



# A-GABL1-3135 & 3219-3221

RF Engineering & Custom Build

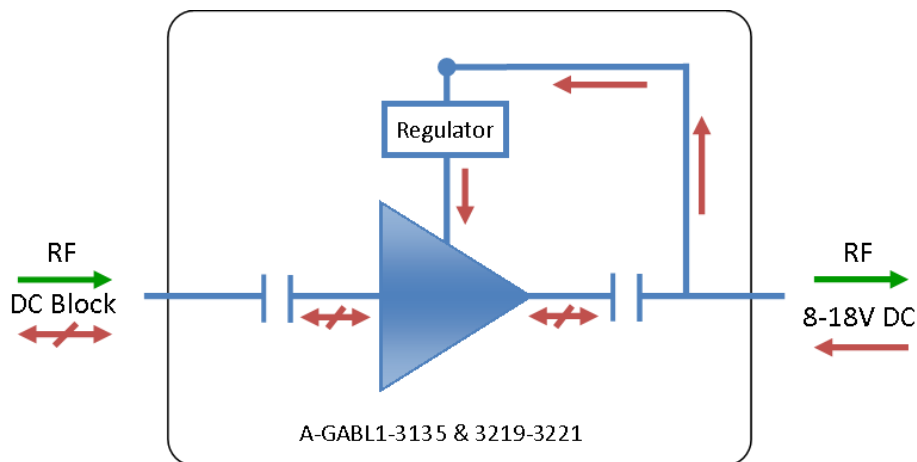
## L-band Amplifier



The 3135 & 3219-3221 series of L-band amplifiers offer flat frequency versus gain characteristics over 850 to 2150MHz, DC block on the input port and gain options of 10, 15, 20 and 25dB. Requires 8-18V DC from the output RF cable.

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-GABL1-3219-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 dB	10 dB	10 dB	10 dB	10 dB
Flatness	± 0.3 dB	± 0.3 dB	± 0.4 dB	± 0.6 dB	± 0.8 dB
Input Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	6 dB min	6 dB min
Output Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	6 dB min	6 dB min
1 dB GCP*	12 dBm typ	12 dBm typ	12 dBm typ	12 dBm typ	12 dBm typ
	10 dBm min	10 dBm min	10 dBm min	10 dBm min	10 dBm min
IP3	20	20	20	20	20
Noise Figure	13	13	13	13	13

1dB Gain Compression Point (1dB GCP) is in relation to output power.

### BROADCAST



### MARINE OIL & GAS



### SNG & VSAT



### SATELLITE TELEPORT





# A-GABL1-3135 & 3219-3221

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## L-band Amplifier

### RF Parameters

A-GABL1-3220-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	15 dB	15 dB	15 dB	15 dB	15 dB
Flatness	± 0.3 dB	± 0.3 dB	± 0.4 dB	± 0.6 dB	± 0.8 dB
Input Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
Output Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
1 dB GCP*	16 dBm typ	16 dBm typ	16 dBm typ	16 dBm typ	16 dBm typ
	13 dBm min	13 dBm min	13 dBm min	13 dBm min	13 dBm min
IP3	22	22	22	22	22
Noise Figure	10	10	10	10	10

1dB Gain Compression Point (1dB GCP) is in relation to output power.

### RF Parameters

A-GABL1-3221-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 dB	20 dB	20 dB	20 dB	20 dB
Flatness	± 0.3 dB	± 0.3 dB	± 0.4 dB	± 0.6 dB	± 0.8 dB
Input Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
Output Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
1 dB GCP*	17 dBm typ	17 dBm typ	17 dBm typ	17 dBm typ	17 dBm typ
	14 dBm min	14 dBm min	14 dBm min	14 dBm min	14 dBm min
IP3	23	23	23	23	23
Noise Figure	9	9	9	9	9

1dB Gain Compression Point (1dB GCP) is in relation to output power.

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## L-band Amplifier

### RF Parameters

A-GABL1-3135-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	25±1.5 dB	25±1.5 dB	25±1.5 dB	25±1.5 dB	25±1.5 dB
Flatness	± 0.3 dB	± 0.3 dB	± 0.4 dB	± 0.6 dB	± 0.8 dB
Input Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
Output Return Loss	15 dB typ	15 dB typ	12 dB typ	10 dB typ	10 dB typ
	10 dB min	10 dB min	10 dB min	8 dB min	8 dB min
1 dB GCP*	16 dBm typ	16 dBm typ	16 dBm typ	16 dBm typ	16 dBm typ
	13 dBm min	13 dBm min	13 dBm min	13 dBm min	13 dBm min
IP3	25	25	25	25	25
Noise Figure	7	7	7	7	7

1dB Gain Compression Point (1dB GCP) is in relation to output power.

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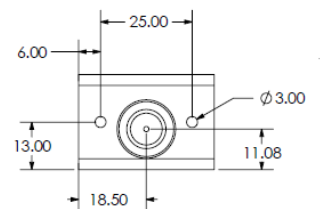
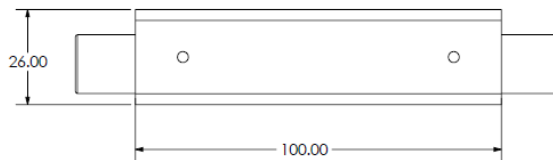
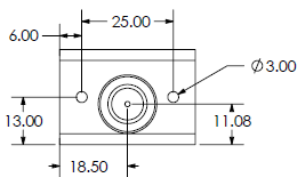
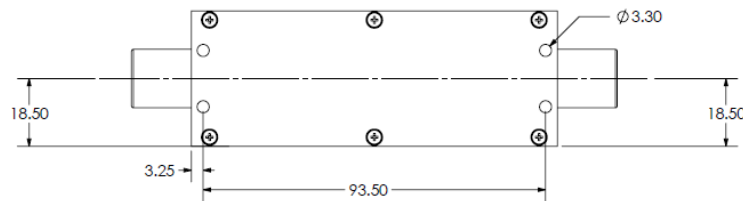
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## L-band Amplifier

Environmental		Max Operating Parameters	
Operating Temperature	0°C to 50°C	Input RF Power	+16 dBm (40mW)
Storage Temperature	-20°C to +75°C	DC Voltage	24V on any RF port
Location	Indoor use Only	DC Current	500mA
Humidity	95% non-condensing	DC Consumption	100mA Max, 80mA typical
Altitude	10,000 feet		

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

### Mechanical Dimensions



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## L-band Amplifier

### 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 input port Tubular design
A-GABL1-3341-3345	In-line	Flat	10-30	10MHz and DC pass on all ports Tubular design
A-GABL1-3347-3351	In-line	Flat	10-30	DC block on output port Tubular design
A-GABL1-3352-3356	In-line	Flat	10-30	10MHz and DC block on all ports Tubular design
A-GABL1-3357-3361	In-line	Flat	10-30	10MHz and DC block 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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