



Ku-band PLL LNB

(Internal Reference, Local Stability : +/- 3 ppm, F-type female)

Model No. NJR2835S

(Input Frequency 11.70 to 12.20 GHz)

Model No. NJR2836S

(Input Frequency 12.25 to 12.75 GHz)

Model No. NJR2837S

(Input Frequency 10.95 to 11.70GHz)

Model No. NJR2839S

(Input Frequency 11.20 to 11.70 GHz)

Specifications

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Microwave Components Division

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1. Scope

This specification details the requirements for the low noise and block downconverter intended for the satellite data communication downlink application in the Ku-Band.

This LNB has a combined 3-stage HEMT Amplifier and Block Down Converter with a Phase Locked Local, which is constituted with a S-Band VCO, Multiplier, Loop Filter and Crystal Oscillator 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	11.70 to 12.20 GHz <Model No. NJR2835S> 12.25 to 12.75 GHz <Model No. NJR2836S> 10.95 to 11.70 GHz <Model No. NJR2837S> 11.20 to 11.70 GHz <Model No. NJR2839S>
2-2.	Input Waveguide Flange	WR 75
2-3.	Input V.S.W.R.	2.5 : 1 typ.
2-4.	Noise figure (Ta: +25 C)	0.8 dB typ. 1.0 dB max.
2-5.	Output Frequency	950 to 1,450 MHz <Model No. NJR2835S/36S/39S> 950 to 1,700 MHz <Model No. NJR2837S>
2-6.	Conversion Gain (Ta: +25 C)	55 dB min. 60 dB typ.
2-7.	Conversion Gain Variation (Ta: +25 C)	2.0 dB max. in any 50 MHz segment over the frequency band.
2-8.	Output Power for 1 dB Gain Compression	0 dBm min.
2-9.	Intermodulation Products (3rd order Intermodulation rejection with two RF input carriers separated by 10 MHz, -10 dBm IF Output Power)	45 dBc min
2-10.	Local Oscillator Leakage Levels	-25 dBm max. at the IF Output Connector. -60 dBm max. at the RF Input Flange.
2-11.	Local Oscillator Frequency Accuracy (Initial set and Temp.; -40 to +60 C)	<Model No. NJR2835S> 10.75 GHz +/- 2.5 ppm (Temp.; -30 to +60C) 10.75 GHz +/- 3.0 ppm (Temp.; -40 to +60C) <Model No. NJR2836S> 11.30 GHz +/- 2.5 ppm (Temp.; -30 to +60C) 11.30 GHz +/- 3.0 ppm (Temp.; -40 to +60C) <Model No. NJR2837S> 10.00 GHz +/- 2.5 ppm (Temp.; -30 to +60C) 10.00 GHz +/- 3.0 ppm (Temp.; -40 to +60C) <Model No. NJR2839S> 10.25 GHz +/- 2.5 ppm (Temp.; -30 to +60C) 10.25 GHz +/- 3.0 ppm (Temp.; -40 to +60C)
2-12.	Phase Noise (SSB)	-70 dBc/Hz at 100 Hz -80 dBc/Hz at 1 kHz



#	Item	Specification
2-13.	Spurious	a) -140 dBm max. at input, fixed frequency spur, unrelated to test CW signal. (Measured at specified IF band ; 950 to 1,450 or 1,700 MHz) b) -50 dBc max. With test CW signal -10 dBm IF output (Measured at specified IF band ; 950 to 1,450 or 1,700 MHz)
2-14.	Image Rejection	45 dB min.
2-15.	Output Interface	F-type female (75 ohms)
2-16.	Output V.S.W.R. (75 ohm)	2.3 : 1 max.
2-17.	Input Voltage	+12 to +24 V DC
2-18.	Current Drain	200 mA max.

