



TECHNICAL INFORMATION

TYPES 6EF6
9EF6
12EF6

Excellence in Electronics

from JETEC release
#1932, May 27, 1957

VERTICAL DEFLECTION AMPLIFIER

The 6EF6 is a beam power pentode designed primarily for application as a vertical deflection amplifier in wide angle television receivers. Types 9EF6 and 12EF6 are identical to the 6EF6 except that they are designed for series heater operation and therefore, both the 9EF6 and the 12EF6 incorporate heater warm-up control characteristics to minimize surges during the warm-up cycle.

MECHANICAL DATA

Coated unipotential cathode	Bulb T-9
Base: Intermediate-shell octal	JETEC B7-7 or B6-81 or B7-59 or 36-84
Outline drawing	JETEC 9-13 or 9-42
Maximum diameter	1-9/32"
Maximum overall length	3-3/8"
Maximum seated height	2-13/16"
Base pin connections	Basing, JETEC 7S
Pin 1 - No connection	Pin 5 - Grid #1
Pin 2 - Heater	Pin 7 - Heater
Pin 3 - Plate	Pin 8 - Cathode, grid #3
Pin 4 - Grid #2	

ELECTRICAL DATA

Heater Characteristics

	6EF6	9EF6	12EF6
Heater voltage	6.3	9.4	12.6 volts
Heater current	0.9	0.6	0.45 amps
Warm-up time (approx.)		11	11 secs.

Interelectrode capacitances (no external shield)

Grid #1 to plate	0.8 uuf
Grid #1 to cathode grid #3, grid #2, heater	11.5 uuf
Plate to cathode grid #3, grid #2, heater	9.0 uuf

TENTATIVE

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RECEIVING AND CATHODE RAY TUBE OPERATIONS



RATINGS - DESIGN CENTER SYSTEM

Vertical deflection amplifier - pentode connected

Maximum heater - cathode voltage

Heater positive with respect to cathode

Total DC and peak

200 volts

DC

100 volts

Heater negative with respect to cathode

Total DC and peak

200 volts

Maximum plate voltage

250 volts

Maximum grid #2 voltage

250 volts

** Maximum peak positive pulse plate voltage (abs. max.)

2000 volts

Maximum plate dissipation

10 watts

Maximum peak negative pulse grid #1 voltage

250 volts

Maximum grid #2 dissipation

2.0 watts

Maximum average cathode current

60 ma.

Maximum peak cathode current

180 ma.

* Maximum grid #1 circuit resistance (Rk=100 ohm minimum)

2.2 megohms

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

	<u>6EF6</u>	<u>9EF6</u>	<u>12EF6</u>
Heater voltage	6.3	9.4	12.6 volts
Heater warm-up time (approx.)	---	11	11 secs.
Plate voltage			250 volts
Grid #2 voltage			250 volts
Grid #1 voltage			-18 volts
Plate current			50 ma.
Grid #2 current			2 ma.
Transconductance			5000 umhos
Grid #1 voltage (approx.) for $I_b = 1$ milliampere			-40 volts
*** Plate current for $E_b=75$ V, $E_{c2}=250$ V, $E_{c1}=0$			170 ma.
*** Screen current - $E_b=75$ V, $E_{c2}=250$ V, $E_{c1}=0$			17 ma.

* In the case of grid resistor bias some protection is necessary for the tube in the no drive conditions.

** The duration of the voltage pulse must not exceed 15% of one scanning system which is 2.5 milliseconds in a 525 line, 30 frame system.

*** Instantaneous values.

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