TUNG-SOL

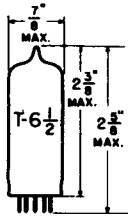
HEPTODE

MINIATURE TYPE

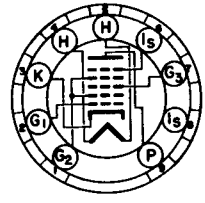
UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 150 MA.
AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW
SMALL BUTTON
9 PIN BASE

THE 12BA7 IS A CATHODE TYPE HIGH GAIN PENTAGRID CONVERTER IN THE SMALL 9-PIN BUTTON CONSTRUCTION. IT IS DESIGNED FOR SERVICE AS A COMBINED LOCAL OSCILLATOR AND MIXER AT HIGH FREQUENCIES, ESPECIALLY IN THE FM BROADCAST BAND.

DIRECT INTERELECTRODE CAPACITANCES
WITH NO EXTERNAL SHIELD

GRID #3 TO PLATE: (G_3 TO P) MAX.	0.19	μμf
GRID #1 TO GRID #3: (G_1 TO G_3) MAX.	0.1	μμf
GRID #1 TO PLATE: (G_1 TO P) MAX.	0.05	μμf
GRID #1 TO CATHODE: (G_1 TO K)	3.3	μμf
GRID #1 TO ALL EXCEPT CATHODE: G_1 TO (H+G_2&G_4+G_3+G_5+P+IS)	3.4	μμf
CATHODE TO ALL EXCEPT GRID #1: K TO (H+G_2&G_4+G_3+G_5+P+IS)	4	μμf
RF INPUT: G_3 TO (H+K+G_1+G_2&G_4+G_5+P+IS)	9.5	μμf
OSCILLATOR INPUT: G_1 TO (H+K+G_2&G_4+G_3+G_5+P+IS)	6.7	μμf
MIXER OUTPUT: P TO (H+K+G_1+G_2&G_4+G_3+G_5+IS)	8.3	μμf

RATINGS
INTERPRETED ACCORDING TO RMA STANDARD M8-210

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	90	VOLTS
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM GRIDS #2 & #4 VOLTAGE	100	VOLTS
MAXIMUM GRIDS #2 & #4 SUPPLY VOLTAGE	300	VOLTS
MAXIMUM NEGATIVE GRID #3 VOLTAGE	100	VOLTS
MAXIMUM POSITIVE GRID #3 VOLTAGE	0	VOLTS
MAXIMUM GRID #5 & INTERNAL SHIELD VOLTAGE[A]	0	VOLTS
MAXIMUM PLATE DISSIPATION	2	WATTS
MAXIMUM GRIDS #2 & #4 DISSIPATION	1.5	WATTS
MAXIMUM CATHODE CURRENT	22	MA.

[A] INTERNAL SHIELD (PINS #6 AND #8) CONNECTED DIRECTLY TO GROUND.

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CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CONVERTER SERVICE - SEPARATE EXCITATION

THE CHARACTERISTICS SHOWN WITH SEPARATE EXCITATION CORRESPOND VERY CLOSELY WITH THOSE OBTAINED IN A SELF-EXCITED OSCILLATOR CIRCUIT OPERATING WITH ZERO BIAS.

HEATER VOLTAGE	12.6	12.6	VOLTS
HEATER CURRENT	150	150	MA.
PLATE VOLTAGE	100	250	VOLTS
GRIDS #2 & #4 VOLTAGE	100	100	VOLTS
GRID #3 VOLTAGE	-1	-1	VOLTS
GRID #5 AND INTERNAL SHIELD[A]	CONNECTED DIRECTLY TO GROUND		
GRID #1 RESISTOR	20 000	20 000	OHMS
PLATE RESISTANCE (APPROX.)	0.5	1	MEGOHM
CONVERSION TRANSCONDUCTANCE	900	950	µMHOS
PLATE CURRENT	3.6	3.8	MA.
GRIDS #2 & #4 CURRENT	10.2	10	MA.
GRID #1 CURRENT	0.35	0.35	MA.
TOTAL CATHODE CURRENT	14.2	14.2	MA.
CONVERSION TRANSCONDUCTANCE WITH E_{C3} = -20 VOLTS	3.5	3.5	µMHOS

[A] INTERNAL SHIELD (PINS #6 AND #8) CONNECTED DIRECTLY TO GROUND.

OSCILLATOR TRANSCONDUCTANCE

NOT OSCILLATING

GRID #3 VOLTAGE	0	VOLTS
GRID #1 VOLTAGE	0	VOLTS
GRIDS #2 & #4 CONNECTED TO PLATE	100	VOLTS
PLATE CURRENT	32	MA.
TRANSCONDUCTANCE BETWEEN GRID #1 & GRIDS #2 & #4 CONNECTED TO PLATE	8 000	µMHOS
AMPLIFICATION FACTOR	16.5	

SIMILAR TYPE REFERENCE: Except for heater ratings similar to 6SB7Y.

