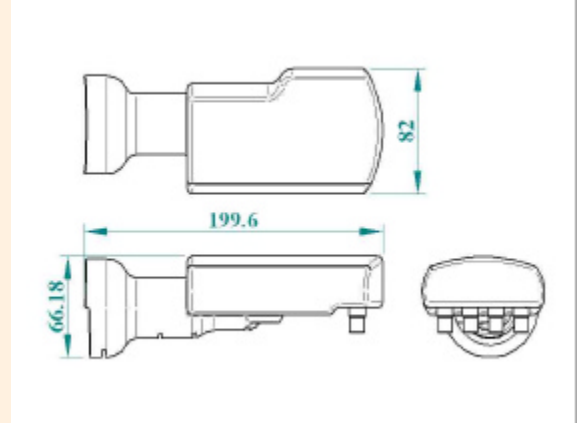


UNIVERSAL LNB



Manhattan-Invacom Universal LNB



1 Input Frequency	
Low Band	10.7 - 11.7 GHz
High Band	11.7 - 12.75 GHz
2 Output Frequency	
Low Band	950 - 1950 MHz
High Band	1100 - 2150 MHz
3 Noise Figure	0.3 dB typ
4 Gain	50 - 60 dB
5 Gain Ripple	
26 MHz bandwidth	<+/- 0.5 dB
Low Band	<5 dB typ
High Band	<5 dB typ
6 Local Oscillator Frequency	
Low	9.75 GHz
High	10.6 GHz
7 Local Oscillator Phase Noise (typ)	
1kHz	-65 dBc/Hz
10kHz	-95 dBc/Hz
100kHz	-110 dBc/Hz
8 Local Oscillator stability (including Setting, aging and temperature drift)	+/-1 MHz typ +/-2 MHz max
9 Current Consumption	185mA typ

10 Image Rejection	>40 dB
11 Isolation	
Cross Polar Isolation	>20 dB
High to Low Band Isolation	>25 dB
12 Two Tone 3rd Order intercept point (output)	>15 dBm
13 Output Connector Impedance Return Loss	4x female F-Type 75 Ohm > 10 dB
14 Operating Temperature Range Storage Temp Range	-40°C to +70°C -40°C to +70°C
15 Power Supply	8V to 19V
16 In Band Spurious (primarily 1700MHz)	<-65 dBm
17 Out of Band Spurious (primarily 850MHz)	<-45 dBm
18 Output Gain Difference (between the outputs in 26MHz Bandwidth)	<6 dB

Patent Pending