



ELECTRONIC TUBE REFERENCE

RS2052CV

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
TETRODE

High-power transmitting tetrode designed primarily for broadcast, FM, VHF, medium-wave, or short-wave transmitter RF power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	16 V / 260 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode	
TRANSCONDUCTANCE	0.09 S
AMPLIFICATION FACTOR	5
MAXIMUM PLATE VOLTAGE	12000 V
MAXIMUM SCREEN VOLTAGE	900 V
MAXIMUM PLATE DISSIPATION	120000 W
MAXIMUM SCREEN DISSIPATION	2500 W
MAXIMUM GRID DISSIPATION	800 W
MAXIMUM CATHODE CURRENT	25 A
<i>Maximum ratings promoted from published rating tables; additional condition-specific values preserved in parameters.</i>	

Coaxial metal-ceramic tetrode, vapor-cooled, particularly suitable for 100 kW broadcast transmitters
Emission current at $U_A = U_{G2} = U_{G1} = 600 \text{ V}$ $I_{em} 150 \text{ A}$ Transconductance at $U_A = 4 \text{ kV}$, $U_{G2} = 1000 \text{ V}$,

I A = 5 A s 90 mA/V Cathode connecting strip (2 for each tube) RōKat363 Q81-X1174

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 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	5	—
Transconductance	90000 μ S	—
Emission current at $U_A = U_{G2}$ = $U_{G1} = 600$ V	150 A V	—
Amplification factor of screen grid	5,0	—
at $U_A = 4$ kV, $U_{G2} = 800$	1200 V, I A = 5 A kV	—
Transconductance at $U_A = 4$ kV, $U_{G2} = 1000$ V, I A = 5	90 mA/V kV	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	16 V V	—
Heater current	≈ 260 A A	—
Frequency	30 MHz MHz	—
Anode voltage (dc)	12 kV kV	—
Screen grid voltage (dc)	900 V V	—
Control grid voltage (dc)	– 800 V V	—
Cathode current (dc)	25 A A	—
Peak cathode current	150 A A	—
Anode dissipation	120 kW kW	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen grid dissipation	2500 W W	—
Control grid dissipation	800 W W	—
Frequency	$\leq 30 \leq 30$ MHz MHz	—
Carrier power	110 110 kW 1) kW	—
Anode voltage (dc)	11 10 kV kV	—
Screen grid voltage (dc)	800 800 V V	—
Control grid bias (dc), fixed	– 250 – 250 V V	—
Control grid resistance	440 350 Ω Ω	—
Peak control grid voltage (ac)	820 850 V V	—
Anode current (dc)	12,4 14 A A	—
Screen grid current (dc)	1,6 2,0 A A	—
Control grid current (dc)	0,8 1,0 A A	—
Anode input power	136 140 kW A	—
Drive power	590 760 W 1) W	—
Anode dissipation	26 30 kW 2) kW	—
Screen grid dissipation	1280 1600 W W	—
Control grid dissipation	110 160 W W	—
Efficiency	81 79 %	—
Anode load resistance	470 380 Ω Ω	—
Modulation factor	100 100 %	—
Peak screen grid voltage (ac)	700 700 V 3) V	—
Modulation power	68 70 kW kW	—
Control grid current (dc)	1,0 1,3 A 4) A	—
Drive power	800 1000 W 1)4) W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode dissipation at modulation	45 50 kW 5) kW	—
Screen grid dissipation at modulation	1600 2000 W 4) W	—
modulation the anode dissipation increases	1,5 times the power dissipation stated for the carrier value.	—
Transmitter Tetrode	2052 CV	—
The temperature of the metal-ceramic seals must not	220 °C at any point. Sufficient cooling	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode/control grid	≈ 160 pF pF	—
Cathode/screen grid	≈ 20 pF pF	—
Cathode/anode	≈ 0,7 pF 1) pF	—
Control grid/screen grid	≈ 240 pF pF	—
Control grid/anode	≈ 5,0 pF 1) pF	—
Screen grid/anode	≈ 80 pF pF	—
Transmitter Tetrode	2052 CV	—

COOLING		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(PA + PG + 0,8 PF)	125,5 kW PF	—
Equivalent thermal	7520 kJ/min (2700 kcal/min)	—
at returning water temperature	20 °C approx. 2,8 l/min l/min	—
at returning water temperature	90 °C approx. 3,3 l/min l/min	—
at returning water temperature	20 °C approx. 4,9 m 3/min	—
at returning water temperature	90 °C approx. 5,6 m 3/min	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The tube fuse Rösich4 is recommended for protecting the vapor-cooled version	2052 CV	—
Transmitter Tetrode	2052 CV	—