

ELECTRONIC TUBE REFERENCE

5KE8

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode used as an oscillator and mixer or frequency converter in television or VHF communications receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DC	BASE PINS	9
NOMINAL HEATER	5.6 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9DC - 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	0.008 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	280 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Published ratings and characteristics promoted where clearly applicable; additional published values retained as parameters.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	125000 Ω
TRANSCONDUCTANCE	0.012 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	280 V
MAXIMUM SCREEN VOLTAGE	280 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Published ratings and characteristics promoted where clearly applicable; additional published values retained as parameters.</i>	

Miniature type with frame-grid pentode unit used as combined oscillator-mixer tube in television receivers using an intermediate frequency in the order of 40 MHz. Outlines section, 6B; requires miniature 9-con- tact socket. Types 4KE8 and 5KE8 are identical with type 6KE8 except for heater ratings. 9DC 4KE8 5KE8 6KE8



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	5 V	Published nominal value
Heater or filament current	600 mA	Published nominal value
Pentode transconductance	12000 μ S	Published headline value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Combined oscillator-mixer converter	Television receiver

1940 RCA

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	5 V	Published nominal value
Heater or filament current	600 mA	Published nominal value
Transconductance	12000 μ S	Published operating characteristic



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	14000	Published value from supplied target entry
Plate Current	120 mA	Published value from supplied target entry
Grid-No	1.8 mA	Published value from supplied target entry
Grid-No.1-Circuit Resistance	2.2 megohms	Published value from supplied target entry
Grid-No	0.01 megohm	Published value from supplied target entry
fGrid-No	2	Published value from supplied target entry
Heater Voltage (ac/dc)	6.3 volts	Published value from supplied target entry
Heater Current	0.4 ampere	Published value from supplied target entry
Heater Warm-up Time (Average)	11 seconds	Published value from supplied target entry
Grid-No	280 volts	Published value from supplied target entry
Grid-No	300	Published value from supplied target entry
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 volts	Published value from supplied target entry
Cathode Current	20 mA	Published value from supplied target entry
Plate Dissipation	2 watts	Published value from supplied target entry
Grid-No	2	Published value from supplied target entry
For grid-No	0.5 volts	Published value from supplied target entry
For grid-No	300 volts	Published value from supplied target entry
Plate Supply Voltage	125 volts	Published value from supplied target entry
Grid-No	125 volts	Published value from supplied target entry
Grid-No.1 Supply Voltage	0 volts	Published value from supplied target entry
Amplification Factor	40	Published value from supplied target entry
Plate Resistance (Approx.)	125000 ohms	Published value from supplied target entry
Transconductance	12000 umhos	Published value from supplied target entry
Plate Current	10 mA	Published value from supplied target entry
Grid-No	2.8 mA	Published value from supplied target entry
For plate current of	5 volts	Published value from supplied target entry
For plate current of	-3 volts	Published value from supplied target entry
Heater Voltage (ac/dc)	40 volts	Published value from supplied target entry
Heater Current	0.3 amperes	Published value from supplied target entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	160 volts	Published value from supplied target entry
Grid-No	0 volts	Published value from supplied target entry
Grid-No	160 volts	Published value from supplied target entry
Grid-No.1 Voltage	0 volts	Published value from supplied target entry
Plate Current*	1400 mA	Published value from supplied target entry
Grid-No	45 mA	Published value from supplied target entry
Plate Supply Voltage	700 volts	Published value from supplied target entry
Peak Positive-Pulse Plate Voltage*	7000 volts	Published value from supplied target entry
Grid-No	700 volts	Published value from supplied target entry
Grid-No	250 volts	Published value from supplied target entry
Grid-No	7 watts	Published value from supplied target entry
Cathode Current	500 mA	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.3 pF	Published value from supplied target entry
Grid to Cathode, Heater, Pentode Cathode, Pentode Grid No	3	Published value from supplied target entry
Plate to Cathode, Heater, Pentode Cathode, Pentode Grid No	3	Published value from supplied target entry
Plate to Cathode, Heater, Grid No	3	Published value from supplied target entry
Heater to Triode Cathode and Pentode Cathode	5.5 pF	Published value from supplied target entry
Plate to Grid-No.1	2.5 pF	Published value from supplied target entry
Grid-No.1 to Heater	0.2 pF	Published value from supplied target entry

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation (Absolute-Maximum Value)	34 watts	Published value from supplied target entry