

# AMALGAMATED WIRELESS VALVE CO., LTD.

SYDNEY, AUSTRALIA

## TYPE 6BV7

### DOUBLE DIODE POWER OUTPUT PENTODE

#### MECHANICAL DATA

|                               |                                         |                          |
|-------------------------------|-----------------------------------------|--------------------------|
| Style                         | . . . . .                               | miniature                |
| Cathode                       | . . . . .                               | coated, unipotential     |
| Bulb                          | . . . . .                               | T6 $\frac{1}{2}$         |
| Base                          | . . . . .                               | Small button Noval 9 pin |
| Mounting Position             | . . . . .                               | Any                      |
| Maximum Overall Length        | . . . . .                               | 2-5/8"                   |
| Maximum Seated Length         | . . . . .                               | 2-3/8"                   |
| Length from Base Seat to Bulb |                                         |                          |
| Top (excluding tip)           | . . . . .                               | 2" $\pm$ 3/32"           |
| Maximum Diameter              | . . . . .                               | 7/8"                     |
| Basing                        | . . . . .                               | 9BU                      |
| Pin Connections:              |                                         |                          |
| Pin 1                         | . . Diode Plate                         |                          |
| Pin 2                         | . . Pentode Plate                       |                          |
| Pin 3                         | . . Pentode Screen Grid                 |                          |
| Pin 4                         | . . Heater                              |                          |
| Pin 5                         | . . Heater                              |                          |
| Pin 6                         | . . Diode Plate                         |                          |
| Pin 7                         | . . Cathode and Pentode Suppressor Grid |                          |
| Pin 8                         | . . Pentode Control Grid                |                          |
| Pin 9                         | . . Cathode and Pentode Suppressor Grid |                          |

#### GENERAL CHARACTERISTICS

#### ELECTRICAL

Heater, for Unipotential Cathode:

|                        |           |           |
|------------------------|-----------|-----------|
| Voltage (A.C. or D.C.) | . . . . . | 6.3 volts |
| Current                | . . . . . | 0.8 amp.  |

Direct Interelectrode Capacitances:\*

Pentode Unit:

|               |           |               |
|---------------|-----------|---------------|
| Grid to Plate | . . . . . | 0.5 uuf. max. |
| Input         | . . . . . | 11.5 uuf.     |
| Output        | . . . . . | 9.5 uuf       |

Diode Unit:

|                                    |           |               |
|------------------------------------|-----------|---------------|
| Diode (pin 1) - Diode (pin 6)      | . . . . . | .01 uuf. max. |
| Diode (pin 6) - Pentode Plate      | . . . . . | 0.3 uuf. max. |
| Diode (pin 1) - Pentode Plate      | . . . . . | 0.7 uuf. max. |
| Diode (pin 6) - Pentode Grid No. 1 | . . . . . | 0.1 uuf. max. |
| Diode (pin 1) - Pentode Grid No. 1 | . . . . . | 0.1 uuf. max. |

\*unshielded

ELECTRICAL DATAPentode UnitA.F. Power Amplifier - Class A1

## Maximum Ratings, Design Center Values:

|                                 |                |
|---------------------------------|----------------|
| Plate Voltage                   | 250 max. volts |
| Grid No. 2 (Screen) Voltage     | 250 max. volts |
| Plate Dissipation               | 10 max. watts  |
| Grid No. 2 (Screen) Dissipation | 2 max. watts   |
| Peak Heater - Cathode Voltage   |                |
| Heater Negative with respect    |                |
| to Cathode                      | 90 max. volts  |
| Heater Positive with respect    |                |
| to Cathode                      | 90 max. volts  |

## Typical Operation:

|                                       |         |              |
|---------------------------------------|---------|--------------|
| Plate Voltage                         | 180     | 250 volts    |
| Grid No. 2 (Screen) Voltage           | 180     | 250 volts    |
| Grid No. 1 (Control grid) Voltage     | -4      | -5 volts     |
| Peak A-F Grid No. 1 Voltage           | 3.7     | 4.3 volts    |
| Zero-Sig. Plate Current               | 20      | 38 ma        |
| Zero-Sig. Grid No. 2 Current          | 3.5     | 6.0 ma       |
| Plate Resistance (approx)             | 130,000 | 100,000 ohms |
| Transconductance                      | 8,000   | 10,000 umhos |
| Load Resistance                       | 8,000   | 8,000 ohms   |
| Max.-Signal Power Output              | 2.0     | 4.0 watts    |
| Max.-Signal Total Harmonic Distortion | 10      | 10% approx   |

DIODE UNITS

## Maximum Ratings, Design Center Values:

|                                |              |
|--------------------------------|--------------|
| Plate Current (for each diode) | 1.0 max. ma. |
|--------------------------------|--------------|

## Typical Operation:

Minimum diode current per plate with an applied d.c. voltage of 10 volts is 0.8 ma.