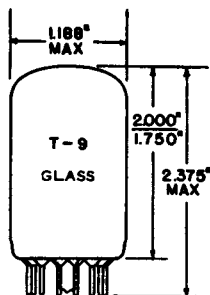


TUNG-SOL

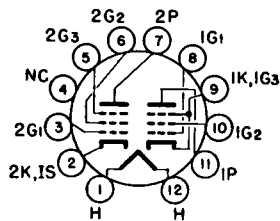
DUAL PENTODE

COMPACTRON

OUTLINE
JEDEC 9-58BASE 12 PIN BUTTON
JEDEC E12-70

FOR
FM DETECTOR
AND AUDIO OUTPUT
IN T.V. RECEIVERS

COATED UNIPOTENTIAL CATHODE
ANY MOUNTING POSITION

BASING DIAGRAM
JEDEC 12EZ

BOTTOM VIEW

THE TUNG-SOL 17BF11 IS A 12-PIN T-9 COMPACTRON CONTAINING TWO DISSIMILAR PENTODES. SECTION 1 IS A POWER PENTODE FOR AUDIO APPLICATION. SECTION 2 IS A DUAL CONTROL PENTODE INTENDED FOR USE AS FM DETECTOR IN TV CIRCUITS. ELECTRICALLY, SECTION 2 IS SIMILAR TO TYPE 6DT6, EXCEPT FOR HEATER CHARACTERISTICS, THE 17BF11 IS IDENTICAL TO THE 6BF11.

DIRECT INTERELECTRODE CAPACITANCES WITHOUT EXTERNAL SHIELD

PENTODE 1 - GRID 1 TO PLATE	0.24	pf
INPUT: (G ₁ TO H + K + I.S. + G ₂)	13	pf
OUTPUT: (P TO H + K + I.S. + G ₂)	10	pf
PENTODE 2 - GRID 1 TO PLATE	0.036	pf
GRID 1 TO ALL (G ₁ TO H + K + I.S. + G ₂ + G ₃ + P)	6.5	pf
GRID 3 TO PLATE	3.2	pf
GRID 3 TO ALL (G ₃ TO H + K + I.S. + G ₁ + G ₂ + P)	8.0	pf
GRID 1 TO GRID 3	0.11	pf
COUPLING - PLATE TO PLATE	0.13	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	16.8 VOLTS	0.45	AMPS.
HEATER WARM-UP TIME		11	SEC.
LIMITS OF SUPPLIED CURRENT		0.45 ± 0.03	AMPS.
MAXIMUM HEATER-CATHODE VOLTAGE-BOTH SECTIONS			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

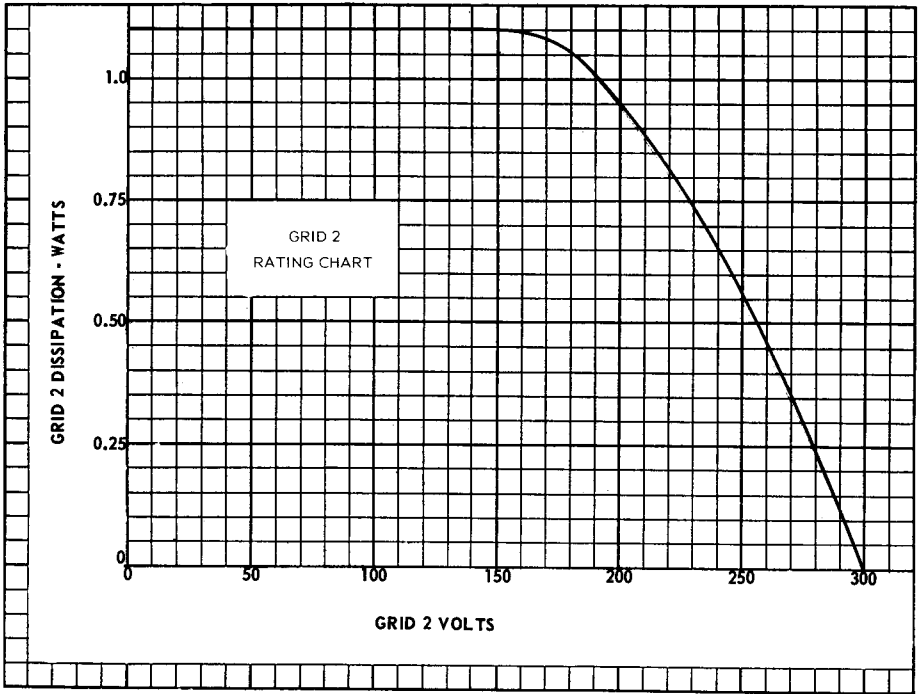
	SECTION 1	SECTION 2	
PLATE VOLTAGE	165	330	VOLTS
GRID 2 VOLTAGE	150	-	VOLTS
GRID 2 SUPPLY VOLTAGE	-	330	VOLTS
POSITIVE DC GRID 3 VOLTAGE	-	28	VOLTS
PLATE DISSIPATION	6.5	1.7	WATTS
GRID 2 DISSIPATION	1.8	SEE CHART	WATTS
	UP TO 150 VOLTS	1.1	WATTS
CATHODE CURRENT	65	-	MA
GRID 1 CIRCUIT RESISTANCE			
FIXED BIAS	0.25	-	MEGOHMS
SELF BIAS	0.5	-	MEGOHMS

AVERAGE CHARACTERISTICS

	SECTION 1	SECTION 2	
PLATE VOLTAGE	145	150	VOLTS
GRID 2 VOLTAGE	110	100	VOLTS
GRID 3 VOLTAGE	-	0	VOLTS
GRID 1 VOLTAGE	-6.0	0	VOLTS
CATHODE RESISTOR	-	560	OHMS
PLATE CURRENT	36	1.3	MA
GRID 2 CURRENT	3.0	2.0	MA
TRANSCONDUCTANCE GRID 1 TO PLATE	8,600	1,000	μ MHOS
GRID 3 TO PLATE	-	400	μ MHOS
PLATE RESISTANCE - APPROX.	0.03	0.15	MEGOHMS
GRID 1 VOLTAGE FOR $I_b = 10 \mu A$	-	-4.5	VOLTS
GRID 3 VOLTAGE FOR $I_b = 10 \mu A$	-	-4.5	VOLTS

TYPICAL OPERATION - CLASS A1 POWER AMPLIFIER

	SECTION 1	
PLATE VOLTAGE	145	VOLTS
GRID 2 VOLTAGE	110	VOLTS
GRID 1 VOLTAGE	-6.0	VOLTS
PEAK AUDIO GRID 1 VOLTAGE	6.0	VOLTS
LOAD RESISTANCE	3,000	OHMS
MAXIMUM SIGNAL PLATE CURRENT	40	MA
MAXIMUM SIGNAL GRID 2 CURRENT	9.0	MA
TOTAL HARMONIC DISTORTION	10	%
POWER OUTPUT	2.4	WATTS



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