

# Philips „Miniwatt“ B 105

Filament voltage .....	$v_f$	$=$	1.0—1.3 V
Filament current .....	$i_f$	$=$	0.15 A
Anode voltage .....	$v_a$	$=$	50—150 V
Amplification factor .....	$g$	$=$	5
Mutual conductance (slope)....	$S$	$=$	1.0 mA/V
Internal resistance.....	$R_i$	$=$	5,000 $\Omega$
Negative grid voltage .....	$v_g$	$=$	18 V
Normal anode current .....	$i_a$	$=$	8 mA
Total length .....	$l$	$=$	92 mm
Largest diameter .....	$d$	$=$	45 mm

This receiving valve is specially designed for use as a **power valve** in receiving sets working from a **1.5 volt cell**. It can, however, also be used as a **detector valve** or **low frequency amplifier**.

With the use of a 1.5 volt cell a filament rheostat of **at least 6 ohms** should be connected in series with the filament.

A **filament voltage higher than that which is necessary for good results, should be strictly avoided**. The filament rheostat should therefore be kept inserted as far as possible. One should never attempt to adjust the rheostat by observing the incandescence of the filament, which shows only a faint glow even when the valve is worked on the highest permissible voltage (1.3 volts).

## DETECTOR

When used as a detector a grid condenser of 150—250  $\mu\mu\text{F}$  should be used and the grid should be connected to the **positive** side of the filament by means of a grid leak of 0.3 to 3 megohms, or better still to the sliding contact of a potentiometer shunted across the filament.

**When using an H.T. battery safeguard your valve filaments!**

**Employ Philips filament safety fuses!**

An anode voltage of 50 volts will be sufficient to procure satisfactory results.

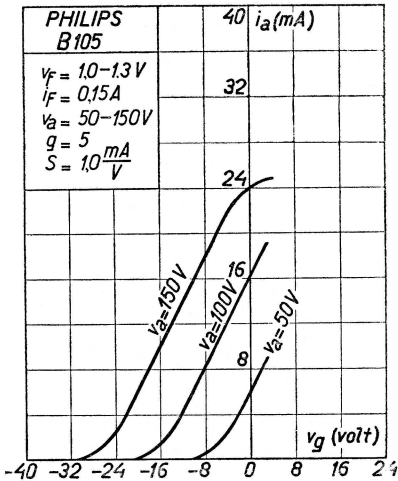
### L.F. AMPLIFIER AND POWER VALVE

When employed as a low frequency amplifier or power valve, it is **absolutely necessary** to use a **negative grid bias**, viz:

9	volts	with an anode voltage of	80	volts,
12	„	„	„	„
15	„	„	„	„
18	„	„	„	„

The positive terminal of the grid bias battery to be used in this case, should be connected to the negative side of the filament.

The characteristic curves given below show all the properties of this valve.



All Philips valves are carefully tested before leaving the factory!