



ELECTRONIC TUBE REFERENCE

RS2012CJ

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

Water-cooled coaxial tetrode for approximately 10 kW-class single-sideband communications transmitters to 110 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	10 V / 83 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode	
TRANSCONDUCTANCE	0.07 S
AMPLIFICATION FACTOR	8.4
MAXIMUM PLATE VOLTAGE	9000 V
MAXIMUM SCREEN VOLTAGE	1100 V
MAXIMUM SCREEN DISSIPATION	200 W
MAXIMUM GRID DISSIPATION	70 W
MAXIMUM CATHODE CURRENT	6 A
<i>Maximum ratings promoted from published rating tables; additional condition-specific values preserved in parameters.</i>	

Coaxial metal-ceramic tetrode for frequencies up to 110 MHz, forced-air-cooled or water-cooled; particularly suitable for single-sideband communications transmitters up to 10 kW with grid-current Forced-air-cooled version Water-cooled version The radiator and the terminals are of concentric design with the following diameters:

SOURCE OPERATING CONDITIONS

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	8.4	—
Transconductance	70000 μ S	—
Emission current	35 A A	—
Amplification factor of screen grid	8,4	—
UG2 = 600	1000 V, V	—
Transconductance	70 mA/V mA/V	—
I A = 2,5	3,5 A A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	10 V V	—
Heater current	≈ 83 A A	—
Frequency	110 MHz MHz	—
Anode voltage (dc)	7,5 kV kV	—
Screen grid voltage (dc)	1000 V V	—
Control grid voltage (dc)	– 250 V V	—
Cathode current (dc)	4,0 A A	—
Peak cathode current	35 A A	—
Anode dissipation (RS 2012 CL)	12 kW kW	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode dissipation (RS 2012 CJ)	18 kW 5) kW	—
Screen grid dissipation	200 W W	—
Control grid dissipation	70 W W	—
Frequency	≤ 110 50 ≤ 110 MHz MHz	—
Output power	11 15+0,26 3) 10,8+0,23 3) kW 1) kW	—
Anode voltage (dc)	6,0 9,0 7,0 kV kV	—
Screen grid voltage (dc)	800 800 800 V V	—
Control grid voltage (dc)	– 120 – 125 – 120 V 4) V	—
Peak control grid voltage (ac)	140 140 130 V V	—
Anode current (dc)	2,9 2,5 2,3 A A	—
Screen grid current (dc)	130 120 120 mA mA	—
Control grid current (dc)	70 40 10 mA mA	—
Anode input power	17,5 22,7 16 kW A	—
Drive power	9,0 2) 6 + 260 3) 1 + 230 3) W 1) W	—
Anode dissipation	6,5 7,7 5,2 kW kW	—
Screen grid dissipation	104 96 110 W W	—
Control grid dissipation	1,0 1,0 0,1 W W	—
Efficiency	63 66 68 %	—
Transmitter Tetrode	2012 C	—
Frequency	30 MHz MHz	—
Anode voltage (dc)	6,0 kV kV	—
Screen grid voltage (dc)	750 V V	—
Control grid voltage (dc)	– 250 V V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode current (dc)	4,0 A A	—
Peak cathode current	35 A A	—
Anode dissipation (RS 2012 CL)	12 kW kW	—
Anode dissipation (RS 2012 CJ)	18 kW 6) kW	—
Screen grid dissipation	200 W W	—
Control grid dissipation	70 W W	—
Frequency	≤ 30 ≤ 30 MHz MHz	—
Carrier power	12 6,0 kW 1) kW	—
Anode voltage (dc)	6,0 5,0 kV kV	—
Screen grid voltage (dc)	700 500 V V	—
Control grid bias (dc), fixed	– 90 – 70 V V	—
Control grid resistance	500 470 Ω Ω	—
Control grid voltage (dc)	– 220 – 150 V V	—
Peak control grid voltage (ac)	280 190 V V	—
Anode current (dc)	2,4 1,45 A A	—
Screen grid current (dc)	200 120 mA mA	—
Control grid current (dc)	260 170 mA mA	—
Anode input power	14,4 7,3 kW A	—
Drive power	64 30 W 1) W	—
Anode dissipation	2,4 1,3 kW 2) kW	—
Screen grid dissipation	140 60 W W	—
Control grid dissipation	7,0 5,0 W W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Efficiency	83 82 %	—
Anode load resistance	1,2 1,7 kΩ kΩ	—
Modulation factor	100 100 %	—
Peak screen grid voltage (ac)	600 350 V 3) V	—
Modulation power	7,2 3,7 kW kW	—
Control grid current (dc)	400 240 mA 4) mA	—
Drive power	100 40 W 1) 4) W	—
Anode dissipation at modulation	3,6 2,0 kW 5) kW	—
Screen grid dissipation at modulation	170 75 W 5) W	—
tion the anode dissipation increases	1,5 times the power dissipation stated for the carrier value.	—
Transmitter Tetrode	2012 C	—
Anode voltage (dc)	7,0 kV kV	—
Screen grid voltage (dc)	1100 V V	—
Control grid voltage (dc)	– 200 V V	—
Cathode current (dc)	4,0 A A	—
Peak cathode current	35 A A	—
Anode dissipation (RS 2012 CL)	12 kW kW	—
Anode dissipation (RS 2012 CJ)	18 kW 1) kW	—
Screen grid dissipation	200 W W	—
Control grid dissipation	70 W W	—
20 kW	10 kW kW	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output power	0 16 0 8 kW kW	—
Anode voltage (dc)	6 6 5 5 kV kV	—
Screen grid voltage (dc)	1000 1000 800 800 V V	—
Control grid voltage (dc)	– 130 – 130 – 110 – 110 V V	—
between 2 tubes	0 220 0 180 V V	—
Anode current (dc)	2 × 0,5 2 × 2,4 2 × 0,3 2 × 1,5 A A	—
Screen grid current (dc)	0 2 × 90 0 2 × 30 mA mA	—
Anode input power	2×3 2 × 14,4 2 × 1,5 2 × 7,5 kW A	—
Anode dissipation	2×3 2 × 6,4 2 × 1,5 2 × 3,5 kW kW	—
Screen grid dissipation	0 2 × 90 0 2 × 24 W W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode/control grid	≈ 76 pF pF	—
Cathode/screen grid	≈ 5,50 pF pF	—
Cathode/anode	≈ 0,07 pF 1) pF	—
Control grid/screen grid	≈ 122 pF pF	—
Control grid/anode	≈ 0,75 pF 1) pF	—
Screen grid/anode	≈ 22 pF pF	—
Transmitter Tetrode	2012 C	—
Transmitter Tetrode	2012 C	—

TUBE TINKER

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