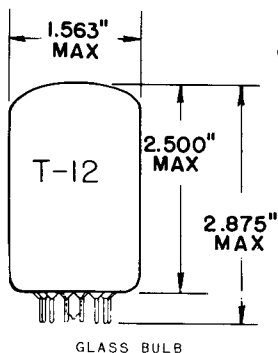


TUNG-SOL

BEAM PENTODE
COMPACTRON

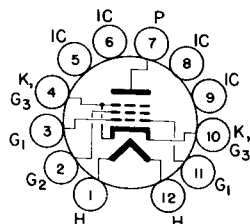
GLASS BULB

BUTTON
12 PIN BASE E12-74
OUTLINE DRAWING
JEDEC 12-56

COATED UNIPOTENTIAL CATHODE

FOR HORIZONTAL-DEFLECTION
AMPLIFIER APPLICATIONS IN
T.V. RECEIVERS

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM

JEDEC 126J

THE 12GE5 IS A BEAM-POWER PENTODE IN THE COMPACT 12 PIN, T-12 CONSTRUCTION. IT IS DESIGNED PRIMARILY FOR USE AS THE HORIZONTAL-DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS. EXCEPT FOR HEATER CHARACTERISTICS AND HEATER WARM-UP TIME, THE 12GE5 IS IDENTICAL TO THE 6GE5.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.

WITHOUT EXTERNAL SHIELD*

GRID #1 TO PLATE: (G1 TO P)	0.34	pf
INPUT: G1 TO (H ⁺ K+G2+B.P.)	16	pf
OUTPUT: P TO (H ⁺ K+G2+B.P.)	7.0	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	12.5 VOLTS	600	MA.
HEATER SUPPLY LIMITS:			
CURRENT OPERATION		600±40	MA.
MAXIMUM HEATER-CATHODE VOLTAGE			
HEATER POSITIVE WITH RESPECT TO CATHODE ^B			
DC COMPONENT		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
HEATER WARM-UP TIME ^D		11	SECONDS

^D HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 50% 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 2 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS
 DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239
 HORIZONTAL-DEFLECTION AMPLIFIER SERVICE •

DC PLATE-SUPPLY VOLTAGE (BOOST + DC POWER SUPPLY))	770	VOLTS
PEAK POSITIVE PULSE PLATE VOLTAGE	6500	VOLTS
PEAK NEGATIVE PULSE PLATE VOLTAGE	1500	VOLTS
GRID #2 VOLTAGE	220	VOLTS
NEGATIVE DC GRID #1 VOLTAGE	55	VOLTS
PEAK NEGATIVE GRID #1 VOLTAGE	330	VOLTS
PLATE DISSIPATION ^A	17.5	WATTS
GRID #2 DISSIPATION	3.5	WATTS
DC CATHODE CURRENT	175	MA.
PEAK CATHODE CURRENT	550	MA.
GRID #1 CIRCUIT RESISTANCE	1.0	MEGOHMS
BULB TEMPERATURE AT HOTTEST POINT	220	°C

TYPICAL OPERATING CHARACTERISTICS

AVERAGE CHARACTERISTICS

PLATE VOLTAGE	60	250	VOLTS
GRID #2 VOLTAGE	150	150	VOLTS
GRID #1 VOLTAGE	0 ^B	-22.5	VOLTS
PLATE RESISTANCE, APPROX.	---	20,000	OHMS
TRANSCONDUCTANCE	---	6600	μMHOS
PLATE CURRENT	345	75	MA.
GRID #2 CURRENT	33	2.4	MA.
GRID #1 VOLTAGE, APPROX.	---	-46	VOLTS
TRIODE AMPLIFICATION FACTOR	---	4.1	
G ₂ TIED TO PLATE, E _b = E _{c2} = 150 V., E _{c1} = -22.5 V.	---	4.1	

• FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

^A 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.

^B APPLIED FOR SHORT INTERVAL (TWO SECONDS MAXIMUM) SO AS NOT TO DAMAGE TUBE.