

SYLVANIA  ELECTRIC  
RMA Registration Data

**TYPE 5638**

**PENTODE VOLTAGE AMPLIFIER**

MECHANICAL DATA

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| Style .....                               | subminiature                                        |
| Cathode .....                             | coated, unipotential                                |
| Outline .....                             | (see Page 2)                                        |
| Maximum Diameter .....                    | 0.400 inch                                          |
| Maximum Bulb Length .....                 | 1.500 inches                                        |
| Bulb .....                                | T-3                                                 |
| Base .....                                | subminiature button, flexible leads<br>(see Page 2) |
| Lead Connections:                         |                                                     |
| Lead 1 .. plate                           | Lead 4 .. heater                                    |
| Lead 2 .. cathode and grid #3             | Lead 5 .. grid #2                                   |
| Lead 3 .. grid #1                         | Lead 6 .. heater                                    |
| Mounting Position .....                   | any                                                 |
| Maximum Acceleration <sup>(1)</sup> ..... | 1,000 G                                             |

ELECTRICAL DATA

GENERAL

|                                    |                       |                                   |                  |
|------------------------------------|-----------------------|-----------------------------------|------------------|
| Direct Interelectrode Capacitances |                       |                                   |                  |
|                                    | <u>without shield</u> | <u>with shield <sup>(2)</sup></u> |                  |
| Grid to Plate .....                | 0.22                  | 0.19                              | $\mu\mu\text{f}$ |
| Input .....                        | 4.00                  | 4.00                              | $\mu\mu\text{f}$ |
| Output .....                       | 3.00                  | 6.50                              | $\mu\mu\text{f}$ |
| Heater Voltage .....               | 6.3                   | volts                             |                  |
| Heater Current .....               | 150                   | milliamps                         |                  |

RATINGS - - Design Center Values

|                                                 |                    |        |
|-------------------------------------------------|--------------------|--------|
| Heater Voltage (ac or dc) .....                 | 6.3 ( $\pm 10\%$ ) | volts  |
| Maximum Plate Voltage .....                     | 150                | volts  |
| Maximum Screen Voltage .....                    | 140                | volts  |
| Maximum Plate Dissipation .....                 | 0.6                | watt   |
| Maximum Screen Dissipation .....                | 0.2                | watt   |
| Maximum Heater to Cathode Voltage .....         | 90                 | volts  |
| Maximum Grid Circuit Resistance (self bias) ... | 1                  | megohm |

(1) Forces applied gradually, as in centrifuge, in direction of long axis of tube and such that internal structure is in tension.

(2) External shield of 0.405 inch diameter connected to cathode.

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## CHARACTERISTICS

|                                                 |         |           |
|-------------------------------------------------|---------|-----------|
| Heater Voltage .....                            | 6.3     | volts     |
| Plate Voltage (dc) .....                        | 100     | volts     |
| Screen Voltage (dc) .....                       | 100     | volts     |
| Self Bias Resistor .....                        | 270     | ohms      |
| Plate Current .....                             | 4.8     | milliamps |
| Screen Current .....                            | 1.25    | milliamps |
| Transconductance .....                          | 3,300   | $\mu$ hos |
| Plate Resistance .....                          | 150,000 | ohms      |
| Grid Bias for 10 $\mu$ amps Plate Current ..... | -9.0    | volts     |

