

TRIODE & FRAME-GRID PENTODE CONVERTER TYPES 4GX7, 5GX7, 6GX7 AND 8GX7

The 4GX7, 5GX7, 6GX7 and 8GX7 are medium-mu triode and sharp-cutoff frame-grid pentode types designed for oscillator-mixer service in V.H.F. television tuners. The pentode section features high transconductance and low grid 1-to-plate capacitance to ensure high gain with good stability in amplifier operation.

The 4GX7, 5GX7 and 8GX7 feature controlled heater warm-up time and render reliable service in properly designed series heater circuits.

ELECTRICAL

Cathodes	Coated Unipotential			
Heater:	4GX7	5GX7	6GX7	8GX7
Voltage	4.2	5.6	6.3	7.7
Current	0.60	0.45	0.40	0.30
Warm-Up Time (Note 1)	11	11	—	11
Seconds				
Direct Interelectrode Capacitances: Shielded (Note 2)				

Triode:

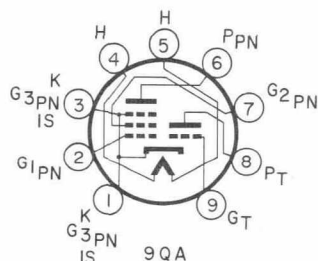
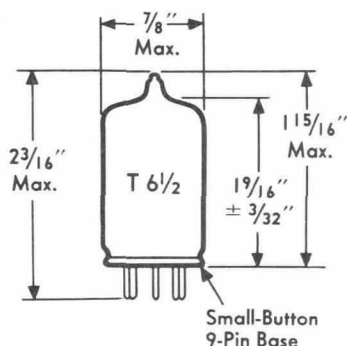
Grid to Plate	1.2	pf
Input	2.3	pf
Output	1.9	pf

Pentode:

Grid 1 to Plate	0.005	pf
Input	5.40	pf
Output	3.30	pf
Grid 1 to Grid 2	1.6	pf

MECHANICAL

Bulb	T-6½
Base	Miniature 9-Pin (JEDEC E9-1)
Outline	6-2
Basing	9QA
Mounting Position	Any



RATINGS

Design Maximum Values

	Triode	Pentode	
Plate Voltage	275	275	max. Volts
Grid 2 Supply Voltage	—	275	max. Volts
Grid 2 Voltage	—	See Grid 2 Input	Rating Curve
Plate Dissipation	1.5	2.2	max. Watts
Grid 2 Dissipation	—	0.45	max. Watts
Positive Grid 1 Voltage	0	0	max. Volts
Negative Grid 1 Voltage	40	40	max. Volts
Cathode Current	20	20	max. Ma.
Grid 1 Circuit Resistance			
Fixed Bias	0.5	0.25	max. Megohm
Cathode Resistor Bias	1.0	0.5	max. Megohm
Heater-Cathode Voltage:			
Heater Negative with Respect to Cathode			
Total DC + Peak	200	200	max. Volts
Heater Positive with Respect to Cathode			
DC Component	100	100	max. Volts
Total DC + Peak	200	200	max. Volts

CHARACTERISTICS AND TYPICAL OPERATION

Triode Unit:

Plate Voltage	100	125	Volts
Grid Voltage	—	—1.0	Volts
Grid Circuit Resistance	0.1	—	Megohm
Amplification Factor	—	40	—
Plate Resistance	—	4700	Ohms
Transconductance	.8700	8500	μmhos
Plate Current	12.5	13	Ma.
Grid Cutoff Voltage (Note 3)	—6.0	—	Volts

Pentode Unit:

Plate Voltage	120	125	Volts
Grid 2 Voltage	90	125	Volts
Grid 1 Voltage	—	—1.0	Volts
Grid 1 Circuit Resistance	0.1	—	Megohms
Plate Resistance	—	200000	Ohms
Transconductance	13000	11000	μmhos
Plate Current	8.5	8.0	Ma.
Grid 2 Current	2.8	2.5	Ma.
Grid 1 Cutoff Voltage (Note 3)	—2.5	—	Volts

NOTES

1. 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 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.
2. With external shield connected to cathode.
3. For a plate current of 20 microamperes. Receiving Tube

