

Ku band Single LNB
Model No. NJR2154HA
Specifications
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New Japan Radio Co., Ltd.

Microwave Components Division

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1. Scope

This specification details the requirements for the low noise amplifier and block downconverter intended for Direct Broadcasting Satellite-to-Home downlink application in 12.25 to 12.75 GHz, Ku-Band. 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	12.25 to 12.75 GHz
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. 1.3 dB max.
2-5.	Output Frequency Band	950 to 1,450 MHz
2-6.	Conversion Gain (Ta: +25 C)	55 dB typ. 52 dB min.
2-7.	Conversion Gain Variation (Ta: +25 C)	2.0 dB max. (In any 50MHz segment over the frequency band) 5.0 dB max. (Over the full frequency band)
2-8.	Conversion Gain Drift	+4 dB typ. at -40 C -2 dB typ. at +60 C
2-9.	Output Power for 1 dB Gain Compression	0 dBm min.
2-10.	Intermodulation Products (3rd order intermodulation rejection with two -6 dBm output carriers separated by 5 MHz.)	31 dBc min.
2-11.	Local Oscillator Leakage Levels	a) -25 dBm max. at the F type output connector. b) -50 dBm max. at the waveguide flange.
2-12.	Local Oscillator Frequency Temperature Stability (-40 to +60 C)	11.2995 to 11.3005 GHz (Including Initial offset) [11.300 GHz +/- 500 kHz]
2-13.	Phase Noise	-60 dBc/Hz typ. -57dBc/Hz max. at 1 kHz offset -85 dBc/Hz typ. at 10 kHz offset -105 dBc/Hz typ. at 100 kHz offset
2-14.	Image Rejection Ratio	40 dB min.
2-15.	Output V.S.W.R. (75 ohm)	2.0:1 typ.
2-16.	Power Requirement	+12 to +24 V dc
2-17.	Current Drain	110 mA typ. 170 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	G=5 (f=50±2 Hz, t=5(min), Direction ; X,Y,Z)
3-5.	Shock	G=15 (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

