

### MECHANICAL DATA

Bulb	ST-12
Base	B7-2 Small Shell Octal
Basing	6AM
Top Cap	C1-2 or C1-3 Skirted Miniature
Cathode	Coated Unipotential
Mounting Position	Any

### ELECTRICAL DATA

#### HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	1.2 Amperes
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

#### DIRECT INTERELECTRODE CAPACITANCES (Approximate)

Grid to Plate	0.6 $\mu\mu\text{f}$
Input	15 $\mu\mu\text{f}$
Output	7.5 $\mu\mu\text{f}$

#### RATINGS (Design Center Values — Except as Noted)

##### Horizontal Deflection Amplifier<sup>1</sup>

DC Plate Supply Voltage		
(Boost + DC Power Supply)	600 Volts	Max.
Peak Positive Plate Voltage (Abs. Max.)	6000 Volts	
Peak Negative Plate Voltage	1250 Volts	Max.
Plate Dissipation <sup>2</sup>	11 Watts	Max.
Peak Negative Grid #1 Voltage	300 Volts	Max.
DC Grid #2 Voltage	175 Volts	Max.
Grid #2 Dissipation	2.5 Watts	Max.
Average Cathode Current	110 Ma	Max.
Peak Cathode Current	400 Ma	Max.
Grid #1 Circuit Resistance	0.47 Megohm	Max.
Bulb Temperature (At Hottest Point)	200° C	Max.

#### AVERAGE CHARACTERISTICS

Pentode Operation: With  $E_{b1}=250\text{ V}$ ,  $E_{c2}=150\text{ V}$  and  $E_{c1}=-22.5\text{ V}$

Plate Current	55 Ma
Grid #2 Current	2.1 Ma
Transconductance	5500 $\mu\text{mhos}$
Plate Resistance	20,000 Ohms

Zero Bias: With  $E_{b1}=60\text{ V}$  and  $E_{c2}=150\text{ V}$  (Instantaneous Values)

Plate Current	225 Ma
Grid #2 Current	25 Ma

Cutoff: For  $I_{b1}=1\text{ ma}$  with  $E_{b1}=250\text{ V}$  and  $E_{c2}=150\text{ V}$

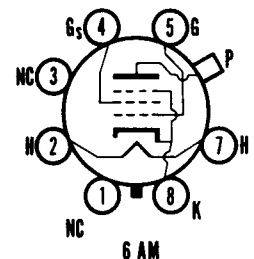
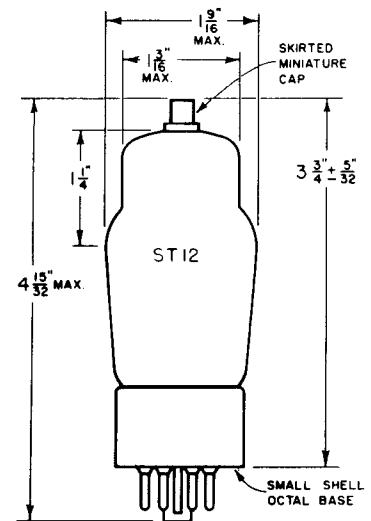
Grid #1 Voltage (approx.)	-46 Volts
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Triode Amplification Factor: With

$E_{b1}=E_{c2}=150\text{ V}$ and $E_{c1}=22.5\text{ V}$	4.3
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### QUICK REFERENCE DATA

Beam power amplifier designed for use as a driver tube in horizontal deflection amplifiers. It is identical to the type 6BQ6GT except for bulb size. The larger ST-12 bulb provides a better safety margin for dissipation.



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**6BQ6G**

**NOTES:**

1. *For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission". The duty cycle of the voltage pulse not to exceed 15% of a scanning cycle.*
2. *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.*