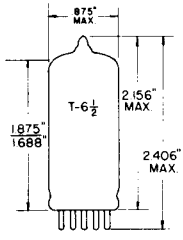
TUNG-SOL

SHARP CUTOFF PENTODE

MINIATURE TYPE



MINIATURE BUTTON
9 PIN BASE E9-1

OUTLINE DRAWING
SPECIAL

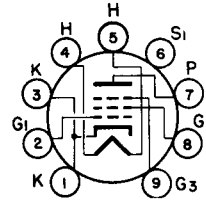
GLASS BULB

COATED UNIPOTENTIAL CATHODE

FOR IF CIRCUITS IN TV RECEIVERS

SERIES STRING OPERATION

ANY MOUNTING POSITION



BASING DIAGRAM
JEDEC 9AQ

BOTTOM VIEW

THE 4EJ7 IS A HIGH TRANSCONDUCTANCE SHARP-CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE AS AN IF AMPLIFIER IN TELEVISION RECEIVERS. CONTROLLED HEATER WARM-UP TIME MAKES THE TUBE SUITABLE FOR SERIES STRING OPERATION.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE (MAX.)	.005	pf
INPUT: G1 TO (H+K+G2+G3+I.S.)	10	pf
OUTPUT: P TO (H+K+G2+G3+I.S.)	3	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN CENTER VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	4.4 VOLTS	450	MA.
HEATER SUPPLY LIMITS:			
CURRENT OPERATION		450±30	MA
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		150	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		150	VOLTS
HEATER WARM-UP TIME [A]		11	SECONDS

MAXIMUM RATINGS

DESIGN CENTER VALUES - SEE EIA STANDARD RS-239 [B]

PLATE VOLTAGE WITH Ib = 0 MA.	550 VOLTS
PLATE VOLTAGE	250 VOLTS
GRID #2 VOLTAGE WITH Ic2 = 0 MA	550 VOLTS
GRID #2 VOLTAGE	250 VOLTS
PLATE DISSIPATION	2.5 WATTS
GRID #2 DISSIPATION	0.9 WATTS
CATHODE CURRENT	25 MA.
GRID #1 CIRCUIT RESISTANCE	1.0 MEGOHM

