

December 15, 1958

BEAM POWER AMPLIFIER TYPE 12EN6

The 12EN6 is a glass octal beam power pentode designed for use as a vertical deflection amplifier in television receiver sweep circuits.

The 12EN6 has been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes having a heater current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

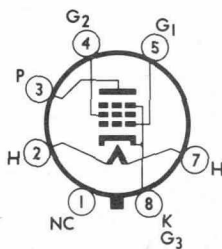
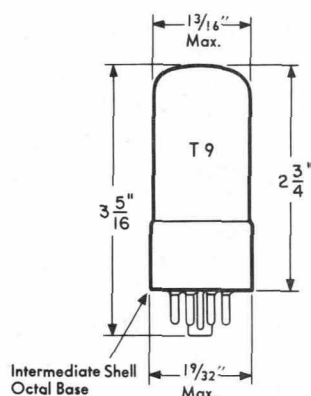
GENERAL DATA

ELECTRICAL:

Cathode.....	Coated Unipotential
Filament:	
Voltage.....	12.6 ac or dc Volts
Current.....	0.6 ± 6% Ampere
Warm-up Time (Approx.)*	11 Seconds
Direct Interelectrode Capacitances:	
Grid to Plate.....	0.65 uuf
Input.....	14 uuf
Output.....	8.0 uuf

MECHANICAL:

Bulb.....	T-9
Bases.....	Intermediate Shell Octal (JETEC B6-81) & (JETEC B7-7) Short Intermediate Shell Octal (JETEC B6-84) & (JETEC B7-59)
Basing.....	7AC
Mounting Position.....	Any



MAXIMUM RATINGS:

Design Maximum Ratings

	Triode Connection▲	Pentode Connection	
D. C. Plate Voltage.....	300	300 max.	Volts
Peak Pos. Pulse Plate Volt.	1200	1200 max.	Volts
Plate Dissipation§.....	7.5	7.0 max.	Watts
Peak Negative Grid 1 Voltage	250	250 max.	Volts
D. C. Grid 2 Voltage.....	-	150 max.	Volts
Grid 2 Dissipation.....	-	1.25 max.	Watts
Average Cathode Current...	50	50 max.	Ma.
Peak Cathode Current.....	175	175 max.	Ma.
Grid 1 Circuit Resistance ..	2.2	2.2 max.	Megohms
Heater-Cathode Voltage			
Heater Positive with Respect to Cathode			
DC Component.....	100	max.	Volts
Total DC & Peak.....	200	max.	Volts
Heater Negative with Respect to Cathode			
DC Component.....	200	max.	Volts
Total DC & Peak.....	300	max.	Volts

CHARACTERISTICS

Plate Voltage.....	50	200	Volts
Grid 2 Voltage.....	110	110	Volts
Grid 1 Voltage.....	0	-9.5	Volts
Plate Current.....	140	50	Ma.
Grid 2 Current.....	17	2.2	Ma.
Plate Resistance.....		28000	Ohms
Transconductance.....		8000	umhos
Grid 1 Cutoff Voltage (Approx.) *		-35	Volts

** Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater current.

■ For operation in a 525-line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Fed. Communications Commission." The duty cycle of the voltage pulse not to exceed 15% of the scanning cycle.

▲ With Grid 2 tied to plate.

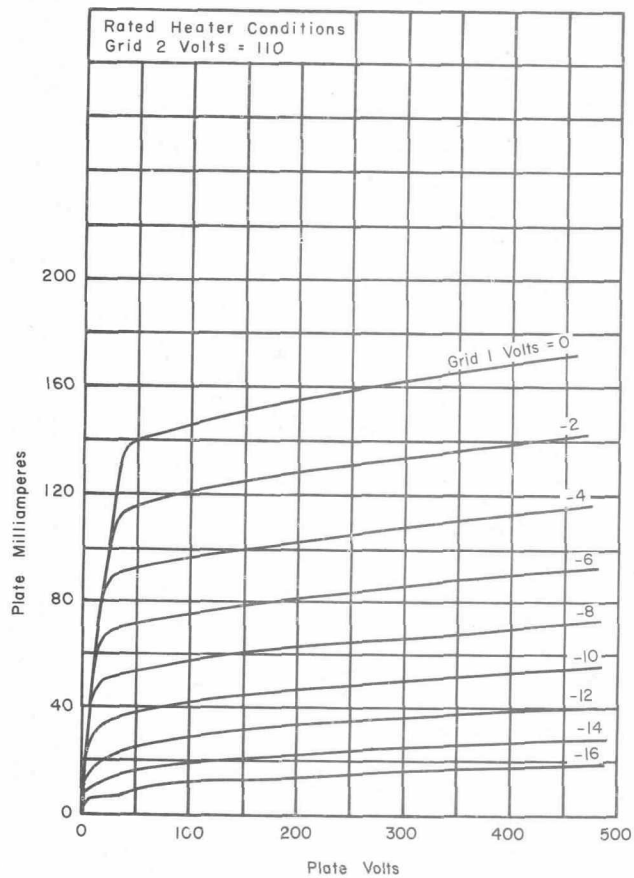
§ In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.

♣ Applied for short interval (2 seconds maximum) so as not to damage the tube.

* For plate current of 100 microamperes

Receiving Tube Section

AVERAGE PLATE CHARACTERISTICS



AVERAGE SCREEN CHARACTERISTICS

