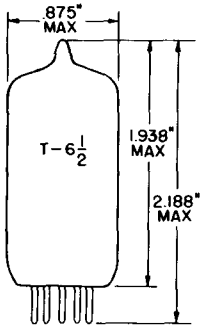
TUNG-SOL

PENTODE

MINIATURE TYPE



GLASS BULB

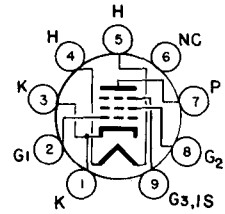
SMALL BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-2

SHARP-CUTOFF PENTODE

FOR

IF AMPLIFIER STAGES

IN TV RECEIVERS



BOTTOM VIEW

BASING DIAGRAM
JEDEC 9PM

THE 3HM6 IS A FRAME-GRID, SHARP-CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE IN THE IF AMPLIFIER STAGES OF TELEVISION RECEIVERS. EXCEPT FOR HEATER CHARACTERISTICS AND RATINGS, THE 3HM6 IS IDENTICAL TO THE 4HM6 AND THE 6HM6.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD #315 CONNECTED TO CATHODE	WITHOUT SHIELD	
GRID TO PLATE	0.024	0.031	pf
INPUT	8.70	8.70	pf
OUTPUT	3.00	2.15	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	3.15	VOLTS		600	MA.
HEATER WARM-UP TIME				11	SECONDS
LIMITS OF SUPPLIED CURRENT				600 ± 40	MA.
HEATER CATHODE VOLTAGE:					
HEATER NEGATIVE WITH RESPECT TO CATHODE					
TOTAL DC AND PEAK			MAX.	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE					
TOTAL DC AND PEAK			MAX.	200	VOLTS

CONTINUED ON FOLLOWING PAGE

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CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS

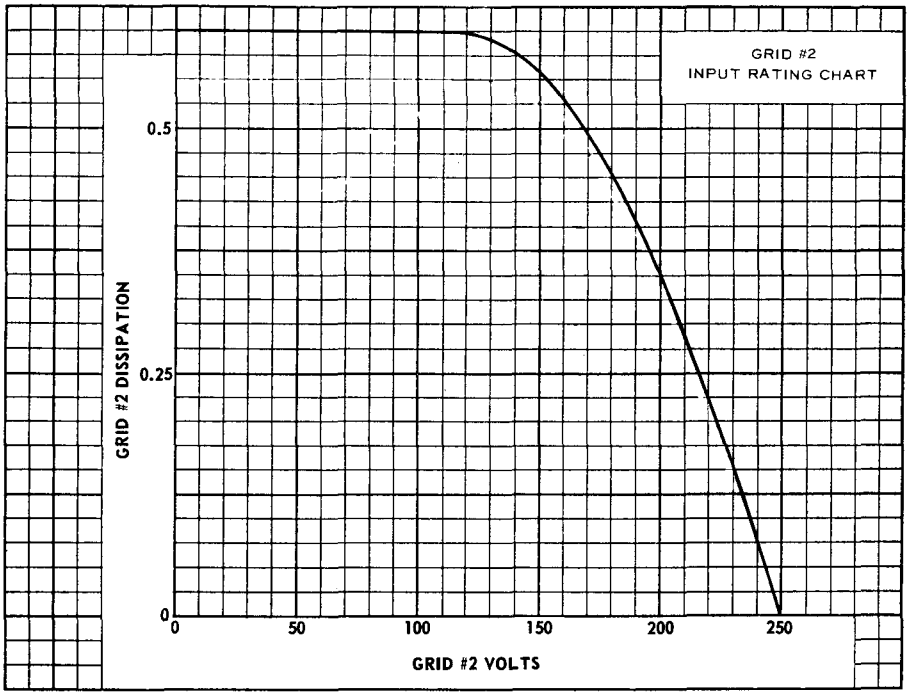
DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