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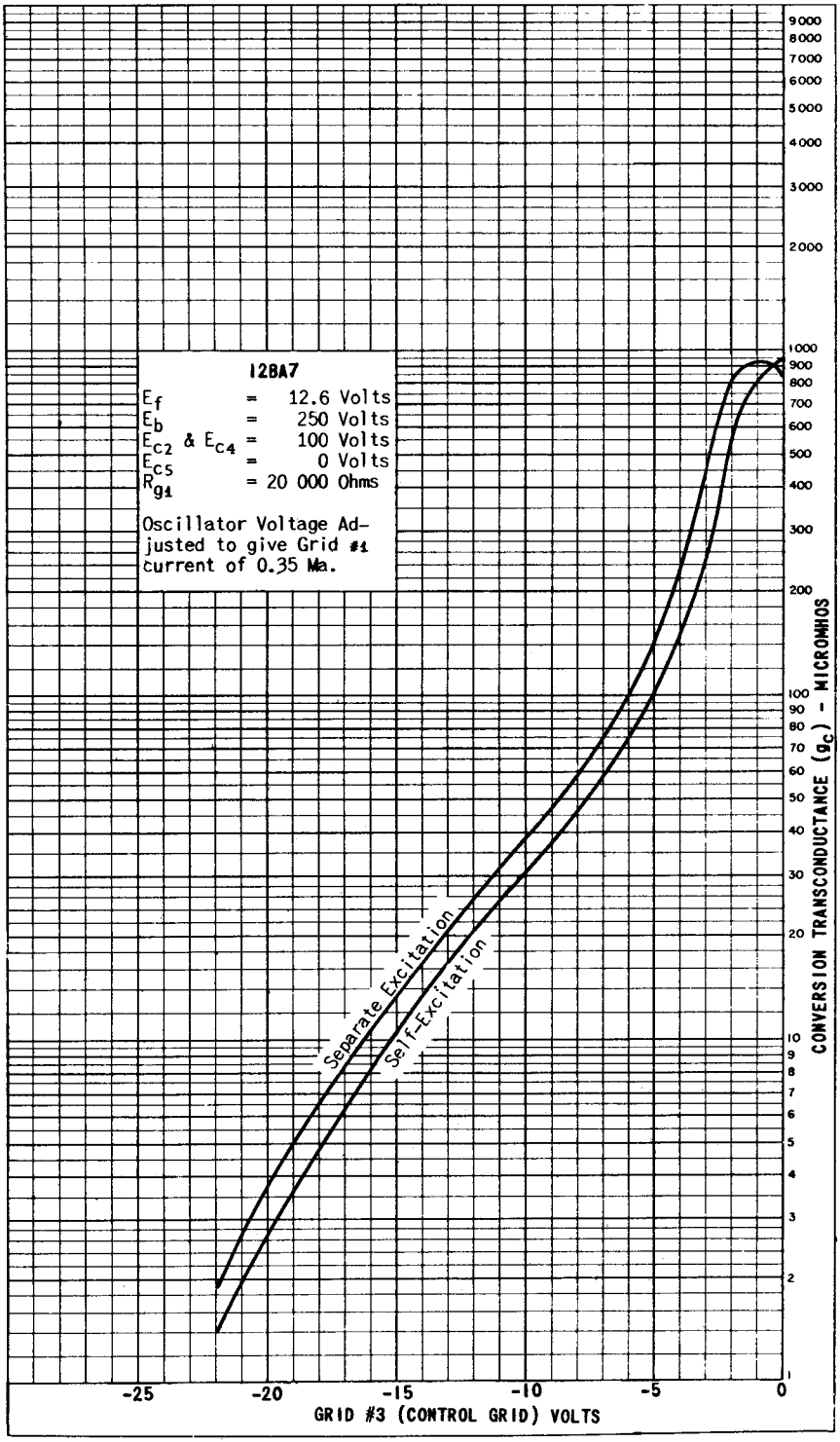

