

ELECTRONIC TUBE REFERENCE

6GD7

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Triode-pentode designed for VHF oscillator and mixer service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9GF	BASE PINS	9
NOMINAL HEATER	6.3 V / 380 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9GF - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4700 Ω
TRANSCONDUCTANCE	0.01 S
MAXIMUM PLATE VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	1.7 W
<i>Sylvania 6GD7 medium-mu TRI ODE local-oscillator section in dissimilar nine-pin 9GF triode-pentode VHF frequency changer. Tube heater 6.3 V 0.380 A, source classifies triode oscillator and sharp-cutoff pentode mixer. Design maximum triode plate voltage 125 V, dissipation 1.7 W. Typical triode at plate 125 V, control grid approx -1 V: transconductance 10,000 μmhos (0.010 S), plate resistance approximately 4700 Ω, triode amplification factor around 47. Published unshielded triode grid-plate $\sim$2.3 pF, input 3.0 pF, output 1.2 pF and cross-section couplings. The triode is one physical section, not an additional control grid of pentode.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.012 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.7 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Sylvania 6GD7 sharp-cutoff PENTODE VHF mixer section, separate from its medium-mu triode oscillator. Design maximum pentode plate voltage 250 V, plate dissipation 2.7 W and cathode current 20 mA. Screen-grid supply max 250 V must NOT be entered as unconditional max_screen_voltage: actual permissible screen voltage and screen dissipation follow manufacturer rating chart; max_screen_voltage cleared as approved, max_screen_dissipation NULL. Typical at Va 170 V, Vg2 150 V, grid-1 0 V, cathode resistor 82 Ω: plate 10 mA, screen $\sim$3.3 mA, gm 12000 μmhos (0.012 S), approximate plate resistance 350 kΩ, grid1-to-grid2 amplification factor 70 (not overall pentode mu). Unshielded capacitances grid-to-plate max 0.025 pF, input $\sim$6.4 pF, output 3.5 pF; source specifies tight control-grid/cathode spacing and test-voltage cautions.</i>	

Medium-mu triode and sharp-cutoff pentode designed primarily for VHF oscillator and mixer service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 2 · Pentode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PlateVoltageTypical	170 V	Published operating/characteristic value

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