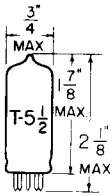
TUNG-SOL

PENTODE

MINIATURE TYPE

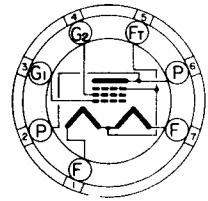


GLASS BULB

COATED FILAMENT

SERIES FILAMENT		PARALLEL FILAMENT	
E_f	APPLIED BETWEEN PINS 1 & 7	E_f	APPLIED BETWEEN PIN 5 AND PINS 1 & 7 TIED TOGETHER
E_{g1}	REFERRED TO PIN 1	E_{g1}	REFERRED TO PIN -F
2.8 VOLTS 50 MA.		1.4 VOLTS 100 MA.	

DC



BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE

A SHUNTING RESISTOR MUST BE CONNECTED BETWEEN PINS 1 AND 5 FOR SERIES-FILAMENT OPERATION TO BY-PASS ANY CATHODE CURRENT IN EXCESS OF THE 5.5 MA. RATED MAXIMUM PER SECTION. AN ADDITIONAL SHUNTING RESISTOR MAY BE NECESSARY BETWEEN PINS 1 & 7 IF OTHER TUBES USED IN SERIES FILAMENT ARRANGEMENT CONTRIBUTE TO THE FILAMENT CURRENT OF THE 3S4.

ANY MOUNTING POSITION

THE 3S4 IS A FILAMENTARY TYPE POWER OUTPUT PENTODE IN THE MINIATURE CONSTRUCTION. IT IS CHARACTERIZED BY ECONOMY OF FILAMENT POWER AND ABILITY TO PERFORM WELL AT LOW PLATE SUPPLY VOLTAGES SUCH AS ENCOUNTERED IN PORTABLE EQUIPMENT.

RATINGS

INTERPRETED ACCORDING TO DESIGN-MAXIMUM SYSTEM

	SERIES FILAMENT	PARALLEL FILAMENT	
FILAMENT VOLTAGE	2.8	1.4	VOLTS
MAXIMUM PLATE VOLTAGE	90	90	VOLTS
MAXIMUM GRID #2 VOLTAGE	67.5	67.5	VOLTS
MAXIMUM CATHODE CURRENT	6[A] ←	6[A] ←	MA. MA.

[A] FOR EACH 1.4 FILAMENT SECTION.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

	SERIES FILAMENT		PARALLEL FILAMENT		
FILAMENT VOLTAGE	2.8	2.8	1.4	1.4	VOLTS
FILAMENT CURRENT	50	50	100	100	MA.
PLATE VOLTAGE	67.5	90	67.5	90	VOLTS
GRID #2 VOLTAGE	67.5	67.5	67.5	67.5	VOLTS
GRID #1 VOLTAGE	-7	-7	-7	-7	VOLTS
PEAK AF SIGNAL VOLTAGE	7	7	7	7	VOLTS
PLATE RESISTANCE (APPROX.)	0.1	0.1	0.1	0.1	MEGOHM
TRANSCONDUCTANCE	1 400	1 425	1 550	1 575	μMHOS
ZERO-SIGNAL PLATE CURRENT	6	6.1	7.2	7.4	MA.
ZERO-SIGNAL GRID #2 CURRENT	1.2	1.1	1.5	1.4	MA.
LOAD RESISTANCE	5 000	8 000	5 000	8 000	OHMS
TOTAL HARMONIC DISTORTION	12	13	10	12	PERCENT
MAXIMUM-SIGNAL POWER OUTPUT	160	235	180	270	MW

→ INDICATES A CHANGE.

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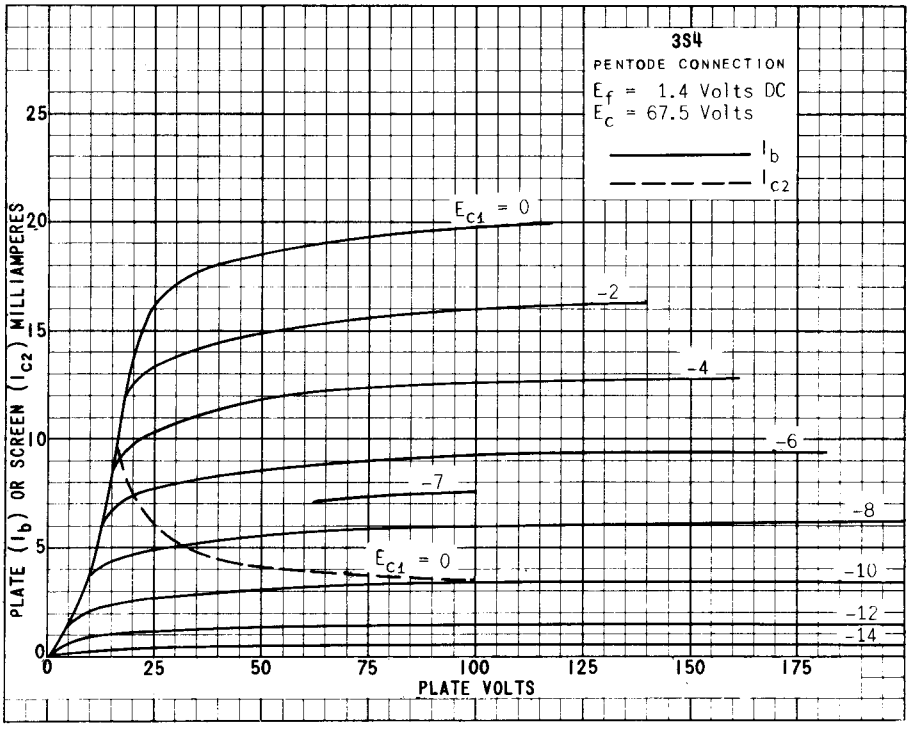
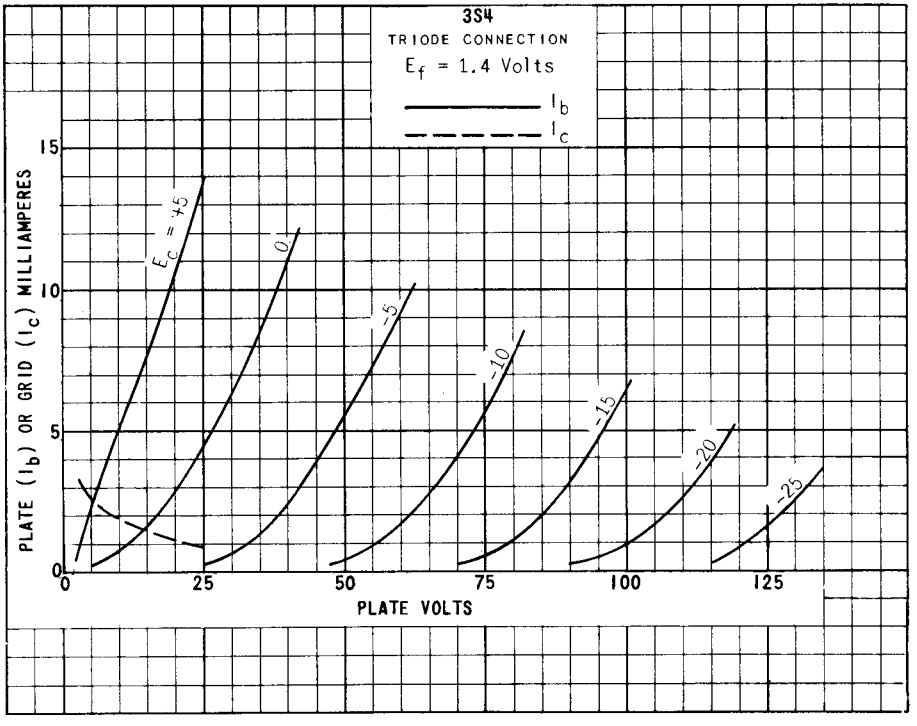
3S4


3S4
PENTODE CONNECTION
E_f = 1.4 Volts DC
E_c = 67.5 Volts
I_b
I_{c2}
E_{c1} = 0
-2
-4
-6
-7
-8
E_{c1} = 0
-10
-12
-14
PLATE (I_b) OR SCREEN (I_{c2}) MILLIAMPERES
PLATE VOLTS
0
25
50
75
100
125
150
175
5
10
15
20


3S4
TRIODE CONNECTION
E_f = 1.4 Volts
I_b
I_c
E_c = +5
0
-5
-10
-15
-20
-25
PLATE (I_b) OR GRID (I_c) MILLIAMPERES
PLATE VOLTS
0
25
50
75
100
125
5
10
15

3S4
PENTODE CONNECTION
E_f = 1.4 Volts DC
——— P_o
– – – – – Dist.

CURVE	PLATE VOLTS	SCREEN VOLTS	GRID VOLTS	SIGNAL VOLTS
1	45	45	-4.5	3.2
2	67.5	67.5	-7	4.95
3	90	67.5	-7	4.95

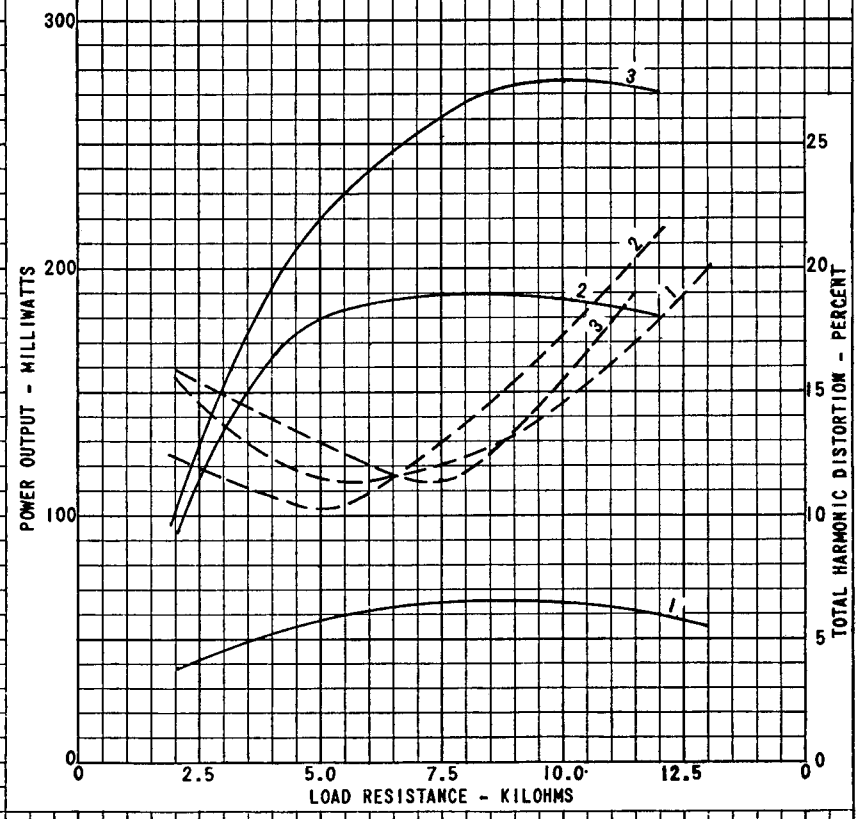


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PLATE
1986
MAR. 1,
1948