Pentagrid Converter

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	18	volts
Current	0.1 ± 6%	amp
Warm-up time (Average)	20	sec

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[a]	
Grid No.3 to all other electrodes (RF input)	7	7	μμf
Plate to all other electrodes (Mixer input)	8	13	μμf
Grid No.1 to all other electrodes (Oscillator input)	5.5	5.5	μμf
Grid No.3 to plate	0.3 max.	0.25 max.	μμf
Grid No.3 to grid No.1	0.15 max.	0.15 max.	μμf
Grid No.1 to plate	0.1	0.05	μμf
Grid No.1 to cathode & grid No.5	3	3	μμf
Cathode & grid No.5 to all other electrodes except grid No.1	15	20	μμf

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

18FX6A

GRIDS-No.2 & No.4 VOLTAGE.	110 max.	volts
GRIDS-No.2 & No.4 INPUT.	1.2 max.	watts
PLATE DISSIPATION.	1 max.	watt
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[b]

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	μmhos
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 (μmhos) = 10	-21	volts

Oscillator Characteristics (Not Oscillating):[c]

Plate & Grids-No.2 & No.4 Voltage.	100	volts
Grid-No.3 Voltage.	0	volts
Grid-No.1 Voltage.	0	volts
Amplification Factor[d].	22	
Oscillator Transconductance[d]	7000	μmhos
Cathode Current.	24	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20.	-9.2	volts

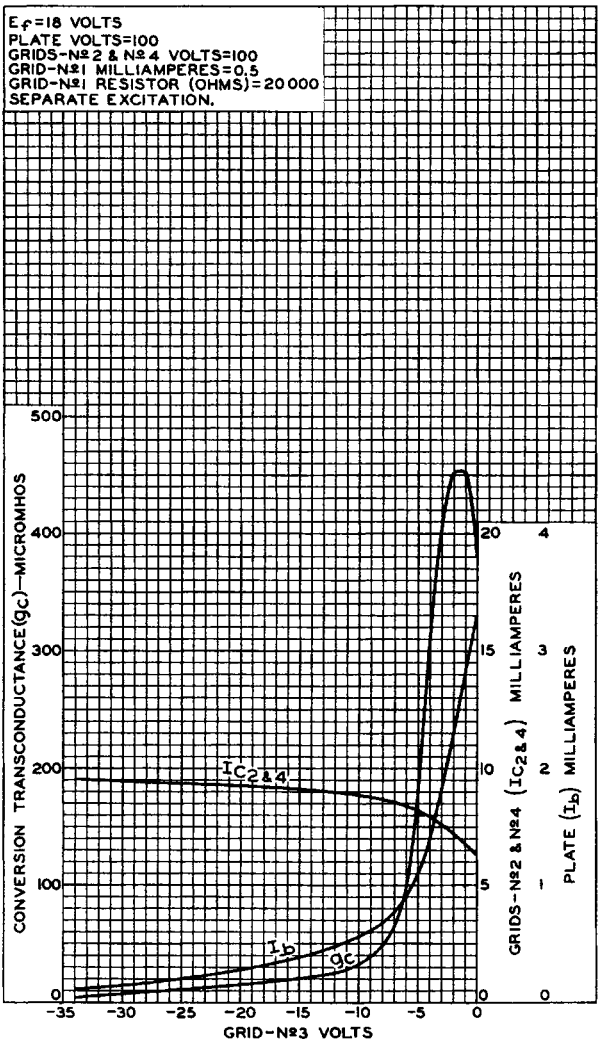
[a] With external shield JEDEC No.316 connected to cathode.

[b] The characteristics shown with separate excitation correspond very closely with those obtained in a self-excited-oscillator circuit operating with zero bias.

[c] With grids No.2 & No.4 connected to plate.

[d] Between grid No.1 and grids No.2 & No.4 connected to plate.

AVERAGE CHARACTERISTICS



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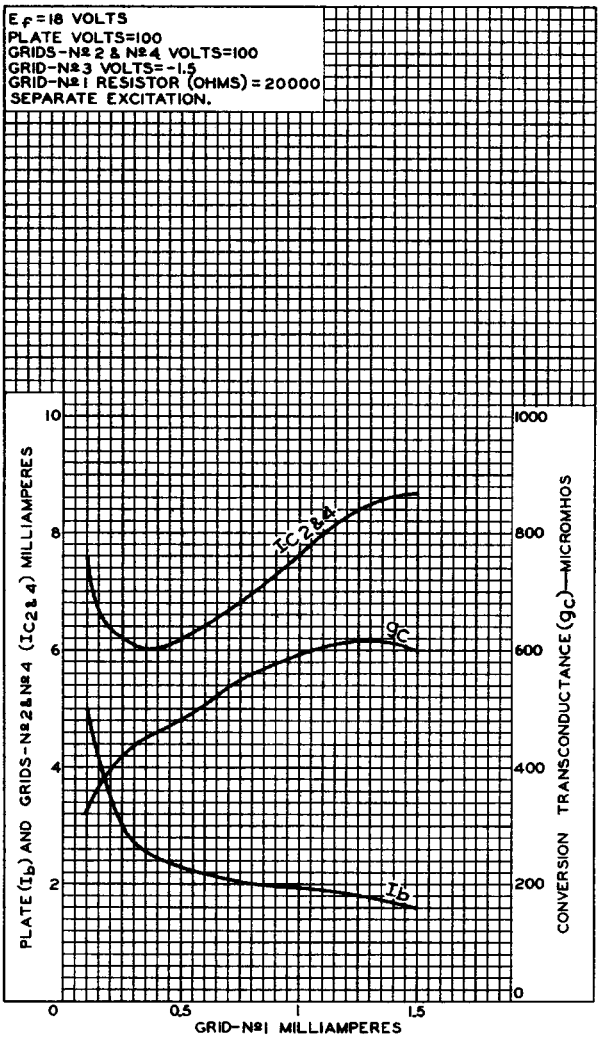

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