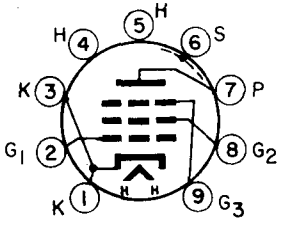
AMPEREX TUBE TYPE 3EJ7/XF184

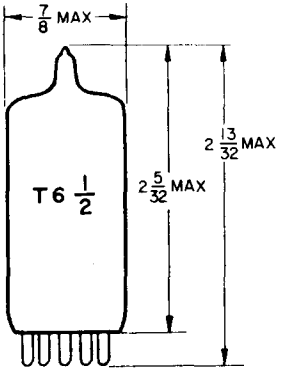
TENTATIVE DATA

The Amperex 3EJ7/XF184 is a frame grid sharp cut-off pentode designed for use as an IF amplifier in television receivers. Its high transconductance with low interelectrode and 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 3EJ7/XF184 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	10 $\mu\mu$f
Output	3 $\mu\mu$f
→ Plate to grid No. 1	0.005 $\mu\mu$f max

3EJ7/XF184

Maximum Ratings, Design Center Values

→ 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	0.9 watts max
Cathode current	25 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 Operation [1,2]

Plate voltage	200 volts
Grid No. 3 voltage	0 volts
Screen grid voltage	200 volts
Negative control grid voltage	2.5 volts
Plate current	10 mA
Screen grid current	4.1 mA
Transconductance	15,000 micromhos
Plate resistance	350,000 ohms
Amplification factor of grid No. 2 with respect to grid no. 1	60
→ Input resistance (f = 40 Mc/s)	10,000 ohms

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[1] Operation with cathode bias resistor is recommended.

[2] In order to ensure good performance with respect to cross modulation and microphonics, the 3EJ7/XF184 should not be used in circuits with automatic gain control. For such applications a tube with a variable amplification factor is recommended.

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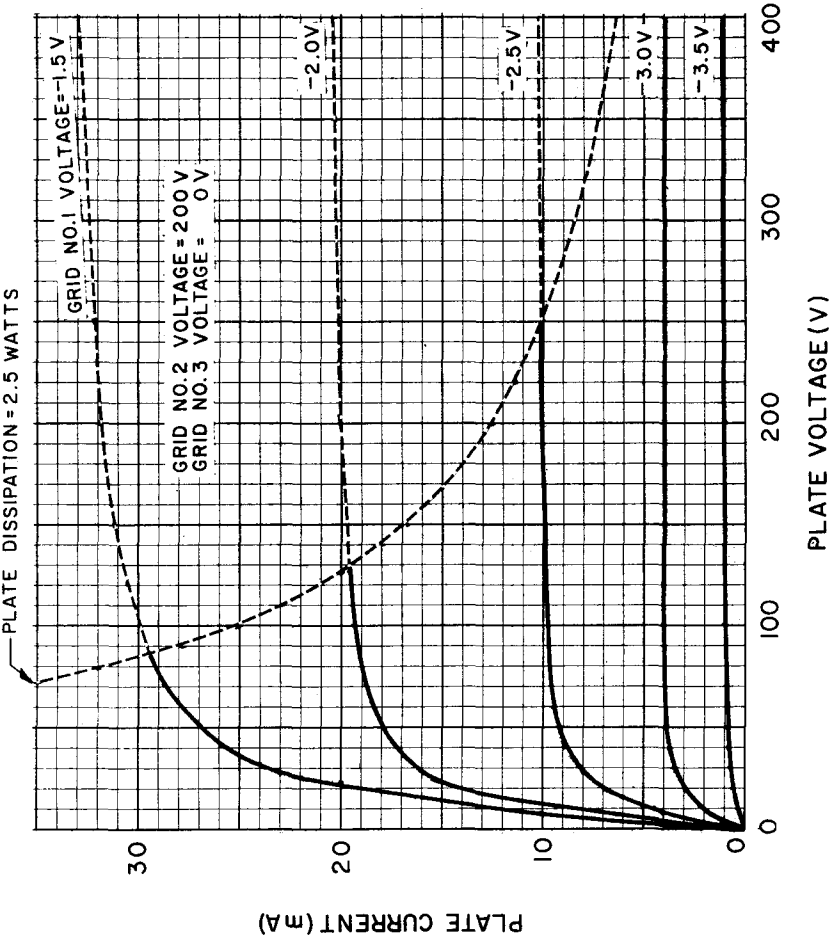
PLATE CHARACTERISTICS



