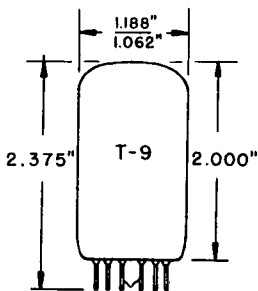


## TUNG-SOL

## DOUBLE PENTODE

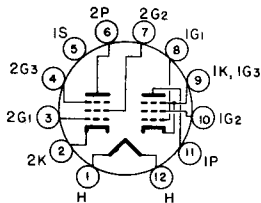
## COMPACTRON



GLASS BULB  
BUTTON 12 PIN  
BASE E12-70  
OUTLINE DRAWING  
JEDEC 9-58

DISSIMILAR DOUBLE PENTODE  
FOR  
USE AS AN FM DETECTOR  
AND AUDIO-FREQUENCY OUTPUT  
AMPLIFIER IN T.V. RECEIVERS

COATED UNIPOTENTIAL CATHODE  
ANY MOUNTING POSITION



BOTTOM VIEW  
BASING DIAGRAM  
JEDEC 12BU

THE 6AL11 IS A SHARP-CUTOFF, DUAL-CONTROL PENTODE (SECTION 2) AND A POWER PENTODE (SECTION 1) IN THE T-9 COMPACTRON CONSTRUCTION. THE DUAL-CONTROL PENTODE IS INTENDED FOR USE AS AN FM DETECTOR AND THE POWER PENTODE AS AN AUDIO-FREQUENCY OUTPUT AMPLIFIER IN T.V. RECEIVERS.

## DIRECT INTERELECTRODE CAPACITANCES

## SECTION 1

GRID 1 TO PLATE: (1G1 TO 1P)	0.26	pf
INPUT: 1G1 TO (H + 1K + 1G2 + 1G3 + 1.S.)	11	pf
OUTPUT: 1P TO (H + 1K + 1G2 + 1G3 + 1.S.)	12	pf

## SECTION 2

GRID 1 TO PLATE: (2G1 TO 2P)	0.034	pf
GRID 3 TO PLATE: (2G3 TO 2P)	3.2	pf
GRID 1 TO ALL EXCEPT PLATE: 2G1 TO (H + 2K + 2G2 + 2G3 + 1.S.)	6.5	pf
GRID 3 TO ALL: 2G3 TO (H + 2K + 2G1 + 2G2 + 2P + 1.S.)	7.5	pf
GRID 1 TO GRID 3: (2G1 TO 2G3)	0.24	pf
PLATE TO PLATE: (1P TO 2P)	0.12	pf

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**TUNG-SOL**

CONTINUED FROM PRECEDING PAGE

**HEATER CHARACTERISTICS AND RATINGS**  
DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	900	MA.
LIMITS OF APPLIED VOLTAGE		6.3 ± 0.6	VOLTS
HEATER-CATHODE VOLTAGE	SECTION 1	SECTION 2	
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC COMPONENT	100	100	VOLTS
TOTAL DC AND PEAK	200	200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200	200	VOLTS

**MAXIMUM RATINGS**

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

	SECTION 1	SECTION 2	
PLATE VOLTAGE	275	330	VOLTS
GRID 2 VOLTAGE	275	SEE RATING CHART	VOLTS
GRID 2 SUPPLY VOLTAGE		330	VOLTS
GRID 3 ( SUPPRESSOR ) VOLTAGE		28	VOLTS
POSITIVE DC GRID 1 VOLTAGE		0	VOLTS
PLATE DISSIPATION	10	1.7	WATTS
GRID 2 DISSIPATION	2.0	1.1	WATTS
GRID 1 CIRCUIT RESISTANCE			
WITH FIXED BIAS	0.25		MEGOHMS
WITH CATHODE BIAS	0.5		MEGOHMS

**CHARACTERISTICS AND TYPICAL OPERATION**

## SECTION 1

PLATE VOLTAGE	250	VOLTS
GRID 2 VOLTAGE	250	VOLTS
GRID 1 VOLTAGE	-8.0	VOLTS
PEAK AF GRID 1 VOLTAGE	8.0	VOLTS
ZERO-SIGNAL PLATE CURRENT	35	MA.
MAXIMUM-SIGNAL PLATE CURRENT	39	MA.
ZERO-SIGNAL GRID 2 CURRENT	2.5	MA.
MAXIMUM SIGNAL GRID 2 CURRENT	7.0	MA.
MAXIMUM-SIGNAL POWER OUTPUT	4.2	WATTS
TRANSCONDUCTANCE	6,500	MICROMHOS
PLATE RESISTANCE	Approx. 100,000	OHMS
LOAD RESISTANCE	5,000	OHMS
TOTAL HARMONIC DISTORTION	Approx. 10	PERCENT

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## TUNG-SOL

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## AVERAGE CHARACTERISTICS - SECTION 2

PLATE VOLTAGE	150	VOLTS
GRID 2 VOLTAGE	100	VOLTS
GRID 3 VOLTAGE	0	VOLTS
CATHODE-BIAS RESISTOR	560	OHMS
PLATE CURRENT	1.3	MA.
GRID 2 CURRENT	2.1	MA.
GRID 1 TRANSCONDUCTANCE	1,000	MICROMHOS
GRID 3 TRANSCONDUCTANCE	400	MICROMHOS
PLATE RESISTANCE	Approx. 0.15	MEGOHMS
GRID 1 VOLTAGE FOR $I_b = 30 \mu A$	Approx. -4.5	VOLTS
GRID 3 VOLTAGE FOR $I_b = 50 \mu A$	Approx. -4.5	VOLTS

