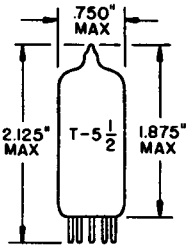
TUNG-SOL

PENTODE

MINIATURE TYPE

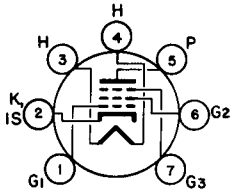
SHARP-CUTOFF PENTODE
WITH
DUAL CONTROL GRIDS



GLASS BULB
SMALL-BUTTON MINIATURE
7 PIN BASE E7-1
OUTLINE DRAWING
JEDEC 5-2

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 7EN

THE 6GY6 IS A SHARP-CUTOFF PENTODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED PRIMARILY FOR USE IN GATED AGC AMPLIFIER AND NOISE-INVERTER SERVICE. PLATE CURRENT IS CONTROLLED BY THE ACTIONS OF GRID 1 AND GRID 3.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID 1 TO PLATE	0.026	pf
GRID 1 TO CATHODE & I.S., GRID 3, GRID 2 & HEATER	8	pf
GRID 1 TO GRID 3	0.12	pf
GRID 3 TO PLATE	1.6	pf
GRID 3 TO CATHODE & I.S., PLATE, GRID 2, GRID 1 & HEATER	6.5	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES • SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3	VOLTS	450	MA.
HEATER WARM-UP TIME			11	SECONDS
LIMITS OF APPLIED VOLTAGE			6.3±0.6	VOLTS
LIMITS OF SUPPLIED CURRENT			450 ± 30	MA.
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:				
HEATER NEGATIVE WITH RESPECT TO CATHODE			200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			200	VOLTS
DC COMPONENT			100	VOLTS

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MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

GATED AGC AMPLIFIER AND NOISE-INVERTER SERVICE

PLATE VOLTAGE, DC	300	VOLTS
PEAK POSITIVE-PULSE PLATE VOLTAGE [A]	600	VOLTS
GRID 3 (CONTROL-GRID) VOLTAGE:		
POSITIVE VALUE	0	VOLTS
NEGATIVE VALUE	100	VOLTS
GRID 2 (SCREEN-GRID) SUPPLY VOLTAGE	300	VOLTS
GRID 1 (CONTROL-GRID) VOLTAGE:		
POSITIVE VALUE	0	VOLTS
NEGATIVE VALUE	50	VOLTS
PLATE DISSIPATION	1.7	WATTS
GRID 2 INPUT:		
FOR GRID 2 VOLTAGES UP TO 150 VOLTS	1.0	WATTS
FOR GRID 2 VOLTAGES BETWEEN 150 VOLTS AND 300 VOLTS	See Rating Chart	

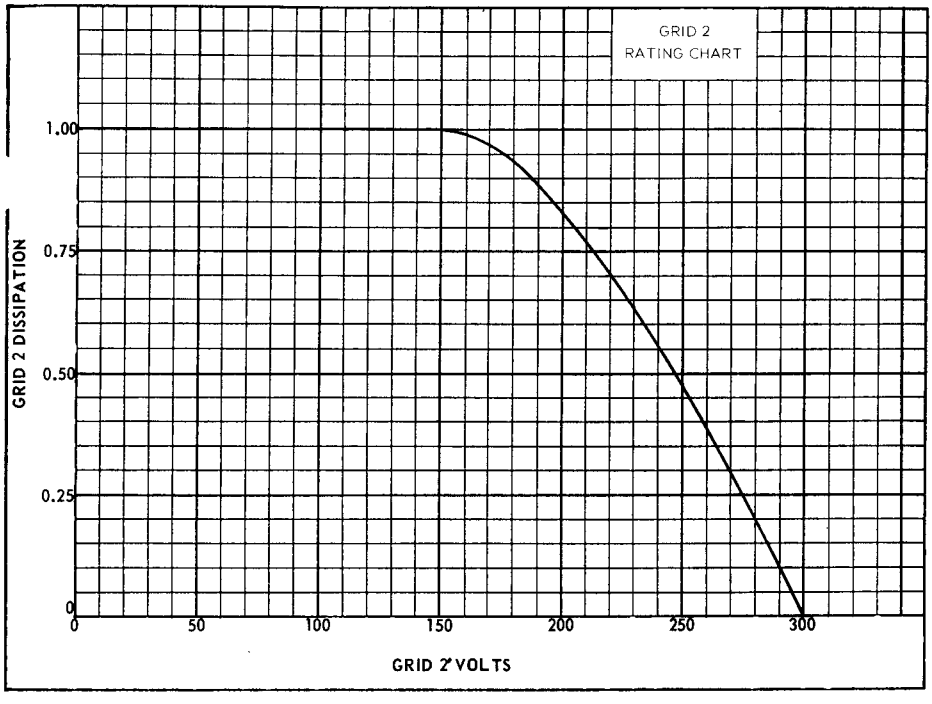
MAXIMUM CIRCUIT VALUES

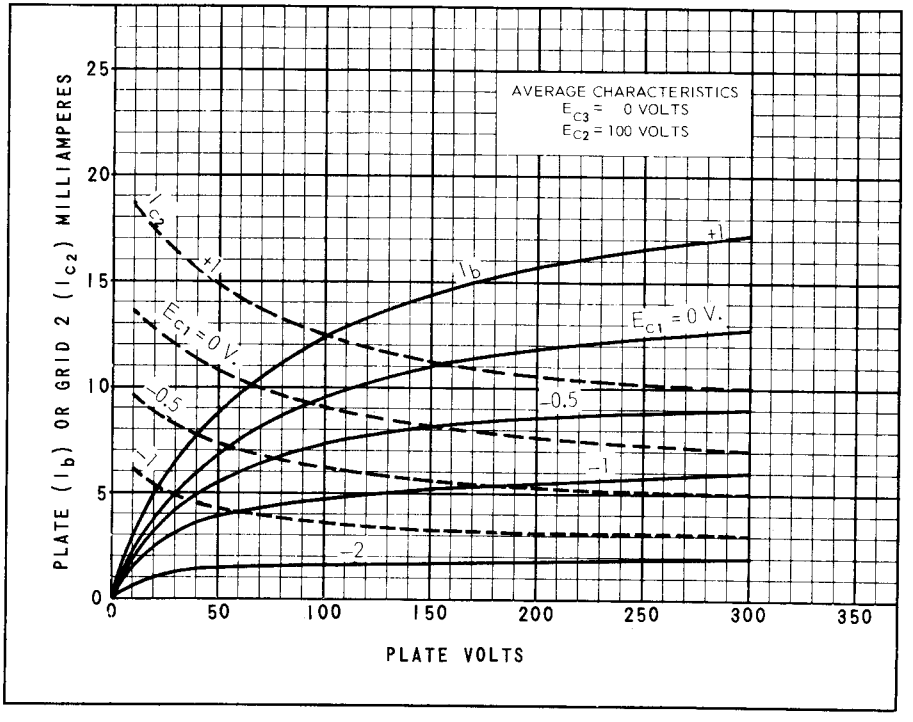
GRID 3 CIRCUIT RESISTANCE	0.68	MEGOHM
GRID 1 CIRCUIT RESISTANCE:		
FOR FIXED-BIAS OPERATION	0.22	MEGOHM
FOR CATHODE-BIAS OPERATION	0.47	MEGOHM

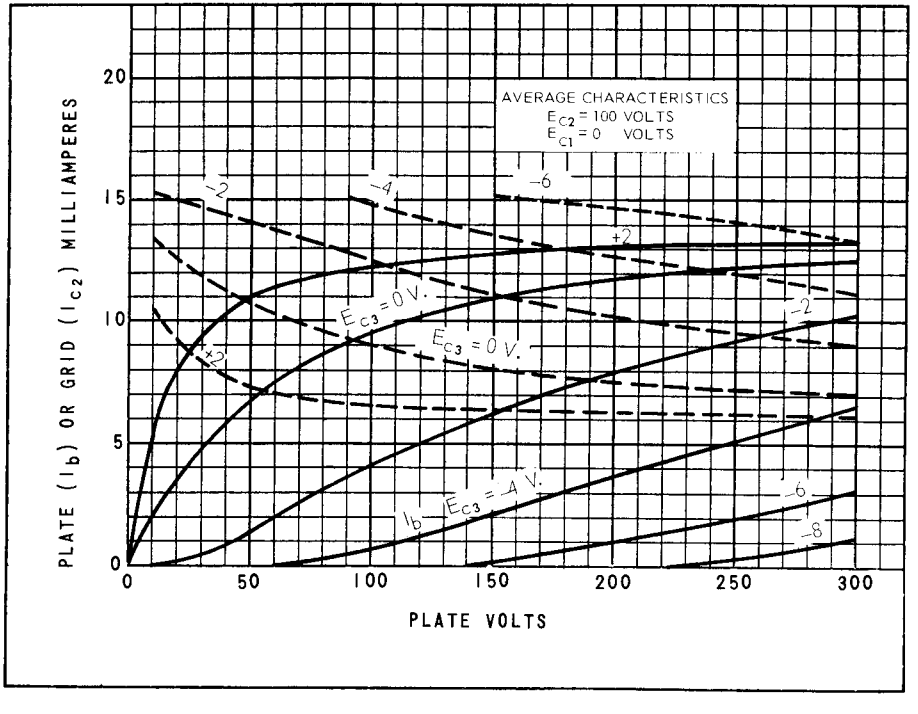
CHARACTERISTICS

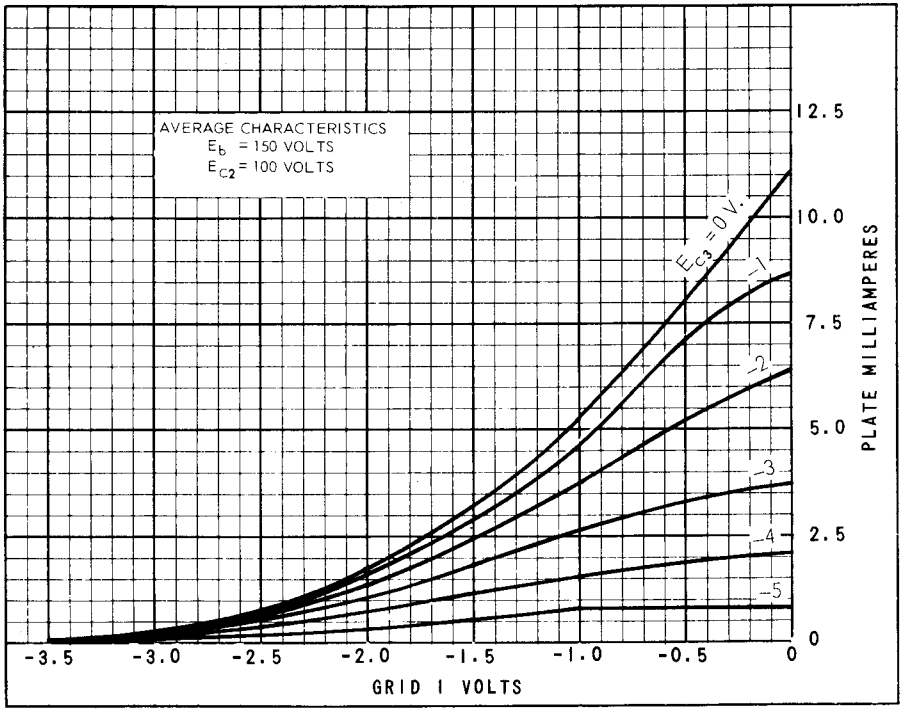
PLATE SUPPLY VOLTAGE		150	VOLTS
GRID 3 SUPPLY VOLTAGE		0	VOLTS
GRID 2 SUPPLY VOLTAGE		100	VOLTS
GRID 1 SUPPLY VOLTAGE		0	VOLTS
CATHODE BIAS RESISTOR		180	OHMS
PLATE CURRENT		3.7	MA.
GRID 2 CURRENT		3	MA.
TRANSCONDUCTANCE, GRID 1 TO PLATE		3700	μMHOS
TRANSCONDUCTANCE, GRID 3 TO PLATE		750	μMHOS
PLATE RESISTANCE	(APPROX.)	0.14	MEGOHM
GRID 1 SUPPLY VOLTAGE FOR I_b = 20 μA	(APPROX.)	-4.5	VOLTS
GRID 3 SUPPLY VOLTAGE FOR I_b = 20 μA	(APPROX.)	-7	VOLTS

