



## L-band Amplifiers

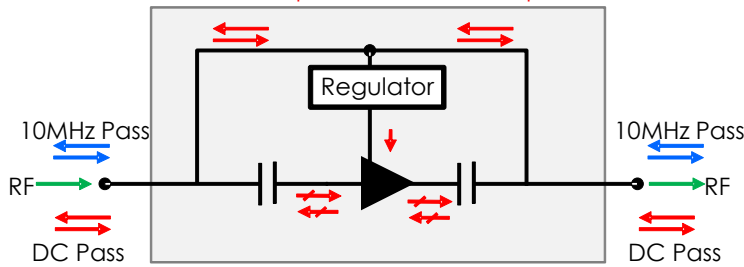


The 3139 & 3207-3209 series of L-band amplifiers offer flat frequency versus gain characteristics over 850 to 2150MHz, with 10MHz and DC pass on both ports and gain options of 10, 15, 20 and 28dB. Requires 8-24V DC from the inline RF cable.

These components are available with the following RF connector options: 50  $\Omega$  SMA, N-type, BNC and 75  $\Omega$  BNC or F-type.

### Vector Diagram

8 to 24V DC presence required on one of the RF ports to bias the amplifier



3207, 3208, 3209 & 3139

10 MHz insertion loss is typically 0.2 to 0.5dB, and max 1dB. 10MHz bypasses the amplifier stages.

Max DC consumption is 200mA.

Maximum acceptable operating parameters for reliable and safe operation

Parameter	Value	Comment
Input RF power	+16 dBm (40mW)	Max total RF power
Max voltage: RF ports	24V	DC pass on all RF ports
Max voltage: DC bias input	24V	
Max DC current	500mA	This is max DC pass between the RF ports.
Operating temperature	0 to 45°C	Indoor use only
Storage Temperature	-20°C to +75°C	
Humidity	85%	Non-condensing
Altitude	10, 000 feet	Above Mean See Level

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



# A-GABL1-3207 to 3209 & 3139

L-band Gain Block Amplifiers



Typical performance over L-band operation, 850MHz to 2150MHz

Model Number	Gain (dB)	Gain vs. Frequency variation (dB)		Input return loss (dB)		Output return loss (dB)		1dB GCP (dBm)		IP3 (dBm)	NF (dB)
	Typical	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typical	Typical

## Model 3139

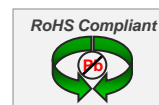
A-GABL1-3139-S5S5	10±1.5	±0.3	±0.7	15	10	15	10	15	12	25	7
A-GABL1-3139-N5N5	10±1.5	±0.3	±0.7	15	10	15	10	15	12	25	7
A-GABL1-3139-B5B5	10±1.5	±0.4	±0.8	12	10	12	10	15	12	25	7
A-GABL1-3139-B7B7	10±1.5	±0.6	±0.8	10	6	10	6	15	12	25	7
A-GABL1-3139-F7F7	10±1.5	±0.8	±1.0	10	6	10	6	15	12	25	7

## Model 3207

A-GABL1-3207-S5S5	15±1.5	±0.5	±0.7	15	10	15	10	15	12	25	7
A-GABL1-3207-N5N5	15±1.5	±0.5	±0.7	15	10	15	10	15	12	25	7
A-GABL1-3207-B5B5	15±1.5	±0.5	±0.8	12	10	12	10	15	12	25	7
A-GABL1-3207-B7B7	15±1.5	±0.7	±1.0	10	6	10	6	15	12	25	7
A-GABL1-3207-F7F7	15±1.5	±1.0	±1.25	10	6	10	6	15	12	25	7

ETL Systems Ltd, Coldwell Radio Station, Madley, Hereford, HR2 9NE, England

ETL Systems design, develop and manufacture specialist equipment for satellite ground stations. For a full description of the ETL product range, please see our website at [www.etlsystems.com](http://www.etlsystems.com). This product range provides the basis for meeting your specific demands.



