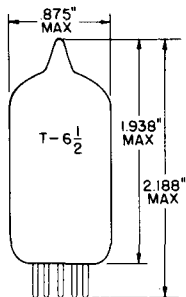


TUNG-SOL

DOUBLE TRIODE

MINIATURE TYPE

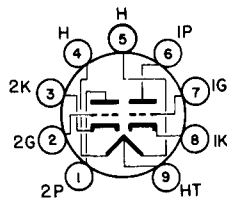


GLASS BULB
SMALL BUTTON MINIATURE
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-2

COATED UNIPOTENTIAL CATHODE

FOR AUDIO AMPLIFIER OR
COMBINED OSCILLATOR-MIXER
APPLICATIONS

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 9A

THE 12AZ7A COMBINES TWO INDEPENDENT MEDIUM-MU TRIODES IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS ADAPTABLE FOR APPLICATIONS AS AN AUDIO AMPLIFIER OR AS A COMBINED OSCILLATOR-MIXER IN VHF TELEVISION TUNERS.

DIRECT INTERELECTRODE CAPACITANCES

	WITH A SHIELD	WITHOUT SHIELD	
GRID TO PLATE: (G TO P) EACH SECTION	1.9	2.0	pf
INPUT: G TO (H+K) EACH SECTION	2.8	2.6	pf
OUTPUT: P TO (H+K) TRIODE 1	1.4	0.44	pf
OUTPUT: P TO (H+K) TRIODE 2	1.6	0.36	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS

HEATER IN SERIES	12.6 VOLTS	225	MA.
HEATER IN PARALLEL	6.3 VOLTS	450	MA.
HEATER WARM-UP TIME ^B		11	SECONDS

HEATER SUPPLY LIMITS:

VOLTAGE OPERATION (HEATER IN SERIES)	12.6±1.3	VOLTS
CURRENT OPERATION (HEATER IN PARALLEL)	450±30	MA.
MAXIMUM HEATER-CATHODE VOLTAGE:		
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 VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE	330	VOLTS
NEGATIVE DC GRID VOLTAGE	55	VOLTS
PLATE DISSIPATION (EACH SECTION)	2.5	WATTS
TOTAL PLATE DISSIPATION	5.0	WATTS
GRID CIRCUIT RESISTANCE:		
FIXED BIAS	0.25	MEGOHM
SELF BIAS	1.0	MEGOHM

TYPICAL OPERATING CHARACTERISTICS

CLASS A1 AMPLIFIER

PLATE VOLTAGE	100	250	VOLTS
CATHODE BIAS RESISTOR	270	200	OHMS
PLATE CURRENT	3.7	10	MA.
TRANSCONDUCTANCE	4,000	5,500	μ MHOS
AMPLIFICATION FACTOR	60	60	
PLATE RESISTANCE (APPROX.)	15,000	10,900	OHMS
GRID VOLTAGE (APPROX.)			
FOR $I_b=10\mu A$, PLATE CURRENT	-5	-12	VOLTS

A
WITH EXTERNAL SHIELD 315 CONNECTED TO CATHODE OF SECTION UNDER TEST.

B
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 HEATER OPERATING RESISTANCE.