



## ELECTRONIC TUBE REFERENCE

## RS2011V

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Vapor-cooled low-mu Siemens power triode particularly suited to AF amplifier and modulator driver stages, with RF amplification also supported. Rated for approximately 12 kW plate dissipation and 11 kV plate voltage.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 10 V / 70 A       | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                      |         |
|----------------------------------------------------------------------------------------------------------------------|---------|
| SECTION 1 Triode                                                                                                     |         |
| TRANSCONDUCTANCE                                                                                                     | 0.02 S  |
| AMPLIFICATION FACTOR                                                                                                 | 15      |
| MAXIMUM PLATE VOLTAGE                                                                                                | 11000 V |
| MAXIMUM PLATE DISSIPATION                                                                                            | 12000 W |
| MAXIMUM GRID DISSIPATION                                                                                             | 100 W   |
| MAXIMUM CATHODE CURRENT                                                                                              | 5 A     |
| Maximum ratings promoted from published rating tables; additional condition-specific values preserved in parameters. |         |

Vapor-cooled triode with coaxial grid lead-through. Due to the low amplification factor the tube is particularly suitable for driver stages of AF amplifiers and modulators in sequential cathode circuit. When used as RF amplifier the tube can be operated at 11 kV up to 30 MHz and at 8 kV up to Cathode connecting strip (2 for each tube) RöKat61 Q81-X1161

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1963 Siemens

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

1963 SIEMENS

## Section 1 · Triode

| CHARACTERISTICS      |                   |                  |
|----------------------|-------------------|------------------|
| PARAMETER            | PUBLISHED VALUE   | CONDITION / NOTE |
| Amplification factor | 15                | —                |
| Transconductance     | 20000 $\mu$ S     | —                |
| Emission current     | 20 A A            | —                |
| Amplification factor | 15                | —                |
| at UA = 1            | 6 kV, IA = 1 A kV | —                |
| Transconductance     | 20 mA/V mA/V      | —                |

| OTHER                |                   |                  |
|----------------------|-------------------|------------------|
| PARAMETER            | PUBLISHED VALUE   | CONDITION / NOTE |
| Heater voltage       | 10 V V            | —                |
| Heater current       | ≈ 70 A A          | —                |
| Frequency            | 70 MHz MHz        | —                |
| Anode voltage (dc)   | 8,0 kV kV         | —                |
| Grid voltage (dc)    | – 1200 – 1200 V V | —                |
| Cathode current (dc) | 5,0 5,0 A A       | —                |
| Peak cathode current | 20 A A            | —                |
| Anode dissipation    | 12 kW kW          | —                |
| Grid dissipation     | 100 60 W W        | —                |
| Frequency            | ≤ 30 ≤ 70 MHz MHz | —                |
| Output power         | 12 kW 1) kW       | —                |
| Anode voltage (dc)   | 7,0 kV kV         | —                |
| Grid voltage (dc)    | – 960 – 700 V V   | —                |

| PARAMETER              | PUBLISHED VALUE             | CONDITION / NOTE |
|------------------------|-----------------------------|------------------|
| Peak grid voltage (ac) | 1260 950 V V                | —                |
| Anode current (dc)     | 2,8 2,3 A A                 | —                |
| Grid current (dc)      | 275 250 mA mA               | —                |
| Anode input power      | 16 kW A                     | —                |
| Drive power            | 335 210 W 1) W              | —                |
| Anode dissipation      | 6,0 4,0 kW kW               | —                |
| Grid dissipation       | 35 W W                      | —                |
| Efficiency             | 78,5 75 %                   | —                |
| Anode load resistance  | 1840 1500 $\Omega$ $\Omega$ | —                |
| Triode                 | 2011 V V                    | —                |
| Frequency              | 30 MHz MHz                  | —                |
| Anode voltage (dc)     | 6,5 kV kV                   | —                |
| Grid voltage (dc)      | – 1200 V V                  | —                |
| Cathode current (dc)   | 5,0 A A                     | —                |
| Peak cathode current   | 20 A A                      | —                |
| Anode dissipation      | 12 kW kW                    | —                |
| Grid dissipation       | 100 W W                     | —                |
| Frequency              | $\leq$ 30 MHz MHz           | —                |
| Carrier power          | 6,0 kW 1) kW                | —                |
| Anode voltage (dc)     | 6,0 kV kV                   | —                |
| Grid bias (dc), fixed  | – 400 V V                   | —                |
| Grid resistance        | 3,0 k $\Omega$ k $\Omega$   | —                |
| Peak grid voltage (ac) | 1260 V V                    | —                |
| Anode current (dc)     | 1,25 A A                    | —                |
| Grid current (dc)      | 210 mA mA                   | —                |
| Anode input power      | 7,5 kW A                    | —                |
| Drive power            | 260 W 1) W                  | —                |
| Anode dissipation      | 1,5 kW 2) kW                | —                |

