

TWIN TRIODE TYPES 6CG7 AND 8CG7

The 6CG7 and 8CG7 are 9-pin miniature medium-mu twin triode types designed for use as vertical deflection oscillators and horizontal deflection oscillators in television receivers. They may also be used as phase inverters, multivibrators, and resistance-coupled amplifiers in electronic equipment.

The 6CG7 and 8CG7 have 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 each is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

ELECTRICAL:

Cathodes	Coated Unipotential	
Heater:	6CG7	8CG7
Voltage (ac or dc)	6.3	8.4
Current	0.60 ± 6%	0.45 ± 6%
Warm-up Time▲	11	11
Direct Interelectrode Capacitances (Unshielded)		
	Unit 1	Unit 2
Grid to Plate	4.0	4.0
Input	2.3	2.3
Output	2.2	2.2

MECHANICAL:

Bulb	T-6½
Base	JEDEC E9-1 (Small Button 9-Pin)
Basing	9AJ
Mounting Position	Any

MAXIMUM RATINGS:

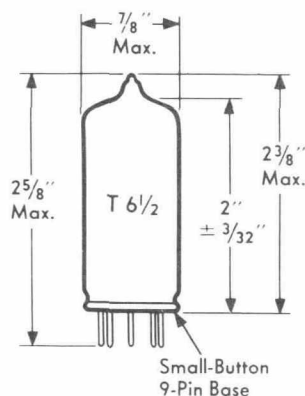
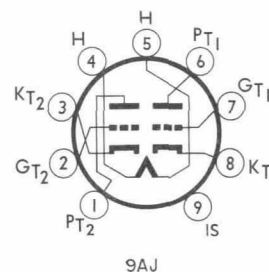
Design Maximum Values		
Plate Voltage	330	max. Volts
Grid Voltage:		
Positive Bias Value	0	max. Volts
Plate Dissipation:		
Each Plate	4.0	max. Watts
Both Plates	5.7	max. Watts
Cathode Current	22	max. Ma.
Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC + Peak	200	max. Volts
Heater Positive with Respect to Cathode		
DC Component	100	max. Volts
Total DC + Peak	200	max. Volts

MAXIMUM CIRCUIT VALUE:

Grid Circuit Resistance		
Fixed Bias Operation	1.0	max. Megohm

CHARACTERISTICS:

Plate Voltage	90	250	Volts
Grid Voltage	0	-8	Volts
Amplification Factor	20	20	
Plate Resistance (Approx.)	6700	7700	Ohms
Transconductance	3000	2600	μmhos
Grid Voltage for Plate			
Current of 10 μamp	-7	-18	Volts
Plate Current for Grid Voltage			
of -12.5 Volts	-	1.3	Ma.
Plate Current	10	9	Ma.



MAXIMUM RATINGS:

Design Maximum Values

	Vertical † Deflection Oscillator	Horizontal † Deflection Oscillator		
DC Plate Voltage	330	330	max.	Volts
Peak Negative Pulse				
Grid Voltage	440#	660**	max.	Volts
Cathode Current				
Peak	77	330	max.	Ma.
DC	22	22	max.	Ma.
Plate Dissipation				
Each Plate	4.0	4.0	max.	Watts
Both Plates	5.7	5.7	max.	Watts
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

MAXIMUM CIRCUIT VALUES:

