

C-band PLL LNB

Model No.: NJS8496 Series

Features

- ★ **Low Noise Temperature**
 - 15 K typ., 30 K max
- ★ **Low Power Consumption**
 - DC Current Drain: 350 mA Max
- ★ **Light Weight**
 - 670 g
- ★ **RoHS Compliance**



Product Line-up

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJS8496EF	3.400 to 4.200 GHz (Full C-band)	5.15 GHz	950 to 1,750 MHz	Same as External Reference	F-type
NJS8496EN					N-type
NJS8496HF				+/- 10 ppm (+/- 50kHz typ.)	F-type
NJS8496HN					N-type
NJS8496SF				+/- 3 ppm (+/- 15kHz typ.)	F-type
NJS8496SN					N-type
NJS8496UF				+/- 1 ppm (+/- 5kHz typ.)	F-type
NJS8496UN					N-type
NJS8496VF				+/- 0.3 ppm (+/- 1.5kHz typ.)	F-type
NJS8496VN					N-type
NJS8497EF	3.625 to 4.200 GHz (Standard C-band)	5.15 GHz	950 to 1,525 MHz	Same as External Reference	F-type
NJS8497EN					N-type
NJS8497HF				+/- 10 ppm (+/- 50kHz typ.)	F-type
NJS8497HN					N-type
NJS8497SF				+/- 3 ppm (+/- 15kHz typ.)	F-type
NJS8497SN					N-type
NJS8497UF				+/- 1 ppm (+/- 5kHz typ.)	F-type
NJS8497UN					N-type
NJS8497VF				+/- 0.3 ppm (+/- 1.5kHz typ.)	F-type
NJS8497VN					N-type
NJS8498EF	4.500 to 4.800 GHz (Insat C-band)	5.76 GHz	960 to 1,260 MHz	Same as External Reference	F-type
NJS8498EN					N-type
NJS8498HF				+/- 10 ppm (+/- 50kHz typ.)	F-type
NJS8498HN					N-type
NJS8498SF				+/- 3 ppm (+/- 15kHz typ.)	F-type
NJS8498SN					N-type
NJS8498UF				+/- 1 ppm (+/- 5kHz typ.)	F-type
NJS8498UN					N-type
NJS8498VF				+/- 0.3 ppm (+/- 1.5kHz typ.)	F-type
NJS8498VN					N-type

Electrical Specifications

#	Items	Specifications
1.1.	Absolute Maximum Rating [RF Input Power] [Supply Voltage]	-10 dBm for CW Signal +10 dBm for Peak of Pulse Signal +28 V DC
1.2.	Input RF Frequency Range <Model No. NJS8496> <Model No. NJS8497> <Model No. NJS8498>	 3.4 to 4.2 GHz 3.625 to 4.2 GHz 4.5 to 4.8 GHz
1.3.	Noise Temperature @ +25 °C	15 K typ., 30 K max.
1.4.	Output IF Frequency Range <Model No. NJS8496> <Model No. NJS8497> <Model No. NJS8498>	 950 to 1,750 MHz 950 to 1,525 MHz 960 to 1,260 MHz
1.5.	Conversion Gain @ +25 °C	59 dB min., 67 dB max.
1.6.	Conversion Gain Ripple @ +25 °C	2 dBp-p max. at any 50 MHz segments.
1.7.	Conversion Gain Flatness over Frequency <Model No. NJS8496> <Model No. NJS8497> <Model No. NJS8498>	 5 dBp-p max. at 800 MHz BW 5 dBp-p max. at 575 MHz BW 4 dBp-p max. at 300 MHz BW
1.8.	Conversion Gain Stability over Temperature	5 dB max.
1.9.	Output Power @ 1dB G.C.P. (P1dB)	+3 dBm min.
1.10.	IM3 for two dBm input carriers < Condition > Input Level: -75 dBm for each carriers Separation Frequency: 10 MHz	-45 dBc max.
1.11.	Output Intercept Point	+13 dBm min.
1.12.	Local Oscillator Frequency <Model No. NJS8496> <Model No. NJS8497> <Model No. NJS8498>	 5.15 GHz nom. 5.15 GHz nom. 5.76 GHz nom.