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L-band Gain Block Amplifiers



Typical performance over L-band operation, 850MHz to 2150MHz

Model Number	Gain (dB)	Gain vs. Frequency variation (dB)		Input return loss (dB)		Output return loss (dB)		1dB GCP (dBm)		IP3 (dBm)	NF (dB)
	Typical	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typical	Typical

## Model 3208

A-GABL1-3208-S5S5	20±1.5	±0.3	±0.7	19	14	19	14	12	10	23	8
A-GABL1-3208-N5N5	20±1.5	±0.3	±0.7	19	14	19	14	12	10	23	8
A-GABL1-3208-B5B5	20±1.5	±0.4	±0.8	18	14	18	14	12	10	23	8
A-GABL1-3208-B7B7	20±1.5	±0.6	±0.8	16	10	16	10	12	10	23	8
A-GABL1-3208-F7F7	20±1.5	±0.8	±1.0	16	10	16	10	12	10	23	8

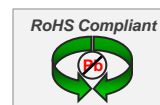
## Model 3209

A-GABL1-3209-S5S5	28±2.0	±0.5	±0.8	19	14	19	14	12	10	23	8
A-GABL1-3209-N5N5	28±2.0	±0.5	±0.8	19	14	19	14	12	10	23	8
A-GABL1-3209-B5B5	28±2.0	±0.5	±0.9	18	14	18	14	12	10	23	8
A-GABL1-3209-B7B7	28±2.0	±0.8	±1.2	16	10	16	10	12	10	23	8
A-GABL1-3209-F7F7	28±2.0	±1.0	±1.25	16	10	16	10	12	10	23	8



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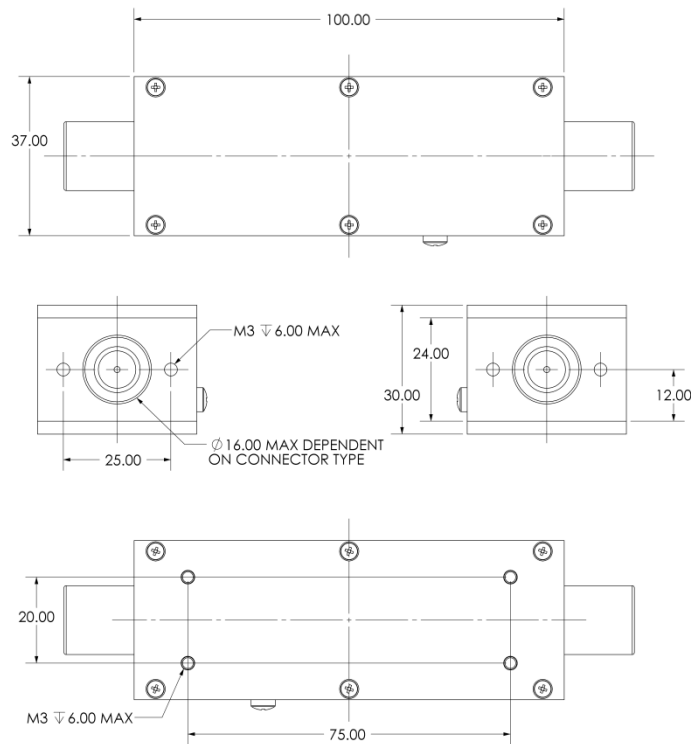
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# A-GABL1-3207 to 3209 & 3139

L-band Gain Block Amplifiers



## Physical dimensions



## Alternative L-band Gain Block Amplifiers

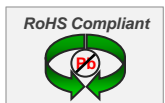
Model Numbers	Bias Option*	Freq vs. Gain	Gain Options (dB)	Other features
3110-3114	External	Flat	10 to 30	DC block on all ports
3130-3134	In-line	Flat	10 to 30	DC pass on all ports
3135	In-line	Flat	25dB	DC block on input port only
3136	In-line	Flat	Unity	10MHz and DC pass on all ports
3204	External	Flat	Unity	10MHz pass and DC block on both ports
3140-3143	External	Flat	10 to 25	10MHz pass and DC block on both ports
3218, 3219 & 3210	External	Flat	20, 25 & 30dB options	10MHz and DC pass on all ports
3145-3147	External	3dB +ve slope	10, 15, 20	DC block on both ports
3207-3209 & 3139	In-line	Flat	10, 15, 20, 28	10MHz and DC pass on all ports
3148-3150	External	6dB +ve slope	10, 15, 20	DC block on both ports
3151-3153	In-line	3dB +ve slope	10, 15, 20	DC block on input port only
3154-3156	In-line	6dB +ve slope	10, 15, 20	DC block on input port only

\*In Line bias option requires DC on an RF port



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