



18FX6

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PENTAGRID CONVERTER

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	18 ± 10%	volts
Current	0.1	amp

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^o	
Grid No.3 to all other elec- trodes (RF input)	7	7	μf
Plate to all other electrodes (Mixer input)	8	13	μf
Grid No.1 to all other elec- trodes (Oscillator input) . .	5.5	5.5	μf
Grid No.3 to plate.	0.30 max.	0.25 max.	μf
Grid No.3 to grid No.1. . . .	0.15 max.	0.15 max.	μf
Grid No.1 to plate.	0.1	0.05	μf
Grid No.1 to cathode & grid No.5.	3	3	μf
Cathode & grid No.5 to all other electrodes except grid No.1 .	15	20	μf

Mechanical:

Operating Position. Any

Maximum Overall Length. 2-1/8"

Maximum Seated Length 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip). . . 1-1/2" ± 3/32"

Diameter. 0.650" to 0.750"

Dimensional Outline See General Section

Bulb. T5-1/2

Base. Small-Button Miniature 7-Pin (JEDEC No.E7-1)

Basing Designation for BOTTOM VIEW. 7CH

Pin 1 - Grid No.1
Pin 2 - Cathode,
Grid No.5
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Grid No.2,
Grid No.4
Pin 7 - Grid No.3

CONVERTER

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	150 max.	volts
GRIDS-No.2 & No.4 (SCREEN-GRIDS) SUPPLY VOLTAGE.	150 max.	volts
GRIDS-No.2 & No.4 VOLTAGE	110 max.	volts
GRIDS-No.2 & No.4 INPUT	1.2 max.	watts
PLATE DISSIPATION	1 max.	watt

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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode.	100 max.	volts
Heater positive with respect to cathode.	100 max.	volts

Characteristics:

*With Separate Excitation**

Plate Voltage	100	volts
Grids-No.2 & No.4 Voltage	100	volts
Grid-No.3 Voltage	-1.5	volts
Grid-No.1 Resistor.	20000	ohms
Plate Resistance (Approx.).	0.4	megohm
Conversion Transconductance	480	μ mhos
Plate Current	2.3	ma
Grids-No.2 & No.4 Current	6.2	ma
Grid-No.1 Current	0.5	ma
Total Cathode Current	9	ma
Grid-No.3 Voltage (Approx.) for conversion transconductance (μ mhos) = 10.	-21	volts

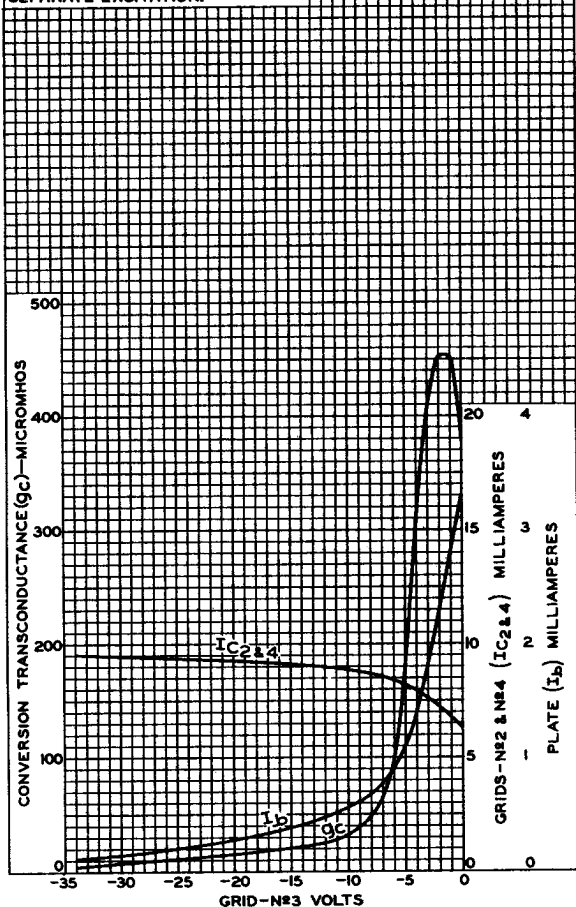
Oscillator Characteristics (Not Oscillating):^o

Plate & Grids-No.2 & No.4 Voltage . . .	100	volts
Grid-No.3 Voltage	0	volts
Grid-No.1 Voltage	0	volts
Amplification Factor†	22	
Oscillator Transconductance†.	7000	μ mhos
Cathode Current	24	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 20	-9.2	volts

^o With external shield JEDEC No.316 connected to cathode.^{*} The characteristics shown with separate excitation correspond very closely with those obtained in a self-excited-oscillator circuit operating with zero bias.[†] With grids No.2 & No.4 connected to plate.[‡] Between grid No.1 and grids No.2 & No.4 connected to plate.

AVERAGE CHARACTERISTICS

$E_f = 18$ VOLTS
 PLATE VOLTS = 100
 GRIDS-N $\#$ 2 & N $\#$ 4 VOLTS = 100
 GRID-N $\#$ 1 MILLIAMPERES = 0.5
 GRID-N $\#$ 1 RESISTOR (OHMS) = 20 000
 SEPARATE EXCITATION.



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AVERAGE CHARACTERISTICS

$E_f = 18$ VOLTS

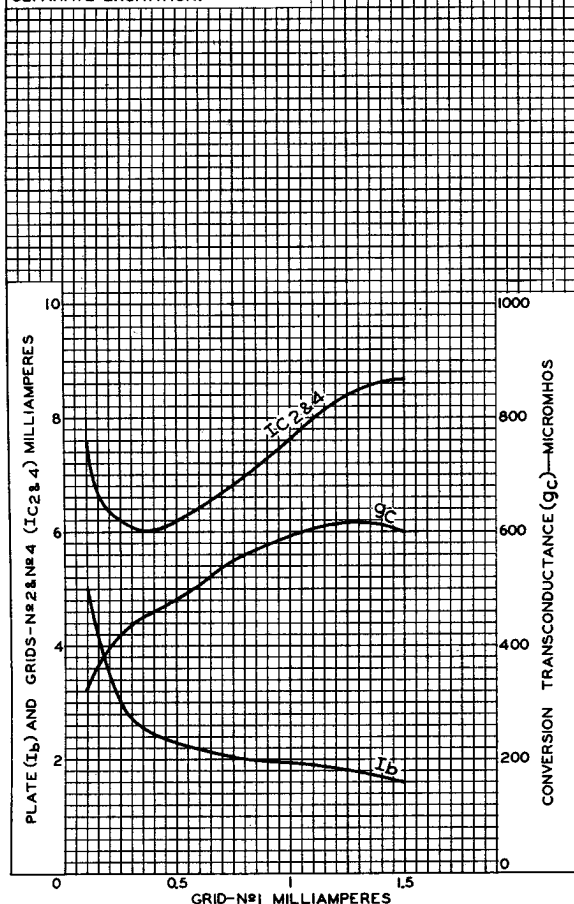
PLATE VOLTS=100

GRIDS-N^o 2 & N^o 4 VOLTS=100

GRID-N^o 3 VOLTS=-1.5

GRID-N^o 1 RESISTOR (OHMS) = 20000

SEPARATE EXCITATION.



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