

Beam Power Unit as Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	275	volts
Grid-No.2 (Screen-Grid) Voltage	275	volts
Plate Dissipation	10	watts
Grid-No.2 Input	2	watts

TYPICAL OPERATION

Plate Voltage	250	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 (Control-Grid) Voltage	—8	volts
Peak AF Grid-No.1 Voltage	8	volts
Zero-Signal Plate Current	35	mA
Maximum-Signal Plate Current	39	mA
Zero-Signal Grid-No.2 Current	2.5	mA
Maximum-Signal Grid-No.2 Current	7	mA
Plate Resistance (Approx.)	0.1	megohm
Transconductance	6500	μ mhos
Load Resistance	5000	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	4.2	watts

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	0.5	megohm

Pentode Unit as Class A₁ Amplifier

CHARACTERISTICS

Plate Supply Voltage	150	volts
Grid-No.3 (Suppressor-Grid) Voltage	0	volts
Grid-No.2 (Screen-Grid) Supply Voltage	100	volts
Cathode-Bias Resistor	560	ohms
Plate Resistance (Approx.)	0.15	megohm
Transconductance, Grid No.1 to Plate	1000	μ mhos
Transconductance, Grid No.3 to Plate	400	μ mhos
Plate Current	1.3	mA
Grid-No.2 Current	2.1	mA
Grid-No.1 Voltage (Approx.) for plate current of 30 μ A	—4.5	volts
Grid-No.3 Voltage (Approx.) for plate current of 50 μ A	—4.5	volts

Pentode Unit as FM Detector

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	330	volts
Grid-No.3 Voltage	28	volts
Grid-No.2 Supply Voltage	330	volts
Grid-No.2 Voltage	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	1.7	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	1.1	watts
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

6AM4

Refer to chart at end of section.

6AM8

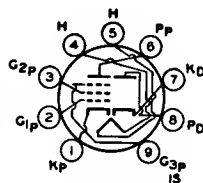
Refer to chart at end of section.

6AM8A

5AM8

DIODE—
SHARP-CUTOFF PENTODE

Miniature type used in television receiver applications. The pentode unit is used as an if amplifier, video amplifier, or agc amplifier. The high-perveance diode is used as an audio detector, video detector, or dc restorer. Outlines section, 6B; requires miniature 9-contact socket. Type 5AM8 is identical with type 6AM8A except for heater ratings.



9CY

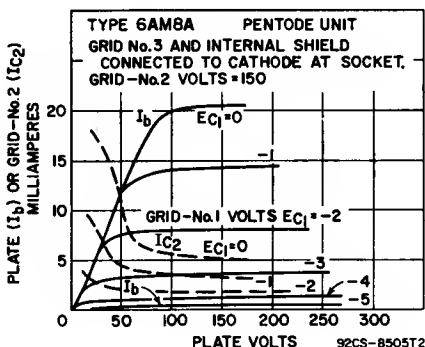
Heater Voltage (ac/dc)	5AM8 4.7	6AM8A 6.3	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	100 max	100 max	volts

Heater-Cathode Voltage:

Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts

Direct Interelectrode Capacitances:

Diode Unit:			
Plate to Cathode and Heater		1.8	pF
Cathode to Plate and Heater		3	pF
Pentode Unit:			
Grid No.1 to Plate		0.015	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3 and Internal Shield		6.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		2.6	pF
Pentode Grid No.1 to Diode Plate		0.006	pF
Pentode Plate to Diode Cathode		0.15	pF
Pentode Plate to Diode Plate		0.1	pF



Pentode Unit as Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	330	volts
Grid-No.3 (Suppressor-Grid) Voltage, Positive value	0	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts
Grid-No.2 Voltage	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	3.2	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	0.55	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

CHARACTERISTICS

Plate Supply Voltage	125	volts
Grid No.3	Connected to cathode at socket	
Grid-No.2 Supply Voltage	125	volts
Cathode-Bias Resistor	56	ohms
Plate Resistance (Approx.)	0.3	megohm
Transconductance	7800	μmhos
Plate Current	12.5	mA
Grid-No.2 Current	3.2	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	-6	volts
Grid-No.1 Voltage (Approx.) for plate current of 2 mA	-3	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	1	megohm

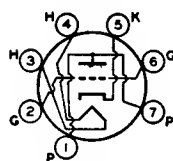
Diode Unit

MAXIMUM RATINGS (Design-Maximum Values)

Average Plate Current	5	mA
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6AN4**HIGH-MU TRIODE**

Miniature type used as mixer or rf amplifier in cathode-drive circuits of uhf television tuners covering the frequency range of 470 to 890 MHz. Outlines section, 5B; requires miniature 7-contact socket.

**7DK**

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.225	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Grid to Plate	1.7°	pF
Grid to Cathode and Heater	3.3°	pF
Plate to Cathode and Heater	1.8°	pF
Heater to Cathode	2.9*	pF
Grid to Cathode	2.6*	pF
Plate to Cathode	0.18*	pF
Cathode to Grid and Heater	5.7*	pF
Plate to Grid and Heater	3.4*	pF

° With external shield connected to cathode.

* With external shield connected to ground.

* With external shield connected to grid.

Class A₁ Amplifier**MAXIMUM RATINGS (Design-Center Values)**

Plate Voltage	300	volts
Cathode Current	30	mA
Plate Dissipation	4	watts

CHARACTERISTICS

Plate-Supply Voltage	200	volts
Cathode-Bias Resistor	100	ohms
Amplification Factor	70	
Transconductance	10000	μmhos
Plate Current	13	mA
Grid Voltage (Approx.) for plate current of 20 μA	—7	volts

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

6AN8

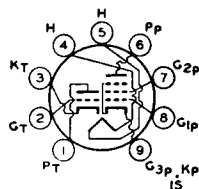
Refer to chart at end of section.

6AN8A

5AN8

**MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

Miniature type used in color television receiver applications. The pentode unit is used as an intermediate-frequency amplifier, a video amplifier, an agc amplifier, or a reactance tube. The triode unit is used in low-frequency oscillator, sync-separator, sync-clipper, and phase-splitter circuits. Outlines section, 6B; requires miniature 9-contact socket. Type 5AN8 is identical with 6AN8A except for heater ratings.



Heater Voltage (ac/dc)	6AN8 4.7	6AN8A 6.3	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	11	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts