

# PHILIPS

# 1E3

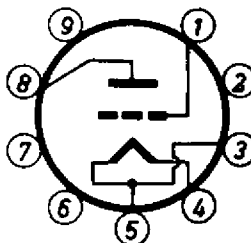
## U.H.F. TRIODE FOR TRANSMITTING AND RECEIVING PURPOSES

### Physical Specifications

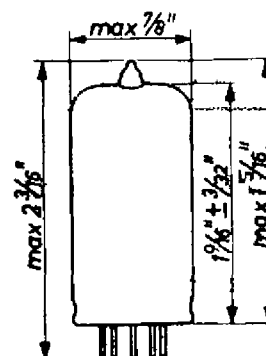
|                            |                                           |
|----------------------------|-------------------------------------------|
| Filament                   | Coated                                    |
| Base                       | Small button noval 9-pin                  |
| Bulb                       | T6 $\frac{1}{2}$                          |
| Maximum overall length     | 2 $\frac{3}{16}$ "                        |
| Maximum seated height      | 1 $\frac{15}{16}$ "                       |
| Bulb length excluding tip  | 1 $\frac{9}{16}$ " $\pm$ $\frac{3}{32}$ " |
| Maximum diameter           | $\frac{7}{8}$ "                           |
| Mounting position          | any                                       |
| Basing connections - JETEC |                                           |
| basing designation         | 9BG                                       |

- Pin 1 - grid
- Pin 2 - not connected
- Pin 3 - filament (-)
- Pin 4 - filament (+)
- Pin 5 - filament (-)
- Pin 6 - not connected
- Pin 7 - not connected
- Pin 8 - plate
- Pin 9 - not connected

Bottom view of base



Tube outline



### General Electrical Data

#### Filament data

|                  |            |
|------------------|------------|
| Filament voltage | 1.25 volts |
| Filament current | 0.22 amp.  |

#### Direct Interelectrode Capacitances

|                                         |              |
|-----------------------------------------|--------------|
| Grid to all other elements except plate | 1.25 $\mu$ F |
| Plate to all other elements except grid | 0.75 $\mu$ F |
| Plate to grid                           | 1.5 $\mu$ F  |

**1E3****PHILIPS**Ratings (Design center values)

|                                                    |                                                |
|----------------------------------------------------|------------------------------------------------|
| Plate voltage                                      | max. 150 volts                                 |
| Plate dissipation                                  | max. 3 watts                                   |
| Cathode current                                    | max. 20 ma <sup>1)</sup>                       |
| Grid current                                       | max. 5 ma                                      |
| Grid current starting point.                       |                                                |
| Grid voltage when grid current<br>= +0.3 $\mu$ amp | max. -0.2 volt                                 |
| Grid circuit resistance                            | 1 megohm                                       |
| Filament voltage                                   | max. 1.55 volts<br>min. 0.9 volt <sup>2)</sup> |

Typical Characteristics

|                      |                     |
|----------------------|---------------------|
| Plate voltage        | 150 volts           |
| Grid voltage         | -3.5 volts          |
| Plate current        | 20 ma <sup>1)</sup> |
| Transconductance     | 3500 micromhos      |
| Amplification factor | 14                  |

Operating characteristics for use as oscillator

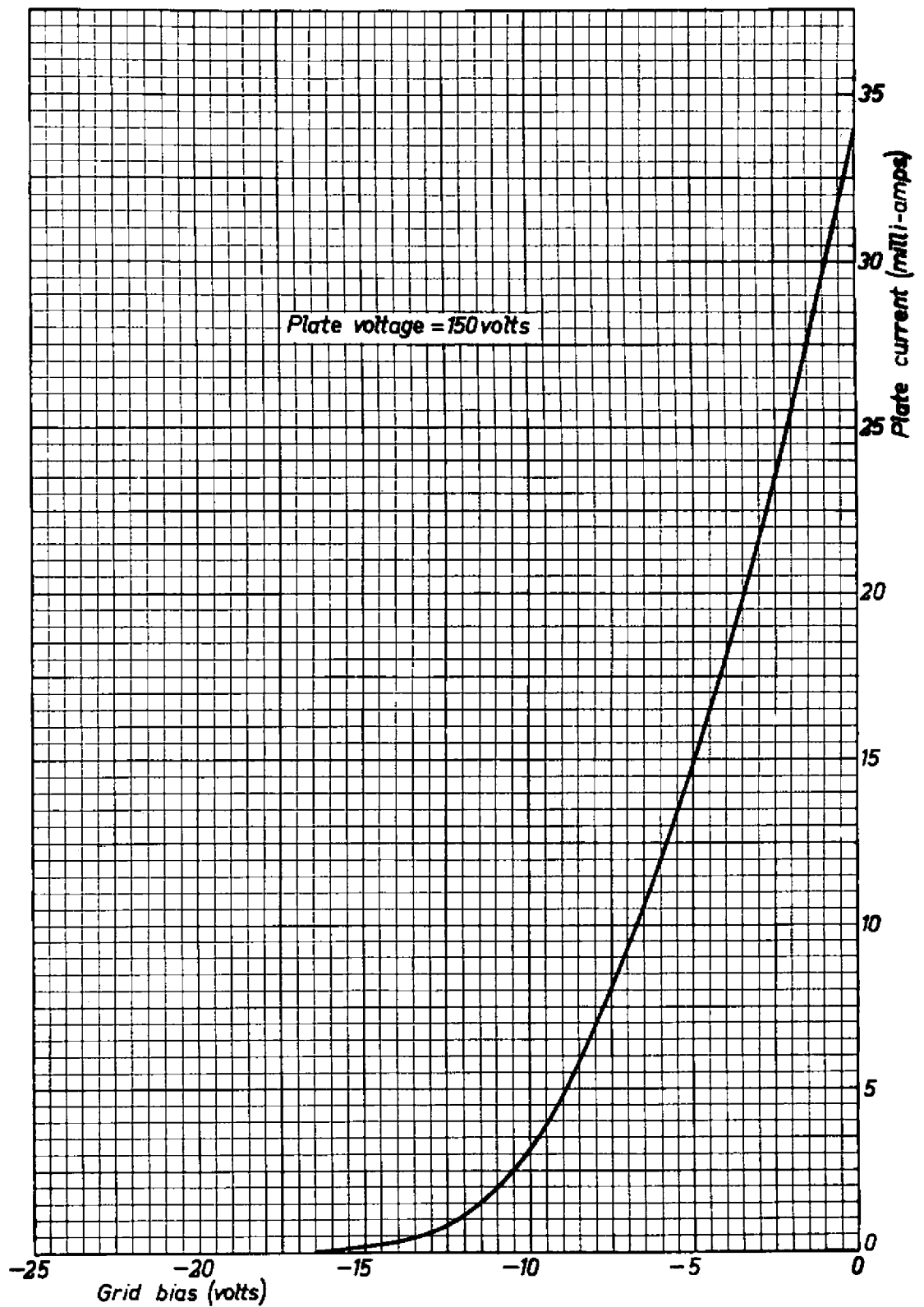
|                 |                              |
|-----------------|------------------------------|
| Plate voltage   | 150 volts                    |
| Cathode current | 20 ma <sup>1)</sup>          |
| Grid current    | 1.5 ma                       |
| Frequency       | 470 megacycles<br>per second |
| Output          | 0.45 watt                    |

<sup>1)</sup> Absolute maximum which must never be exceeded.  
When operating the tube at this cathode current  
the filament voltage must be at least 1.1 volts.

<sup>2)</sup> See footnote <sup>1)</sup>

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