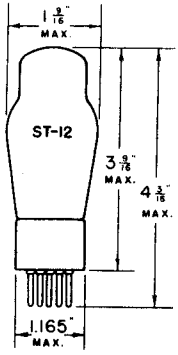
TRIODE AMPLIFIER

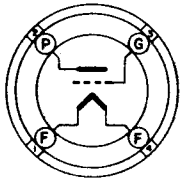


COATED FILAMENT

2.0 VOLTS 0.06 AMPERE
DC

GLASS BULB

SMALL 4 PIN BASE



4D

THE TUNG-SOL 30 IS A GENERAL PURPOSE FILAMENT TYPE TRIODE DESIGNED FOR SERVICE IN BATTERY OPERATED RECEIVERS. WITH THE EXCEPTION OF CAPACITANCES ITS RATINGS AND CHARACTERISTICS ARE IDENTICAL WITH THOSE OF THE 1H4G.

OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A1 AMPLIFIER

PLATE VOLTAGE	90	135	180 MAX.	VOLTS
GRID VOLTAGE	-4.5	-9.0	-13.5	VOLTS
GRID CIRCUIT RESISTANCE MAX.	2	2	2	MEGOHMS
PLATE CURRENT	2.5	3.0	3.1	MA.
PLATE RESISTANCE	11 000	10 300	10 300	OHMS
TRANSCONDUCTANCE	850	900	900	μMHOS
AMPLIFICATION FACTOR	9.3	9.3	9.3	

DETECTOR

	BIASED			GRID LEAK	
PLATE VOLTAGE	90	135	180 MAX.	45 MAX.	VOLTS
GRID VOLTAGE	-9 A	-13.5 A	-18 A	RETURN TO (+) FILAMENT	VOLTS
PLATE CURRENT P	ADJUST TO 0.2 MA. WITH NO INPUT SIGNAL			–	
GRID LEAK	–	–	–	1 TO 5	MEGOHMS
GRID CONDENSER	–	–	–	250	μμf

A APPROXIMATE, GRID RETURN TO NEGATIVE END OF FILAMENT.

P WITH MAXIMUM SIGNAL THE AVERAGE DC PLATE CURRENT SHOULD NOT EXCEED 2.0 MA.

CONTINUED NEXT PAGE

CLASS B_2 AMPLIFIER

PLATE VOLTAGE	180 MAX.	VOLTS
PEAK PLATE CURRENT PER TUBE	50 MAX.	MA.
ZERO-SIGNAL PLATE CURRENT PER TUBE	1.5 MAX.	MA.

TYPICAL OPERATING CONDITIONS

VALUES ARE FOR TWO TUBES

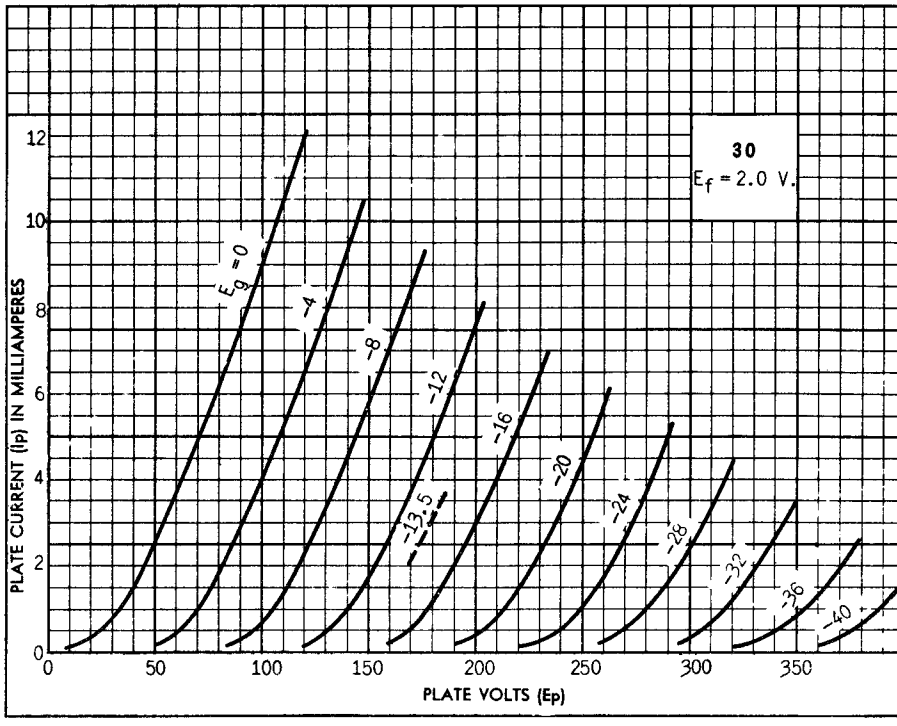
PLATE VOLTAGE	157.5	VOLTS
GRID VOLTAGE	-15	VOLTS
ZERO-SIGNAL PLATE CURRENT	1	MA.
LOAD RESISTANCE PER TUBE	2000	OHMS
EFFECTIVE LOAD RESISTANCE PLATE TO PLATE	8000	OHMS
PEAK POWER INPUT GRID TO GRID	260 MAX.	MILLIWATTS
POWER OUTPUT[D] (6% TO 7% DISTORTION)	2.1	WATTS

[D] WITH ONE TYPE 30 AS DRIVER, OPERATED WITH PLATE VOLTAGE = 157.5 VOLTS, GRID VOLTAGE = -11.3 VOLTS, PLATE LOAD OF APPROXIMATELY 18,000 OHMS, AND INPUT TRANSFORMER RATIO, PRIMARY TO ONE HALF SECONDARY = 1.165.

