

National Measurement Institute



PBA-1S PRECISION BUFFER AMPLIFIER FOR THERMAL VOLTAGE CONVERTERS



INTRODUCTION

The amplifier is a three stage voltage follower designed to drive thermal voltage converters without introducing appreciable contribution to the ac-dc difference. The design of the buffer ensures closeness of the gain to unity and low phase shift up to 200 kHz. The amplifier is supplied with a 16V ac power supply and a connector for an optional battery.

SPECIFICATIONS

Maximum voltage 5 V_{rms}

Input connector N-female or BNC Output connector N-male or BNC

 $\begin{array}{ll} \text{Input impedance} & 10 \text{ M}\Omega \text{ in parallel with 20 pF} \\ \text{Ac-dc difference} & \text{less than 1 }\mu\text{V/V up to 10 kHz}; \\ \text{less than 100 }\mu\text{V/V at 100 kHz} \end{array}$

Output voltage with open input less than 200 mV

Power 16 V_{ac} from included supply or ±12 V_{dc} from an optional external battery

ENQUIRIES

Dr Ilya Budovsky, ilya.budovsky@measurement.gov.au