Model 23-LNA
23 cm
Pre-Amplifier

The KH6HTV VIDEO Model 23-LNA is a low noise Pre-Amplifier for the 23 cm (1240 - 1300 MHz) amateur radio band. The typical noise figure is 0.7 dB with a gain of 14 dB. This amplifier has decent return loss on both input and output. It is also stable under widely varying antenna impedances.

Available options: (1) DC powered via output coax connector (2) It can be supplied tuned to any center frequency from 800 MHz to 1.5 GHz including 33 cm band. For 33cm, order as model 33-LNA. ***Note: the 23-LNA is the replacement for the discontinued 23-4LNA which used a now obsolete, MMIC.***

S21 vs. Frequency -- sweep from 0 to 1.5GHz, 5 dB/div & 150 MHz/div.
markers 1 & 2 show 23 cm band edges

PARAMETER	Typical Performance	Notes
Frequency Range	1240 - 1300 MHz	23cm amateur radio band
Noise Figure	0.7 dB, typical	
Gain, S21	14 dB	see plot, p. 2
Bandwidth	115 MHz	-3 dB
Max. Output Power	+21 dBm	at -1 dB gain compression
Input Return Loss, S11	-10 dB	see plot, p. 2
Output Return Loss, S22	-15 dB	see plot, p. 2
DC Supply Voltage	+12 Vdc, nominal at 95 mA	+11 to +15 V range
RF Connectors	SMA (f)	
DC Power Connector	Feed-Thru, By-Pass Capacitor	Optional -- DC feed via RF output
Dimensions	1.5" x 3.6" x 1.25"	fully shielded, die-cast enclosure
Test Report Furnished --- includes Noise Figure & S parameters		

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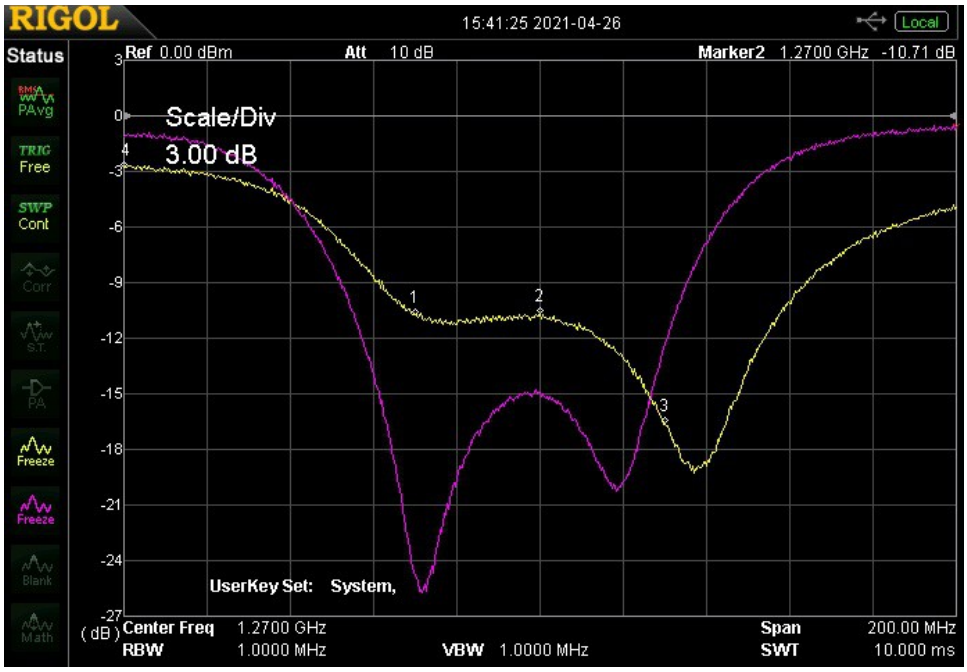
23cm Gain, S21 vs. Frequency

1270 MHz center frequency, 200 MHz span. 2dB/div & 20 MHz/div.
Pin = -20dBm, markers at 1240, 1270 & 1300 MHz



23cm Return Loss S11 (yellow) & S22 (magenta) vs. Frequency

1270 MHz center frequency, 200 MHz span. 3dB/div & 20 MHz/div.
Pin = -10dBm, markers at 1240, 1270 & 1300 MHz

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