**TUNG-SOL**

**CATHODE RAY**

COATED UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 0.6 AMPERE

AC OR DC

ANY MOUNTING POSITION

THE 12LP4 IS A DIRECTLY VIEWED PICTURE TUBE DESIGNED FOR USE IN TELEVISION RECEIVERS. THE TUBE UTILIZES MAGNETIC DEFLECTION AND MAGNETIC FOCUS TO PROVIDE 7 1/2" X 10" PICTURES.

**DESCRIPTION**

- **FLUORSCENCE**: WHITE
- **PERSISTENCE**: MEDIUM
- **DEFLECTION AND FOCUSING METHOD**: MAGNETIC
- **DEFLECTION ANGLE (APPROX.)**: 54 DEGREES
- **EXTERNAL COATING WHEN GROUNDED ACTS AS A FILTER CAPACITOR**: RECESSED SMALL CAVITY CAP
- **ELECTRON GUN TO BE USED WITH ION-TRAP MAGNET**: BULB CONTACT

**DIRECT INTERELECTRODE CAPACITANCES - APPROX.**

- CATHODE TO ALL OTHER ELECTRODES: K TO (H+G4+G2+A) 5 µf
- GRID #1 TO ALL OTHER ELECTRODES: G2 TO (H+G4+G2+A) 6 µf
- MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE: 3 000 µf
- MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE: 750 µf

**RATINGS**

**INTERPRETED ACCORDING TO NEMA STANDARD MB-210**

**DESIGN CENTER VALUES**

- HEATER VOLTAGE: 6.3 VOLTS
- MAXIMUM ANODE VOLTAGE: 12 000 VOLTS
- MAXIMUM GRID #2 VOLTAGE: 410 VOLTS
- MAXIMUM GRID #1 VOLTAGE:
  - NEGATIVE BIAS VOLTAGE: 125 VOLTS
  - POSITIVE BIAS VOLTAGE: 0 VOLTS
  - POSITIVE PEAK VOLTAGE: 2 VOLTS
- MAXIMUM PEAK HEATER CATHODE VOLTAGE:
  - HEATER NEGATIVE WITH RESPECT TO CATHODE DURING EQUIPMENT WARM-UP PERIOD NOT EXCEEDING 15 SECONDS: 125 VOLTS
  - HEATER POSITIVE WITH RESPECT TO CATHODE: 125 VOLTS

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

- HEATER VOLTAGE: 6.3 VOLTS
- HEATER CURRENT: 0.6 AMP.
- ANODE VOLTAGE
  - A: 11 000 VOLTS
- GRID #2 VOLTAGE: 250 VOLTS
- GRID #1 VOLTAGE:
  - B: -27 TO -63 VOLTS
- FOCUSING COIL CURRENT (APPROX.):
  - C: 110 MA.
- ION-TRAP CURRENT (APPROX.):
  - D: 120 MA.
- GRID #1 CIRCUIT RESISTANCE: 1.5 MEGOHMS

A: ANODE CONTACT ALIGNED WITH VACANT PIN POSITION #3 ± 10 DEGREES.
B: VISIBLE EXTINCTION OF UNDEFOCUS SPOT.
C: FOR JETEC STANDARD FOCUS COIL WITH THE COMBINED GRID #2 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 7.5 X 10 INCH PICTURE AREA, DISTANCE FROM REFERENCE LINE OF BULB TO CENTER OF FOCUS Coil AIR GAP SHALL BE 3.25 IN.
D: WITH JETEC STANDARD ION-TRAP MAGNET.
TUNG-SOL

12 7\(\frac{1}{16}\) + 1\(\frac{1}{16}\) - 1\(\frac{1}{8}\)

10\(\frac{1}{2}\) ± 3\(\frac{3}{16}\)

18\(\frac{3}{4}\) ± 3\(\frac{3}{8}\)

REFERENCE LINE

1. HEATER
2. GRID NO. 1
3. NO CONNECTION
4. NO CONNECTION
5. GRID NO. 2
6. CATHODE
7. MEATER
8. CAP. ANODE NO. 1

SMALL SHELL DUODECAL
7 PIN BASE
120