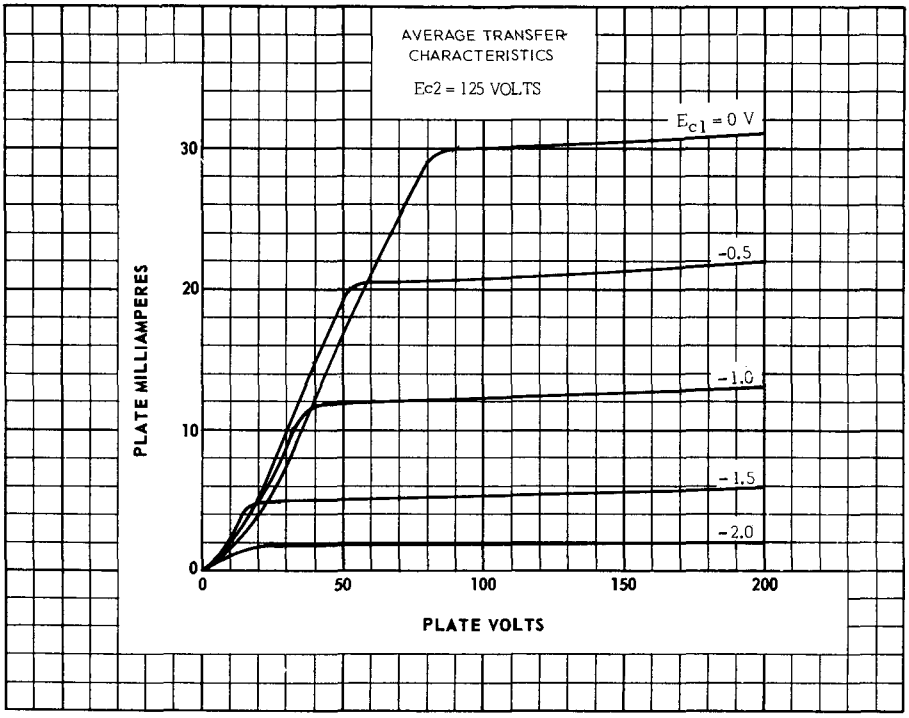
PLATE VOLTAGE	250	VOLTS
GRID 2 SUPPLY VOLTAGE	250	VOLTS
GRID 2 VOLTAGE	See Rating Chart	
NEGATIVE GRID 1 VOLTAGE	50	VOLTS
PLATE DISSIPATION	2.5	WATTS
GRID 2 DISSIPATION - UP TO 125 VOLTS	0.6	WATT
GRID 1 CIRCUIT RESISTANCE:		
CATHODE-BIAS RESISTOR	1	MEGOHM
FIXED BIAS	0.25	MEGOHM

CHARACTERISTICS AND TYPICAL OPERATION

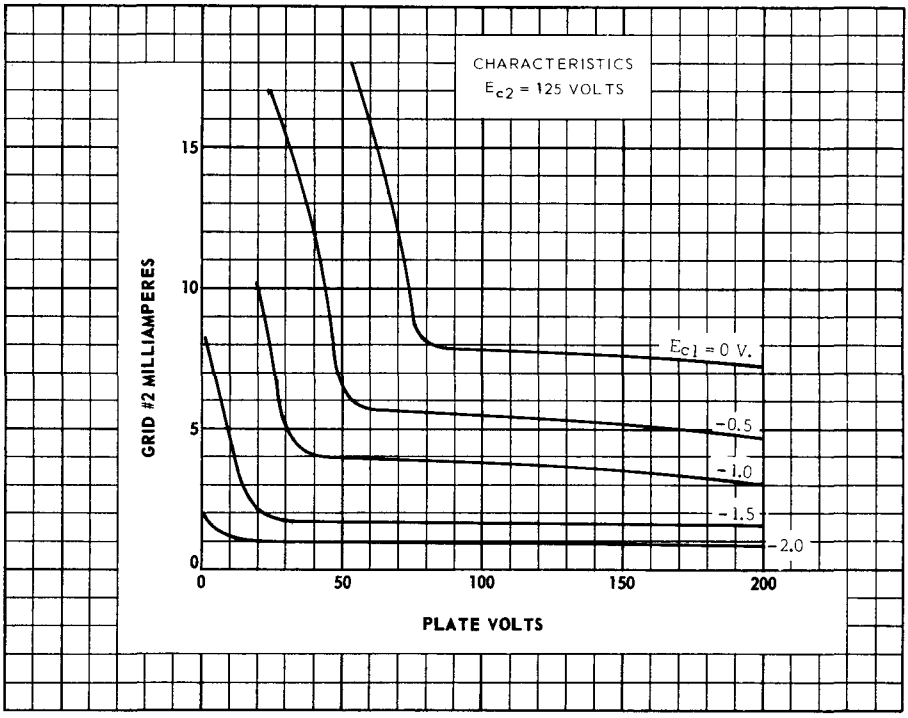
PLATE VOLTAGE	125	VOLTS
GRID 3 VOLTAGE	Connected To Cathode At Socket	
GRID 2 VOLTAGE	125	VOLTS
CATHODE-BIAS RESISTOR	56	OHMS
PLATE CURRENT	13	MA.
GRID 2 CURRENT	3.2	MA.
TRANSCONDUCTANCE	15,000	μMHOS
PLATE RESISTANCE	0.156	MEGOHM
HOT INPUT RESISTANCE [A]	13,000	OHMS
HOT INPUT CAPACITANCE [A]	7.4	pf
GRID 1 VOLTAGE AT Gm = 100 μMHOS	-3.0	VOLTS

