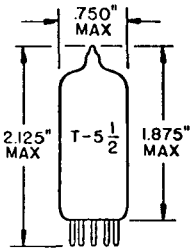


**TUNG-SOL**

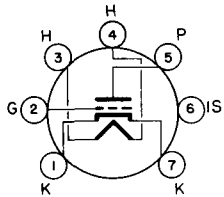
TRIODE

MINIATURE TYPE



GLASS BULB  
MINIATURE BUTTON  
7 PIN BASE E7-1  
OUTLINE DRAWING  
JEDEC 5-2

SHIELDED TRIODE  
FOR  
NEUTRODE CIRCUIT  
APPLICATIONS



BOTTOM VIEW  
JEDEC 7 FP

THE 3GK5 IS A FRAME GRID GAIN CONTROLLED SHIELDED TRIODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS A VHF RF AMPLIFIER AT A B+ OF 135 VOLTS.

**DIRECT INTERELECTRODE CAPACITANCES**

WITH SHIELD

|                                      |      |    |
|--------------------------------------|------|----|
| GRID TO PLATE                        | 0.52 | pf |
| INPUT: G TO ( H + K + I.S. + E.S. )  | 5.0  | pf |
| OUTPUT: P TO ( H + K + I.S. + E.S. ) | 3.5  | pf |
| HEATER TO CATHODE                    | 2.5  | pf |

**HEATER CHARACTERISTICS AND RATINGS**

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

|                                         |           |     |         |
|-----------------------------------------|-----------|-----|---------|
| AVERAGE CHARACTERISTICS                 | 2.8 VOLTS | 450 | MA.     |
| HEATER WARM-UP TIME                     |           | 11  | SECONDS |
| LIMITS OF SUPPLY                        | 600 ± 40  |     | MA.     |
| HEATER-CATHODE VOLTAGE                  |           |     |         |
| HEATER NEGATIVE WITH RESPECT TO CATHODE |           |     |         |
| TOTAL DC AND PEAK                       |           | 100 | VOLTS   |
| HEATER POSITIVE WITH RESPECT TO CATHODE |           |     |         |
| TOTAL DC AND PEAK                       |           | 100 | VOLTS   |

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**MAXIMUM RATINGS**

DESIGN MAXIMUM RATINGS - SEE EIA STANDARD RS-239

|                                     |     |         |
|-------------------------------------|-----|---------|
| PLATE VOLTAGE                       | 200 | VOLTS   |
| GRID VOLTAGE                        | -50 | VOLTS   |
| PLATE DISSIPATION                   | 2.5 | WATTS   |
| DC CATHODE CURRENT                  | 22  | MA.     |
| GRID CIRCUIT RESISTANCE - SELF BIAS | 1.0 | MEGOHMS |

**CHARACTERISTICS AND TYPICAL OPERATION**

CLASS A1 AMPLIFIER

|                                                   |               |            |
|---------------------------------------------------|---------------|------------|
| PLATE VOLTAGE                                     | 135           | VOLTS      |
| GRID VOLTAGE                                      | -1.0          | VOLTS      |
| PLATE CURRENT                                     | 11.5          | MA.        |
| TRANSCONDUCTANCE                                  | 15,000        | $\mu$ MHOS |
| AMPLIFICATION FACTOR                              | 78            |            |
| PLATE RESISTANCE                                  | Approx. 5,400 | OHMS       |
| $E_c$ FOR $G_m = 150 \mu$ MHOS                    | Approx. -4.2  | VOLTS      |
| $E_c$ FOR $G_m = 1,500 \mu$ MHOS                  | Approx. -2.5  | VOLTS      |
| HOT INPUT RESISTANCE - 200 Mc/s - GROUNDED PLATE  | 275           | OHMS       |
| HOT INPUT CAPACITANCE - 200 Mc/s - GROUNDED PLATE | 11.2          | pf         |
| NOISE FIGURE - 200 Mc/s - OPTIMIZED NEUTRALIZED   |               |            |
| TRIODE RF AMPLIFIER STAGE, NOISE MATCHED          | 4.7           | DB         |