



ELECTRONIC  
**INNOVATIONS**  
IN ACTION

**TUBES**

— **PRODUCT INFORMATION** —

**Dissimilar Double Triode**

**13GF7-A**

**FOR TV VERTICAL-DEFLECTION OSCILLATOR  
AND AMPLIFIER APPLICATIONS**

The 13GF7-A is a dissimilar double triode designed for use as a combined vertical-deflection oscillator and amplifier in television receivers. Section one, a high- $\mu$  triode, is intended for service as an oscillator; section two, a low- $\mu$ , high-perveance triode, for service as an amplifier. The 13GF7-A utilizes a T-9 bulb and features a 9-pin glass button base with a 0.687-inch circle.

Except for heater characteristics and ratings, the 13GF7-A is identical to the 6GF7-A.

**GENERAL**

**ELECTRICAL**

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*	..... 13	Volts
Heater Current●	..... 0.45 ± 0.03	Amperes
Heater Warm-up Time, Average◆	..... 11	Seconds

**NOTES**

- \* Heater voltage for a bogey tube at  $I_f = 0.45$  amperes.
- The equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
- ◆ The time required for the voltage across the heater to reach 80 percent of the bogey value after applying 4 times the bogey heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the bogey heater voltage divided by the bogey heater current.

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