

ET1

Osram

VALVES

ET1 ELECTROMETER TRIODE

DESCRIPTION

Type ET1 is a thermionic measuring device similar in principle to the triode valve but designed to have a very high value of input resistance, so that it may be employed for any purpose for which an electrometer is required. Typical applications include measurements of ionisation currents and hydrogen-ion concentration, and the study of piezo-electric effects. For such work this electrometer triode has the advantages, over other forms of electrometer, of simplicity, robustness and low capacitance.

The "control grid" electrode is connected to the terminal mounted at the end of a special high resistance glass stem. Internal and external guard rings and an electrostatic shield round the electrode system are connected to a pin in the valve base, and may be connected to the negative end of the filament or given any desired negative potential.

RATINGS

Filament Voltage	...	...	...	...	...	...	...	1.0	volt
Filament Current	...	...	...	...	...	...	...	0.1	amp
Mutual Conductance, at $V_a = +4, V_{g1} = -2$	...	...	...	...	...	...	...	0.05	mA/V
at $V_a = +6, V_{g1} = -2$	...	...	...	...	...	...	...	0.10	mA/V

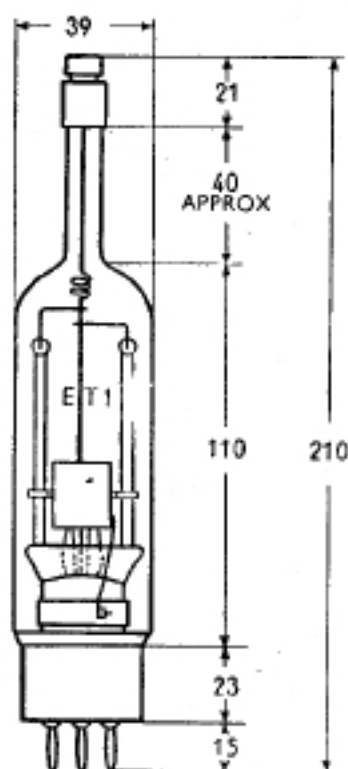
Capacitances :

Control Grid to all other electrodes	2.0	approx. pF
--------------------------------------	-----	-----	-----	-----	-----	-----	-----	-----	------------

OPERATING CONDITIONS

To obtain the minimum possible electrical leakage the operating grid potential should be greater than two volts negative with respect to the negative end of the filament, the glass surface should be kept perfectly clean and dry, and the valve operated in the dark. Particularly in circuits where the highest sensitivity is required, electrical screening of the valve and input circuit should be employed, together with some form of anti-microphonic mounting; and the use of high-capacity accumulators for filament and anode supplies is also recommended, in order to reduce fluctuations and drift as much as possible.

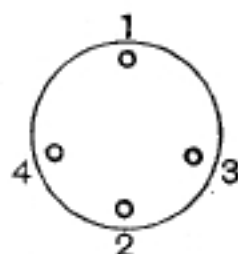
DIMENSIONS



BASE

4-PIN

- Pin 1: Anode
- 2: Guard Rings and Screen
- 3: Filament
- 4: Filament
- Top Cap: Control Grid