*Above Specifications are subject to change without notice.

#	Items	Specifications
1.13.	Local Oscillator Stability including Temperature Stability of -40 to +60 °C, Initial Setting Error and Aging Error	
	<H-type Model>	+/- 10 ppm max.
	<S-type Model>	+/- 3 ppm max.
	<U-type Model>	+/- 1 ppm max.
	<V-type Model>	+/- 0.3 ppm max.
	<E-type Model>	Depend on External Reference
1.14.	L.O. Phase Noise (SSB)	-70 dBc/Hz typ., -59 dBc/Hz max. @ 100 Hz -80 dBc/Hz typ., -75 dBc/Hz max. @ 1 kHz -90 dBc/Hz typ., -85 dBc/Hz max. @ 10 kHz -100 dBc/Hz typ., -95 dBc/Hz max. @ 100 kHz -110 dBc/Hz typ., -105 dBc/Hz max. @ 1 MHz
1.15.	Requirement for External Reference (Only E-type Model Specified)	
	[Input Port]	IF Output Interface
	[Frequency]	*Combine reference with IF Signal and DC Power 10 MHz (sine-wave)
	[Input Power]	-10 to 0 dBm @IF Output connector
	[Phase Noise]	-135 dBc/Hz max. at 100 Hz -143 dBc/Hz max. at 1 kHz -145 dBc/Hz max. at 10 kHz
1.16.	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, or 960 to 1,260 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, or 960 to 1,260 MHz)
1.17.	Image Rejection	60 dB min.
1.18.	Input V.S.W.R.	2.5 : 1 typ.
1.19.	Output V.S.W.R.	2.0 : 1 max.
1.20.	DC Power Requirement	
	[Input Port]	IF Output Interface
	[Input Voltage]	+12 to +24 VDC
	[Current Drain]	350 mA

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Mechanical Specifications

#	Items	Specifications
2.1.	RF Input Interface	Waveguide, CPR-229G (with Grooved) and equivalent Waveguide Flange: Type of Through hole ($\phi 6.5$ nom.)
2.2.	IF Output Interface Connector	
	<F-type Model>	F-type female connector, 75 ohms
	<N-type Model>	N-type female connector, 50 ohms
2.3.	Dimension & Housing	144.5 (L) $\times$ 98.4 (W) $\times$ 69.9 (H) mm without interface connectors and screws
2.4.	Weight	670 g

