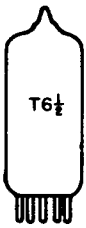
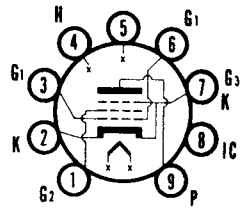


SYLVANIA TYPE 6DB5
12DB5

BEAM PENTODE AMPLIFIER



9GR

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button, 9-Pin
Outline	6-3
Basing	9GR
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6DB5	12DB5
Heater Voltage	6.3	12.6 Volts
Heater Current	1.200	0.600 Ampere
Heater Warm-up Time[1]		11 Seconds
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total D C and Peak		200 Volts Max.
Heater Positive with Respect to Cathode		
D C		100 Volts Max.
Total D C and Peak		200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	0.2 μμf Max.
Input: g1 to (k+h+B.P. +g2)	13 μμf
Output: p to (k+h+B.P. +g2)	8 μμf

MAXIMUM RATINGS (Design Center Values—Except as Noted)[2]

Vertical Deflection Amplifier Service

D C Plate Voltage	300 Volts
Peak Positive Plate Voltage (Abs. Max.)	2000[3] Volts
D C Grid No. 2 Voltage	150 Volts
Peak Negative Grid No. 1 Voltage	250 Volts
Plate Dissipation	10 Watts
Grid No. 2 Dissipation	1.25 Watts
Average Cathode Current	55 Ma
Peak Cathode Current	200 Ma
Grid No. 1 Circuit Resistance	
Fixed Bias	0.1 Megohm
Cathode Bias (Rk = 100 Ohms, Min.)	2.2 Megohms
Bulb Temperature (At Hottest Point)	250 Degrees C

TYPICAL OPERATION

AF Power Amplifier

	Triode Connected	Class A_1 Amplifier	
Plate Voltage	225	110	200 Volts
Grid No. 2 Voltage		110	125 Volts
Grid No. 1 Voltage	-30	-7.5	Volts
Cathode Bias Resistor			180 Ohms
Peak AF Grid No. 1 Voltage		7.5	8.5 Volts
Zero Signal Plate Current		49	46 Ma
Max. Signal Plate Current		50	47 Ma
Zero Signal Grid No. 2 Current		4	2.2 Ma
Max. Signal Grid No. 2 Current		10	8.5 Ma
Plate Resistance	1500	13,000	28,000 Ohms
Transconductance	3800	8000	8000 μmhos
Load Resistance		2000	4000 Ohms
Power Output		2.1	3.8 Watts
Total Harmonic Distortion		10	10 Percent

NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the pulse must not exceed 15% of one scanning cycle.
3. Under no circumstances should this absolute value be exceeded.
4. No Grid No. 1 Current should flow during any part of the input cycle.

APPLICATION

The Sylvania Types 6DB5 and 12DB5 are miniature, beam pentodes intended primarily for use as a vertical deflection amplifier or audio amplifier. The 12DB5 has controlled heater warm-up time for series string operation.