



ELECTRONIC TUBE REFERENCE

6B8SG

Voltage - Pentode or Tetrode (with diode) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Receiving tube combining radio signal detection or control-voltage rectification with associated voltage amplification. Its detector function is integral to receiver signal processing and supports classification within the radio detector/converter family.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Diode

No fixed ratings recorded.

First physical diode of Brimar 6B8SG (6G8G) double-diode variable-mu pentode for receiver rectification, detection and AVC. Brimar confirms two diodes but printed section-specific diode maxima are absent in the attached sheet; no diode maximum electrical ratings invented. Distinct physical diode element retained.

SECTION2 Pentode

PLATE RESISTANCE	800000 Ω
TRANSCONDUCTANCE	0.001 S

Brimar 6B8SG, marked equivalent to 6G8G, double-diode variable-mu pentode for receiver AVC and amplification. Typical operating conditions: heater 6.3 V 0.3 A; anode 250 V, screen grid 100 V, control grid -3 V, anode current 6.5 mA, screen current 1.4 mA, mutual conductance 1.0 mA/V (0.001 S), anode impedance 0.8 M Ω . Additional control-grid bias approximately -40 V reduces gm to 0.005 mA/V. These are typical characteristics, NOT absolute maxima. Two physical diode sections distinct; previous gm and rp retained.

SECTION3 Diode

No fixed ratings recorded.

Second physical diode of Brimar 6B8SG/6G8G double-diode variable-mu pentode, used for detector/AVC receiver functions. Separate physical diode confirmed; no independently published diode electrical maxima available in this attached manual extract, so no unsupported ratings promoted.

The BRIMAR 6B8SG is a double-diode vari-mu pentode with a 6.3 V, 0.3 A heater and published pentode characteristics at 250 V anode voltage.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1948 Brimar Radio Valve Manual

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1948 BRIMAR RADIO VALVE MANUAL

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	250 V	—
Anode Current	6.5 mA	—
Screen Voltage	100 V	—
Screen Current	1.4 mA	—
Control Grid Voltage	-3 V	—
Control Grid Voltage for Low Transconductance	-40 V	Transconductance=0.005mA/V

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