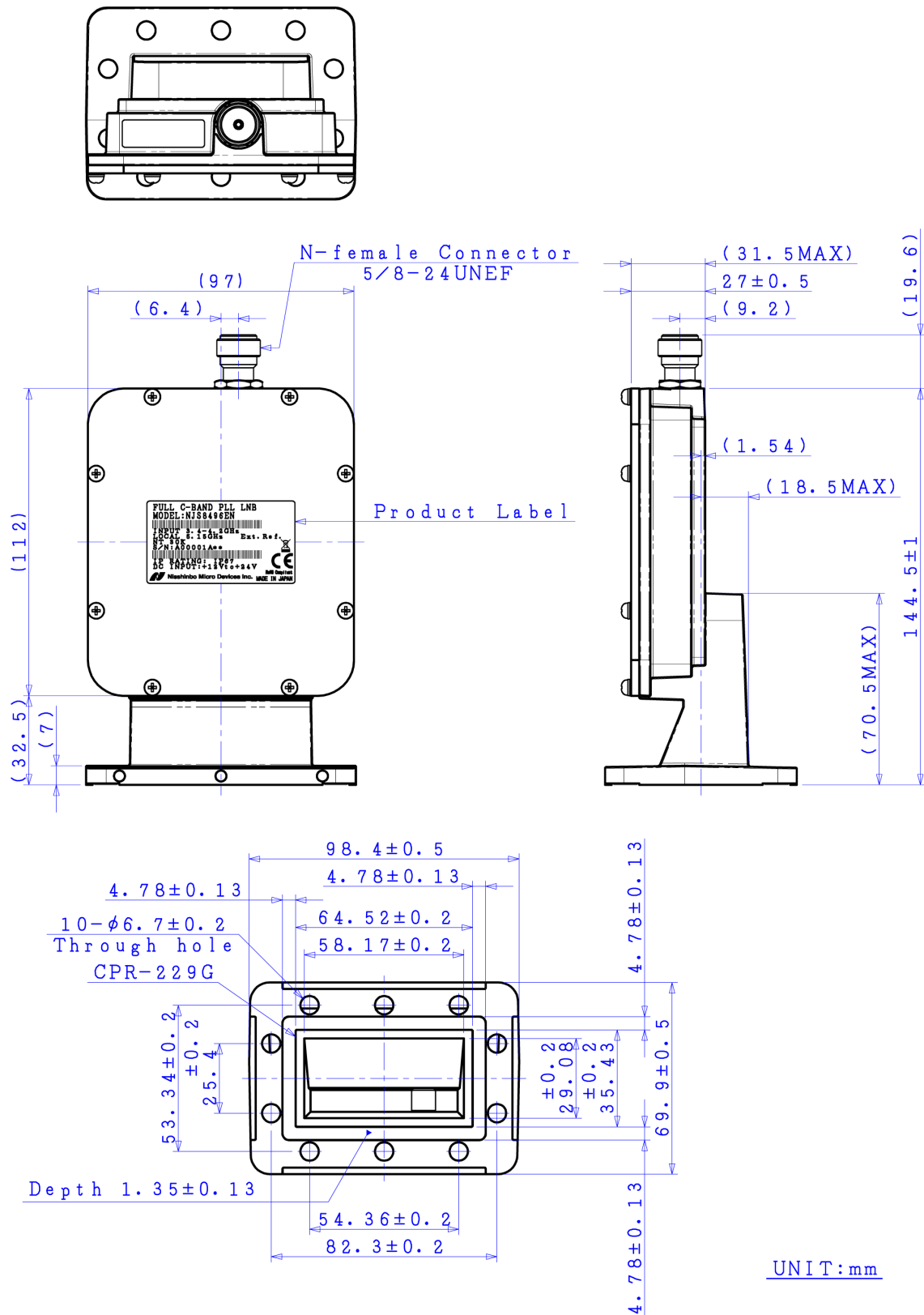
Environmental Specifications

#	Items	Specifications
3.1.	Temperature Range (ambient)	
	[Operating]	-40 to +60 °C
	[Storage]	-40 to +80 °C
3.2.	Humidity	0 to 100 % RH
3.3.	Altitude	15,000 feet (4,572 m)
3.4.	Vibration	5 G [49.03 m/s ²] (3 axis, 50 Hz to 2 kHz)
		1 mm p-p (3 axis, 5 to 50 Hz)
3.5.	Shock	30 G [294.20 m/s ²] (3 axis)
3.6.	Waterproof / Dustproof (IP Code)	IP 67
3.7.	Regulations	EU Directive (CE Marking) RE - 2014/53/EU EMC - 2014/30/EU RoHS - 2011/65/EU + (EU)2015/863 Safety: EN62368-1, EN60950-22

