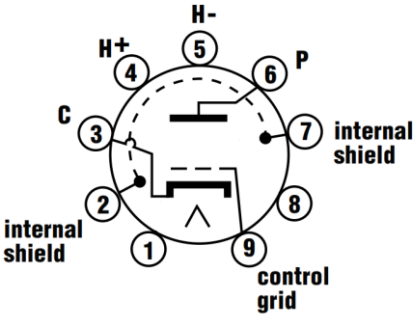
PRELIMINARY

TYPE: **EF86 TRIODE**
B9A LOW-NOISE TYPE
FOR MICROPHONES

The **Phædrus Audio EF86 TRIODE Supertube™** is manufactured especially for low-noise, low-microphony applications in microphones. The device matches the dimensions and performance parameters of the original tube (operated as a triode) and is supplied as a standard B9A substitute device.



For more information contact: sales@phaedrus-audio.com

EF86 TRIODE Supertube™ Technical Specifications

Heater voltage (current): 6V to 12V DC (85mA @ 6.3V)
V(a) max: 250V
g_m: 2mA/V
r_a: 16kΩ

Notes:

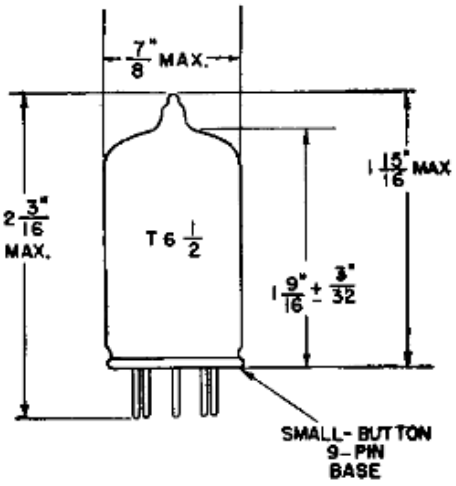
1. The internal shield connection must be connected directly to ground. It must NOT be left floating.

2. The heater pin polarity is important. H+ (pin 4) must be positive w.r.t. H- (pin 5). See application note on heater power supplies.

3. Pins 1 and 8 may be strapped to anode on the tube socket, there is no internal connection to these pins.

4. May be operated with grid or cathode bias.

PHYSICAL DIMENSIONS



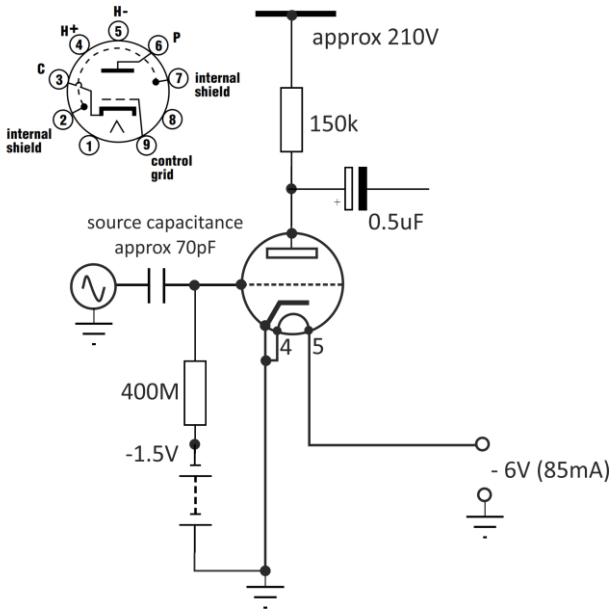
EIA 6-2

Version 1.1 - December 2021

PRELIMINARY

TYPE: **CV4085 (Special EF86)** B9A LOW-NOISE TYPE FOR MICROPHONES

TYPICAL APPLICATION



HEATER CIRCUIT

The voltage polarity of the heater pins in the **Phædrus Audio EF86 TRIODE Supertube™** must be respected. Pin 4 must be positive with respect to pin 5. However, the heater is isolated from the main circuit so that, for example, pin 5 may be -6V with pin 4 grounded (as illustrated above). Or, pin 4 may be +6V with pin 5 grounded.

The heater current in the **Phædrus Audio EF86 TRIODE Supertube™** is below that on the real EF86 to keep internal dissipation down. Because the heater supply in the Neumann microphones (and others) is derived from a RC filter chain, reduced heater current results in increased heater volts. In the case of the Neumann U67 microphone, variable resistor R4 in the NU-67 power supply may be adjusted to bring this voltage back down to around 6V (the exact value isn't critical).

Version 1.1 - December 2021