

|                                                            |                |
|------------------------------------------------------------|----------------|
| Grid No. 3 Voltage .....                                   | -1.5 Volts     |
| Grid No. 1 Resistance .....                                | 20,000 Ohms    |
| Grid No. 1 Current .....                                   | 0.5 Ma         |
| Plate Current .....                                        | 2.3 Ma         |
| Grid No. 2 Current .....                                   | 6.2 Ma         |
| Conversion Transconductance .....                          | 480 $\mu$ mhos |
| Plate Resistance (Approx.) .....                           | 0.4 Megohm     |
| Cathode Current .....                                      | 9 Ma           |
| Grid No. 3 Voltage (Approx.) for $G_c = 10 \mu$ mhos ..... | -21 Volts      |

**Oscillator Section Characteristics (Non-Oscillating)**

|                                                                                                   |                 |
|---------------------------------------------------------------------------------------------------|-----------------|
| Grid No. 3 Voltage .....                                                                          | 0 Volt          |
| Grid No. 1 Voltage .....                                                                          | 0 Volt          |
| Grid No. 2 Connected to Plate .....                                                               | 100 Volts       |
| Cathode Current .....                                                                             | 24 Ma           |
| Transconductance Between Grid No. 1 and Grid No. 2<br>and Grid No. 4 Connected to Plate .....     | 7000 $\mu$ mhos |
| Amplification Factor Between Grid No. 1 and Grid No. 2<br>and Grid No. 4 Connected to Plate ..... | 22              |
| Grid No. 1 Voltage (Approx.) for $I_b = 20 \mu$ a .....                                           | -9.2 Volts      |

**NOTES:**

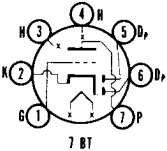
- (1) Shield No. 316 connected to cathode.
- (2) Data for self-excitation in a zero bias circuit corresponds closely to that for separate excitation.

**DETECTOR  
AF AMPLIFIER**

**18FY6A**

**Double Diode and High Mu Triode**

|                              |                    |
|------------------------------|--------------------|
| Construction .....           | Miniature T-5½     |
| Base .....                   | Button 7 Pin, E7-1 |
| Basing .....                 | .7BT               |
| Outline .....                | 5-2                |
| Maximum Diameter .....       | 0.750 In.          |
| Maximum Seated Height .....  | 1.875 In.          |
| Maximum Overall Height ..... | 2.125 In.          |



**ELECTRICAL DATA**

**HEATER OPERATION**

|                                               |            |
|-----------------------------------------------|------------|
| Heater Voltage .....                          | 18 Volts   |
| Heater Current .....                          | 100 Ma     |
| Heater Warm-up Time .....                     | 20 Seconds |
| Maximum Heater-Cathode Voltage .....          |            |
| Heater Negative with Respect to Cathode ..... |            |
| Total DC and Peak .....                       | 100 Volts  |
| Heater Positive with Respect to Cathode ..... |            |
| Total DC and Peak .....                       | 100 Volts  |

**DIRECT INTERELECTRODE CAPACITANCES**

|                                        | Shielded <sup>(1)</sup> | Unshielded |
|----------------------------------------|-------------------------|------------|
| Grid to Plate .....                    | 1.8                     | 1.8 Pf     |
| Input .....                            | 2.4                     | 2.4 Pf     |
| Output .....                           | 0.2                     | 0.22 Pf    |
| Grid to Diode No. 2 Plate (Max.) ..... | 0.2                     | 0.2 Pf     |

**RATINGS (Design Maximum Rating System)**

|                                               |           |
|-----------------------------------------------|-----------|
| Plate Voltage (Max.) .....                    | 150 Volts |
| Plate Dissipation (Max.) .....                | 0.5 Watt  |
| Positive Grid Voltage (Max.) .....            | 0 Volt    |
| Diode Plate Current (Each Diode) (Max.) ..... | 1.0 Ma    |

**CHARACTERISTICS AND TYPICAL OPERATION**

**Class A1 Amplifier**

|                                                                                 |                 |
|---------------------------------------------------------------------------------|-----------------|
| Plate Voltage .....                                                             | 100 Volts       |
| Grid Voltage .....                                                              | -1 Volt         |
| Plate Current .....                                                             | 0.6 Ma          |
| Plate Resistance .....                                                          | 77,000 Ohms     |
| Transconductance .....                                                          | 1300 $\mu$ mhos |
| Amplification Factor .....                                                      | 100             |
| Average Diode Current, Each Diode with 10 Volts DC Applied <sup>(2)</sup> ..... | 2.0 Ma          |

**NOTES:**

- (1) Shield No. 316 connected to Pin No. 2.
- (2) Test condition only.