



ELECTRONIC TUBE REFERENCE

ECL83

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combination valve incorporating a power-output pentode with diode or triode sections for audio-frequency amplification, detection, or driver service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 700 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	34000 Ω
TRANSCONDUCTANCE	0.0025 S
AMPLIFICATION FACTOR	85
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	15 mA

Published Ferranti ratings and characteristics promoted from the supplied source.

SECTION2 Pentode	
PLATE RESISTANCE	65000 Ω
TRANSCONDUCTANCE	0.005 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	5.4 W
MAXIMUM SCREEN DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	45 mA
<i>Published Ferranti ratings and characteristics promoted from the supplied source.</i>	

Combined triode and output pentode with separate cathodes for audio-frequency voltage amplification and power output.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	700 mA	—

1961 FERRANTI TECHNICAL HANDBOOK

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Audio output	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Mullard

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

1963 MULLARD

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	—
Plate Current	2.4 mA	—
Grid Voltage	-1.5 V	—
Transconductance	2500 μ S	—
Plate Resistance	34000 ohm	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification Factor	85 ratio	—
Plate-Grid Capacitance	1.6 pF	TriodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage Gain	47 ratio	AFAmplifier; Vb=200V; Ra=100k
Maximum Output Voltage	17.7 Vrms	AFAmplifier; 5PercentDistortion

1963 MULLARD

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	—
Screen Voltage	200 V	—
Plate Current	27 mA	—
Screen Current	4.4 mA	—
Grid Voltage	-13 V	—
Transconductance	5000 uS	—
Plate Resistance	65000 ohm	—
Input Capacitance	5.7 pF	PentodeSection
Output Capacitance	4.7 pF	PentodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	2.5 W	ClassA; OneTube; AudioAmplifier; Va=200V
Load Resistance	7500 ohm	ClassA; OneTube; Va=200V
Power Output	7.2 W	ClassAB; PushPull; TwoTubes; AudioAmplifier; Va=200V
Load Resistance Plate-to-Plate	7500 ohm	ClassAB; PushPull; TwoTubes; Va=200V



SOURCE DATA APPENDIX

1967 Mullard Receiving Tubes for Maintenance

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

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	—
Plate current	2.4 mA	—
Grid voltage	-1.5 V	—
Transconductance	2.5 mA/V	—
Plate resistance	34 k0hm	—
Amplification factor	85	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	—
Maximum plate dissipation	3.5 W	—
Maximum cathode current	15 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	2.3 pF	—
Output capacitance	0.32 pF	—
Anode-grid capacitance	1.6 pF	—

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	—
Screen-grid voltage	200 V	—
Plate current	27 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid current	4.4 mA	—
Grid voltage	-13 V	—
Transconductance	5 mA/V	—
Plate resistance	65 kΩ	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA
Load resistance	7.5 kΩ	ClassA
Power output	2.5 W	ClassA
Power output	7.2 W	ClassAB PushPull TwoTubes
Maximum plate voltage	250 V	—
Maximum plate dissipation	5.4 W	—
Maximum screen-grid voltage	250 V	—
Maximum screen-grid dissipation	1.2 W	—
Maximum cathode current	45 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	5.7 pF	—
Output capacitance	4.7 pF	—

TUBE TINKER

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

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker