



technical information

CBS ELECTRONICS
A Division of Columbia Broadcasting System, Inc.
Danvers, Massachusetts

E280F/7722

Wideband Pentode Amplifier

Wideband pentode amplifier with very high transconductance in a miniature envelope and 9-pin base.

MECHANICAL DATA

Cathode, coated unipotential	
Bulb	T-6 1/2
Base	9-pin miniature button
Basing	9EQ
Maximum overall height	2.43 inches
Maximum seated height	2.15 inches
Maximum height from base to shoulder	1.88 inches
Maximum diameter	.875 inches
Mounting position	Any

PIN CONNECTIONS

Pin 1: Cathode	Pin 6: Internal Connection
Pin 2: Grid 1	Pin 7: Plate
Pin 3: Cathode	Pin 8: Grid 3 and shield
Pin 4: Heater	Pin 9: Grid 2
Pin 5: Heater	

ELECTRICAL DATA

Heater Characteristics

Heater voltage	6.3	volts
Heater current	320	ma
Peak heater-cathode voltage, max.		
Heater negative to cathode	60	volts
Heater positive to cathode	120	volts

Direct Interelectrode Capacitances

Input	9.3	$\mu\mu\text{f}$
Output	2.1	$\mu\mu\text{f}$
Grid 1 to plate	.035	$\mu\mu\text{f}$

Maximum Ratings (Absolute maximum values)

Plate supply voltage	400	volts
Plate voltage, d-c	220	volts
Grid 2 supply voltage	400	volts
Grid 2 voltage, d-c	180	volts
Grid 1 voltage, negative	50	volts
Grid 1 voltage, positive†	0	volts
Plate dissipation	4.0	watts
Grid 2 dissipation	1.1	watts
Cathode current	30	ma
Grid 1 circuit resistance‡	0.5	meg
Bulb temperature at hottest point	170	°C

Characteristics

	Pentode	Triode	
Plate supply voltage	190	160	volts
Grid 3 voltage	0	0	volts
Grid 2 supply voltage	160	160	volts
Grid 1 supply voltage ‡	+8	+8	volts
Cathode resistor	370	400	ohms
Plate current	20	24.5	ma
Grid 2 current	6		ma
Transconductance	26,000	33,000	μmhos
Amplification factor		60	
Input resistance, 100 mc *	1400		ohms
Plate resistance, approximate	100k	1800	ohms

† Grid 1 current must not exceed 0.5 μa, to prevent damage to tube.

‡ Values for automatic control grid bias arrangement.

* Both cathode leads connected together.