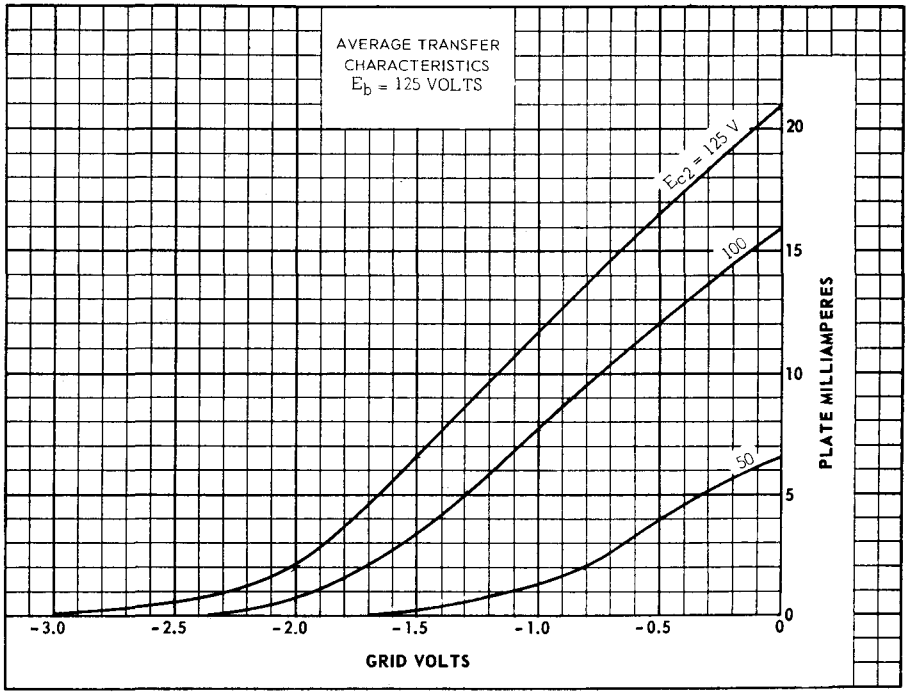
[A] MEASURED AT 44 MC/S WITH UNBYPASSED 56 OHM CATHODE RESISTOR.