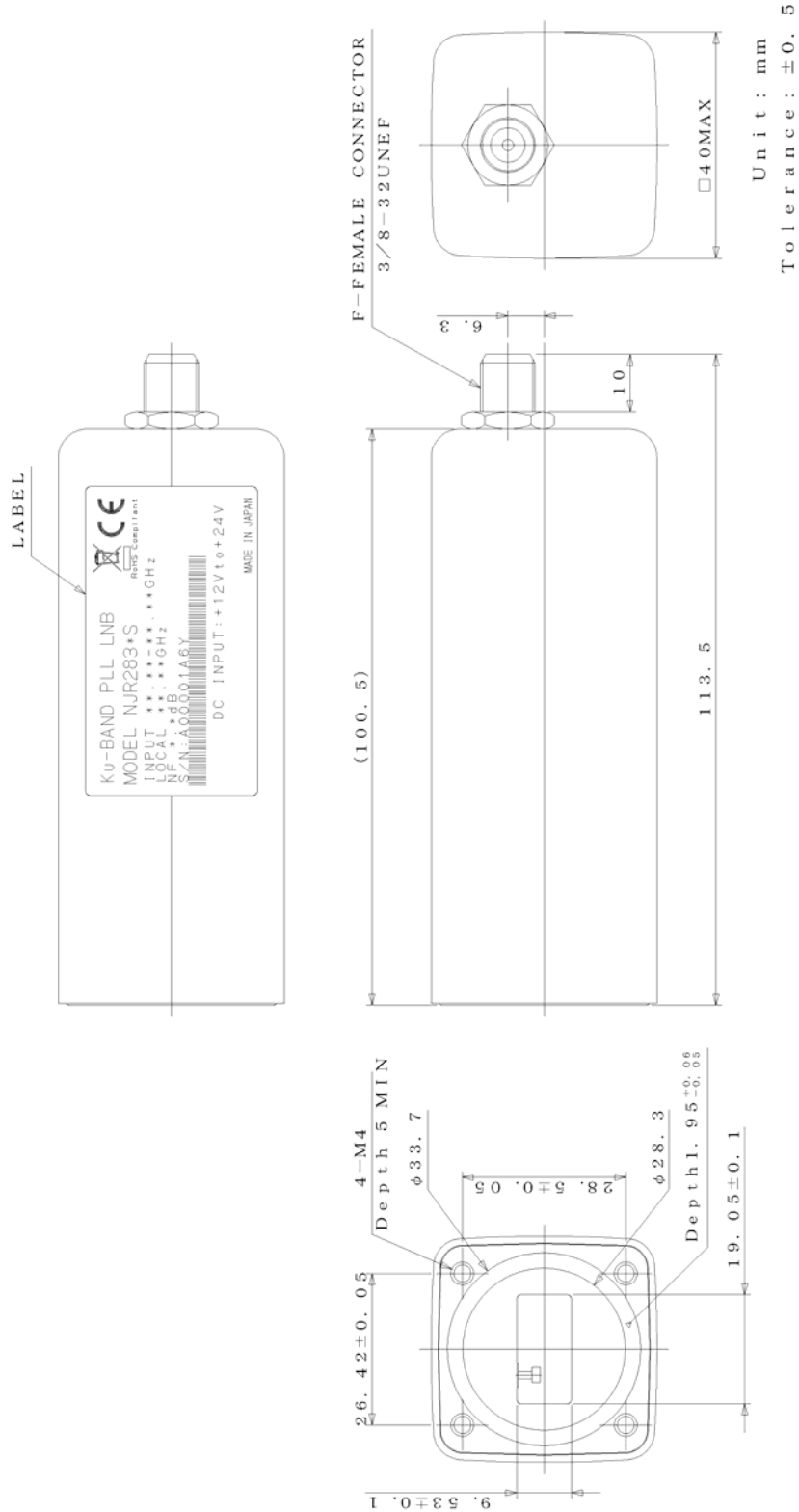
3. Environmental Specifications

#	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)
3-6.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

4. Absolute Maximum Rating

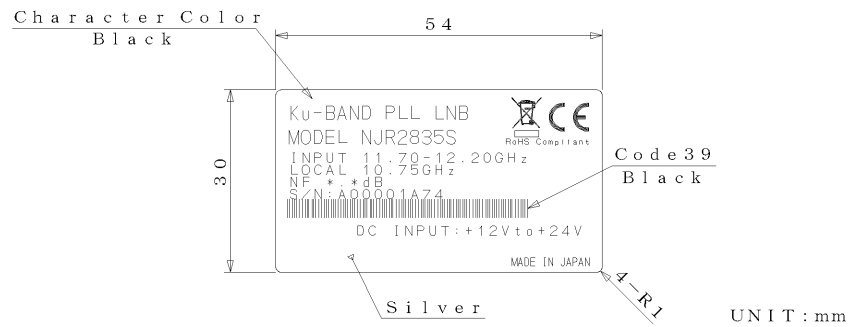
#	Item	Specification
4-1	RF Input Power	-10 dBm (@ CW)
4-2.	Supply Voltage	+28 Vdc

5. Outline Drawing – NJR2835S/36S/37S/39S –

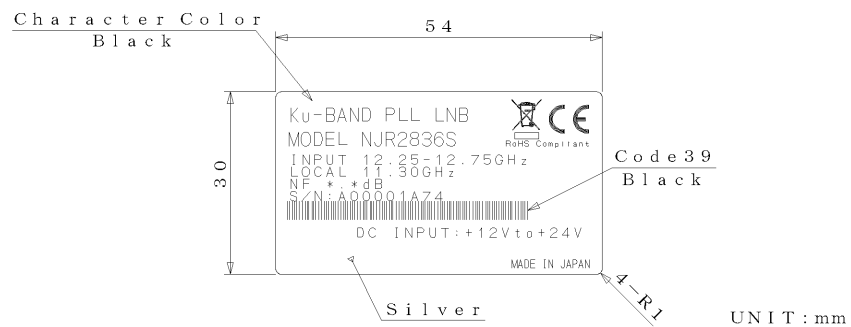


6. Label (WEEE / RoHS compliance)

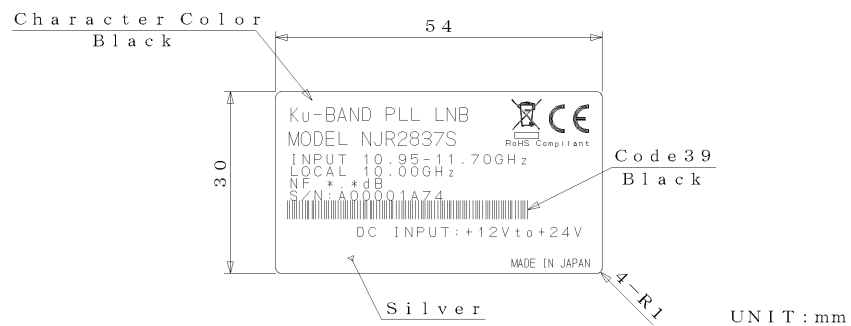
– NJR2835S –



– NJR2836S –



– NJR2837S –



– NJR2839S –

