



# Air-Blast-Cooled U.H.F. Triode

3J/160E

3J/160E

## CATHODE

Thoriated tungsten filament

|                 |    |   |
|-----------------|----|---|
| Voltage         | 10 | V |
| Nominal current | 29 | A |
| Peak emission   | 10 | A |

## RATING

|                      |                              |       |            |
|----------------------|------------------------------|-------|------------|
| Amplification factor | { Measured at }              | 19    |            |
| Impedance            | { $V_a$ 2.5 kV. $I_a$ 0.8A } | 1,300 | $\Omega$ — |

## DIRECT INTERELECTRODE CAPACITIES

|                   |     |    |
|-------------------|-----|----|
| Grid to anode     | 8.8 | pF |
| Grid to filament  | 12  | pF |
| Anode to filament | 0.7 | pF |

## AIR COOLING. For 1 kW. anode dissipation

|                                            |      |              |
|--------------------------------------------|------|--------------|
| Volume of air at pressure of 2in. of water | 80   | cu. ft./min. |
| Maximum temperature of radiator core       | 150° | C.           |

## DIMENSIONS

|                              |     |     |
|------------------------------|-----|-----|
| Maximum overall length       | 133 | mm. |
| Maximum diameter over cooler | 65  | mm. |

## MAXIMUM RATINGS

|                                     |     |      |
|-------------------------------------|-----|------|
| Maximum direct anode voltage        | 3   | kV   |
| Maximum anode dissipation           | 1   | kW   |
| Maximum frequency for above ratings | 120 | Mc/s |

# Air-Blast-Cooled U.H.F. Triode

3J/160E



## TYPICAL OPERATING CONDITIONS RADIO FREQUENCY

### Class B Telephony. Modulated carrier applied to grid.

(Carrier conditions per valve for use with 100% modulation)

|                                                     |      |    |
|-----------------------------------------------------|------|----|
| Direct anode voltage                                | 2    | kV |
| Grid bias                                           | —100 | V  |
| Direct anode current                                | 0.7  | A  |
| Peak R.F. grid voltage at crest of modulation cycle | 320  | V  |
| Power output                                        | 0.45 | kW |

### Class C Power Amplifier. Anode subject to modulation.

(Carrier conditions per valve for use with 100% modulation).

|                        |       |           |
|------------------------|-------|-----------|
| Direct anode voltage   | 2     | kV        |
| Grid bias              | —400  | V         |
| Direct anode current   | 0.75  | A         |
| Peak R.F. grid voltage | 660   | V         |
| *Direct grid current   | 0.225 | A approx. |
| Power output           | 1.0   | kW        |

### Class C Power Amplifier or Oscillator, unmodulated.

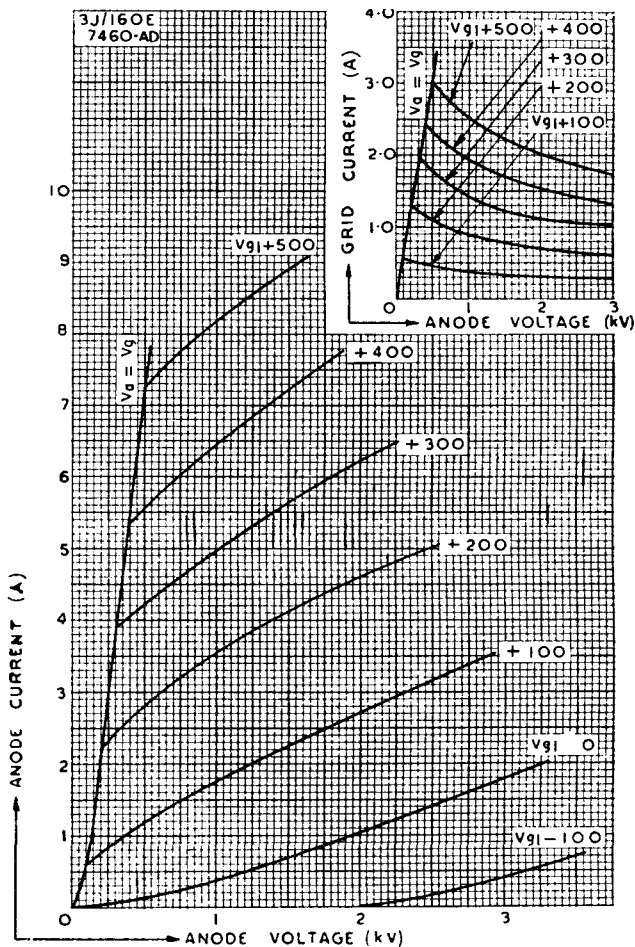
|                        |      |           |
|------------------------|------|-----------|
| Direct anode voltage   | 3    | kV        |
| Grid bias              | —325 | V         |
| Direct anode current   | 1    | A         |
| Peak R.F. grid voltage | 600  | V         |
| *Direct grid current   | 0.26 | A approx. |
| Power output           | 2.15 | kW        |

\* Subject to wide variation depending upon the impedance of the load circuit.



# Air-Blast-Cooled U.H.F. Triode

3J/160E



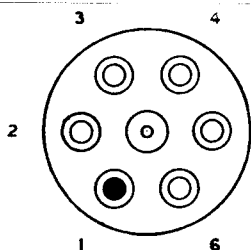
Tentative data  
July 1947

3J/160E

# Air-Blast-Cooled U.H.F. Triode

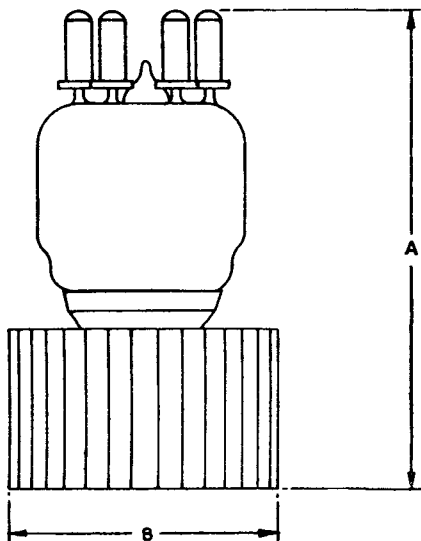


3J/160E



## BASING

- 1 FILAMENT C.T.  
(RED TIP)
- 2 GRID
- 3 FILAMENT
- 4 GRID
- 5 FILAMENT
- 6 GRID



| DIM | MILLIMETRES |     | INCHES |     |
|-----|-------------|-----|--------|-----|
| A   | 133         | MAX | 5.2    | MAX |
| B   | 65          | MAX | 2.6    | MAX |

**NOTE** BASIC FIGURES ARE MILLIMETRES

Tentative data  
July 1947

3J/160E—4