ELECTRONIC TUBE REFERENCE

E235L

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Rugged long-life Telefunken power pentode designed for high-current service, including approximately 30 W push-pull Class-B operation. Its professional construction emphasizes durability and sustained high-power output.

General characteristics

BASE DESIGNATION	Octal	**BASE PINS**	8
NOMINAL HEATER	6.3 V / 1.2 A	**PARALLEL HEATER**	– / –
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Pentode

PLATE RESISTANCE	350 Ω
TRANSCONDUCTANCE	0.014 S
AMPLIFICATION FACTOR	5.6
MAXIMUM PLATE VOLTAGE	650 V
MAXIMUM SCREEN VOLTAGE	650 V
MAXIMUM PLATE DISSIPATION	15 W
MAXIMUM SCREEN DISSIPATION	5.5 W
MAXIMUM CATHODE CURRENT	220 mA

Power pentode.

The Telefunken E235L is a rugged long-life power pentode for high-current service, including 30 W push-pull Class B operation.

SOURCE OPERATING CONDITIONS

1959 Telefunken

SOURCE PDF

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

1959 TELEFUNKEN

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate Voltage	**100 V**	—
Screen Voltage	**100 V**	—
Plate Current	**100 mA**	—
Transconductance	**14000 uS**	—
Guaranteed Life	**10000 h**	Average of 100 tubes

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Power Output	**30 W**	ClassB; PushPull; TwoTubes; PlateVoltage=250V; ScreenVoltage=170V

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1963 Siemens

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1963 SIEMENS

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Typical Plate Voltage	**100 V**	PentodeConnection
Typical Screen Voltage	**100 V**	PentodeConnection
Typical Plate Current	**100 mA**	PentodeConnection

SOURCE OPERATING CONDITIONS

1999 Philips E-Z

SOURCE PDF

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

1999 PHILIPS E-Z

Section 1 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater voltage Vs	**6.3 V**	Heating
Heater current It	**1.2 A**	Heating
Anode current I	**100 mA**	Heating
Mutual conductance S	**14 mA**	Heating
Output power. Class B (two tubes) W,	**30 W**	Heating
Heater current If	**1.12 A–1.28 A**	Characteristics
Anode voltage Vao max	**650 V**	Limiting Values
Anode dissipation Wa max	**15 W**	Limiting Values
Anode + grid No.2 dissipation Wa+g2 max	**2 W**	Limiting Values
Grid No.2 voltage Vgzo max	**2 V**	Limiting Values
Grid No.2 dissipation Wg2 max	**2 W**	Limiting Values
Grid No.1 resistor Rgl max	**1 MΩ**	Limiting Values
Cathode current I max	**220 mA**	Limiting Values
Cathode peak current Iy max	**1.2 A**	Limiting Values
cathode negative Vis(kneg) max	**200 V**	Limiting Values
Heater voltage: The average heater value should be	**6.3 V**	Limiting Values
Grid No.2 current mA	**2 mA**	Operating Characteristics
Maximum plate voltage	**650 V**	Promoted published datasheet value
Maximum screen voltage	**650 V**	Promoted published datasheet value
Maximum plate dissipation	**15 W**	Promoted published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum screen dissipation	**16 W**	Promoted published datasheet value

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage Vy	**100 A**	Characteristics
Grid No.2 voltage Vgz	**2 A**	Characteristics
Cathode resistor Ry	**75 Ω**	Characteristics
Anode current I	**85–118 mA**	Characteristics
Grid No.2 current Ig2	**4–6.5 mA**	Characteristics
Mutual conductance S	**11.5–16.5 mA**	Characteristics
Cut off voltage –Vgl	**35 A**	Characteristics
Ancde current I,	**0.1 mA**	Characteristics
Negative grid current –Igl max	**1 uA**	Characteristics
Anode voltage Va	**100 A**	Characteristics
Cathode resistor Ry	**85 Ω**	Characteristics
Anode current Iy	**100 mA**	Characteristics
Internal resistance Ri	**0.35 kΩ**	Characteristics
Grid No.1 and other electrodes Ripg min	**1 MΩ**	Characteristics
Plate resistance	**5 Ω**	Promoted published datasheet value
Transconductance	**14000 µS**	Promoted published datasheet value
Amplification factor	**5.6**	Promoted published datasheet value

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
cathode and heater ca/g2g3kf	**8–10 pF**	Capacitances
cathode and heater Cc	**16.5–19.5 pF**	Capacitances
Anode to grid No.1 Cagl max	**1 pF**	Capacitances

Tube Tinker

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