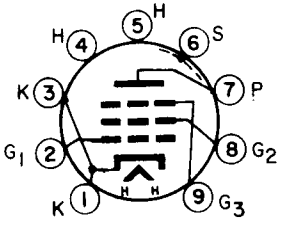
AMPEREX TUBE TYPE 3EH7/XF183

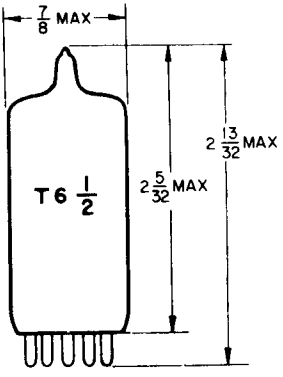
TENTATIVE DATA

The Amperex 3EH7/XF183 is a frame grid remote cut-off pentode designed for use as an IF amplifier in television receivers. Its high variable transconductance, with low interelectrode and low feed back capacitance, enables the construction of simplified broad band amplifiers with high stability. The higher gain per stage in many instances reduces the number of tubes required in the television IF strip. The 3EH7/XF183 is designed for 600 mA controlled warm-up series string operation.



PIN CONNECTIONS

1 - CATHODE
2 - GRID NO. 1
3 - CATHODE
4 - HEATER
5 - HEATER
6 - SHIELD
7 - PLATE
8 - GRID NO.2
9 - GRID NO.3



GENERAL CHARACTERISTICS

MECHANICAL

Bulb	T 6½
Base	E 9-1
Dimensions	see outline drawing

ELECTRICAL

Cathode	coated, unipotential
Heater current	600 mA
Heater voltage	3.4 volts

Direct Interelectrode Capacitances

→ Input	9.5 μμf
Output	3 μμf
→ Plate to grid No. 1	0.005 μμf max

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Maximum Ratings, Design Center

→ Plate voltage, cut-off condition	550 volts max
Plate voltage	250 volts max
Plate dissipation	2.5 watts max
→ Screen grid voltage, cut-off condition	550 volts max
Screen grid voltage	250 volts max
Screen grid dissipation	0.65 watts max
Cathode current	20 mA max
Control grid series resistance	1 megohm max
Heater-cathode voltage	150 volts max
Heater-cathode circuit resistance	20,000 ohms max
Negative grid no. 1 voltage (Grid No. 1 current = + 0.3 μA)	1.3 volts max
Peak negative grid no. 1 voltage	50 volts max

Typical Characteristics

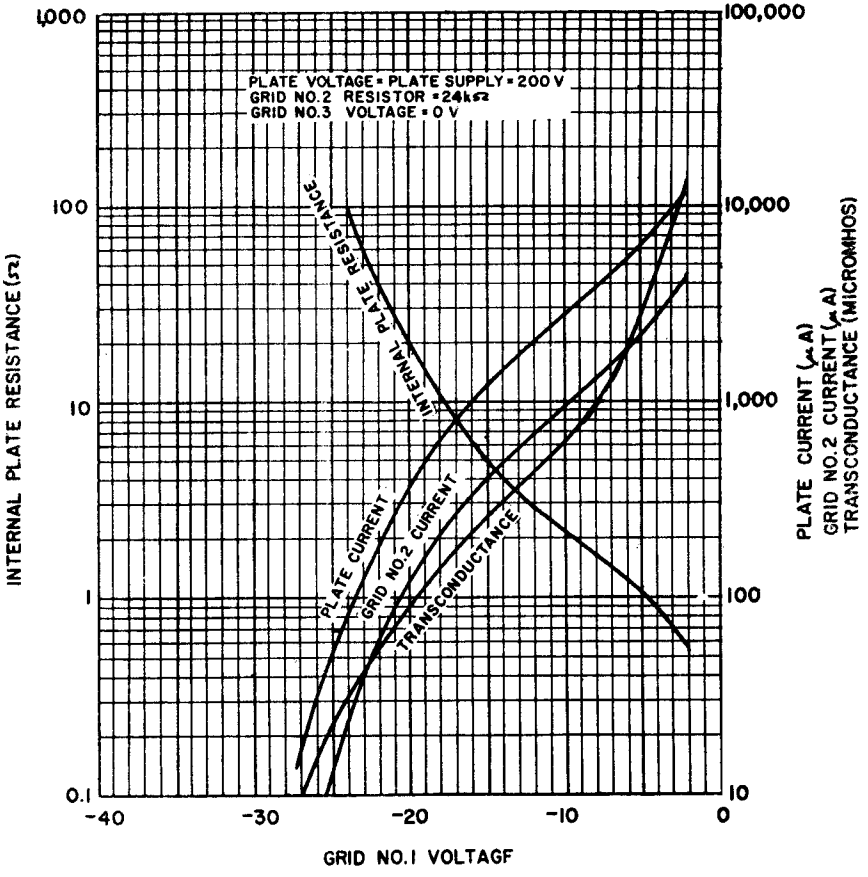
Plate voltage	200 volts
Grid no. 3 voltage	0 volts
Screen grid voltage	90 volts
Control grid voltage	−2 volts
Plate current	12 mA
Screen grid current	4.5 mA
Transconductance	12,500 micromhos
Plate resistance	0.5 megohms
→ Input resistance (f = 40 Mc/s)	10,000 ohms

Typical Operation [1]

Plate voltage				200 volts
Screen grid supply voltage				200 volts
Grid No. 3 voltage				0 volts
→ Screen grid series resistance				24,000 ohms
Negative control grid voltage	2	6.5	9.5	19.5 volts
Transconductance	12,500	1250	625	125 micromhos
Input voltage for cross-modulation = 1%		100	160	450 millivolts

[1] Operation with cathode bias resistor and/or screen grid resistor is recommended.

AVERAGE CHARACTERISTICS



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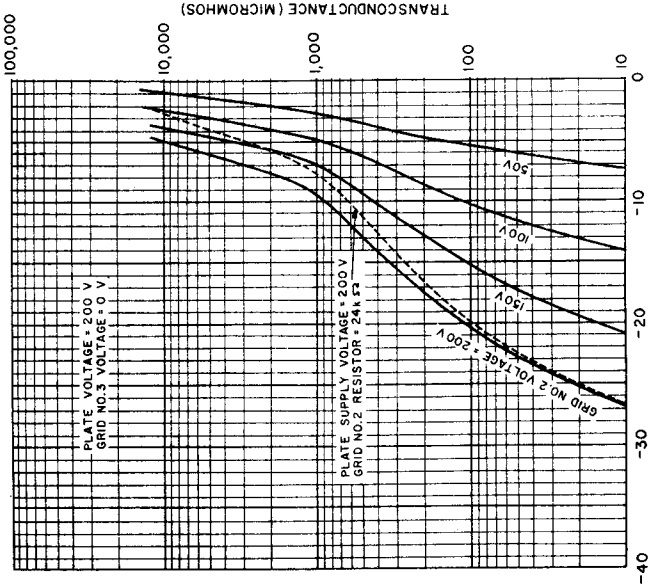
AGC CHARACTERISTICS



TRANSFER CHARACTERISTICS