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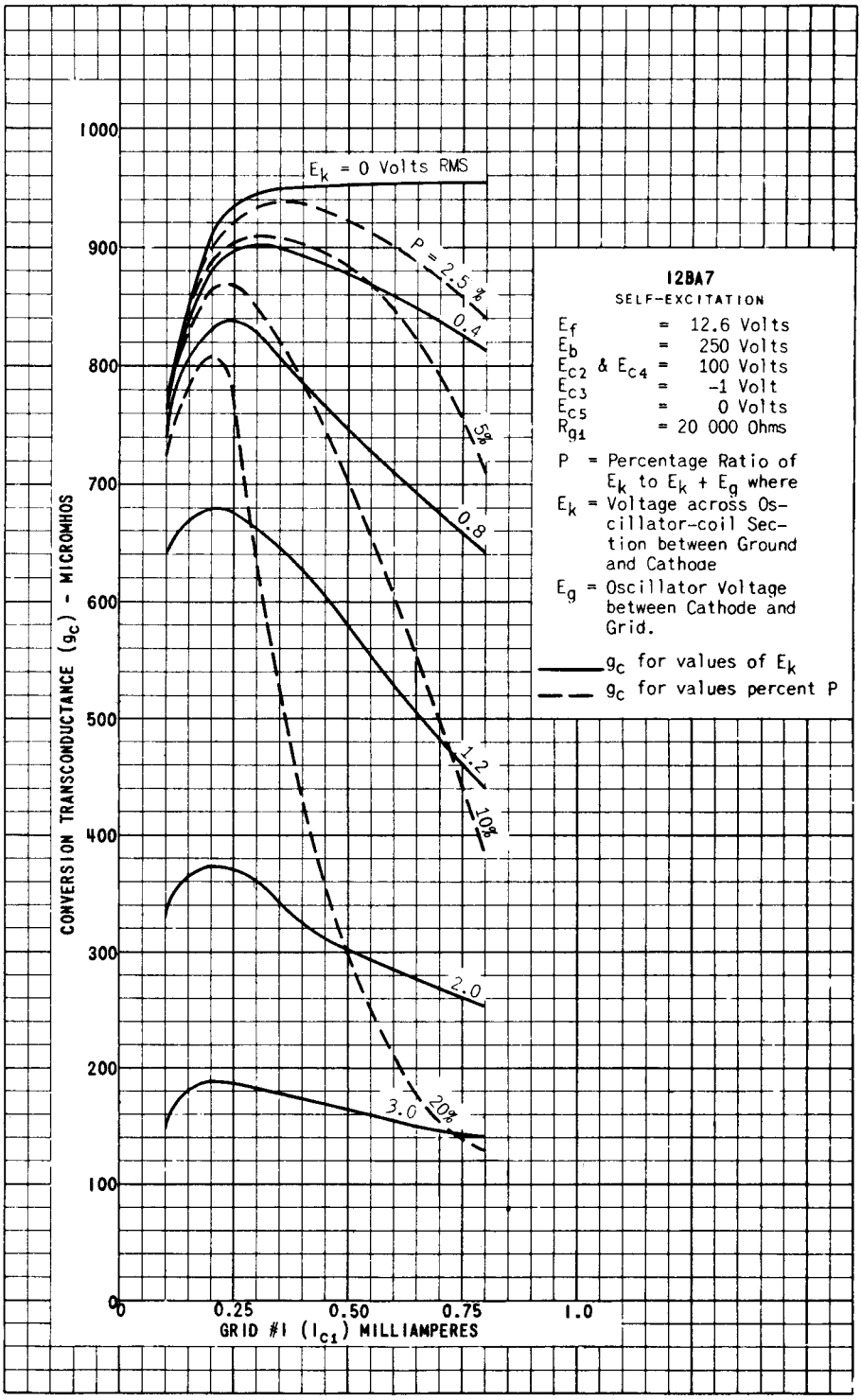
12BA7



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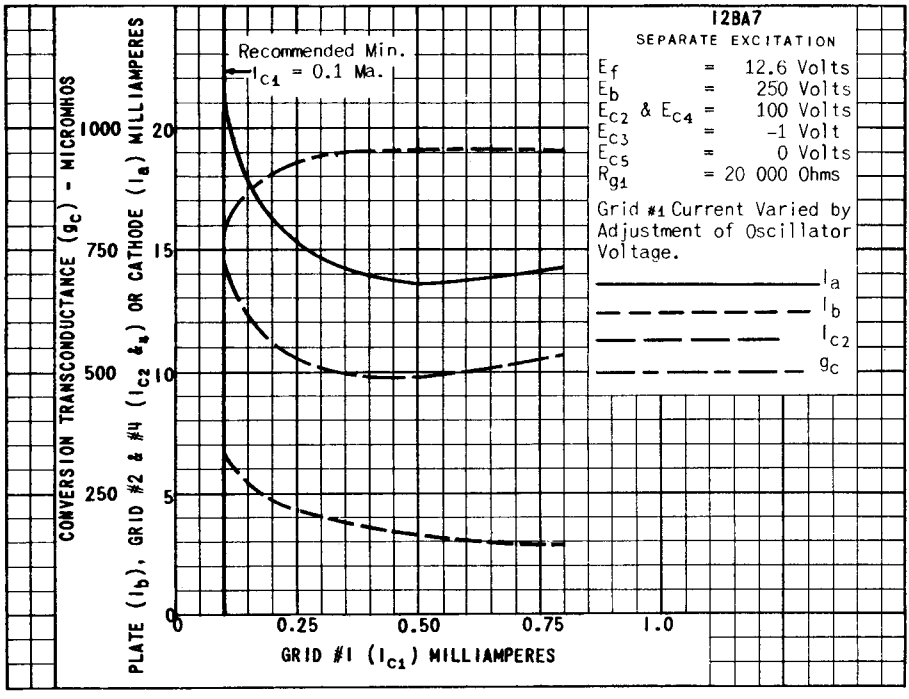

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