DIRECT INTERELECTRODE CAPACITANCES

GRID TO FILAMENT	3.0	μμf
PLATE TO FILAMENT	2.2	μμf
GRID TO PLATE	6.0	μμf

PLATE
187-1



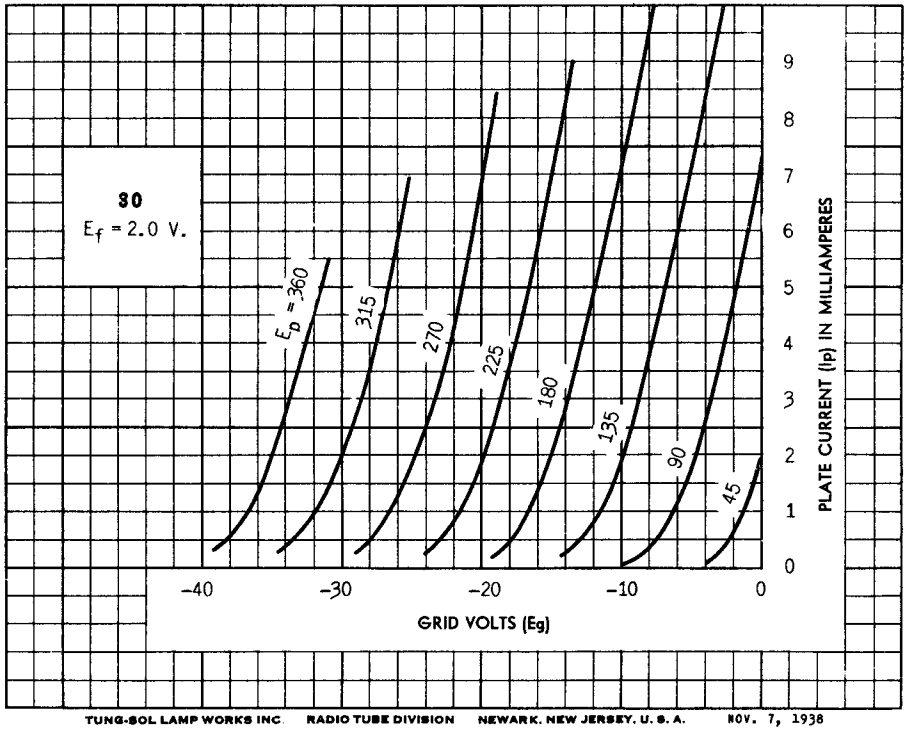


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PLATE
158-1

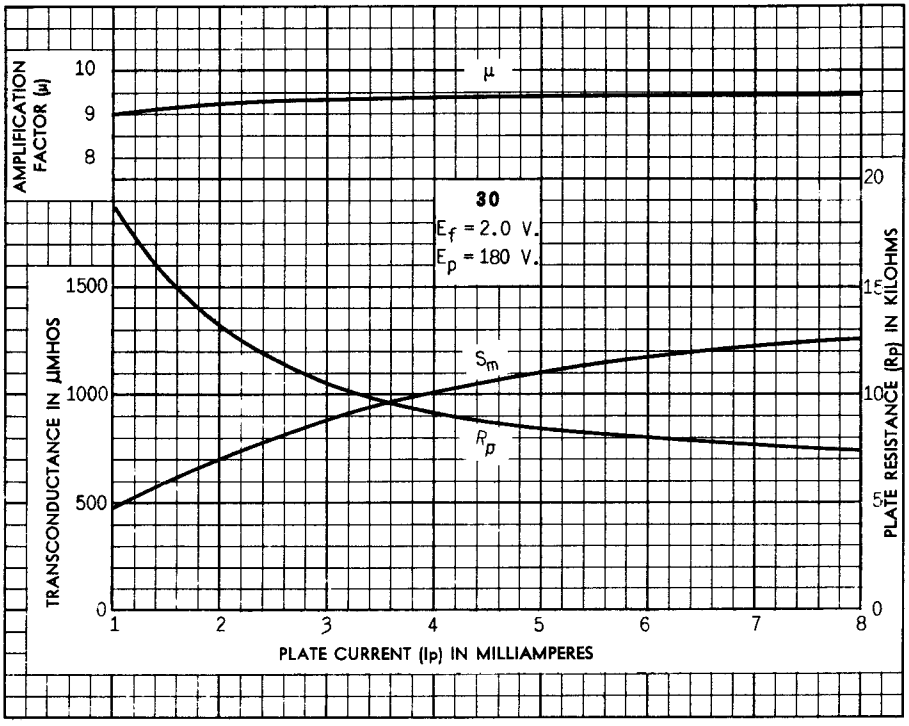
AMPLIFICATION FACTOR (μ)
10
9
8
μ
30
E_f = 2.0 V.
E_p = 180 V.
1500
1000
500
0
TRANSCONDUCTANCE IN μMHOS
S_m
R_p
20
15
10
5
0
PLATE RESISTANCE (Rp) IN KILOHMS
1
2
3
4
5
6
7
8
PLATE CURRENT (Ip) IN MILLIAMPERES

PLATE
159-1