TUNG-SOL

PENTODE

COATED UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 0.6 AMP.
AC OR DC
ANY MOUNTING POSITION

GLASS BULB

THE MAX. DIAMETER
OF THE T-12 BULB IS
7.9/16".

THE 12AV5GA IS A BEAM PENTODE USING EITHER A T-11 OR T-12 BULB. IT IS
DESIGNED FOR USE AS A HORIZONTAL-DEFLECTION AMPLIFIER IN 500 MA SERIES
HEATER OPERATED TELEVISION RECEIVERS. THERMAL CHARACTERISTICS OF
THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP
CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMI-
LARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES — APPROX.
WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE 0.5 μF
INPUT 14 μF
OUTPUT 7.0 μF

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

HEATER VOLTAGE 12.6 VOLTS

MAXIMUM HEATER—CATHODE VOLTAGE:
HEATER POSITIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK 200 VOLTS
DC 100 VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK 200 VOLTS
MAXIMUM DC PLATE—SUPPLY VOLTAGE (BOOST + POWER SUPPLY) 550 VOLTS
MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE (ABSOLUTE MAX.) 5 500 VOLTS
MAXIMUM PEAK NEGATIVE PULSE PLATE VOLTAGE 1 290 VOLTS
MAXIMUM GRID #2 VOLTAGE 175 VOLTS
MAXIMUM PEAK NEGATIVE GRID #4 VOLTAGE 300 VOLTS
MAXIMUM PLATE DISSIPATION 11 WATTS
MAXIMUM GRID #2 DISSIPATION 2.5 WATTS
MAXIMUM DC CATHODE CURRENT 110 MA.
MAXIMUM PEAK CATHODE CURRENT 400 MA.
MAXIMUM GRID #4 CIRCUIT RESISTANCE 0.47 MEGOHM
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT) 210 °C
HEATER WARM-UP TIME (APPROX.) 11.0 SECONDS

A UNLESS OTHERWISE SPECIFIED.
B FOR OPERATION IN A 525-LINE, 30-FRAME TELEVISION SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD
ENGINEERING PRACTICE CONCERNING TELEVISION BROADCAST STATIONS," FEDERAL COMMUNICATIONS
COMMISSION. THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15 PERCENT OF ONE SCANNING
CYCLE.
C THIS VALUE MUST NOT BE EXCEEDED.
D IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE-BIAS RESISTOR OR OTHER SUITABLE
MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

*HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH
80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING
OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATION
RESISTANCE.

CONTINUED ON FOLLOWING PAGE
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

HEATER VOLTAGE 12.6 VOLTS
HEATER CURRENT 0.6 AMP.
PLATE VOLTAGE 60 250 VOLTS
GRID #2 VOLTAGE 150 150 VOLTS
GRID #4 VOLTAGE 0 22.5 VOLTS
PLATE RESISTANCE (APPROX.)
TRANSCONDUCTANCE
PLATE CURRENT 260 57 MA.
GRID #2 CURRENT 26 2.1 MA.
GRID #4 VOLTAGE (APPROX.) FOR $I_b = 1.0$ MA.
TRIODE AMPLIFICATION FACTOR$^F$

$^F$APPLIED FOR VERY SHORT INTERVAL SO AS NOT TO DAMAGE TUBE.

SIMILAR TYPE REFERENCE: Except for heater characteristics, the 12AV5GA is identical to the 6AV5GA, 17AV5GA & the 29AV5GA.

$^E$INDICATES A CHANGE.
12AV5GA

PENTODE CONNECTION

$E_f = 12.6$ Volts
$E_d = 250$ Volts

GRID #1 VOLTS

PLATE MILLIAMPERES

-60 -50 -40 -30 -20 -10 0