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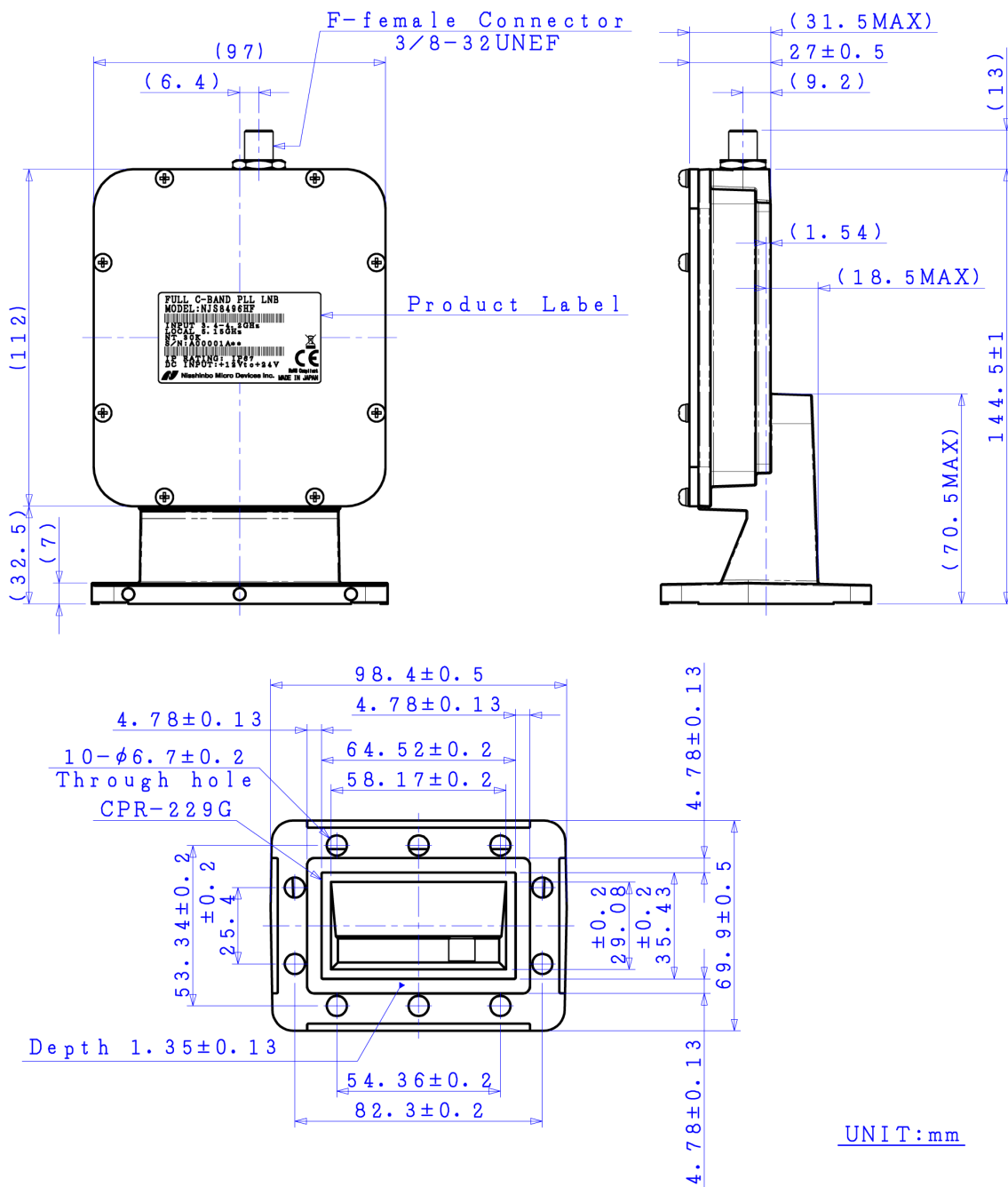
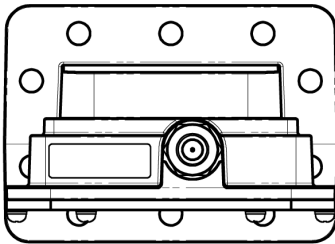
Outline Drawing

N-type Model (e.g. NJS8496EN)



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F-type Model (e.g. NJS8496HF)



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