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CHARACTERISTICS

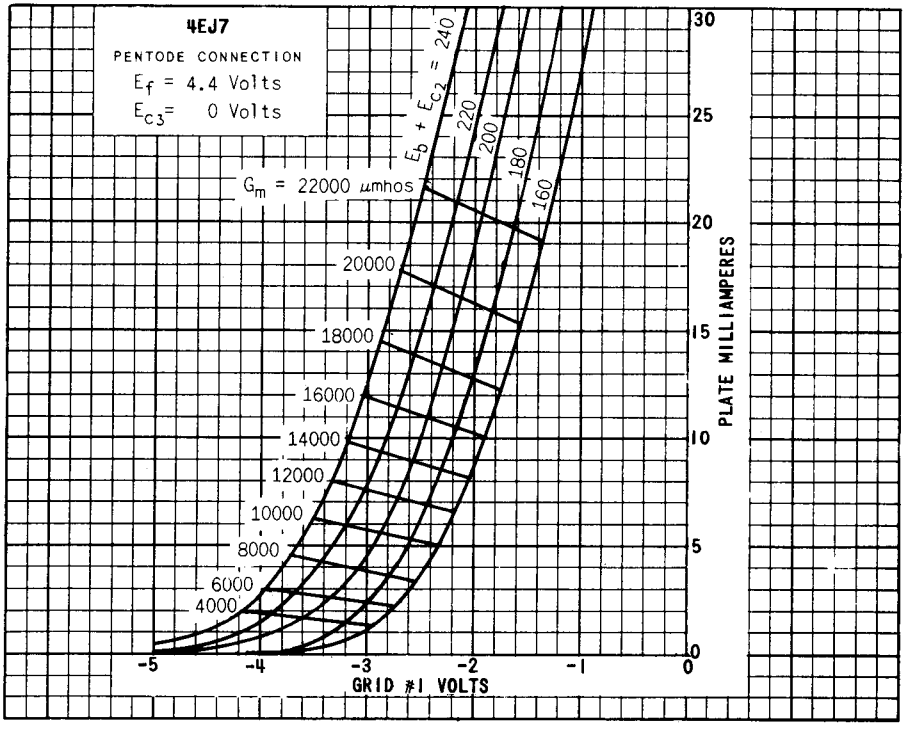
CLASS A_1 AMPLIFIER

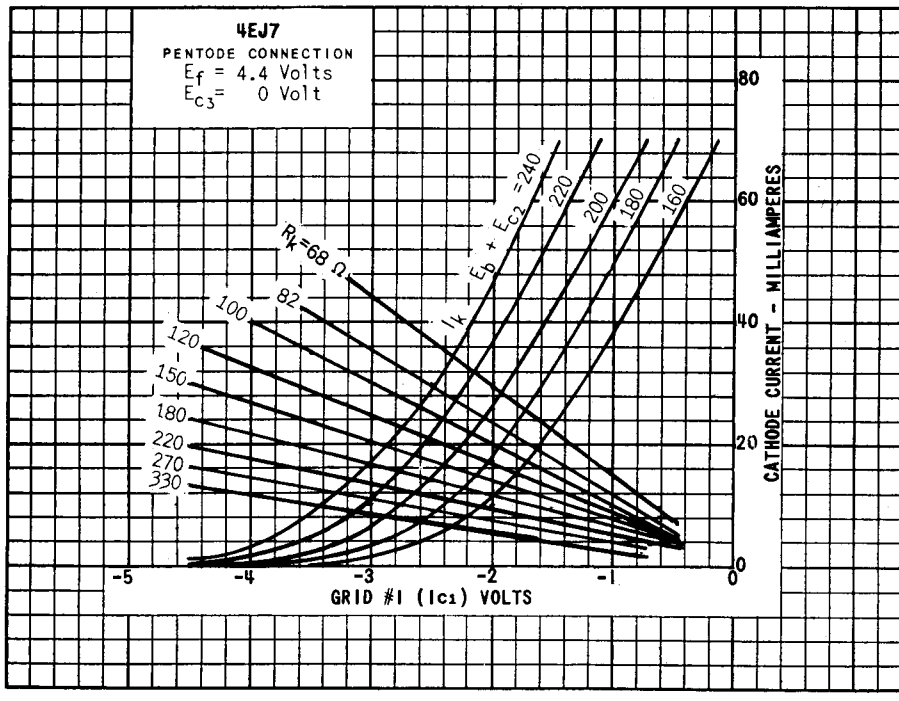
PLATE VOLTAGE	200	VOLTS
GRID #3 VOLTAGE	0	VOLTS
GRID #2 VOLTAGE	200	VOLTS
GRID #1 VOLTAGE	-2.5	VOLTS
PLATE CURRENT	10	MA.
GRID #2 CURRENT	4.1	MA.
TRANSCONDUCTANCE	15000	μMHOS
AMPLIFICATION FACTOR (G2 TO G1)	60	
PLATE RESISTANCE (APRROX)	0.35	MEGOHM
GRID #1 IMPEDANCE AT 40 MC	30000	OHMS[C]

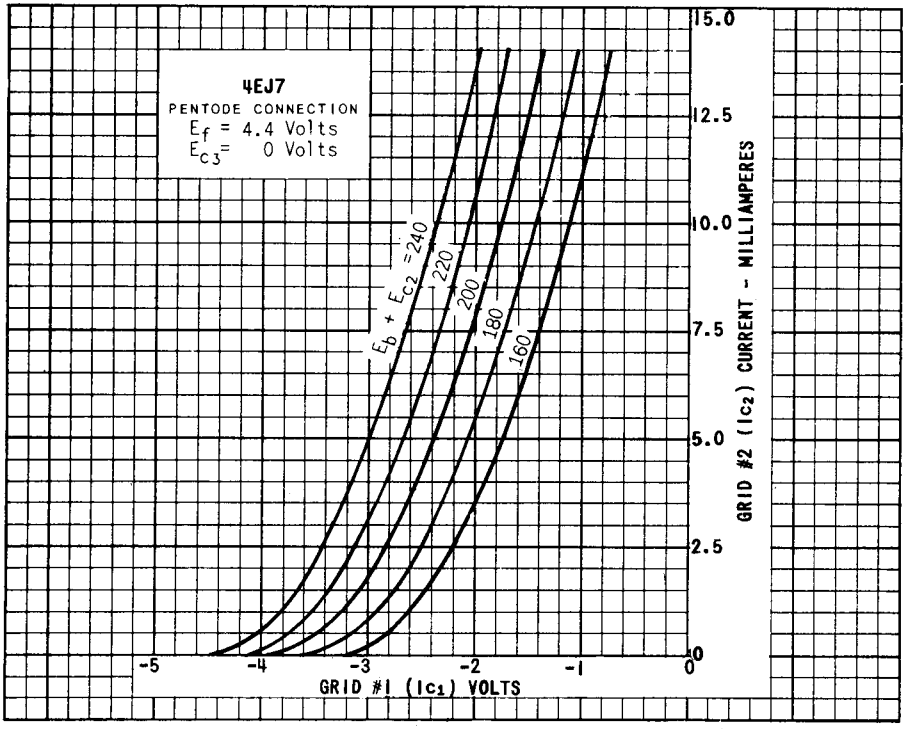
[A] HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

[B] FOR SERIES OPERATION OF HEATERS, EQUIPMENT SHOULD BE DESIGNED THAT AT NORMAL SUPPLY VOLTAGE BOGEY TUBES WILL OPERATE AT THIS VALUE OF HEATER CURRENT.

