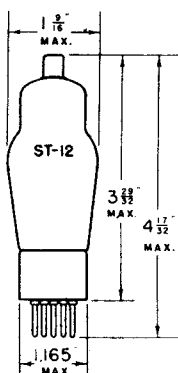


## TUNG-SOL



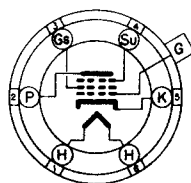
TRIPLE GRID  
REMOTE CUT-OFF AMPLIFIER

UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 0.3 AMPERE  
AC OR DC

GLASS BULB



6F

BOTTOM VIEW

SMALL 6 PIN BASE

THE TUNG-SOL 78 IS A TRIPLE GRID REMOTE CUT-OFF AMPLIFIER. IT IS SUITABLE FOR USE WITH AVC IN RF AND IF AMPLIFIERS AND MINIMIZES CROSS MODULATION. WITH THE EXCEPTION OF CAPACITANCES, ITS RATINGS AND ELECTRICAL CHARACTERISTICS ARE IDENTICAL WITH THOSE OF THE 6K7, THE 6K7G AND THE 6K7GT.

## RATINGS

|                                    |      |       |
|------------------------------------|------|-------|
| MAXIMUM PLATE VOLTAGE              | 300  | VOLTS |
| MAXIMUM SCREEN SUPPLY VOLTAGE      | 300  | VOLTS |
| MAXIMUM SCREEN VOLTAGE             | 125  | VOLTS |
| MINIMUM EXTERNAL GRID BIAS VOLTAGE | 0    | VOLTS |
| MAXIMUM PLATE DISSIPATION          | 2.75 | WATTS |
| MAXIMUM SCREEN DISSIPATION         | 0.35 | WATT  |

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A<sub>1</sub> AMPLIFIER

|                                     |                                |       |       |       |        |
|-------------------------------------|--------------------------------|-------|-------|-------|--------|
| PLATE VOLTAGE                       | 90                             | 180   | 250   | 250   | VOLTS  |
| SCREEN VOLTAGE                      | 90                             | 75    | 100   | 125   | VOLTS  |
| CONTROL GRID VOLTAGE                | -3                             | -3    | -3    | -3    | VOLTS  |
| SUPPRESSOR GRID                     | CONNECTED TO CATHODE AT SOCKET |       |       |       |        |
| PLATE CURRENT                       | 5.4                            | 4.0   | 7.0   | 10.5  | MA.    |
| SCREEN CURRENT                      | 1.3                            | 1.0   | 1.7   | 2.6   | MA.    |
| PLATE RESISTANCE <sup>APPROX.</sup> | 0.3                            | 1.0   | 0.8   | 0.6   | MEGOHM |
| TRANSCONDUCTANCE                    | 1275                           | 1100  | 1450  | 1650  | μMHOS  |
| CONTROL GRID BIAS                   | -38.5                          | -38.5 | -42.5 | -52.5 | VOLTS  |

FOR TRANSCONDUCTANCE = 2 μMHOS

CONTINUED NEXT PAGE

## TYPICAL OPERATING CONDITIONS WITH VARIABLE BIAS

## MIXER IN SUPERHETERODYNE CIRCUITS

|                                |                                |       |
|--------------------------------|--------------------------------|-------|
| PLATE VOLTAGE                  | 250                            | VOLTS |
| SCREEN VOLTAGE                 | 100                            | VOLTS |
| CONTROL GRID VOLTAGE APPROX. A | -10                            | VOLTS |
| SUPPRESSOR GRID                | CONNECTED TO CATHODE AT SOCKET |       |

<sup>A</sup> THE GRID BIAS SHOWN IS MINIMUM FOR AN OSCILLATOR PEAK VOLTAGE OF 7 VOLTS. THESE VALUES ARE OPTIMUM.

DIRECT INTERELECTRODE CAPACITANCES<sup>S</sup>

|                         |                      |               |
|-------------------------|----------------------|---------------|
| CONTROL GRID TO CATHODE | 4.5                  | $\mu\text{f}$ |
| PLATE TO CATHODE        | 11                   | $\mu\text{f}$ |
| CONTROL GRID TO PLATE   | .007 <sup>MAX.</sup> | $\mu\text{f}$ |

<sup>S</sup> MEASURED WITH AN EXTERNAL SHIELD. THE INTERNAL SHIELD IN THE DOME IS CONNECTED TO THE CATHODE WITHIN THE TUBE.