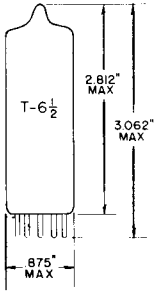
TUNG-SOL

PENTODE

MINIATURE TYPE



GLASS BULB

MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-4

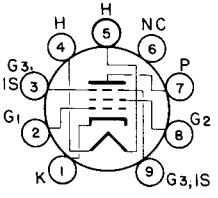
COATED UNIPOTENTIAL CATHODE

AUDIO AMPLIFIER

FOR

HEATER SERIES STRING OPERATION

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 9GK

THE 16GK6 IS A POWER PENTODE AUDIO AMPLIFIER IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE IN THE OUTPUT STAGE OF HIGH QUALITY AUDIO AMPLIFIERS. EXCEPT FOR HEATER RATINGS, THE 16GK6 IS IDENTICAL TO THE 6GK6.

DIRECT INTERELECTRODE CAPACITANCES

GRID TO PLATE: G1 TO P (MAX.)	.14	pf
INPUT: G1 TO ALL	10.0	pf
OUTPUT: P TO ALL	7.0	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	16.0 VOLTS	300	MA.
HEATER SUPPLY LIMITS:			
CURRENT OPERATION		300±20	MA.
MAXIMUM HEATER CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		100	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		100	VOLTS
HEATER WARM-UP TIME[A]		11	SECONDS

A
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 OPERATING RESISTANCE.

CONTINUED ON FOLLOWING PAGE

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CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE	330[B]	VOLTS
PLATE SUPPLY VOLTAGE	605	VOLTS
GRID #2 VOLTAGE	330	VOLTS
GRID #2 SUPPLY VOLTAGE	605	VOLTS
NEGATIVE GRID #1 VOLTAGE	100	VOLTS
PLATE DISSIPATION	13.2[B]	WATTS
GRID #2 DISSIPATION (AVERAGE)	2	WATTS
GRID #2 DISSIPATION, PEAK	4	WATTS
CATHODE CURRENT (AVERAGE)	65	MA.
GRID #1 VOLTAGE FOR GRID CURRENT STARTING POINT WITH I_{c1} = 0.3 μA.	-1.3	VOLTS
GRID CIRCUIT RESISTANCE:		
FIXED BIAS	0.3	MEGOHM
SELF BIAS	1.0	MEGOHM

TYPICAL OPERATING CHARACTERISTICS

CLASS A AMPLIFIER

PLATE VOLTAGE	250	VOLTS
GRID #2 (SCREEN) VOLTAGE	250	VOLTS
GRID #1 (CONTROL-GRID) VOLTAGE	-7.3	VOLTS
CATHODE BIAS RESISTOR	135	OHMS
PLATE RESISTANCE (APPROX.)	38000	OHMS
TRANSCONDUCTANCE	11300	μMHOS
PLATE CURRENT ZERO SIGNAL	48	MA.
GRID #2 CURRENT, ZERO SIGNAL	5.5	MA.
LOAD RESISTANCE	5200	OHMS
TOTAL HARMONIC DISTORTION (APPROX.)	10	PERCENT
POWER OUTPUT, MAXIMUM SIGNAL	5.7	WATTS
AMPLIFICATION FACTOR OF GRID #2 WITH RESPECT TO GRID #1 ZERO SIGNAL	19	

PUSH PULL AMPLIFIER - VALUES FOR TWO TUBES

	CLASS AB		CLASS B		
PLATE VOLTAGE	250	300	250	300	VOLTS
GRID #2 (SCREEN) VOLTAGE	250	300	250	300	VOLTS
GRID #1 (CONTROL-GRID) VOLTAGE	---	---	-11.6	-14.7	VOLTS
CATHODE BIAS RESISTOR	130	130	---	---	OHMS
GRID TO GRID INPUT VOLTAGE PEAK A-F	22.4	28	22.4	28	VOLTS
PLATE CURRENT, ZERO SIGNAL	62	72	20	15	MA.
PLATE CURRENT, MAXIMUM SIGNAL	75	92	75	92	MA.
GRID #2 CURRENT, ZERO SIGNAL	7	8	2.2	1.6	MA.
GRID #2 CURRENT, MAXIMUM SIGNAL	15	22	15	22	MA.
LOAD RESISTANCE, PLATE-TO-PLATE	8000	8000	8000	8000	OHMS
TOTAL HARMONIC DISTORTION (APPROX.)	3	4	3	4	PERCENT
POWER OUTPUT, MAXIMUM SIGNAL	11	17	11	17	WATTS

[B] WHEN THE HEATER AND POSITIVE VOLTAGE ARE OBTAINED FROM A STORAGE BATTERY BY MEANS OF A VIBRATOR THE MAXIMUM VALUES OF THE PLATE AND GRID 2 VOLTAGES ARE 275 VOLTS AND THE PLATE DISSIPATION IS 9.9 WATTS.