



ELECTRONIC TUBE REFERENCE

7HG8

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode plus frame-grid sharp-cutoff pentode used as a combined oscillator/mixer and television IF/video amplifier.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	8 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	7200 Ω
TRANSCONDUCTANCE	0.0055 S
AMPLIFICATION FACTOR	17
MAXIMUM PLATE VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	16 mA
Triode oscillator section; operating data cross-referenced to 6HG8/ECF86.	

SECTION2 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.012 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	18 mA
<i>Pentode mixer section; operating data cross-referenced to 6HG8/ECF86.</i>	

Medium-mu triode plus frame-grid sharp-cutoff pentode used as combined oscillator/mixer and television IF/video amplifier.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	VHF TV tuner oscillator
Grid voltage	-3 V	VHF TV tuner oscillator
Plate current	14 mA	VHF TV tuner oscillator

1963 AMPEREX CONDENSED

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	170 V	VHF TV tuner mixer
Screen voltage	150 V	VHF TV tuner mixer
Grid voltage	-1.5 V	VHF TV tuner mixer
Plate current	10 mA	VHF TV tuner mixer
Screen current	3.3 mA	VHF TV tuner mixer

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1 to grid-2 amplification factor	60	VHF TV tuner mixer

1975 RCA RC30

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

1975 RCA RC30
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-bias operation 0.5	0.25 MΩ	Published in approved ECF86 target datasheet entry; Section1
For cathode-bias operation 1	1 MΩ	Published in approved ECF86 target datasheet entry; Section1
Heater Voltage (ac/dc) 5.3 6.3	7.2 V	Published in approved ECF86 target datasheet entry; Section1
Heater Current	300 mA	Published in approved ECF86 target datasheet entry; Section1
Plate Voltage 125	250 V	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Voltage	150 V	Published in approved ECF86 target datasheet entry; Section1
Plate Dissipation 1.5	2 W	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 Input	0.5 W	Published in approved ECF86 target datasheet entry; Section1
Plate Voltage 100	170 V	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 Voltage	160 V	Published in approved ECF86 target datasheet entry; Section1
Voltage -3	-1.2 V	Published in approved ECF86 target datasheet entry; Section1
Transconductance 5500	12000 μS	Published in approved ECF86 target datasheet entry; Section1
Plate Current 14	10 mA	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 Current	3.3 mA	Published in approved ECF86 target datasheet entry; Section1
For fixed-bias operation	0.25 MΩ	Published in approved ECF86 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For cathode-bias operation 0.5	0.5 MΩ	Published in approved ECF86 target datasheet entry; Section1
amperes, 0.6; warm-up time (average),	11 seconds	Published in approved ECF86 target datasheet entry; Section1
Plate Voltage 330	330 V	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved ECF86 target datasheet entry; Section1
0	0 V	Published in approved ECF86 target datasheet entry; Section1
Plate Dissipation 2.5	2.5 W	Published in approved ECF86 target datasheet entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved ECF86 target datasheet entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved ECF86 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.)	0.35 MΩ	Published in approved ECF86 target datasheet entry; Section1
Plate Voltage 125	125 V	Published in approved ECF86 target datasheet entry; Section1
Grid-No.2 Voltage	125 V	Published in approved ECF86 target datasheet entry; Section1
Grid-No.1 Voltage 1 –	-1 V	Published in approved ECF86 target datasheet entry; Section1
Plate Resistance (Approx.) 5000	150000 Ω	Published in approved ECF86 target datasheet entry; Section1
Transconductance 7000	10000 μS	Published in approved ECF86 target datasheet entry; Section1
Plate Current 12.5	12 mA	Published in approved ECF86 target datasheet entry; Section1
20 iiA –	-7 V	Published in approved ECF86 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-bias operation 0.5	0.25 MΩ	Published in approved ECF86 target datasheet entry; Section2
For cathode-bias operation 1	1 MΩ	Published in approved ECF86 target datasheet entry; Section2
Heater Voltage (ac/dc) 5.3 6.3	7.2 V	Published in approved ECF86 target datasheet entry; Section2
Heater Current	300 mA	Published in approved ECF86 target datasheet entry; Section2
Plate Voltage 125	250 V	Published in approved ECF86 target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Voltage	150 V	Published in approved ECF86 target datasheet entry; Section2
Plate Dissipation 1.5	2 W	Published in approved ECF86 target datasheet entry; Section2
Grid-No.2 Input	0.5 W	Published in approved ECF86 target datasheet entry; Section2
Plate Voltage 100	170 V	Published in approved ECF86 target datasheet entry; Section2
Grid-No.2 Voltage	160 V	Published in approved ECF86 target datasheet entry; Section2
Voltage -3	-1.2 V	Published in approved ECF86 target datasheet entry; Section2
Transconductance 5500	12000 μS	Published in approved ECF86 target datasheet entry; Section2
Plate Current 14	10 mA	Published in approved ECF86 target datasheet entry; Section2
Grid-No.2 Current	3.3 mA	Published in approved ECF86 target datasheet entry; Section2
For fixed-bias operation	0.25 MΩ	Published in approved ECF86 target datasheet entry; Section2
For cathode-bias operation 0.5	0.5 MΩ	Published in approved ECF86 target datasheet entry; Section2
amperes, 0.6; warm-up time (average),	11 seconds	Published in approved ECF86 target datasheet entry; Section2
Plate Voltage 330	330 V	Published in approved ECF86 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved ECF86 target datasheet entry; Section2
0	0 V	Published in approved ECF86 target datasheet entry; Section2
Plate Dissipation 2.5	2.5 W	Published in approved ECF86 target datasheet entry; Section2
For grid-No.2 voltages up to	165 V	Published in approved ECF86 target datasheet entry; Section2
For grid-No.2 voltages between 165 and	330 V	Published in approved ECF86 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.)	0.35 MΩ	Published in approved ECF86 target datasheet entry; Section2
Plate Voltage 125	125 V	Published in approved ECF86 target datasheet entry; Section2
Grid-No.2 Voltage	125 V	Published in approved ECF86 target datasheet entry; Section2
Grid-No.1 Voltage 1 –	-1 V	Published in approved ECF86 target datasheet entry; Section2
Plate Resistance (Approx.) 5000	150000 Ω	Published in approved ECF86 target datasheet entry; Section2
Transconductance 7000	10000 μS	Published in approved ECF86 target datasheet entry; Section2
Plate Current 12.5	12 mA	Published in approved ECF86 target datasheet entry; Section2
20 iiA –	-7 V	Published in approved ECF86 target datasheet entry; Section2