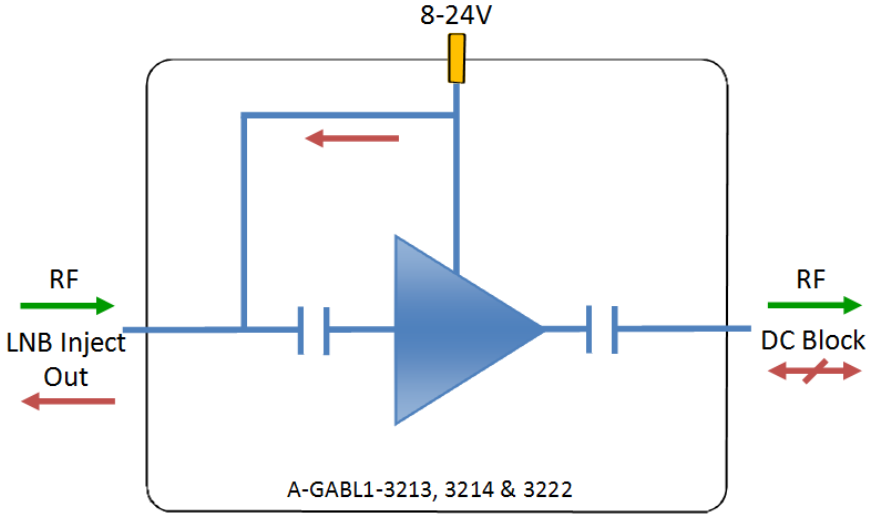
A-GABL1-3213, 3214 & 3222

RF Engineering & Custom Build

L-band Amplifier

A-GABL1-3213, 3214 & 3222 are L-band amplifiers that offer 10dB, 20dB & 30dB gain respectively, with LNB injection onto the input port and DC block on the output port. The amplifiers require 8-24V external DC bias. This component is available with the following RF connector options: 50 Ω SMA, N-type, BNC and 75 Ω BNC or F-type.

Vector diagram



RF Parameters

A-GABL1-3213-xxxx	S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz
RF Connectors	50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Gain	10 ±1.5 dB	10 ±1.5 dB	10 ±1.5 dB	10 ±1.5 dB	10 ±2.0 dB
Input Return Loss	22 dB typ	22 dB typ	18 dB typ	15 dB typ	12 dB typ
	14 dB min	14 dB min	12 dB min	8 dB min	8 dB min
Output Return Loss	20 dB typ	20 dB typ	18 dB typ	15 dB typ	15 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
1 dB GCP*	18 dB typ	18 dB typ	18 dB typ	18 dB typ	18 dB typ
	15 dB min	15 dB min	15 dB min	15 dB min	15 dB min
IP3	28	28	28	28	28
Noise Figure	10	10	10	10	10

1dB Gain Compression Point (1dB GCP) is in relation to output power.
Gain measured at centre of frequency band

BROADCAST **MARINE OIL & GAS** **SNG & VSAT** **SATELLITE TELEPORT**

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L-band Amplifier

RF Parameters

A-GABL1-3214-xxxx	S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz
RF Connectors	50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Gain	20 ±1.5 dB	20 ±1.5 dB	20 ±1.5 dB	20 ±1.5 dB	20 ±2.0 dB
Input Return Loss	22 dB typ	22 dB typ	18 dB typ	15 dB typ	12 dB typ
	14 dB min	14 dB min	12 dB min	8 dB min	8 dB min
Output Return Loss	20 dB typ	20 dB typ	18 dB typ	15 dB typ	15 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
1 dB GCP*	18 dB typ	18 dB typ	18 dB typ	18 dB typ	18 dB typ
	15 dB min	15 dB min	15 dB min	15 dB min	15 dB min
IP3	28	28	28	28	28
Noise Figure	10	10	10	10	10

1dB Gain Compression Point (1dB GCP) is in relation to output power.
Gain measured at centre of frequency band

RF Parameters

A-GABL1-3222-xxxx	S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz
RF Connectors	50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Gain	30 ±2.0 dB	30 ±2.0 dB	30 ±2.0 dB	30 ±2.0 dB	30 ±2.5 dB
Input Return Loss	22 dB typ	22 dB typ	18 dB typ	15 dB typ	12 dB typ
	14 dB min	14 dB min	12 dB min	8 dB min	8 dB min
Output Return Loss	20 dB typ	20 dB typ	18 dB typ	15 dB typ	15 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
1 dB GCP*	18 dB typ	18 dB typ	18 dB typ	18 dB typ	18 dB typ
	15 dB min	15 dB min	15 dB min	15 dB min	15 dB min
IP3	28	28	28	28	28
Noise Figure	10	10	10	10	10

1dB Gain Compression Point (1dB GCP) is in relation to output power.
Gain measured at centre of frequency band