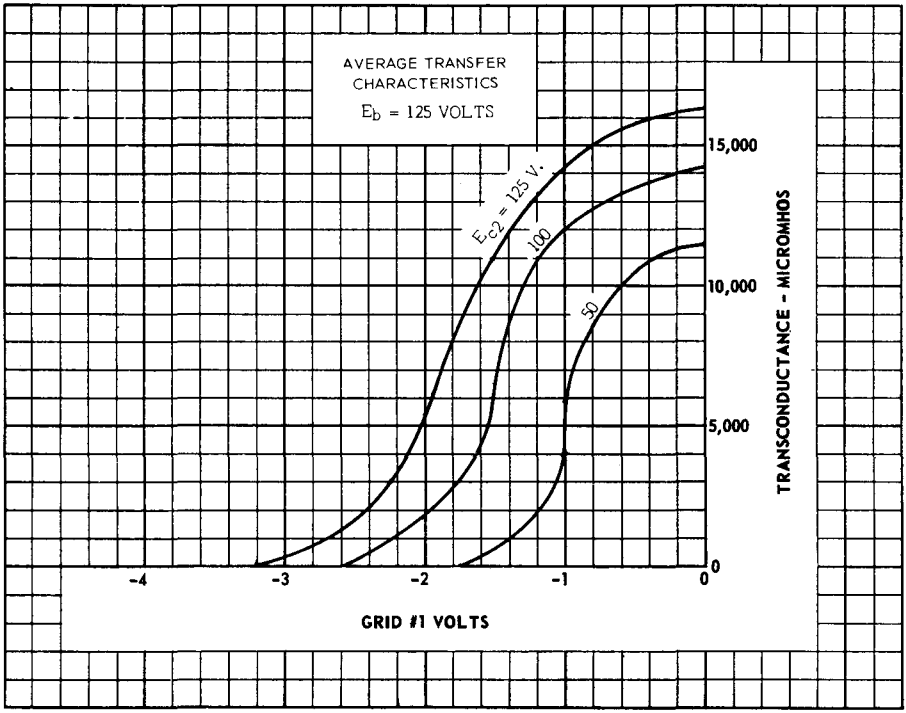

GRID #2
INPUT RATING CHART
GRID #2 DISSIPATION
0.5
0.25
0
0
50
100
150
200
250
GRID #2 VOLTS

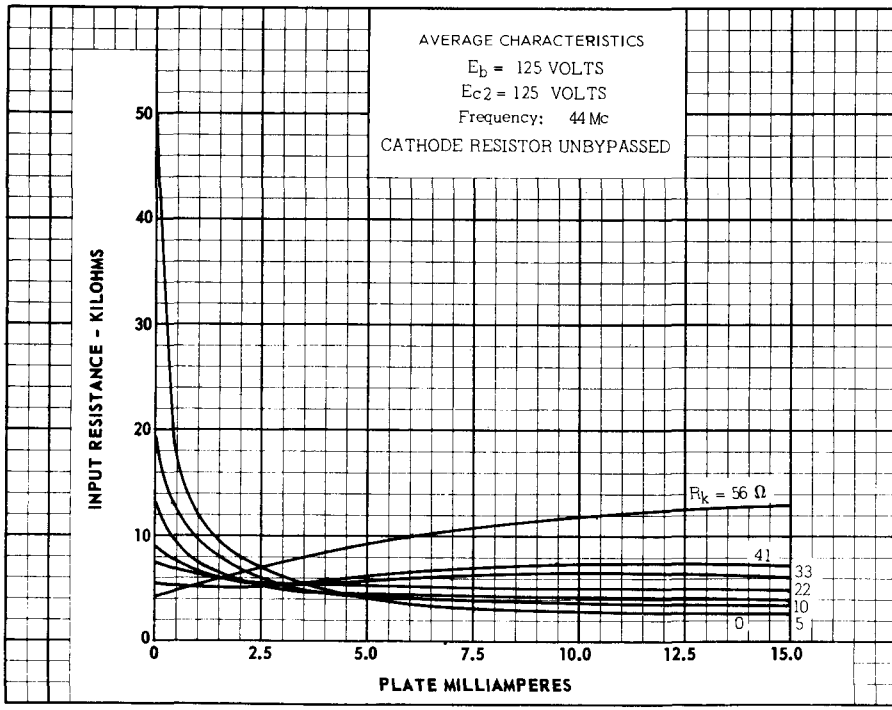

AVERAGE TRANSFER
CHARACTERISTICS
Ec2 = 125 VOLTS
Ec1 = 0 V
-0.5
-1.0
-1.5
-2.0
PLATE MILLIAMPERES
30
20
10
0
0
50
100
150
200
PLATE VOLTS

