

▶ Input

Input configuration	Balanced differential input (2 BNC connectors) A-B (differential input) A, -B, A - Offset, -B + Offset (unbalanced single-ended input) GND (input shorted) Selectable from front panel
Input impedance	1MΩ ±2% shunted by less than 35pF Capacitance matching between A and B Inputs: ±3pF (100MΩ input impedance is possible by rearranging an internal shorting plug.)
Input bias current	3nA typ. (23°C), doubles every 10°C increase
Maximum allowable input voltage	±50V (at ±10.5V, an input protector operates and automatically recovers after approx. 5s if the excessive input is removed.)
Common mode input voltage range	±10V (linear operation)
Common-mode rejection ratio	120 dB or greater (DC to 1kHz) (gain: 1000, common mode voltage: ±5V)
Input referred noise	4nV/√Hz typ. (1 kHz, input short-circuited, gain: 1000)
DC offset voltage	Adjustable to zero by a screwdriver from the front panel. (Adjustment range: ±0.5mV min. referred to input)
DC offset stability	±8μV/°C typ. referred to input (input short-circuited, gain: 1000)
Input DC offset cancellation range	DC components up to ±5V (referred to input) can be canceled using the internal offset function with single-ended input.
Offset cancellation voltage range	±0.5V, ±5V Accuracy: ±3% of full scale Stability: ±200 ppm/°C

▶ Output

Output configuration	Unbalanced single-ended output (BNC connector)
Output impedance	50Ω ±2% (f= 1 kHz)
Rated output voltage	±5V (RL = 50Ω +1%, DC to 3MHz) ±10V (RL ≥ 1MΩ, DC to 3MHz)
Maximum output voltage	±5.2V (RL = 50Ω ±1%, DC to 3MHz) ±10.4V (RL ≥ 1MΩ, DC to 3MHz)
Maximum output current	±100mA
Slew rate	150V/μs typ. (RL = 50Ω, Vo ±5V) 300V/μs typ. (RL ≥ 1MΩ, Vo ±10V)
Overvoltage detection level	±5V +10%, -0% (f=1kHz, RL = 50Ω +1%)
Output noise	20mVrms max. input short-circuited, gain:1000, bandwidth 10MHz, 50Ω load)

▶ Amplifier Section

Gain	10 to 1000 (with 50Ω load) in 1-, 2-, 5 sequence
Gain accuracy	±3% (f=1 kHz, RL ≥ 1MΩ)
Gain stability	±200 ppm/°C (f=1kHz, RL ≥ 1MΩ)
Frequency response	DC to 10MHz +0.2, -3dB (RL = 50Ω, Vo = ±1V)
Full-power bandwidth	DC to 3MHz min. (RL = 50Ω, Vo = ±5V)
Distortion	0.02% max. (f=1kHz, RL=50Ω, Vo = ±5V, gain: 10)
Settling time	300ns typ. (output voltage step: 5V, ±1% error, gain: 10, RL=50Ω, with band limiting filter off)
Overload reset time	10μs max. [gain: (10 to 100) x 1] 50μs max. [gain: (10 to 100) x 10] This is the time required for the output to reach within ±1% of the rated output voltage after applying an input voltage of +5V or -5V for 10mS.
Propagation delay time	55 ±10ns typ. (band limiting filter off) 310 ±20ns typ. (1 MHz band limiting filter on)
Band limiting filter	Cut-off frequency: 1 MHz ±10% (-3dB point) Roll-off: -18 dB/oct (phase linear) On/Off switchable from the front panel

▶ General Specifications

Power requirements	100VAC (switchable to 120, 220 or 240V) ±10%, 48 to 62Hz, 30VA Insulation resistance: 30MΩ min. (measured with 500Vdc insulation tester) Withstand voltage: 1500 Vac for 1 minute
Operating temperature/humidity	0 to 40°C, 10 to 90% RH (noncondensing)
Storage temperature/humidity	-10 to +50°C, 10 to 80% RH (noncondensing)
Outer dimensions	215(W) x 88(H) x 350(D) mm 8.46(W) x 3.46(H) x 13.77(D) inch (not including protrusions) 224(W) x 91.5(H) x 384(D) mm 8.82(W) x 3.60(H) X 15.11(D) inch (including protrusions)
Weight	Approx. 4.5 kg, 9.9lbs