



LOW NOISE, HIGH GAIN, GaAs FET TRANSIMPEDANCE AMPLIFIER

- ULTRA LOW NOISE - DOWN TO 1pA/√Hz
- HIGH GAIN - 1MV/A
- BANDWIDTH – DC or 200Hz TO 65MHz
- 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		Power	+15VDC at 86mA typical
Impedance	Virtual ground, DC coupled	Temperature	-20° to +70°C
Capacitance	See table on reverse for performance vs. capacitance. Indicate value of input capacitance (Add - ___pF to part number.)	Connections	
		Input	Solder Pins
Output		Output	SMB (SMB to BNC cable provided)
Load	≥ 50Ω	Power	Solder Pins
Swing	6V pk-pk AC coupled -50Ω	Bias Decoupled	9V internal bias supply may be over-ridden by external supply. Pin decoupled with 0.01μF, 1kV capacitor.
Polarity	Non-inverting	Size	1.98" x 3.3" x 0.5"
Coupling	DC Coupling (add -DC to part no.) AC Coupling (add -AC to part no.)		

Specifications subject to change without notice.



APPLICATIONS:

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

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