3HM6

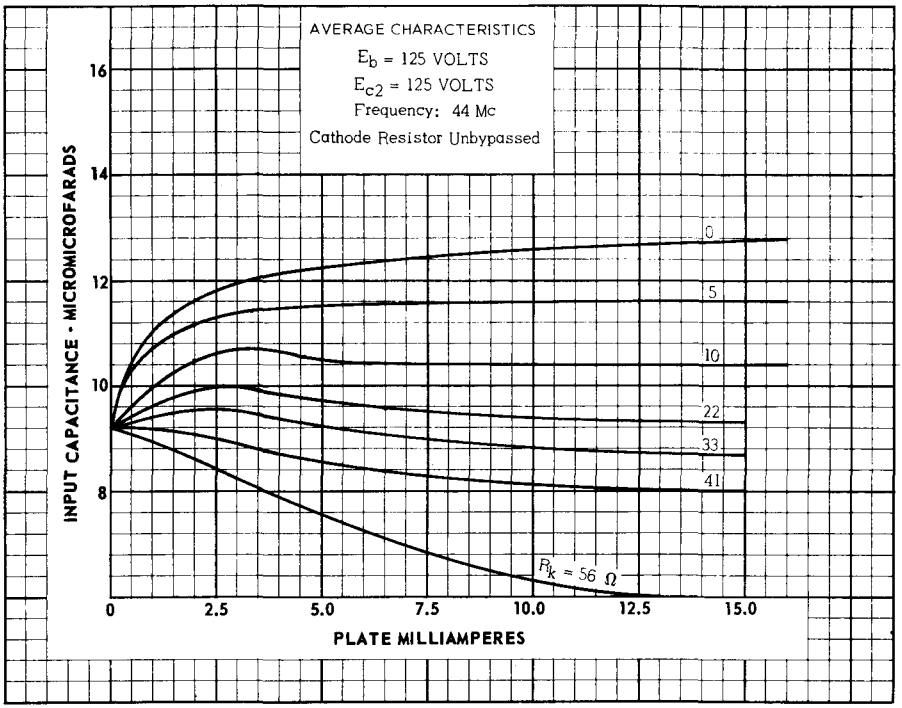

CHARACTERISTICS
E_{c2} = 125 VOLTS
GRID #2 MILLIAMPERES
15
10
5
0
E_{c1} = 0 V.
-0.5
-1.0
-1.5
-2.0
0
50
100
150
200
PLATE VOLTS


AVERAGE TRANSFER
CHARACTERISTICS
E_b = 125 VOLTS
E_{c2} = 125 V
100
50
20
15
10
5
0
PLATE MILLIAMPERES
-3.0
-2.5
-2.0
-1.5
-1.0
-0.5
0
GRID VOLTS


AVERAGE TRANSFER CHARACTERISTICS
Eb = 125 VOLTS
Ec2 = 125 V.
100
50
15,000
10,000
5,000
0
TRANSCONDUCTANCE - MICROMHOS
-4
-3
-2
-1
0
GRID #1 VOLTS


AVERAGE CHARACTERISTICS
Eb = 125 VOLTS
Ec2 = 125 VOLTS
Frequency: 44 Mc
CATHODE RESISTOR UNBYPASSED
INPUT RESISTANCE - KILOHMS
50
40
30
20
10
0
Rk = 56 Ω
41
33
22
10
5
0
0
2.5
5.0
7.5
10.0
12.5
15.0
PLATE MILLIAMPERES

3HM6


AVERAGE CHARACTERISTICS
E_b = 125 VOLTS
E_{c2} = 125 VOLTS
Frequency: 44 Mc
Cathode Resistor Unbypassed
INPUT CAPACITANCE - MICROMICROFARADS
16
14
12
10
8
0
2.5
5.0
7.5
10.0
12.5
15.0
PLATE MILLIAMPERES
0
5
10
22
33
41
R_k = 56 Ω