

### TYPE 12VP4A

#### CATHODE-RAY TUBE

The Type 12VP4A is a twelve inch magnetic-focus and magnetic-deflection direct-view picture tube for television applications. The face plate is tinted neutral gray. This type has an external conductive coating, and it has an electron gun of triode construction to be used with an external ion-trap magnet.

#### GENERAL DATA

##### ELECTRICAL

|                                         |                    |
|-----------------------------------------|--------------------|
| Heater Voltage .....                    | 6.3 volts          |
| Heater Current .....                    | 0.6 $\pm$ 10% amps |
| Focusing Method .....                   | magnetic           |
| Deflecting Method .....                 | magnetic           |
| Deflecting Angle (approx.) .....        | 55 degrees         |
| Phosphor .....                          | P4                 |
| Fluorescence .....                      | white              |
| Persistence .....                       | medium             |
| Face Transmittance <sup>(1)</sup> ..... | 66%                |
| Capacitance                             |                    |
| External Conductive Coating to Anode    |                    |
| Maximum .....                           | 3,000 $\mu$ f      |
| Minimum .....                           | 750 $\mu$ f        |

##### MECHANICAL

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| Overall Length .....                 | 18 $\pm$ 3/8 inches               |
| Greatest Diameter of Bulb .....      | 12 7/16 $\pm$ 1/16 - 1/8 inches   |
| Minimum Useful Screen Diameter ..... | 11 inches                         |
| Bulb Contact .....                   | J1-21, Recessed Small Cavity Cap  |
| Base .....                           | B5-57, Small Shell Duodecal 5-Pin |
| Basing .....                         | 12G                               |
| Bulb Contact Alignment               |                                   |
| with Pin Position #3 (vacant) .....  | $\pm$ 10 degrees                  |

#### MAXIMUM RATINGS -- Design Center Values

|                                                  |                 |
|--------------------------------------------------|-----------------|
| Anode Voltage (dc) .....                         | 12,000 volts    |
| Grid Voltage                                     |                 |
| Negative-Bias (dc) .....                         | 125 volts       |
| Positive-Bias (dc) .....                         | 0 volts         |
| Positive Peak .....                              | 2 volts         |
| Peak Heater-Cathode Voltage <sup>(2)</sup> ..... | $\pm$ 125 volts |

(1) With a 7000° K all-sulphide P4 screen as the light source.

(2) A peak heater-cathode voltage of - 410 volts maximum may be applied for not more than 15 seconds during equipment warm-up periods.

**TYPE 12VP4A**

**TYPICAL OPERATING CONDITIONS**

Anode Voltage (dc) ..... 11,000 volts  
 Grid Voltage for Cut-Off (dc) ..... -33 to -77 volts

**MAXIMUM CIRCUIT VALUES**

Grid #1 Circuit Resistance ..... 1.5 megohms

