



ELECTRONIC TUBE REFERENCE

7150

Voltage - Tetrode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TETRODE

Frame-grid broadband tetrode amplifier covering audio through approximately 300 MHz, also usable as an output stage or low-noise triode-connected input amplifier.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode	
PLATE RESISTANCE	30000 Ω
TRANSCONDUCTANCE	0.0358 S
AMPLIFICATION FACTOR	35
MAXIMUM PLATE VOLTAGE	165 V
MAXIMUM SCREEN VOLTAGE	165 V
MAXIMUM PLATE DISSIPATION	4.5 W
MAXIMUM SCREEN DISSIPATION	1.65 W
MAXIMUM CATHODE CURRENT	55 mA
<i>Published ratings and characteristics audited; additional numerical data retained in TUBE_SECTION_PARAMETER.</i>	

Frame-grid broadband tetrode amplifier for audio through about 300 MHz; also useful as an output stage and low-noise triode-connected input stage.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 Ericsson

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

1960 ERICSSON

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Thanks to pentode-like characteristics	7150	Thanks to pentode-like characteristics 7150 is very useful in output
The	7150	The 7150 also offers small transit time loading and low cathode lead
Published value [1]	1	1. Plate 6 Cathode
Published value [2]	6	1. Plate 6 Cathode
Published value [1]	2	2. Heater 7. Cathode
Published value [2]	7	2. Heater 7. Cathode
Published value [1]	3	3. Cathode 8. No Connection
Published value [2]	8	3. Cathode 8. No Connection
Published value [1]	4	4. Grid No 1 9 Grid No 2
Published value [2]	1	4. Grid No 1 9 Grid No 2
Published value [3]	9	4. Grid No 1 9 Grid No 2
Published value [4]	2	4. Grid No 1 9 Grid No 2
Published value [1]	5	5. Heater & Int. Shield (see Note 1)
Published value [2]	1	5. Heater & Int. Shield (see Note 1)
APRIL	1960	APRIL 1960 shield when the latter is positive in relation to the cathode.
Plate Voltage	165 V	Plate Voltage 165 volts
Plate Dissipation e e e e e e e e e	4.5 W	Plate Dissipation e e e e e e e e e 4.5 watts
Grid No [1]	2 V	Grid No 2 Voltage 165 volts
Grid No [2]	165 V	Grid No 2 Voltage 165 volts
Grid No [1]	2 W	Grid No 2 Dissipation . ot e 1.65 watts *