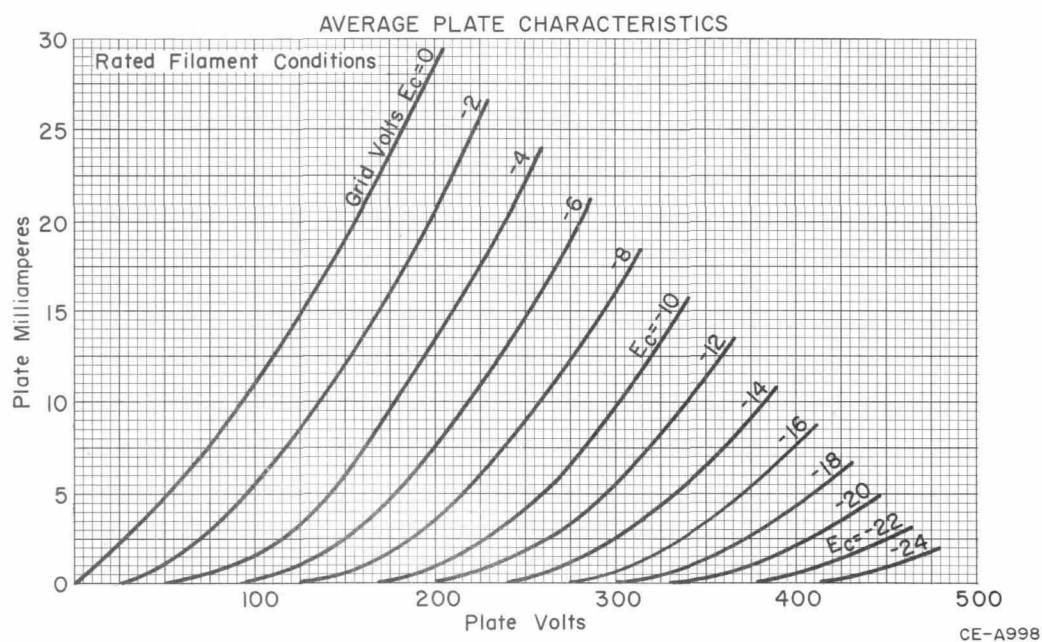
Grid Circuit Resistance				
Fixed-Bias, Grid-Resistor				
Bias, or Cathode-Bias				
Operation	2.2	2.2	max.	Megohms

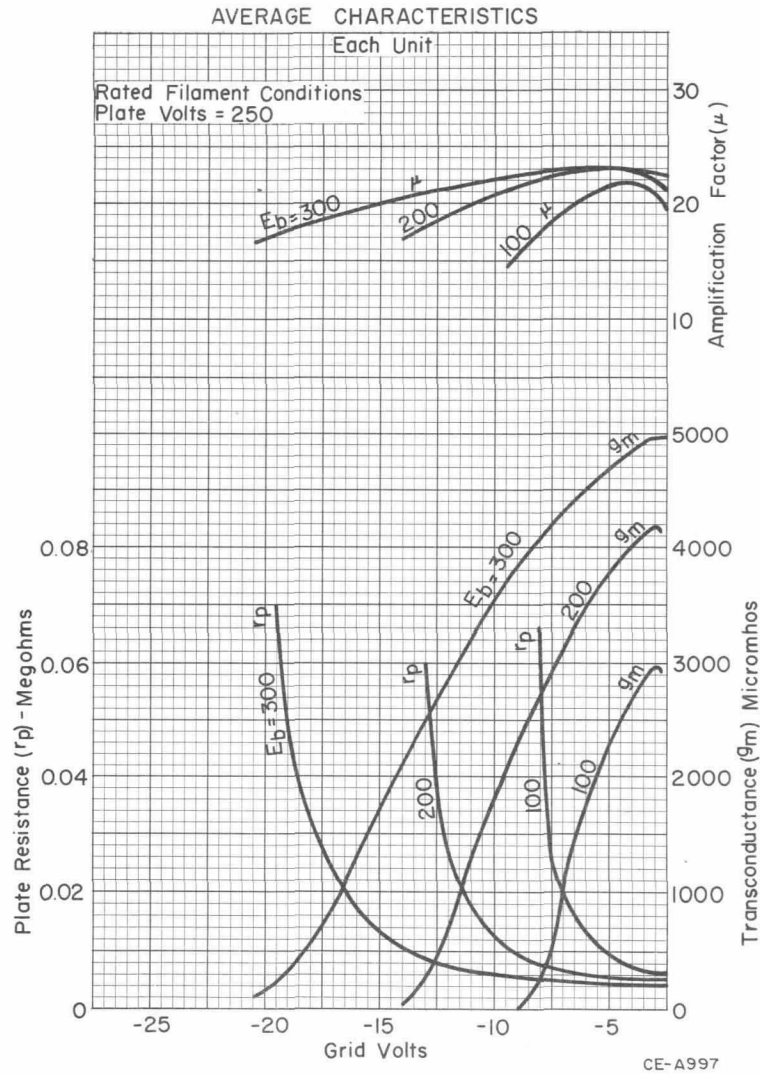
▲ Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater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

† For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission

This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

** This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.





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