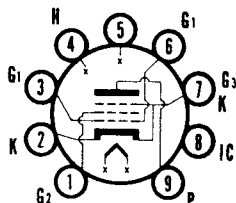


# SYLVANIA TYPE 6DB5 12DB5

BEAM PENTODE AMPLIFIER



9GR

## MECHANICAL DATA

Bulb.....	T-6 $\frac{1}{2}$
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 <sup>1</sup> .....		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 $\mu$ f Max.
Input: g1 to (k+h+B.P.+g2).....	13 $\mu$ f
Output: p to (k+h+B.P.+g2).....	8 $\mu$ f

### MAXIMUM RATINGS (Design Center Values—Except as Noted)<sup>2</sup>

#### Vertical Deflection Amplifier Service

D C Plate Voltage.....	300 Volts
Peak Positive Plate Voltage (Abs. Max.).....	2000 <sup>3</sup> 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 <sub>1</sub> 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 $\mu$ mhos
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.