

# 6CD6-GA — 25CD6-GB BEAM PENTODE

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FOR TV HORIZONTAL-DEFLECTION AMPLIFIER APPLICATIONS

## DESCRIPTION AND RATING =

The 6CD6-GA is a beam-power pentode designed primarily for use as the horizontal-deflection amplifier in television receivers which incorporate large-deflection-angle picture tubes. Features of the tube include an extremely high perveance, high plate current at low plate and screen voltages, and a high ratio of plate to screen current. The 6CD6-GA may be used as a replacement for the 6CD6-G; it differs from the 6CD6-G by employing a straight-sided T-12 envelope and incorporating increased maximum ratings for plate dissipation, pulse plate voltage, and bulb temperature.

Except for heater ratings, the 25CD6-GB is identical to the 6CD6-GA. In addition, as a result of its controlled heater warm-up characteristic, the 25CD6-GB is especially suited for use in television receivers which employ series-connected heaters. When the 25CD6-GB is used in conjunction with other 600-milliampere types which exhibit essentially the same heater warm-up characteristic, heater voltage surges across the individual tubes are minimized during the warm-up period.

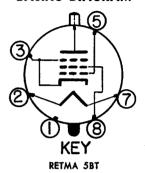
#### **GENERAL**

#### **ELECTRICAL**

	6CD6-GA	25CD6-GB	
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	<b>6.3</b>	25.0	Volts
Heater Current	2.5	0.6	Amperes
Heater Warm-up Time*		11	Seconds
Direct Interelectrode Capacitances, approximate†			
Grid-Number 1 to Plate		1.1	μμf
Input		22	μμf
Output		8.5	ццf

# GENERAL ELECTRIC

#### **BASING DIAGRAM**



#### **TERMINAL CONNECTIONS**

Pin 1—No Connection

Pin 2—Heater

Pin 3—Cathode and Beam Plates

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Pin 4—No Connection

Pin 5-Grid Number 1

Pin 6-No Connection

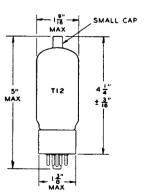
Pin 7—Heater

Pin 8—Grid Number 2

(Screen)

Cap —Plate

#### PHYSICAL DIMENSIONS



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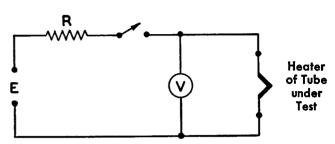
#### **MECHANICAL**

Mounting Position—Vertical‡ Envelope—T-12, Glass Base-B8-110, Short Medium-Shell Octal 8-Pin Top Cap-C1-1, Small

### **MAXIMUM RATINGS**

HORIZONTAL-DEFELECTION AMPLIFIER SERVICE§ DESIGN-CENTER VALUES UNLESS OTHERWISE INDICATED				
DC Plate-Supply Voltage (Boost + DC Power Supply)				
Peak Positive Pulse Plate Voltage				
Peak Negative Pulse Plate Voltage				
Screen Voltage				
Peak Negative Grid-Number 1 Voltage				
Plate Dissipation $\pi$	Watts			
Screen Dissipation	Watts			
DC Cathode Current	Milliamperes			
Peak Cathode Current	Milliamperes			
Heater-Cathode Voltage				
Heater Positive with Respect to Cathode				
DC Component	Volts			
Total DC and Peak	Volts			
Heater Negative with Respect to Cathode				
Total DC and Peak	Volts			
Grid-Number 1 Circuit Resistance	Megohms			
Bulb Temperature at Hottest Point	C			
CHARACTERISTICS AND TYPICAL OPERATION				
AVERAGE CHARACTERISTICS				
Plate Voltage	Volts			
Screen	Volts			
Grid-Number 1 Voltage	Volts			
Plate Resistance, approximate	Ohms			
· · · ·	Micromhos			
Plate Current	Milliamperes			
Screen Current	•			
Grid-Number 1 Voltage, approximate	•			
	Volts			
Triode Amplification Factor #				

\* Heater warm-up time is defined as the time required in the circuit shown at the right for the voltage across the heater terminals to increase from zero to the heater test voltage  $(V_1)$ . For this type, E=100 volts (RMS or DC),  $V_1=20.0$  volts (RMS or DC), and R=126 ohms.



- † Without external shield.
- ‡ Horizontal operation is permitted if pins 2 and 7 are in a vertical plane.
- § For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.
- ▲ Value given is to be considered as an Absolute Maximum Rating. In this case, the combined effect of supply voltage variation, manufacturing variation including components in the equipment, and adjustment of equipment controls should not cause the rated value to be exceeded.
- $\pi$  In stages operating with grid-leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in absence of excitation.
- ♦ Applied for very short interval so as not to damage tube.
- # Triode connection (screen tied to plate) with Eb = Ec2 = 175 volts and Ec1 = -30 volts.