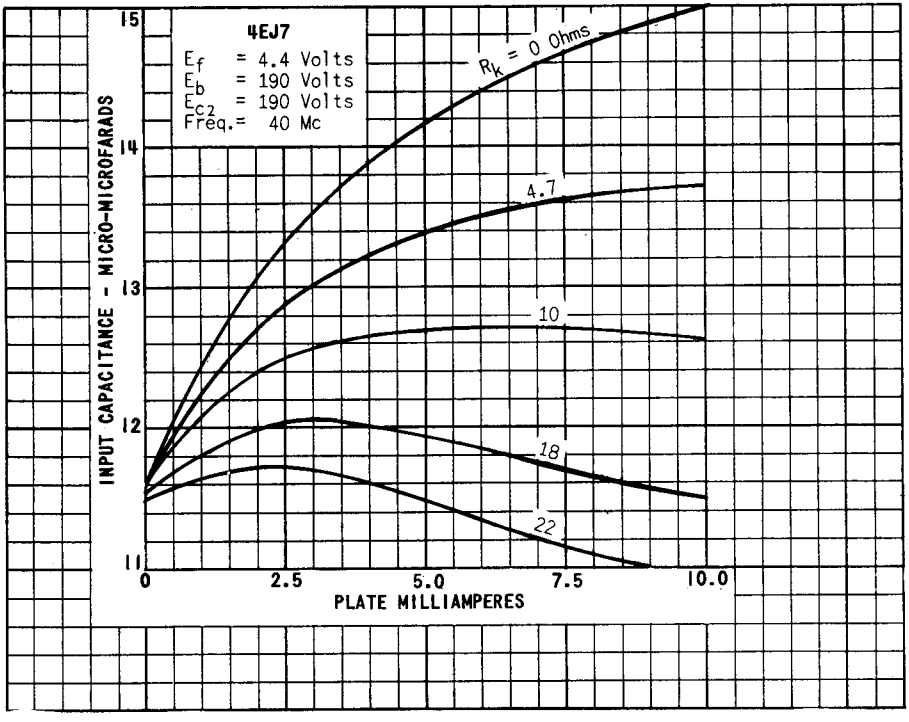
[C] INPUT DAMPING OF TUBE AND TYPICAL CERAMIC SOCKET WITH BOTH CATHODE LEADS TIED DIRECTLY TO GROUND IS ABOUT 10,000 OHMS.

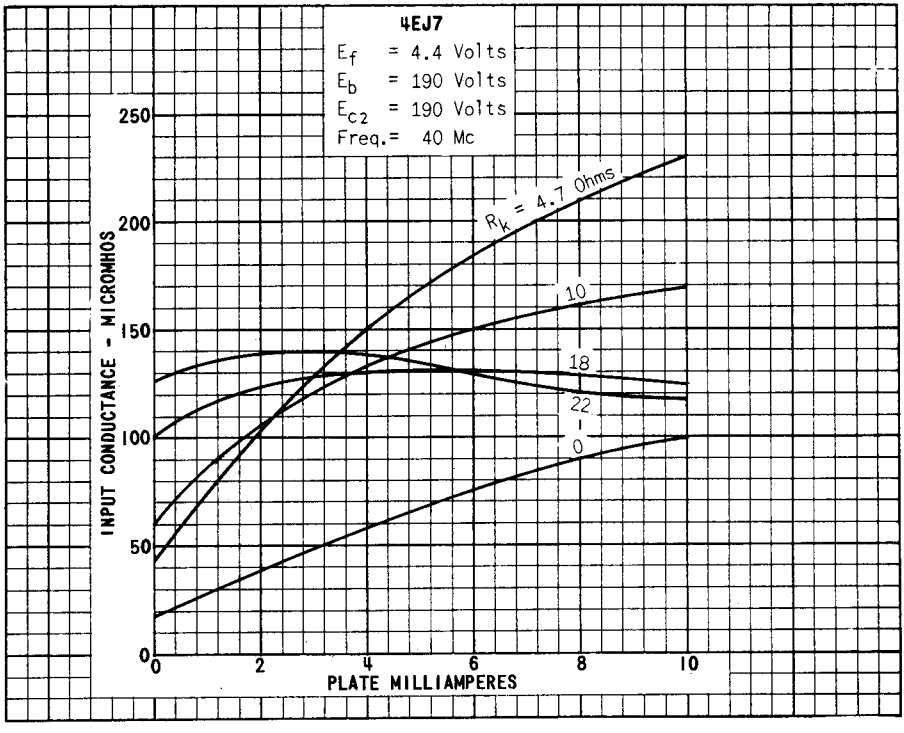






4EJ7


4EJ7
Ef = 4.4 Volts
Eb = 190 Volts
Ec2 = 190 Volts
Freq.= 40 Mc
Rk = 0 Ohms
4.7
10
18
22
INPUT CAPACITANCE - MICRO-MICROFARADS
15
14
13
12
11
0
2.5
5.0
7.5
10.0
PLATE MILLIAMPERES


4EJ7
Ef = 4.4 Volts
Eb = 190 Volts
Ec2 = 190 Volts
Freq.= 40 Mc
Rk = 4.7 Ohms
10
18
22
0
INPUT CONDUCTANCE - MICROMHOS
250
200
150
100
50
0
0
2
4
6
8
10
PLATE MILLIAMPERES