



## ELECTRONIC TUBE REFERENCE

# 6S33SV

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

**1 SECTION**

CONSTRUCTION

**TRIODE**

Russian 6S33S-family power triode variant intended for high-current voltage-stabilizer and series-pass service.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | –                 | BASE PINS            | 7             |
| NOMINAL HEATER      | 6.3 V / –         | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                          |              |
|------------------------------------------------------------------------------------------|--------------|
| <b>SECTION1</b> Triode                                                                   |              |
| PLATE RESISTANCE                                                                         | 130 $\Omega$ |
| MAXIMUM PLATE VOLTAGE                                                                    | 450 V        |
| MAXIMUM PLATE DISSIPATION                                                                | 60 W         |
| MAXIMUM CATHODE CURRENT                                                                  | 600 mA       |
| <i>Promoted-field completeness audit performed from English ratings/characteristics.</i> |              |

Russian triode intended for voltage amplification and/or high-frequency operation, as specified in the source entry.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1968 Electronintorg

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1968 ELECTRONINTORG

## Section 1 · Triode

| OTHER                                                  |                 |                                                                                                      |
|--------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------|
| PARAMETER                                              | PUBLISHED VALUE | CONDITION / NOTE                                                                                     |
| voltage regulators in stationary and mobile equip- ' a | 0 V             | nic voltage regulators in stationary and mobile equip- ' a 0                                         |
| Cathode: indirectly heated, oxide-coated [1]           | 1               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [2]           | 2               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [3]           | 6               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [4]           | 7               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [5]           | 3               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [6]           | 4               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| Cathode: indirectly heated, oxide-coated [7]           | 5               | Cathode: indirectly heated, oxide-coated. 1, 2, 6, 7 - nogorpesavens; 3 - Katoa; 4 - aHog; 5 - ceTka |
| grid [1]                                               | 12              | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |
| grid [2]                                               | 6               | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |
| grid [3]                                               | 7               | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |
| grid [4]                                               | 3               | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |
| grid [5]                                               | 4               | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |
| grid [6]                                               | 5               | Envelope: glass. 1,2, 6, 7 heater; 3 - cathode; 4 - anode; 5 - grid                                  |

| PARAMETER                          | PUBLISHED VALUE | CONDITION / NOTE                                                                                   |
|------------------------------------|-----------------|----------------------------------------------------------------------------------------------------|
| frequency, Hz [1]                  | <b>30 Hz</b>    | AvanasoHuacToT, My .. ... 30-300 frequency, Hz .<br>..... 30-300                                   |
| frequency, Hz [2]                  | <b>-300 Hz</b>  | AvanasoHuacToT, My .. ... 30-300 frequency, Hz .<br>..... 30-300                                   |
| frequency, Hz [3]                  | <b>30 Hz</b>    | AvanasoHuacToT, My .. ... 30-300 frequency, Hz .<br>..... 30-300                                   |
| frequency, Hz [4]                  | <b>-300 Hz</b>  | AvanasoHuacToT, My .. ... 30-300 frequency, Hz .<br>..... 30-300                                   |
| temperature, °C [1]                | <b>-60 C</b>    | Temnepatypa okpyxarowen cpegpl, °C . .....<br>—60-+100 Ambient temperature, °C<br>..... —60to +100 |
| temperature, °C [2]                | <b>100 C</b>    | Temnepatypa okpyxarowen cpegpl, °C . .....<br>—60-+100 Ambient temperature, °C<br>..... —60to +100 |
| temperature, °C [3]                | <b>-60 C</b>    | Temnepatypa okpyxarowen cpegpl, °C . .....<br>—60-+100 Ambient temperature, °C<br>..... —60to +100 |
| temperature, °C [4]                | <b>100 C</b>    | Temnepatypa okpyxarowen cpegpl, °C . .....<br>—60-+100 Ambient temperature, °C<br>..... —60to +100 |
| Mutual conductance, mA/V [1]       | <b>30 mA/V</b>  | npyv nocnefoBaTenbHOM BKNIOYEHUN<br>Mutual conductance, mA/V . . ..... 30-50                       |
| Mutual conductance, mA/V [2]       | <b>-50 mA/V</b> | npyv nocnefoBaTenbHOM BKNIOYEHUN<br>Mutual conductance, mA/V . . ..... 30-50                       |
| current, yuA, atmost [1]           | <b>3 uA</b>     | NOROIPEBATENEN . . .....covirerunennn .. 3-<br>3,6 Inverse grid current, yuA, atmost .....<br>5    |
| current, yuA, atmost [2]           | <b>-36 uA</b>   | NOROIPEBATENEN . . .....covirerunennn .. 3-<br>3,6 Inverse grid current, yuA, atmost .....<br>5    |
| current, yuA, atmost [3]           | <b>5 uA</b>     | NOROIPEBATENEN . . .....covirerunennn .. 3-<br>3,6 Inverse grid current, yuA, atmost .....<br>5    |
| resistance, ), atmost [1]          | <b>120 ohm</b>  | Hanpskewneawoga,B..... 120<br>Internal resistance, ), atmost ..... 120                             |
| resistance, ), atmost [2]          | <b>120 ohm</b>  | Hanpskewneawoga,B..... 120<br>Internal resistance, ), atmost ..... 120                             |
| Interelectrode capacitance, pF [1] | <b>30 pF</b>    | KpyTtusHa xapaktepuctnku, MA/B .. .....<br>30-50 Interelectrode capacitance, pF:                   |
| Interelectrode capacitance, pF [2] | <b>-50 pF</b>   | KpyTtusHa xapaktepuctnku, MA/B .. .....<br>30-50 Interelectrode capacitance, pF:                   |
|                                    |                 |                                                                                                    |

| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE                                                                |
|----------------------------------|-----------------|---------------------------------------------------------------------------------|
| input [1]                        | <b>6</b>        | O6paTHbIf TOK CETKN, MKA, He 6onee .<br>..... 5 input . ... . 23-37             |
| input [2]                        | <b>5</b>        | O6paTHbIf TOK CETKN, MKA, He 6onee .<br>..... 5 input . ... . 23-37             |
| input [3]                        | <b>23</b>       | O6paTHbIf TOK CETKN, MKA, He 6onee .<br>..... 5 input . ... . 23-37             |
| input [4]                        | <b>-37</b>      | O6paTHbIf TOK CETKN, MKA, He 6onee .<br>..... 5 input . ... . 23-37             |
| output [1]                       | <b>80</b>       | BHyTpeHHee conpotuBnenne, OM ..... 80-<br>120 output ... 9.5-115                |
| output [2]                       | <b>-120</b>     | BHyTpeHHee conpotuBnenne, OM ..... 80-<br>120 output ... 9.5-115                |
| output [3]                       | <b>9.5</b>      | BHyTpeHHee conpotuBnenne, OM ..... 80-<br>120 output ... 9.5-115                |
| output [4]                       | <b>-115</b>     | BHyTpeHHee conpotuBnenne, OM ..... 80-<br>120 output ... 9.5-115                |
| heater capacitance,<br>pF,atmost | <b>60 pF</b>    | MeXXaneKTpoaHbie eMKoCTK, Nd: Cathode-<br>heater capacitance, pF,atmost..... 60 |
| current, mA, atleast [1]         | <b>95 mA</b>    | BBIXOAHARA . . .ottt 9,5-11,5 anode current,<br>mA, atleast ..... 340           |
| current, mA, atleast [2]         | <b>-115 mA</b>  | BBIXOAHARA . . .ottt 9,5-11,5 anode current,<br>mA, atleast ..... 340           |
| current, mA, atleast [3]         | <b>340 mA</b>   | BBIXOAHARA . . .ottt 9,5-11,5 anode current,<br>mA, atleast ..... 340           |
| current, yAatmost [1]            | <b>24 A</b>     | NPOXOAHAS ... \ it it ii et 24-38 inverse grid<br>current, yAatmost ..... 15    |
| current, yAatmost [2]            | <b>-38 A</b>    | NPOXOAHAS ... \ it it ii et 24-38 inverse grid<br>current, yAatmost ..... 15    |
| current, yAatmost [3]            | <b>15 A</b>     | NPOXOAHAS ... \ it it ii et 24-38 inverse grid<br>current, yAatmost ..... 15    |
| current, %, atmost<br>..... +    | <b>30 A</b>     | EmkocTb kaTog-nopopesatens, nd, change in<br>anode current, %, atmost ..... +30 |
| cathode operation [1]            | <b>5.7</b>      | npuv NapannenbHOM BKOEYEHNN single-<br>cathode operation . . ..... 5.7-6.9      |
| cathode operation [2]            | <b>-6.9</b>     | npuv NapannenbHOM BKOEYEHNN single-<br>cathode operation . . ..... 5.7-6.9      |
| dissipation above [1]            | <b>57 W</b>     | e 5,7-6,9 at anode dissipation above 30W<br>..... 250                           |
| dissipation above [2]            | <b>-69 W</b>    | e 5,7-6,9 at anode dissipation above 30W<br>..... 250                           |

| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE                                                                                         |
|---------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|
| dissipation above [3]                 | <b>30 W</b>     | e 5,7-6,9 at anode dissipation above 30W ..... 250                                                       |
| dissipation above [4]                 | <b>250 W</b>    | e 5,7-6,9 at anode dissipation above 30W ..... 250                                                       |
| dissipationat most [1]                | <b>30 W</b>     | Hanps>xenne aHoga, B: at anode dissipationat most 30W ..... 450                                          |
| dissipationat most [2]                | <b>450 W</b>    | Hanps>xenne aHoga, B: at anode dissipationat most 30W ..... 450                                          |
| voltage, V [1]                        | <b>6 V</b>      | aHogoM, 6onee30BT ..... .., 250 Negative grid voltage, V ..... 0.5-150                                   |
| voltage, V [2]                        | <b>0 V</b>      | aHogoM, 6onee30BT ..... .., 250 Negative grid voltage, V ..... 0.5-150                                   |
| voltage, V [3]                        | <b>250 V</b>    | aHogoM, 6onee30BT ..... .., 250 Negative grid voltage, V ..... 0.5-150                                   |
| voltage, V [4]                        | <b>0.5 V</b>    | aHogoM, 6onee30BT ..... .., 250 Negative grid voltage, V ..... 0.5-150                                   |
| voltage, V [5]                        | <b>-150 V</b>   | aHogoM, 6onee30BT ..... .., 250 Negative grid voltage, V ..... 0.5-150                                   |
| cathode [1]                           | <b>600</b>      | NPY BKINIOHEHWM HA XONozHYKO namny .. ..... 600 in operation with single cathode ..... 45                |
| cathode [2]                           | <b>45</b>       | NPY BKINIOHEHWM HA XONozHYKO namny .. ..... 600 in operation with single cathode ..... 45                |
| heater, V [1]                         | <b>5 V</b>      | HanpsixeHue ceTku, oTpuyatenoHoe, B . ..., .. 0,5-150 Voltage between cathode and heater, V... ..... 300 |
| heater, V [2]                         | <b>-150 V</b>   | HanpsixeHue ceTku, oTpuyatenoHoe, B . ..., .. 0,5-150 Voltage between cathode and heater, V... ..... 300 |
| heater, V [3]                         | <b>300 V</b>    | HanpsixeHue ceTku, oTpuyatenoHoe, B . ..., .. 0,5-150 Voltage between cathode and heater, V... ..... 300 |
| gridcircuit, MQ                       | <b>0.2 Mohm</b> | Tok aHoga, MA: Resistance ingridcircuit, MQ .. ..... 0.2                                                 |
| Anode Characteristic Curves: Uy = [1] | <b>12.6</b>     | E Averaged Anode Characteristic Curves: Uy = 12.6 V; 0 'P E                                              |
| Anode Characteristic Curves: Uy = [2] | <b>0</b>        | E Averaged Anode Characteristic Curves: Uy = 12.6 V; 0 'P E                                              |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1981 Russian Tubes Katsnelson and Larionov

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1981 RUSSIAN TUBES KATSNELSON AND LARIONOV

## Section 1 · Triode

| CHARACTERISTICS  |                 |                                                                                                |
|------------------|-----------------|------------------------------------------------------------------------------------------------|
| PARAMETER        | PUBLISHED VALUE | CONDITION / NOTE                                                                               |
| Plate current    | <b>-90 mA</b>   | Translated from Russian source; OCR line: Ток анода, mA . . , — 54090 550--=80 540=-90         |
| Plate resistance | <b>130 ohm</b>  | Translated from Russian source; OCR line: Внутреннее сопротивление, Ом --- < 130 80— 120 < 130 |

| OTHER        |                 |                                                                                   |
|--------------|-----------------|-----------------------------------------------------------------------------------|
| PARAMETER    | PUBLISHED VALUE | CONDITION / NOTE                                                                  |
| Service life | <b>2000 h</b>   | Translated from Russian source; OCR line: Наработка, ч. . . . . — 1000 750 > 2000 |