

9QL

BEAM POWER TUBE

36MC6

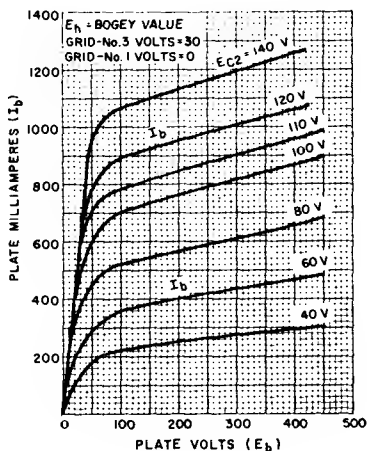
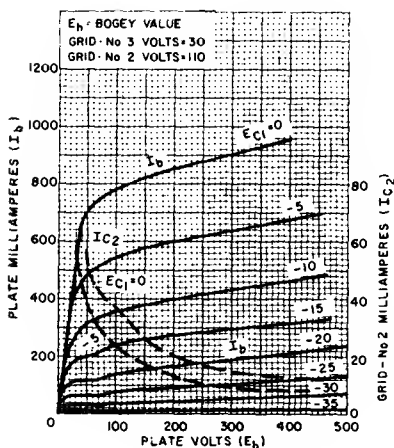
Novar type used for horizontal-deflection amplifier in color television receivers. Outlines section, 18D; requires novar 9-contact socket.

Heater Voltage (ac/dc)	36	volts
Heater Current	0.45	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	1.0	pF
Grid No.1 to Cathode, Heater, Grid No.2 and Grid No.3	40	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	16	pF

Class A₁ Amplifier

CHARACTERISTICS

	Triode† Connection		Pentode Connection		
Plate Voltage	175	—	45	60	175 volts
Peak Positive-Pulse Plate Voltage#	—	5000	—	—	— volts
Grid No.3 (Suppressor Grid)	—	30	30	30	30 volts
Grid-No.2 (Screen-Grid) Voltage	175	110	110	110	110 volts
Grid-No.1 (Control-Grid) Voltage	-21	—	0	0	-21 volts
Amplification Factor	4	—	—	—	—
Plate Resistance (Approx.)	—	—	—	—	6000 ohms
Transconductance	—	—	—	—	14000 μmhos
Plate Current	—	—	1100††	750††	125 mA
Grid-No.2 Current	—	—	110††	42††	3.3 mA
Grid-No.1 Voltage for plate current of 1 mA	—	-125	—	—	-40 volts



Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	990	volts
Peak Positive-Pulse Plate Voltage#	7500	volts
Peak Negative-Pulse Plate Voltage	1100	volts
DC Grid-No.3 Voltage	75	volts
DC Grid-No.2 Voltage	250	volts

Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	1400	mA
Average Cathode Current	400	mA
Grid-No.2 Input	5	watts
Plate Dissipation■■	33	watts
Bulb Temperature (At hottest point)	250	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For cathode-bias operation	1	megohm
For grid-leak-bias operation	10	megohms
For fixed-bias operation	0.47	megohm

Pulse duration must not exceed 15% of one horizontal scanning cycle (10 microseconds).

† Grid No.2 connected to plate.

†† This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

■ In this service, a positive value may be applied to grid No.3 to minimize "snivets" interference; a typical value for this voltage is 30 volts.

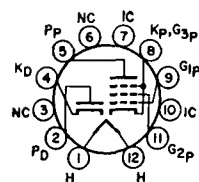
■■ A bias resistor or other means is required to protect the tube in absence of excitation.

Refer to chart at end of section.

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Refer to chart at end of section.

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12FS

DIODE—BEAM POWER TUBE

38HE7

Duodecar type used in television receiver applications. The diode unit is used for damper service and the beam power unit for horizontal-deflection amplifier service. Outlines section, 15D; requires duodecar 12-contact socket. Heater: volts (ac/dc), 37.8; amperes, 0.45; warm-up time, 11 seconds; maximum heater-cathode volts, ± 200 peak, 100 average.

Beam Power Unit As Class A₁ Amplifier

CHARACTERISTICS

	Pentode Connection			Triode** Connection	
Plate Voltage	5000	50	130	130	volts
Grid-No.2 (Screen-Grid) Voltage	130	130	130	130	volts
Grid-No.1 (Control-Grid) Voltage	—	0	-22	-22	volts
Plate Resistance (Approx.)	—	—	6200	—	ohms
Transconductance	—	—	8800	—	μmbos
Plate Current	—	450	60	—	mA
Grid-No.2 Current	—	40	2.8	—	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	-80	—	-39	—	volts
Amplification Factor	—	—	—	4.2	

** Grid No.2 tied to plate.

Beam Power Unit as Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Ratings)

Plate Voltage	500	volts
Peak Positive-Pulse Plate Voltage#	5000	volts
Peak Negative-Pulse Plate Voltage	0	volts
Grid-No.2 Voltage	150	volts
DC Grid-No.1 Voltage, Negative-bias value	55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Average Cathode Current	230	mA
Peak Cathode Current	800	mA
Plate Dissipation†	10	watts
Grid-No.2 Input	3.5	watts

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	1	megohm
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† A bias resistor or other means is required to protect the tube in absence of excitation.