

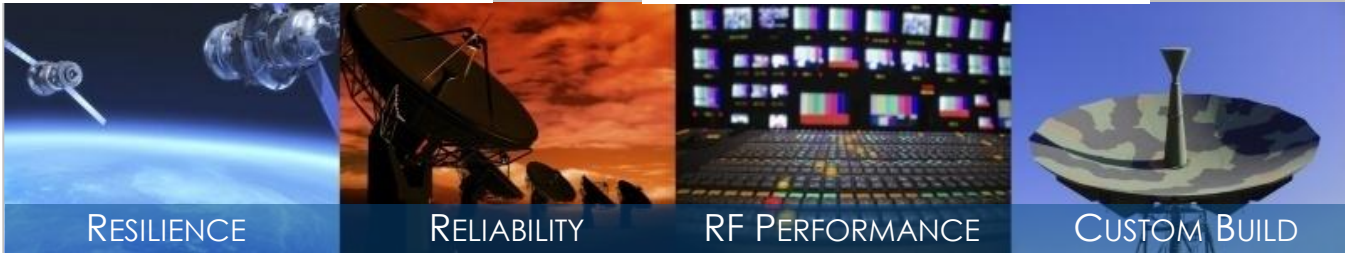
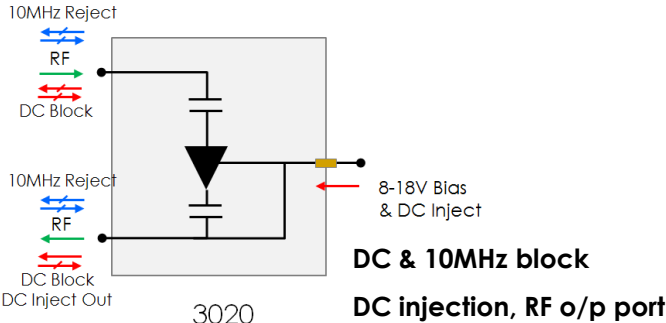
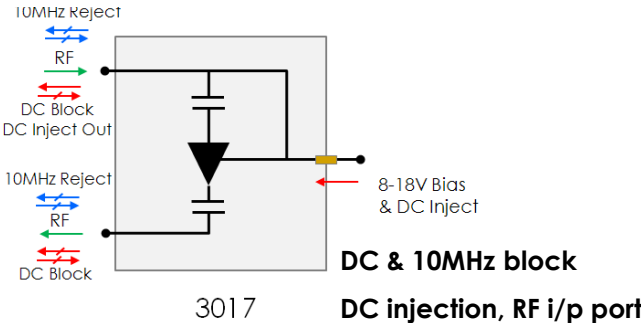
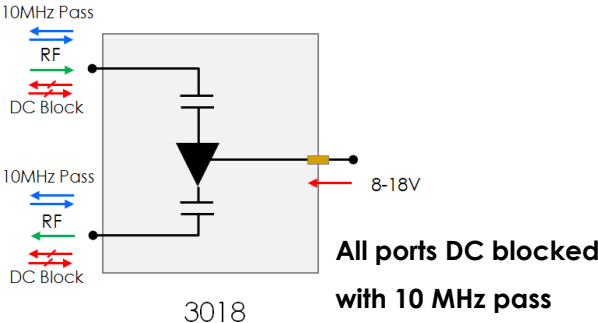
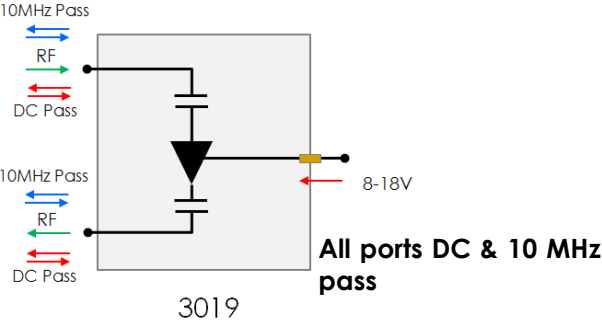
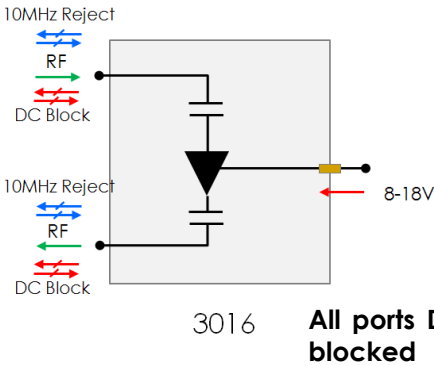
L-band Amplifiers



The A-VGAL1-3016 to 3020 series are variable gain L-band (850-2150MHz) amplifiers with 0 to 30dB gain settable in 1dB gain steps with a built in regulator. The unit requires an external 8 to 18V source.

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

Vector Diagrams



A-VGAL1-3016 to 3020

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.	Min.	Typ.	Min.	Typ.	Min.	Typical	Typical

Model 3016 - DC and 10MHz Block

A-VGAL1-3016-S5S5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3016-N5N5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3016-B5B5	0-30dB	±1dB	±1.4dB	20	15	20	15	15	12	30	8
A-VGAL1-3016-B7B7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8
A-VGAL1-3016-F7F7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8

Model 3017 – DC and 10MHz Block with DC inject, RF i/p port

A-VGAL1-3017-S5S5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3017-N5N5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3017-B5B5	0-30dB	±1dB	±1.4dB	20	15	20	15	15	12	30	8
A-VGAL1-3017-B7B7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8
A-VGAL1-3017-F7F7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8

Model 3020 – DC and 10MHz Block with DC inject, RF o/p port

A-VGAL1-3020-S5S5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3020-N5N5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3020-B5B5	0-30dB	±1dB	±1.4dB	20	15	20	15	15	12	30	8
A-VGAL1-3020-B7B7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8
A-VGAL1-3020-F7F7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8

* 1dB GCP measured at both Max and Min attenuation

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. This product range provides the basis for meeting your specific demands.



