

ELECTRONIC TUBE REFERENCE

9U8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

PCF82/9U8 triode-pentode frequency changer for VHF television receiver service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AE	BASE PINS	9
NOMINAL HEATER	9 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9AE - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2P	B	P – Plate (Anode)	CONNECTED
PIN2 – 1G1	A	G1 – Control Grid	CONNECTED
PIN3 – 1G2	A	G2 – Screen Grid	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – 1G3	A	G3 – Suppressor Grid	CONNECTED
PIN7 – IS	A	IS – Internal Screen	CONNECTED
PIN7 – 1K	A	K – Cathode	CONNECTED
PIN8 – 2K	B	K – Cathode	CONNECTED
PIN9 – 2G1	B	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Published ratings and characteristics promoted from the approved German source.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	110 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	25 mA
<i>Published ratings and characteristics promoted from the approved German source.</i>	

Explicit 9U8 co-designation on the PCF82/9U8 VHF television triode-pentode frequency-changer sheet.

SOURCE OPERATING CONDITIONS

1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	450 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—
Maximum Cathode Current	20 mA	—

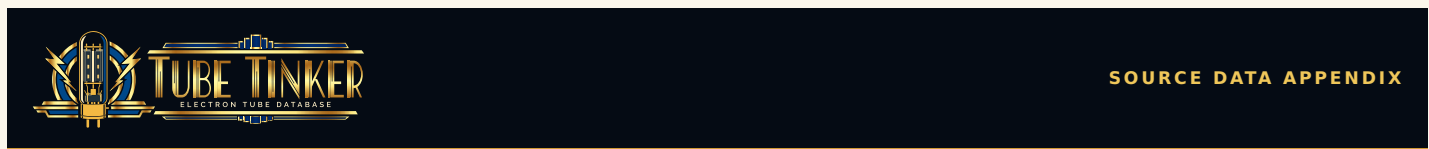
CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8500 μ S	Typical
Amplification Factor	55	Typical
Plate Resistance	18000 ohm	Typical

1953 RFT RUNDFUNK TECHNIK

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	450 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Screen Dissipation	0.5 W	—
Maximum Cathode Current	25 mA	—

Characteristic		
Parameter	Published Value	Condition / Note
Transconductance	5200 μ S	Typical
Plate Resistance	300000 ohm	Typical



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Triode

Characteristic		
Parameter	Published Value	Condition / Note
Application	VHF oscillator	TriodeSection

1958 BRIMAR RADIO VALVE NO 7

Section 2 · Pentode

Characteristic		
Parameter	Published Value	Condition / Note
Application	VHF mixer	PentodeSection
Referenced Characteristics	Type ECF82/6U8	Source explicitly refers to ECF82/6U8 for further characteristics



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published handbook rating
Maximum screen voltage	150 V	Published handbook rating
Plate voltage	250 V	ClassA
Screen voltage	110 V	ClassA
Plate current	10 mA	ClassA
Screen current	3.5 mA	ClassA
Pentode cathode resistor	68 ohm	Pentode Section ClassA
Triode plate voltage	150 V	Triode Section ClassA
Triode cathode resistor	56 ohm	Triode Section ClassA
Triode plate current	18 mA	Triode Section ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	400000 ohm	Published handbook characteristic
Transconductance	5200 μ S	Published handbook characteristic
Heater/filament voltage	9.45 V	Published heater/filament rating
Heater/filament current	300 mA	Published heater/filament rating
Triode plate resistance	5000 ohm	Triode Section
Triode transconductance	8500 μ S	Triode Section
Triode amplification factor	40	Triode Section



SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	9 V	—
Heater Current	300 mA	—
Maximum Intended Frequency	220 MHz	FrequencyChanger

TUBE TINKER

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and their source documents.

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