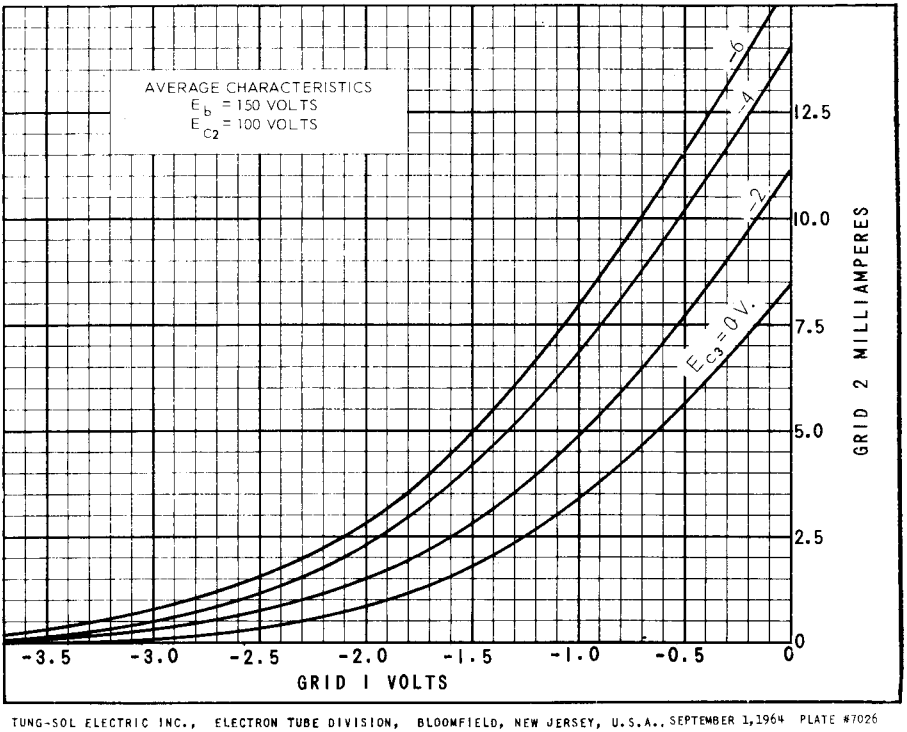
[A] THE DURATION OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE HORIZONTAL SCANNING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM, 15% OF ONE HORIZONTAL SCANNING CYCLE IS 10 MICROSECONDS.


GRID 2
RATING CHART
GRID 2 DISSIPATION
1.00
0.75
0.50
0.25
0
0
50
100
150
200
250
300
GRID 2 VOLTS


AVERAGE CHARACTERISTICS
E_{C3} = 0 VOLTS
E_{C2} = 100 VOLTS
PLATE (I_b) OR GRID 2 (I_{C2}) MILLIAMPERES
PLATE VOLTS
I_{C2}
I_b
+1
E_{C1} = 0 V.
-0.5
-1
-2
0
5
10
15
20
25
50
100
150
200
250
300
350


AVERAGE CHARACTERISTICS
E_{C2} = 100 VOLTS
E_{C1} = 0 VOLTS
PLATE (I_b) OR GRID (I_{C2}) MILLIAMPERES
PLATE VOLTS
-2
-4
-6
+2
E_{C3} = 0 V.
I_b
E_{C3} = -4 V.
-8
0
5
10
15
20
50
100
150
200
250
300


AVERAGE CHARACTERISTICS
E_b = 150 VOLTS
E_{C2} = 100 VOLTS
E_{C3} = 0 V.
-1
-2
-3
-4
-5
12.5
10.0
7.5
5.0
2.5
0
PLATE MILLIAMPERES
-3.5
-3.0
-2.5
-2.0
-1.5
-1.0
-0.5
0
GRID 1 VOLTS


AVERAGE CHARACTERISTICS
E_b = 150 VOLTS
E_{C2} = 100 VOLTS
-6
-4
-2
E_{C3} = 0 V.
12.5
10.0
7.5
5.0
2.5
0
GRID 2 MILLIAMPERES
-3.5
-3.0
-2.5
-2.0
-1.5
-1.0
-0.5
0
GRID 1 VOLTS