Tel +44 (0)1981 259020
Fax +44 (0)1981 259021
info@etlsystems.com



A-VGAL1-3016 to 3020

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.	Min.	Typ.	Min.	Typ.	Min.	Typical	Typical

Model 3018 – DC Block and 10MHz Pass

A-VGAL1-3018-S5S5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3018-N5N5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3018-B5B5	0-30dB	±1dB	±1.4dB	20	15	20	15	15	12	30	8
A-VGAL1-3018-B7B7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8
A-VGAL1-3018-F7F7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8

Model 3019 – DC and 10MHz Pass

A-VGAL1-3019-S5S5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3019-N5N5	0-30dB	±0.8dB	±1.2dB	20	15	20	15	15	12	30	8
A-VGAL1-3019-B5B5	0-30dB	±1dB	±1.4dB	20	15	20	15	15	12	30	8
A-VGAL1-3019-B7B7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8
A-VGAL1-3019-F7F7	0-30dB	±1.2dB	±1.5dB	14	10	14	10	15	12	30	8

Maximum acceptable operating parameters for reliable and safe operation

Parameter	Value	Comment
Input RF power	+24dBm (40mW)	Max total RF power
Max voltage: RF ports	24V	Any RF Port
Max voltage: DC bias input	24V	8-18V Recommended
Max DC current	500mA	For DC pass and DC inject
Operating temperature	-10 to 65 C	Indoor use only
Storage Temperature	-20 C to +85 C	
Humidity	85%	Non-condensing
Altitude	10,000 feet	Above Mean Sea Level

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



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. This product range provides the basis for meeting your specific demands.



Tel +44 (0)1981 259020
Fax +44 (0)1981 259021
info@etlsystems.com

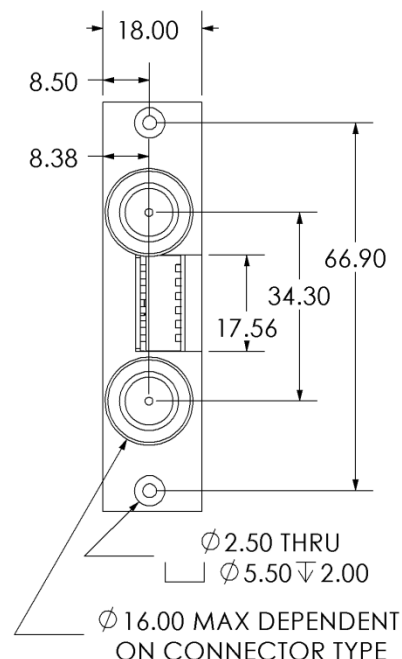
L-band Gain Block Amplifiers



Technical drawing of a door frame assembly. The drawing shows a cross-section of the door frame and door. Key dimensions are indicated:

- Overall width: 80.00
- Overall height: 74.40
- Distance from top edge to the top of the door frame: 3.00
- Distance from the top of the door frame to the center of the door: 51.30
- Distance from the center of the door to the bottom of the door frame: 35.00

The door is shown with a handle and a lock mechanism. The door frame is labeled "M3.00".

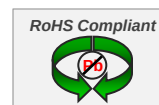


Switch settings	1	2	3	4	5	6	Other features
Attenuation	16	8	4	2	1	n/a	Attenuation settings when the selected switch is at ON state
DC Injection	n/a	n/a	n/a	n/a	n/a	0 for DC OFF 1 for DC ON	Options 3017 & 3020 only
Max Gain	1	1	1	1	1	n/a	Max gain (0dB attenuation setting)
Min gain	0	0	0	0	0	n/a	Min gain (31dB attenuation setting)

The ON position is printed on the switch.



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. This product range provides the basis for meeting your specific demands.



Tel +44 (0)1981 259020
Fax +44 (0)1981 259021
info@etlsystems.com

A-VGAL1-3016 to 3020

L-band Gain Block Amplifiers



Alternative L-band Gain Block Amplifiers

Model Numbers	Bias Option*	Freq vs. Gain	Gain Options (dB)	Other features
3011	In-Line	Flat	0 to 30	DC block and 10MHz Block on all ports
3012, 3015	In-Line	Flat	0 to 30	DC block and 10MHz Block on all ports with LNB inject
3013	In-Line	Flat	0 to 30	DC block and 10MHz pass on all ports
3014	In-Line	Flat	0 to 30	DC Pass and 10MHz Pass on all ports
3016	External	Flat	0 to 30	DC block and 10MHz Block on all ports
3017, 3020	External	Flat	0 to 30	DC block and 10MHz Block on all ports with LNB inject
3018	External	Flat	0 to 30	DC Block and 10MHz Pass on all ports
3019	External	Flat	0 to 30	DC Pass and 10MHz Pass on all ports

PSU12F125-9701



PSU200V01-9700



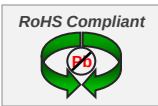
PSU range available

Model Number	Input	Output	Other
PSU12F125-9701-SLP	100-240V (AC), 0.6A	12V (DC), 1.25A	Solder pin output
PSU200V01-9700-SLP	100-240V (AC), 0.6A	14V to 22V(DC) 1.25A	Solder pin output



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. This product range provides the basis for meeting your specific demands.



Tel +44 (0)1981 259020
Fax +44 (0)1981 259021
info@etlsystems.com