

July 15, 1963

TRIODE - PENTODE TYPE 6FV8A

The 6FV8A is a triode-pentode type designed for service in television receivers. The triode is used as the vertical deflection oscillator and the pentode is used as a general-purpose or intermediate-frequency amplifier. The outstanding feature of this tube is its ability to maintain high values of interelement leakage resistance through-out life.

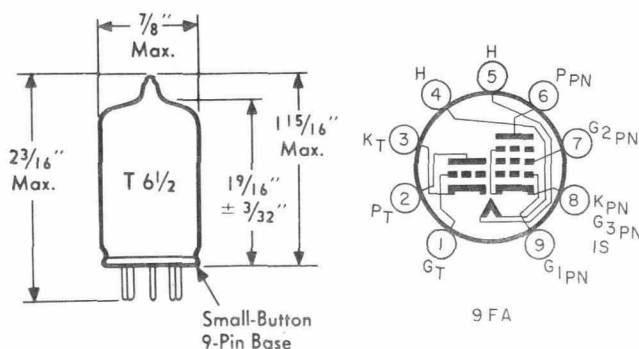
The 6FV8A has been designed for use in receivers which employ series connected heaters especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

ELECTRICAL

Cathode.....	Coated Unipotential Heater:			
Voltage (ac or dc)	6.3	Volts		
Current	0.45±6%	Amperes		
Warm-up Time (Note 1)	11	Seconds		
Direct Interelectrode Capacitances:				
Triode Unit	Unshielded	Shielded (Note 2)		
Grid to Plate.....	1.8	1.8	pf	
Input.....	2.8	1.8	pf	
Output.....	1.5	2.0	pf	
Pentode Unit				
Grid 1 to Plate	0.020	max.	0.010	max. pf
Input.....	5.0		5.0	pf
Output.....	2.0		3.0	pf
Pentode Plate to Triode				
Plate	0.15	max.	0.03	max. pf

MECHANICAL

Bulb.....	T-6½
Base.....	Miniature 9-pin (JEDEC E9-1)
Basing.....	9FA
Outline.....	6-2
Mounting.....	Any



RATINGS

Design Maximum Values	Triode Unit as Vertical Oscillator (Note 3)	Pentode Unit		
Plate Voltage	330	330	max.	Volts
Grid 2 Supply Voltage.....	—	330	max.	Volts
Grid 2 Voltage.....	See Grid 2 Input Rating Chart			
Positive Peak Grid 1 Voltage	—	0	max.	Volts
Negative Peak Pulse Grid Voltage	250	—	max.	Volts
Cathode Current:				
Average.....	20	—	max.	Ma
Peak.....	70	—	max.	Ma
Plate Dissipation (Note 4) ..	2.0	2.3	max.	Watts
Grid 2 Dissipation	—	0.55	max.	Watts
Grid 1 Circuit Resistance:				
Fixed Bias.....	—	0.25	max.	Megohm
Self Bias (Note 4).....	3.0	1.0	max.	Megohms
Heater-Cathode Voltage: (Both Units)				
Heater Negative with Respect to Cathode:				
Total DC and Peak ...	200	max.		Volts
Heater Positive with Respect to Cathode:				
DC Component.....	100	max.		Volts
Total DC and Peak ...	200	max.		Volts

TYPICAL OPERATING CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Voltage	125	125	Volts
Grid 2 Voltage.....	—	125	Volts
Grid 1 Voltage.....	—1.0	—1.0	Volts
Amplification Factor.....	45	—	—
Plate Resistance (Approx.)	5600	200000	Ohms
Transconductance	8000	6500	μmhos
Grid 1 Cutoff Bias (Note 5)	—7.5	—9	Volts
Plate Current	12	12	Ma
Grid 2 Current.....	—	4	Ma

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 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater current.
2. With JEDEC Shield No. 315 connected to pin 4.
3. For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations, Federal Communications Commission". The duty cycle of the voltage pulse not to exceed 15% of one scanning cycle.
4. In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.
5. For Plate Current of 20 microamperes.