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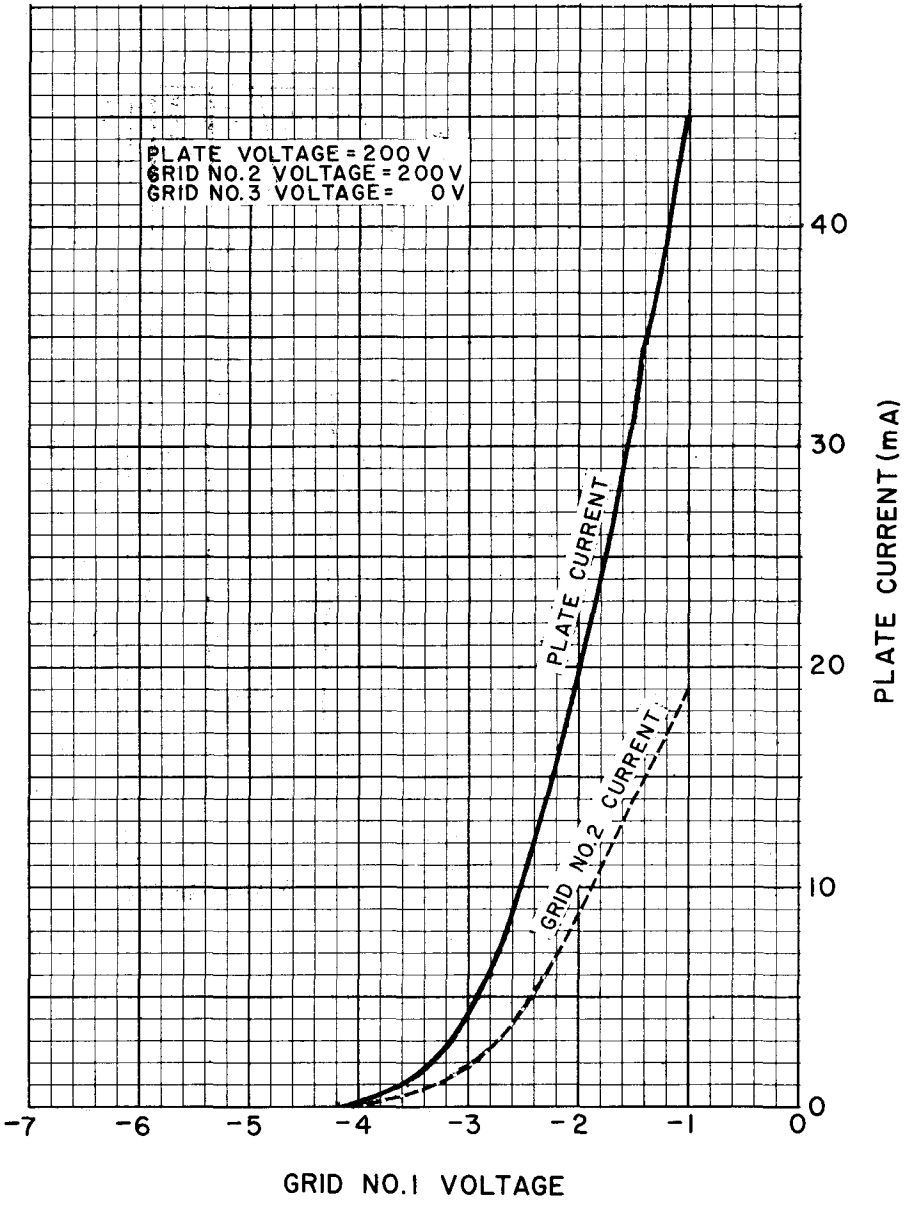
TRANSFER CHARACTERISTICS