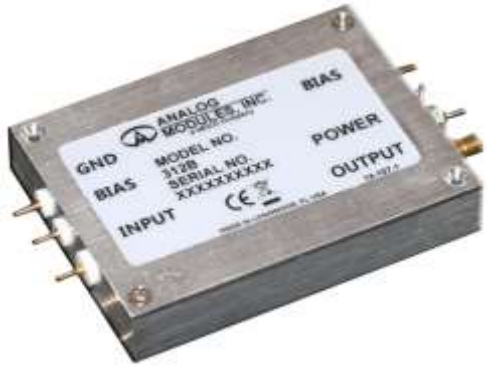
ANALOG MODULES, INC.

a HEICO company

MODEL 312B
LOW NOISE, GaAs FET
TRANSIMPEDANCE AMPLIFIERS

LOW NOISE, HIGH GAIN, GaAs FET TRANSIMPEDANCE AMPLIFIER



- **ULTRA LOW NOISE - DOWN TO 1 pA/√Hz**
- **HIGH GAIN – 1 MV/A**
- **BANDWIDTH – DC or 200 Hz TO 65 MHz**
- **ACCEPTS CURRENT SOURCE INPUTS**
- **DIRECTIVE 2011/65/EU (RoHS II) COMPLIANT**

DESCRIPTION:

The ***312B Series*** are ultra low noise, high gain, GaAs FET amplifiers designed for low level current source input applications in which high gain is required.

SPECIFICATIONS:

Input	
Impedance	Virtual ground, DC coupled
Capacitance	See table on reverse for performance vs. capacitance.
Output	
Load	≥ 50Ω
Swing	6 V pk-pk AC coupled -50Ω
Polarity	Non-inverting
Coupling	DC Coupling (add –DC to part no.) AC Coupling (add –AC to part no.)

Power	+15 VDC at 86 mA typical
Temperature	-20° to +70°C
Connections	
Input	Solder Pins
Output	SMB (SMB to BNC cable provided)
Power	Solder Pins
Bias Decoupled	9 V internal bias supply may be over-ridden by external supply. Pin decoupled with 0.01μF, 1kV capacitor.
Size	1.98" x 3.3" x 0.5"

RoHS

ISO 9001 CERTIFIED

Specifications subject to change without notice.

APPLICATIONS:

High Gain, High Sensitivity APD and PIN Photodiode Amplifier, Current to Voltage Converter

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Model #	Gain (MV/A)			Low Bandwidth (Hz)			High Bandwidth (MHz)			Noise (pA/√Hz)		
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
312B-1 (1pF)	0.95	1	1.1	50	200	250	60	65	70	0.7	0.8	1.0
312B -5 (5pF)	0.95	1	1.1	50	200	250	45	50	55	1.0	1.3	1.6
312B-10 (10pF)	0.95	1	1.1	50	200	250	36	40	44	1.4	1.7	2.0
312B-25 (25pF)	0.95	1	1.1	50	200	250	27	30	33	2.0	2.5	3.1
312B-50 (50pF)	0.95	1	1.1	50	200	250	27	30	33	2.9	3.6	4.4
312B-100 (100pf)	0.95	1	1.1	50	200	250	15	17	19	4.5	5.6	6.7

Typical Part Number: ***312B-5-AC =***

Bandwidth:	200 Hz – 50 MHz
Gain:	1 MV/A
Noise:	1.3 pA/√Hz
Input Capacitance:	3-7 pF
Coupling:	AC