



5205A

5205A Precision Power Amplifier

The 5205A Precision Power Amplifier is a dc coupled programmable inverting amplifier with a fixed gain of 100. Originally designed to extend the range of the Model 5200A AC Calibrator to 1200V rms, the 5205A is now also for use with the 5100-Series Calibrators to extend the load, voltage range, and frequency from 100 volts at 1 kHz to 1100 volts at up to 50 kHz. But the 5205A is also intended to be operated as an independent amplifier for a wide range of waveforms from dc to 120 kHz. Dc output voltages to 1600V and ac output voltages to 1200V rms can be produced at current levels of 200 mA rms.

Remote programming is standard. The 5205A may be programmed in a time-sharing mode between the 5200A Calibrator and an additional input source.

When used with a 5100-Series Calibrator, drive voltage is introduced through the rear panel via a Y5000 Interface/Buffer. Then it becomes a completely integrated calibration system under panel or program control of the calibrator.

The 5205A has a unique automatic overload recovery circuit which senses and protects the amplifier from any condition which might cause instability or damage.

Specifications with 5200A

Range: 100V to 1099.999V rms, with 1 mV resolution

Amplitude Accuracy*

1000V Range	±(% of Setting + % of Range)
10 Hz to 30 Hz	0.12 + 0.005
30 Hz to 20 kHz	0.04 + 0.002
20 kHz to 50 kHz	0.08 + 0.005
50 kHz to 100 kHz	0.10 + 0.01

*Applies for 90 days, 18°C to 28°C, after a 1-hour warm-up

Stand-Alone Specifications

Input Impedance: 10 kΩ, ≤120 pF

Maximum Input Voltage: 50V dc or rms ac

Maximum Output Voltage: ±1500V dc, 1100V rms ac

Frequency Range: dc to >100 kHz

Gain: X100 (inverting)

Gain Accuracy

Maximum Load	DC to 20 kHz	20 kHz to 100 kHz
500Ω/100 pF	±0.05%	±0.02%
5000Ω/100 pF	±0.05%**	±0.15%
1 MΩ/100 pF	±0.05%	±0.2%
1 MΩ/500 pF	±0.06%	±0.4%
1 MΩ/1000 pF	±0.08%	±0.8%
1 MΩ/1500 pF	±0.1%	±1.2%

*Applies for 90 days, 18°C to 25°C, after a 1-hour warm-up

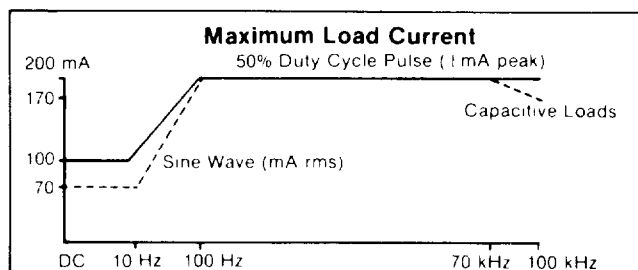
**±0.04% dc to 10 kHz

Gain Stability

Frequency Range	Max Capacitive Load	24 Hours	6 Months
Dc to 20 kHz	1500 pF	0.03%	0.06%
20 kHz to 100 kHz	100 pF	0.08%	0.2%
20 kHz to 100 kHz	1500 pF	0.4%	0.8%

*18°C to 25°C, after a 1-hour warm-up

Maximum Load: 1500 pF, not to exceed rated load current



Line Regulation: ±0.001% of setting for 10% line change

Local/Remote Operation: In LOCAL mode, control is implemented from the front panel. In REMOTE mode, control is obtained via the 5200A or 5100 Series via remote input on the rear panel of the 5205A

Input Power: 100, 115, 200, 230V ac ±10%, internal jumper-selected, 50 to 60 Hz, 1800 VA at full load

Size: (Case only) 26.7 cm H x 43.2 cm W x 62.7 cm D (10.5 in H x 17 in W x 24.7 in D)

Weight: 54.5 kg (120 lb)

Included: Manual, power cord, interface cable to 5200A

Model

February 1982 prices

5205 Precision Power Amplifier

w/ Remote Control \$7585

Option

5205A-07 Rear Input/Output 25

Accessories

Y5000* Interface Buffer 475

Y5001* Cable for Y5000 175

M10-205-600 10½" Rack Adapter 105

M00-260-610 18" Rack Slides for rack adapter 105

M00-280-610 24" Rack Slides for rack adapter 110

*Required when controlled from 5100-Series Calibrators

Also see Section 17 for more accessory information.