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No [2]	1.65 W	Grid No 2 Dissipation . ot e 1.65 watts *
(Plate + Grid No [1]	2	(Plate + Grid No 2} D1531pat10n e e 5.5 watts
(Plate + Grid No [2]	531	(Plate + Grid No 2} D1531pat10n e e 5.5 watts
(Plate + Grid No [3]	0	(Plate + Grid No 2} D1531pat10n e e 5.5 watts
(Plate + Grid No [4]	5.5	(Plate + Grid No 2} D1531pat10n e e 5.5 watts
Cathode Current . . e e e e	55 mA	Cathode Current . . e e e e 55 milliamps
Heater - Cathode Voltage . .o	55 V	Heater - Cathode Voltage . .o 55 golts
Bulb Temperature (at hottest pomt}	140	Bulb Temperature (at hottest pomt} .. 140 C
Grid No [1]	1 V	Grid No 1 Voltage, Positive Value 0 volt
Grid No [2]	0 V	Grid No 1 Voltage, Positive Value 0 volt
Grid No [1]	1 V	Grid No 1 Voltage, Negative Value -25 volts
Grid No [2]	-25 V	Grid No 1 Voltage, Negative Value -25 volts
Grid Circuit Resistance, Fixed Bias [1]	0 Mohm	Grid Circuit Resistance, Fixed Bias . . . 0. 05 megohm
Grid Circuit Resistance, Fixed Bias [2]	5 Mohm	Grid Circuit Resistance, Fixed Bias . . . 0. 05 megohm
Grid Circuit Resistance, Cathode Bias	0.1 Mohm	Grid Circuit Resistance, Cathode Bias . . 0.10 megohm
Grid Nol toPlate	0.03	Grid Nol toPlate 0.03 uuF
Heater Voltage [1]	6.3 V	Heater Voltage 6.3 6.3 volts
Heater Voltage [2]	6.3 V	Heater Voltage 6.3 6.3 volts
Heater Current e e e e e e [1]	450 mA	Heater Current e e e e e e 450 450 milliamps
Heater Current e e e e e e [2]	450 mA	Heater Current e e e e e e 450 450 milliamps
Plate Supply Voltage. e e [1]	135 V	Plate Supply Voltage. e e 135 125 volts
Plate Supply Voltage. e e [2]	125 V	Plate Supply Voltage. e e 135 125 volts
Grid No [1]	2 V	Grid No 2 Supply Voltage . . 135 125 volts
Grid No [2]	135 V	Grid No 2 Supply Voltage . . 135 125 volts
Grid No [3]	125 V	Grid No 2 Supply Voltage . . 135 125 volts
Grid No [1]	1 V	Grid No 1 Supply Voltage (aee Note2) + 8 0 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No [2]	8 V	Grid No 1 Supply Voltage (see Note2) + 8 0 volts
Grid No [3]	0 V	Grid No 1 Supply Voltage (see Note2) + 8 0 volts
Cathode Bias Resistor [1]	260 ohm	Cathode Bias Resistor 260 45 ohms
Cathode Bias Resistor [2]	45 ohm	Cathode Bias Resistor 260 45 ohms
Plate Current [1]	27.5 mA	Plate Current 27.5 24 milliamps
Plate Current [2]	24 mA	Plate Current 27.5 24 milliamps
Grid No [1]	2 mA	Grid No 2 Current 8.5 7.5 milliamps
Grid No [2]	8.5 mA	Grid No 2 Current 8.5 7.5 milliamps
Grid No [3]	7.5 mA	Grid No 2 Current 8.5 7.5 milliamps
Transconductance . e e [1]	35800 uS	Transconductance . e e 35,800 34,000 micromhos
Transconductance . e e [2]	34000 uS	Transconductance . e e 35,800 34,000 micromhos
Plate Resistance, approx [1]	0.03 Mohm	Plate Resistance, approx. 0.03 0.03 megohm
Plate Resistance, approx [2]	0.03 Mohm	Plate Resistance, approx. 0.03 0.03 megohm
Equivalent Noise Resistance [1]	160 ohm	Equivalent Noise Resistance 160 160 ohms
Equivalent Noise Resistance [2]	160 ohm	Equivalent Noise Resistance 160 160 ohms
Input Conductance at [1]	100 uS	Input Conductance at 100 Mc, appr. . 2200 2200 micromhos
Input Conductance at [2]	2200 uS	Input Conductance at 100 Mc, appr. . 2200 2200 micromhos
Input Conductance at [3]	2200 uS	Input Conductance at 100 Mc, appr. . 2200 2200 micromhos
Transit Time Loading at [1]	100	Transit Time Loading at 100 Mc, appr. 200 200 micromhos
Transit Time Loading at [2]	200	Transit Time Loading at 100 Mc, appr. 200 200 micromhos
Transit Time Loading at [3]	200	Transit Time Loading at 100 Mc, appr. 200 200 micromhos
Triode Connection = Grid No	2	Triode Connection = Grid No 2 connected to Plate.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Note	2	Note 2: It is recommended to use the tube in combination bias as per PRINTED
Heater Voltage . . e e e	6.3 V	Heater Voltage . . e e e 6.3 volts
Plate Supply Voltage e e e e	125 V	Plate Supply Voltage e e e e 125 volts
Grid No [1]	2 V	Grid No 2 Supply Voltage. . . . 125 volts
Grid No [2]	125 V	Grid No 2 Supply Voltage. . . . 125 volts


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1965 Ericsson Longlife

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

1965 ERICSSON LONGLIFE

Section 1 · Tetrode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.03 pF	ColdTube
Input capacitance	16 pF	ColdTube
Output capacitance	2 pF	ColdTube

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	135 V	ClassA
Screen-grid supply voltage	135 V	ClassA
Cathode bias resistor	260 0hm	ClassA
Plate current	27.5 mA	ClassA
Screen-grid current	8.5 mA	ClassA
Plate supply voltage	125 V	ClassA
Screen-grid supply voltage	125 V	ClassA
Plate current	24 mA	ClassA
Transconductance minimum	28000 uS	—
Transconductance maximum	40000 uS	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	35800 μ S	ClassA;Va=135V
Plate resistance	0.03 M Ω m	ClassA
Equivalent noise resistance	160 Ω m	—
Input conductance at 100 MHz	2200 μ S	—
Transconductance	34000 μ S	ClassA;Va=125V



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196X LM Ericsson

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

196X LM ERICSSON

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate resistance	45 Ω m	—
Amplification factor	35	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	165 V	—
Maximum screen voltage	165 V	—
Maximum plate dissipation	4.5 W	—
Maximum screen dissipation	1.65 W	—
Broadband upper frequency	300 Mc/s	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

