

ELECTRONIC TUBE REFERENCE

25A6

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Power/output pentode designed for Class-A, single-ended, or push-pull audio-frequency output amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7S	BASE PINS	7
NOMINAL HEATER	25 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7S - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	42000 Ω
TRANSCONDUCTANCE	0.002375 S
AMPLIFICATION FACTOR	90
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM SCREEN VOLTAGE	135 V
MAXIMUM PLATE DISSIPATION	4.3 W
MAXIMUM SCREEN DISSIPATION	1.9 W
<i>Power-amplifier pentode for Class-A output service.</i>	

Power pentode for AC/DC receiver output service.

SOURCE OPERATING CONDITIONS

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1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max, Plate Voltage	180 V	Published ratings
Max, Screen Voltage	135 V	Published ratings
Plate Voltage	95 V	ClassA; Column1
Plate Voltage	135 V	ClassA; Column2
Plate Voltage	180 V	ClassA; Column3
Screen Voltage	95 V	ClassA; Column1
Screen Voltage	135 V	ClassA; Column2
Screen Voltage	135 V	ClassA; Column3
r'an \$V Grid Bias	-15 V	ClassA; Column1
r'an \$V Grid Bias	-20 V	ClassA; Column2
r'an \$V Grid Bias	-20 V	ClassA; Column3
MAK *k Amplification Factor (approx)	90	ClassA; Column1
MAK *k Amplification Factor (approx)	85	ClassA; Column2
MAK *k Amplification Factor (approx)	100	ClassA; Column3
e Plate Resistance {approx	45000	ClassA; Column1
e Plate Resistance {approx	35000	ClassA; Column2
e Plate Resistance {approx	40000	ClassA; Column3
Plate Current	20 mA	ClassA; Column1
Plate Current	37 mA	ClassA; Column2
Plate Current	38 mA	ClassA; Column3
PR L Load Resistance	4500 ohm	ClassA; Column1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PR L Load Resistance	4000 ohm	ClassA; Column2
PR L Load Resistance	5000 ohm	ClassA; Column3
Total Harmonic Distortion	11 %	ClassA; Column1
Total Harmonic Distortion	9 %	ClassA; Column2
Total Harmonic Distortion	10 %	ClassA; Column3
Dw[] *l\N' Power Output	0.9 W	ClassA; Column1
Dw[] *l\N' Power Output	2 W	ClassA; Column2
Dw[] *l\N' Power Output	2.75 W	ClassA; Column3
Heater to cathode bies should not exceed	90	ClassA



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1940 RCA

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1940 RCA
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The	25	The 25A6 is a power-amplifier
HEATER VOLTAGE (A. C.or D. C).....oiiin.t,	25 V	HEATER VOLTAGE (A. C.or D. C).....oiiin.t, 25 Volts
HEATER CURRENT tvtivenenasnconrnnnsonnonnnns	300 mA	HEATER CURRENT tvtivenenasnconrnnnsonnonnnns 0.3 Ampere
PLATE VOLTAGE .. .cuvviuennennnnn	180 V	PLATE VOLTAGE .. .cuvviuennennnnn 95 135 180 max. Volts
ScrREEN VoLTAAgE (Grid No	135 V	ScrREEN VoLTAAgE (Grid No. 2)..... 95 135 135 max. Volts
Grip VoLTAGE (Grid No	20 V	Grip VoLTAGE (Grid No. 1)..... -15 =20 =20 Volts
PLATE CURRENT ..vtrrecnvenacnn	38	PLATE CURRENT ..vtrrecnvenacnn. 20 37 38 Milliamperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
SCREEN CURRENT .. vvvvvnnnnnnnn	7.5	SCREEN CURRENT .. vvvvvnnnnnnnn 4 8 7.5 Milliamperes
AMPLIFICATION FACTOR (Approx.)	100	AMPLIFICATION FACTOR (Approx.)... 90 85 100
SELF-BIAS RESISTOR	440 ohm	SELF-BIAS RESISTOR 625 440 440 Ohms
POWER OUTPUT vovvunnnnnnn	2.75 W	POWER OUTPUT vovvunnnnnnn.. 0.9% 27 2.75% Watts
The	25 V	The 25-volt heater of the 25A6 is designed to operate under the normal
other types having	300 mA	other types having 0.3-ampere rating, the current in the heater circuit should be
adjusted to	300 mA	adjusted to 0.3 ampere for the normal supply voltage.
0.3-ampere (6.3-volt) types and one or two 25A6's, the heate	25 A	0.3-ampere (6.3-volt) types and one or two 25A6's, the heaters of the 25A6's
cathode voltage of the	25	cathode voltage of the 25A6 must not exceed the value given under cathode.
or two	6.3 A	or two 25A6's, and several 0.3-ampere (6.3- volt) types, it is recommended that the
heater-cathode bias will be impressed on the	6.3 V	heater-cathode bias will be impressed on the 25A6('s) rather than on the 6.3-volt
the rectified voltage supply. Between this side of the line and the	25	the rectified voltage supply. Between this side of the line and the 25A6('s), any
of the	90 V	of the 25A6 should not exceed 90 volts d.c., as measured between the negative
As a power amplifier (Class A), the	25	As a power amplifier (Class A), the 25A6 is recommended for use either singly
self-bias; or	135 V	self-bias; or 0.5 megohm for the 95-volt condition and 50000 ohms for the 135-volt
and	180 V	and 180-volt conditions with fixed bias.
Ef=	25 V	Ef=25 VOLTS
SCREEN VOLTS =	43 V	SCREEN VOLTS =43§
z ,// " N ™~	-2	z ,// " N ™ ~ -2°
PLATE VOLTS	4559 V	PLATE VOLTS 92C-4559
325 VOLTS	325 V	325 VOLTS
~ Escreen voLTs =	110 V	~ Escreen voLTs =110 fi

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE RESISTANCE (Approximate)	40000 ohm	PLATE RESISTANCE (Approximate)... 45000 35000 40000 Ohms
TRANSCONDUCTANCE cc	2500 μS	TRANSCONDUCTANCE cc.... 2000 2450 2500 Micromhos
Loap RESISTANCE	5000 ohm	Loap RESISTANCE 4500 4000 5000 Ohms
The total d-c resistance in the grid circuit should not exceed	0.5	The total d-c resistance in the grid circuit should not exceed 0.5 megohm with


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1950 Sylvania

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1950 SYLVANIA
Section 1 · Pentode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Audio power output	—


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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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	8.5 pF	—
Output capacitance	12.5 pF	—
Grid-to-plate capacitance	0.2 pF	—
Plate resistance	42000 ohm	ClassA; OperatingPoint1
Transconductance	2375 uS	ClassA; OperatingPoint1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	160 V	ClassA; OperatingPoint1
Screen voltage	120 V	ClassA; OperatingPoint1
Control-grid bias	18 V	ClassA; OperatingPoint1
Plate current	33 mA	ClassA; OperatingPoint1
Screen current	6.5 mA	ClassA; OperatingPoint1
Load resistance	5000 ohm	ClassA; OperatingPoint1
Power output	2.2 W	ClassA; OperatingPoint1
Maximum plate voltage	160 V	—
Maximum screen voltage	135 V	—



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1961 Tung Sol

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1961 TUNG SOL

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	160 V	ClassA
Screen Voltage	120 V	ClassA
Power Output	2.2 W	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Load Resistance	5000 ohm	ClassA

TUBE TINKER

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