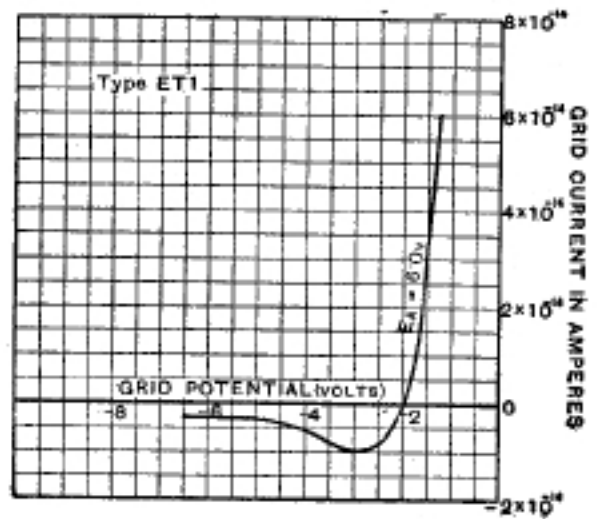
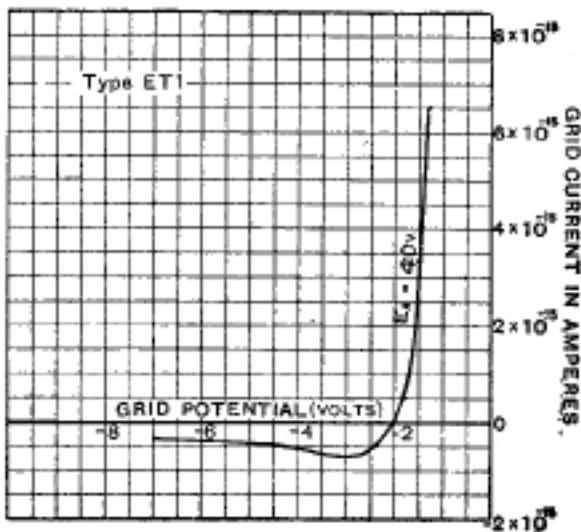
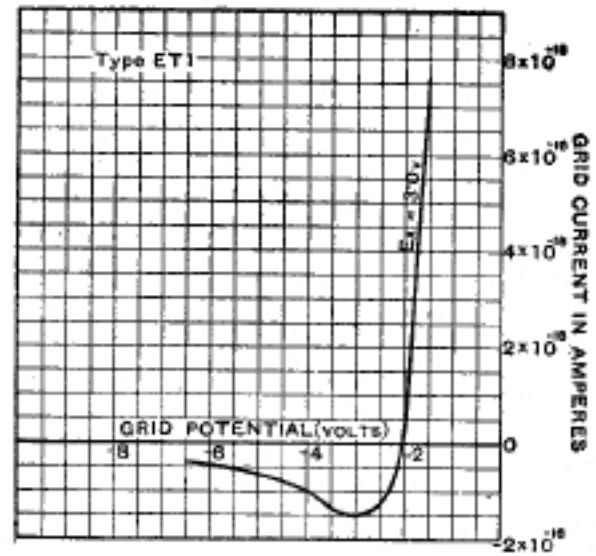
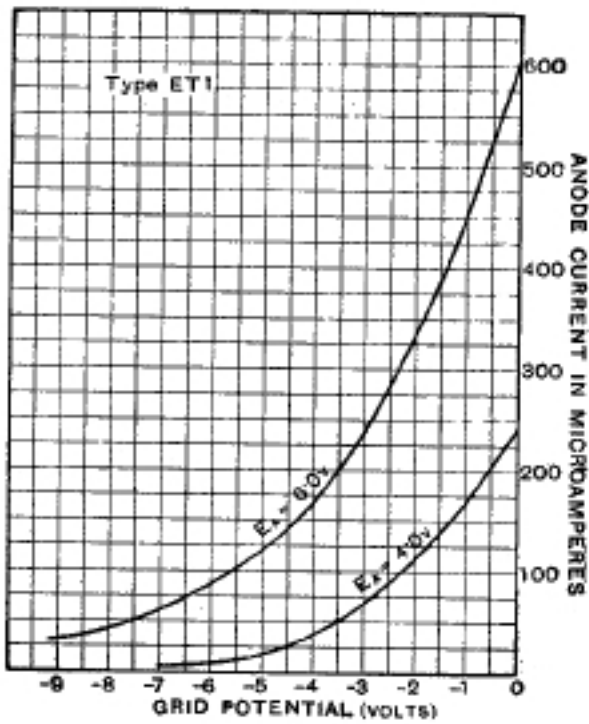


View looking on underside of base.

Top Cap: Threaded 5BA.
Threaded portion 4mm. long.

All dimensions are in mm. and are the maximum except where otherwise stated.

TYPE ET1



CHARACTERISTIC CURVES OF AVERAGE VALVE