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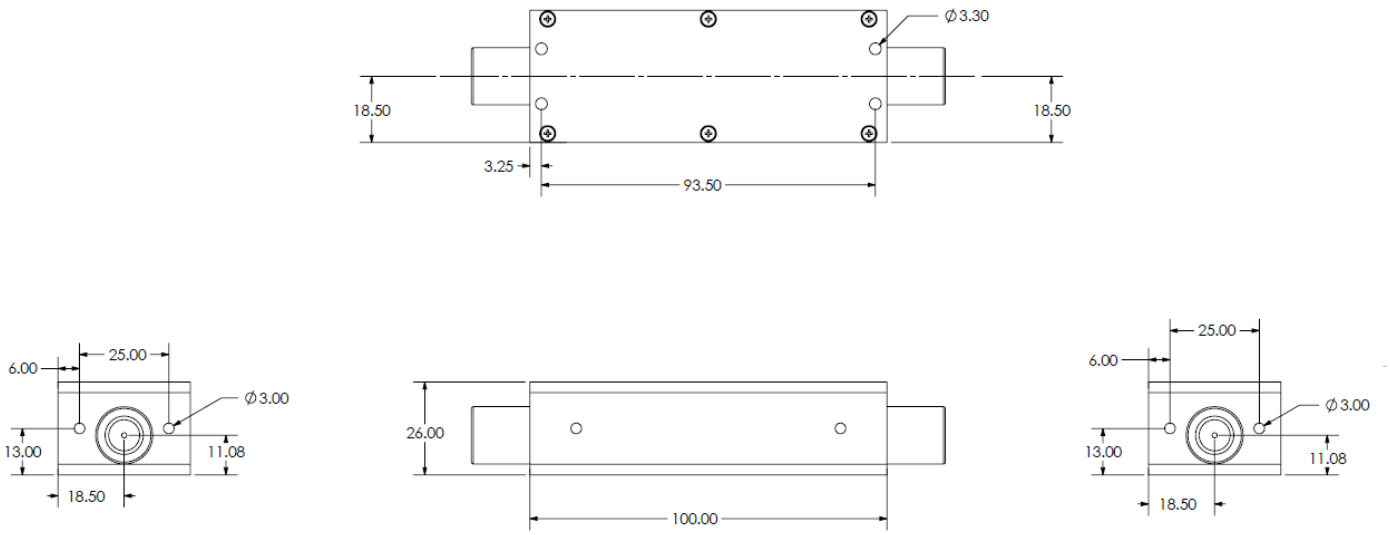
L-band Amplifier

Environmental	
Operating Temperature	0˚C to 45˚C
Storage Temperature	-20˚C to +75˚C
Location	Indoor use Only
Humidity	85% non-condensing
Altitude	10,000 feet

Max Operating Parameters	
Input RF Power	+16 dBm (40mW)
DC Voltage	35V on any RF port
DC Current	N/A
DC Consumption	200mA Max, 160mA typical

! Operation beyond these limits may cause instantaneous and permanent damage.

Mechanical Dimensions



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Feature set for alternative L-Band Gain Block Amplifiers

Model Number	Bias Option	Frequency vs. Gain	Gain Options (dB)	Other Features
A-GABL1-3110-3114	External	Flat	10-30	DC block on all ports
A-GABL1-3204	External	Flat	Unity	10MHz pass and DC block on both ports
A-GABL1-3205	External	Flat	Unity	10MHz pass and DC block on both ports
A-GABL1-3140-3143	External	Flat	10-25	10MHz pass and DC block on both ports
A-GABL1-3206	External	Flat	20	10MHz pass and DC block on both ports
A-GABL1-3217-3218	External	Flat	20-25	10MHz and DC pass on all ports
A-GABL1-3210	External	Flat	10	10MHz and DC pass on all ports
A-GABL1-3216	External	Flat	25	10MHz and DC pass on all ports
A-GABL1-3213-3214	External	Flat	10-20	DC block on output port
A-GABL1-3222	External	Flat	30	DC block on output port
A-GABS2-3223	External	Flat	25	DC block on all ports
A-GABL1-3130-3134	In-line	Flat	10-30	DC pass on all ports
A-GABL1-3215	In-line	Flat	25	DC block on all ports
A-GABL1-3219-3221	In-line	Flat	10-20	DC block on input port only
A-GABL1-3135	In-line	Flat	10-20	DC block on input port only
A-GABL1-3136	In-line	Flat	Unity	10MHz and DC pass on all ports
A-GABL1-3137	In-line	Flat	Unity	10MHz and DC pass on all ports
A-GABL1-3139	In-line	Flat	10	10MHz and DC pass on all ports
A-GABL1-3207-3209	In-line	Flat	15-28	10MHz and DC pass on all ports
A-GABL1-3331-3335	In-line	Flat	10-30	DC pass on all ports Tubular design
A-GABL1-3336-3340	In-line	Flat	10-30	DC block on output port Tubular design
A-GABL1-3341-3345	In-line	Flat	10-30	10MHz and DC pass on all ports Tubular design
A-GABL1-3145-3147	External	3dB +ve slope	10-20	DC block on all ports
A-GABL1-3229	External	3dB +ve slope	10	DC pass on all ports
A-GABL1-3151-3153	In-line	3dB +ve slope	10-20	DC block on input port only
A-GABL1-3330	In-line	3dB +ve slope	10	DC pass on all ports

** Custom designs available on request*

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