>
2-13.	Phase Noise (SSB)	-70 dBc/Hz typ. -63 dBc/Hz max. at 100 Hz -80 dBc/Hz typ. -73 dBc/Hz max. at 1 kHz -85 dBc/Hz typ. -83 dBc/Hz max. at 10 kHz -90 dBc/Hz max. at 100 kHz
2-14.	Spurious	a) -140 dBm max. at input, Fixed frequency spur, unrelated to test CW signal. (Measured at specified IF band ; 950 to 1,750 MHz, 950 to 1,525 MHz, 960 to 1,260 MHz or 1,150 to 1,450 MHz) b) -55 dBc max. With test CW signal -10 dBm IF output (Measured at specified IF band ; 950 to 1,750 MHz, 950 to 1,525 MHz, 960 to 1,260 MHz or 1,150 to 1,450 MHz)



#	Item	Specification
2-15.	Image Rejection	60 dB min.
2-16.	Output Connector	F-type female 75 ohm
2-17.	Output V.S.W.R.(75 ohm)	2.5 : 1 max.
2-18.	Input Voltage	+13.5 to +24 V DC
2-19.	Current Drain	350 mA max.

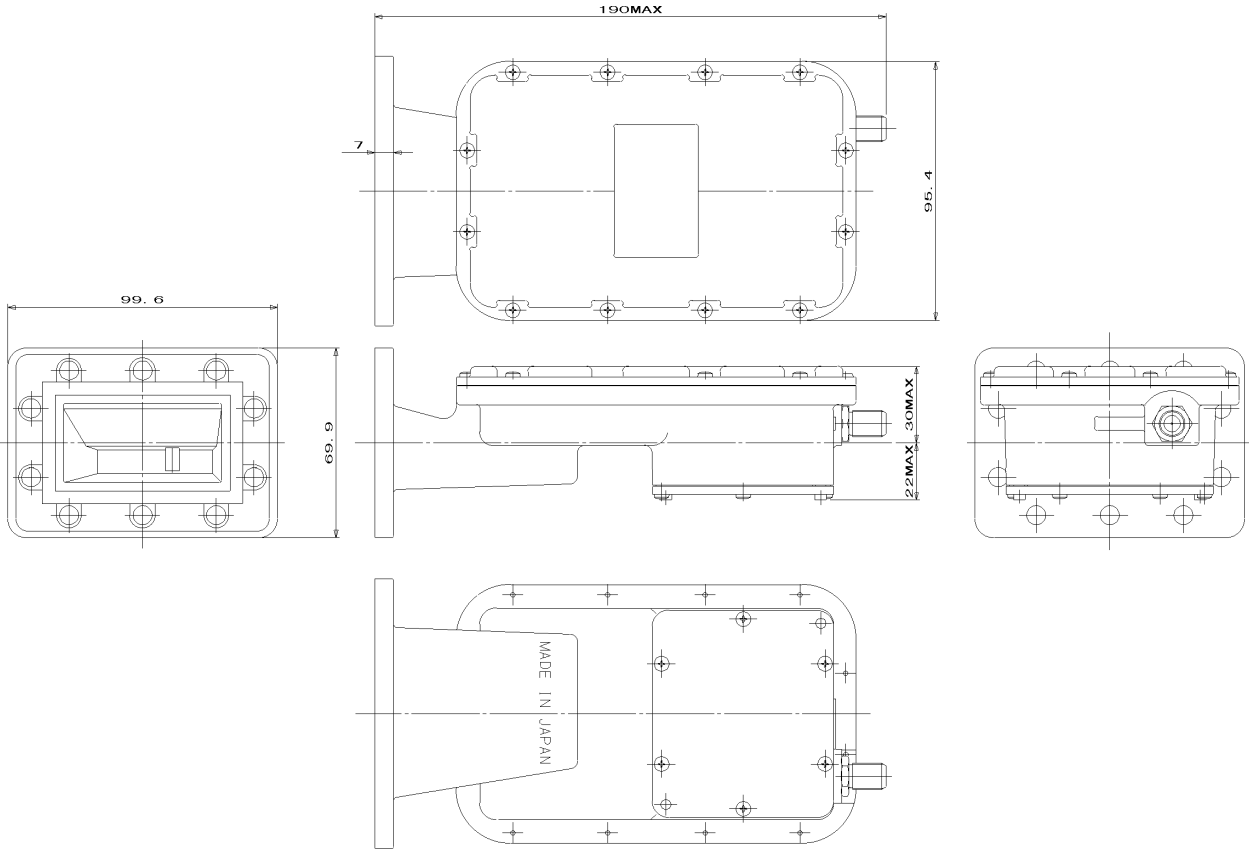
3. Environmental Specifications

#	Item	Specification
3-1.	Operating Temperature Range	-40 to +60 C
3-2.	Storage Temperature Range	-40 to +80 C
3-3.	Humidity	100 % Rh max.
3-4.	Vibration	5 G (f : 50 Hz, T : 5 min. Direction : X,Y,Z)
3-5.	Shock	15 G (Direction : X,Y,Z)

4. Absolute Maximum Rating

#	Item	Specification
4-1.	RF Input Power	-10 dBm (@ CW), +10 dBm (@ Pulse)
4-2.	Supply Voltage	+28 Vdc

5. Outline Drawing



Unit : mm