

TUNG-SOL

CATHODE RAY

THE 19FP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

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| GREY FILTER FACEPLATE | UNIPOTENTIAL CATHODE |
| ROUND GLASS CONSTRUCTION | MAGNETIC FOCUS & DEFLECTION |
| 11 3/4" X 15 3/4" RASTER SIZE | EXTERNAL DOUBLE FIELD ION TRAP |

ELECTRICAL DATA

| | | |
|----------------------------|----|----------|
| FOCUSING METHOD | | MAGNETIC |
| DEFLECTING METHOD | | MAGNETIC |
| DEFLECTION ANGLE (APPROX.) | 66 | DEGREES |

OPTICAL DATA

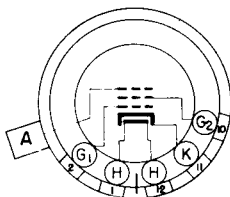
| | | |
|--|----|---------|
| PHOSPHOR NUMBER | | NO. 4 |
| FLUORESCENT COLOR | | WHITE |
| PHOSPHORESCENT COLOR | | WHITE |
| PERSISTENCE | | MEDIUM |
| FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) | 66 | PERCENT |

MECHANICAL DATA

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|--|----------------------------|--------|
| OVERALL LENGTH | 22 ± 1/2 | INCHES |
| GREATEST DIAMETER OF BULB | 18 7/8 ± 1/8 | INCHES |
| MINIMUM USEFUL SCREEN DIAMETER | 17 3/8 | INCHES |
| BULB CONTACT | RECESSED SMALL CAVITY CAP | J1-21 |
| BASE | SMALL SHELL DUODECAL 5 PIN | B5-57 |
| BASING | | 120 |
| BULB CONTACT ALIGNMENT | | |
| J1-21 CONTACT ALIGNS WITH PIN POSITION #3 ± 10 DEGREES | | |

PIN CONNECTIONS

- PIN 1 - HEATER
- PIN 2 - GRID NO. 1
- PIN 10 - GRID NO. 2



- PIN 11 - CATHODE
- PIN 12 - HEATER
- ANODE CAP

BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE

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CONTINUED FROM PRECEDING PAGE

RATINGS

DESIGN CENTER VALUES

| | | |
|--|--------|-------|
| HEATER VOLTAGE | 6.3 | VOLTS |
| HEATER CURRENT | 0.6 | AMP. |
| MAXIMUM DC ANODE VOLTAGE | 19 000 | VOLTS |
| MAXIMUM DC GRID #2 VOLTAGE | 410 | VOLTS |
| MAXIMUM GRID #1 VOLTAGE | | |
| DC NEGATIVE-BIAS VALUE | 125 | VOLTS |
| DC POSITIVE-BIAS VALUE | 0 | VOLTS |
| POSITIVE-PEAK VALUE | 2 | VOLTS |
| MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE | | |
| HEATER NEGATIVE WITH RESPECT TO CATHODE | | |
| DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS | 410 | VOLTS |
| AFTER EQUIPMENT WARM-UP PERIOD | 125 | VOLTS |
| HEATER POSITIVE WITH RESPECT TO CATHODE | 125 | VOLTS |

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

| | | |
|--|------------|-------|
| DC ANODE VOLTAGE | 13 000 | VOLTS |
| DC GRID #2 VOLTAGE | 250 | VOLTS |
| DC GRID #1 VOLTAGE ^A | -27 TO -63 | VOLTS |
| DC FOCUSING COIL CURRENT ^B (APPROX.) | 130 | MA. |
| DC ION TRAP CURRENT STANDARD COIL #108 (APPROX.) | 110 | MA. |

^AVISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

^BFOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 11 3/4" X 15 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.0 INCHES.

CIRCUIT VALUES

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|------------------------------------|-----|---------|
| MAXIMUM GRID #1 CIRCUIT RESISTANCE | 1.5 | MEGOHMS |
|------------------------------------|-----|---------|

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