



technical information

CBS ELECTRONICS

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

7721 (D3a)

Wideband Pentode Amplifier

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

MECHANICAL DATA

Cathode	coated unipotential
Bulb	T6 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 inch
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	

* Do not use.

ELECTRICAL DATA

Heater Characteristics

Heater voltage, a-c or d-c	6.3	volts
Heater current	320	ma
Peak heater-cathode voltage, max.	60	volts

Direct Interelectrode Capacitances

Input	10	μf
Output	2	μf
Grid 1 to plate	.035	μf

MAXIMUM RATINGS (Absolute maximum values)

Plate voltage, peak*	400	volts
Grid 2 voltage, peak*	400	volts
Plate voltage, d-c	220	volts
Grid 2 voltage, d-c	180	volts
Grid 3 voltage, d-c	0	volts
Grid 1 voltage, positive	0	volts
Grid 1 voltage, negative	10	volts
Plate dissipation	4.0	watts
Grid 2 dissipation	0.9	watts
Cathode current	29	ma
Maximum grid 1 circuit resistance†	0.5	meg
Maximum heater to cathode resistance	20000	ohms
Bulb temperature	170	°C

* Intermittent operation

CHARACTERISTICS

Plate voltage, supply	190	volts
Grid 3 voltage, supply	0	volts
Grid 2 voltage, supply	160	volts
Grid 1 voltage, supply†	10	volts
Cathode resistor	400	ohms
Plate current	22	ma
Grid 2 current	6.0	ma
Transconductance	35000	μmhos
Plate resistance	0.12	meg
Grid 2 to plate amplification factor	85	
Input resistance, 100 mc	1000	ohms
Bandwidth factor	465	
Equivalent noise resistor	50	ohms

† Values for automatic control grid bias arrangement.

TRANSFER CHARACTERISTICS

PLATE CHARACTERISTICS