| PARAMETER                            | PUBLISHED VALUE                                               | CONDITION / NOTE |
|--------------------------------------|---------------------------------------------------------------|------------------|
| Grid dissipation                     | 40 W W                                                        | —                |
| Efficiency                           | 80 %                                                          | —                |
| Anode load resistance                | 2,7 kΩ kΩ                                                     | —                |
| Modulation factor                    | 100 %                                                         | —                |
| Modulation power                     | 3,75 kW kW                                                    | —                |
| Grid current (dc)                    | 240 mA 3) mA                                                  | —                |
| Drive power                          | 295 W 1) 3) W                                                 | —                |
| Grid current (dc)                    | 200 mA 4) mA                                                  | —                |
| Drive power                          | 245 W 1) 4) W                                                 | —                |
| tion the anode dissipation increases | 1,5 times the power dissipation stated for the carrier value. | —                |
| Triode                               | 2011 V V                                                      | —                |
| Anode voltage (dc)                   | 11 kV kV                                                      | —                |
| Grid voltage (dc)                    | – 1000 V V                                                    | —                |
| Cathode current (dc)                 | 5,0 A A                                                       | —                |
| Peak cathode current                 | 20 A A                                                        | —                |
| Anode dissipation                    | 12 kW kW                                                      | —                |
| Grid dissipation                     | 100 W W                                                       | —                |
| Grid resistance                      | 10 kΩ kΩ                                                      | —                |
| U <sub>gg</sub>                      | 0 1950 0 1720 0 1500 V V                                      | —                |
| I <sub>G M</sub>                     | 0 2 × 1,6 0 2 × 0,42 0 0 A A                                  | —                |
| P <sub>B A</sub>                     | 2×3 2 × 26,7 2×3 2 × 11 2×3 2 × 15 kW A                       | —                |
| RAA                                  | – 4,15 – 10,1 – 6,1 kΩ kΩ                                     | —                |
| Triode                               | 2011 V V                                                      | —                |
| Anode voltage (dc)                   | 11 kV kV                                                      | —                |
| Grid voltage (dc)                    | – 1000 V V                                                    | —                |
| Cathode current (dc)                 | 5,0 A A                                                       | —                |
| Peak cathode current                 | 20 A A                                                        | —                |
|                                      |                                                               |                  |

| PARAMETER                           | PUBLISHED VALUE                                   | CONDITION / NOTE |
|-------------------------------------|---------------------------------------------------|------------------|
| Anode dissipation                   | 12 kW kW                                          | —                |
| Grid dissipation                    | 100 W W                                           | —                |
| Grid resistance                     | 10 kΩ kΩ                                          | —                |
| U <sub>gg</sub>                     | 0 1470 0 1380 0 1220 V V                          | —                |
| IG M                                | 0 2 × 0,6 0 2 × 0,27 0 0 A A                      | —                |
| PB A                                | 2×2 2 × 11,2 2 × 1,6 2 × 7,2 2 × 1,2 2 × 8,8 kW A | —                |
| RAA                                 | — 6,12 — 9,8 — 5,5 kΩ kΩ                          | —                |
| Triode                              | 2011 V V                                          | —                |
| Anode voltage (dc)                  | 11 kV kV                                          | —                |
| Grid voltage (dc)                   | — 1000 V V                                        | —                |
| Cathode current (dc)                | 5,0 A A                                           | —                |
| Peak cathode current                | 20 A A                                            | —                |
| Anode dissipation                   | 12 kW kW                                          | —                |
| Grid dissipation                    | 100 W W                                           | —                |
| Grid resistance                     | 10 kΩ kΩ                                          | —                |
| Anode voltage (dc)                  | 4,9 4,9 kV kV                                     | —                |
| Grid voltage (dc)                   | — 320 — 320 V V                                   | —                |
| between                             | 2 tubes U <sub>gg</sub> m 0 1550 V V              | —                |
| between                             | 2 tubes U <sub>kk</sub> m 0 910 V V               | —                |
| Cathode current (dc)                | 2 × 0,5 2 × 1,85 A A                              | —                |
| Peak cathode current IK M (2 × 0,5) | 2 × 9,8 A A                                       | —                |
| Anode input power                   | 2 × 2,45 2 × 9,1 kW A                             | —                |

| CAPACITANCE   |                 |                  |
|---------------|-----------------|------------------|
| PARAMETER     | PUBLISHED VALUE | CONDITION / NOTE |
| Cathode/grid  | ≈ 48 pF pF      | —                |
| Cathode/anode | ≈ 1,3 pF 1) pF  | —                |
| Grid/anode    | ≈ 23 pF pF      | —                |
| Triode        | 2011 V V        | —                |

## TUBE TINKER

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and their source documents.

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