

**SYLVANIA  ELECTRIC****RMA Registration Data****TYPE 1U6****PENTAGRID CONVERTER****MECHANICAL DATA**

|                              |                              |
|------------------------------|------------------------------|
| Style .....                  | miniature                    |
| Cathode .....                | coated filament              |
| Bulb .....                   | T-5 1/2                      |
| Base .....                   | E7-1, Miniature Button 7-Pin |
| Outline .....                | 5-2                          |
| Maximum Diameter .....       | 3/4 inch                     |
| Maximum Overall Length ..... | 2 1/8 inches                 |
| Maximum Seated Height .....  | 1 7/8 inches                 |
| Basing .....                 | CD-0-0                       |
| <b>Pin Connections:</b>      |                              |
| Pin 1 .. negative filament   | Pin 5 .. grid #3 and grid #5 |
| Pin 2 .. plate               | Pin 6 .. grid #4             |
| Pin 3 .. grid #2             | Pin 7 .. positive filament   |
| Pin 4 .. grid #1             |                              |

Mounting Position ..... any

**ELECTRICAL DATA****DIRECT INTERELECTRODE CAPACITANCES**

|                                     | <u>without shield</u> | <u>with shield</u> <sup>(1)</sup> |
|-------------------------------------|-----------------------|-----------------------------------|
| Grid #4 to Plate .....              | 0.4                   | 0.4 $\mu\text{f}$                 |
| Grid #4 to Grid #2 .....            | 0.2                   | 0.2 $\mu\text{f}$                 |
| Grid #4 to Grid #1 .....            | 0.2                   | 0.2 $\mu\text{f}$                 |
| Grid #1 to Grid #2 .....            | 0.8                   | 0.8 $\mu\text{f}$                 |
| Grid #4 to All Other Electrodes ... | 8.0                   | 8.0 $\mu\text{f}$                 |
| Grid #2 to All Except Grid #1 ..... | 2.2                   | 2.4 $\mu\text{f}$                 |
| Grid #1 to All Except Grid #2 ..... | 2.0                   | 2.2 $\mu\text{f}$                 |
| Plate to All Other Electrodes ..... | 7.0                   | 12.0 $\mu\text{f}$                |

**RATINGS -- Design Center Values**

|                                                               |               |
|---------------------------------------------------------------|---------------|
| Filament Voltage <sup>(2)</sup> .....                         | 1.4 volts     |
| Maximum Plate Voltage (dc) .....                              | 110 volts     |
| Maximum Grid #3 and Grid #5 Supply Voltage (dc) ...           | 110 volts     |
| Maximum Grid #3 and Grid #5 Voltage <sup>(3)</sup> (dc) ..... | 65 volts      |
| Maximum Grid #2 Voltage (dc) .....                            | 110 volts     |
| Maximum Cathode Current .....                                 | 4.0 milliamps |
| Minimum Grid #4 Circuit Resistance .....                      | 1.0 megohm    |

(1) Shield #316 connected to Pin 1.

(2) For power-line operation the filament voltage is centered at 1.4 volts for normal line voltage (117 volts).

(3) Obtained by using a by-passed voltage dropping resistor in series with the plate supply voltage, or by equivalent means.

**TYPE 1U6**
**CHARACTERISTICS<sup>(4)</sup>**

|                                               |       |       |           |
|-----------------------------------------------|-------|-------|-----------|
| Filament Voltage .....                        | 1.4   | 1.4   | volts     |
| Filament Current .....                        | 25    | 25    | milliamps |
| Plate Voltage (dc) .....                      | 67.5  | 90    | volts     |
| Grid #3 and Grid #5 Voltage (dc) .....        | 45    | 45    | volts     |
| Grid #2 Voltage (dc) .....                    | 67.5  | 90    | volts     |
| Grid #4 Voltage (dc) .....                    | 0     | 0     | volts     |
| Grid #1 Resistor .....                        | 0.2   | 0.2   | megohm    |
| Plate Resistance .....                        | 0.55  | 0.60  | megohm    |
| Plate Current .....                           | 0.5   | 0.55  | milliamp  |
| Grid #3 and Grid #5 Current .....             | 0.6   | 0.55  | milliamp  |
| Grid #2 Current .....                         | 0.95  | 1.1   | milliamps |
| Grid #1 Current .....                         | 0.028 | 0.035 | milliamp  |
| Total Cathode Current .....                   | 2.1   | 2.2   | milliamps |
| Conversion Transconductance .....             | 260   | 275   | micromhos |
| Grid #4 Voltage for Conversion                |       |       |           |
| Transconductance Cut-Off <sup>(5)</sup> ..... | -3    | -3    | volts     |
| Oscillator Transconductance,                  |       |       |           |
| with 0 volts on grids #1 and #4 .....         |       | 475   | micromhos |

(4) Grid #1 ..... oscillator grid.  
Grid #2 ..... oscillator anode.  
Grids #3 & #5 ... screen.  
Grid #4 ..... signal.

(5) Approximately 10 micromhos.