

September 9, 1957

DUAL TRIODE TYPES 6CS7 and 8CS7

The 6CS7 and 8CS7 are dual triodes with dissimilar sections designed for use in television receivers. Triode No. 1 (Pins No. 6, 7 & 8) is designed for service as a vertical deflection oscillator. Triode No. 2 (Pins No. 1, 3 & 9) is designed for operation as a high efficiency vertical deflection output amplifier.

The 6CS7 and 8CS7 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.

GENERAL DATA

ELECTRICAL:

	6CS7	8CS7	
Cathodes	Coated Unipotential		
Heater:			
Voltage (ac or dc)	6.3	8.4	Volts
Current	0.60±6%	0.45±6%	Ampere
Warm-up Time ▲	11	11	Seconds
Direct Interelectrode Capacitances (Unshielded)			
	Unit 1	Unit 2	
Grid to Plate	2.6	2.6	μpf
Input	1.8	3.0	μpf
Output	0.5	0.5	μpf

MECHANICAL:

Bulb	T-6½
Base	Miniature 9-Pin (JETEC E9-1)
Outline	6-3
Basing	9EF
Mounting Position	Any

MAXIMUM RATINGS

Design Center Values (except as noted)*

	Triode No. 1 as Vertical Deflection Oscillator	Triode No. 2 as Vertical Deflection Amplifier §
Plate Voltage	500	500 max. Volts
Peak Positive Pulse Plate Voltage (Abs. Max.)		2200 max. Volts
Peak Negative Grid Voltage	400	250 max. Volts
Plate Dissipation	1.25	6.5 max. Watts
Cathode Current	20	30 max. Ma.
Peak Cathode Current	70	105 max. Ma.
Heater-Cathode Voltage Heater Negative with Respect to Cathode Total D.C. and Peak ..	200	200 max. Volts
Heater Positive with Respect to Cathode D.C. Component	100	100 max. Volts
Total D.C. and Peak ..	200	200 max. Volts
Grid Circuit Resistance ..	2.2	2.2 max. Meg.

CLASS A AMPLIFIER

CHARACTERISTICS AND TYPICAL OPERATION

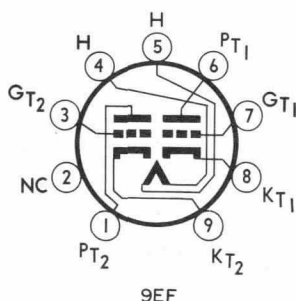
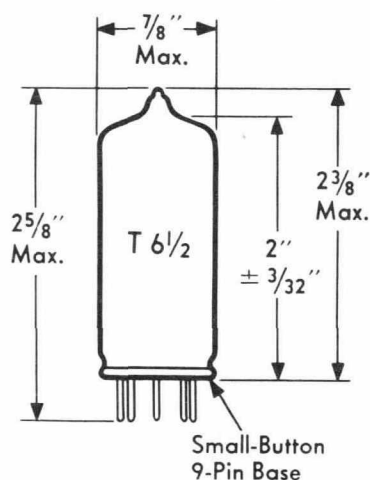
	Triode No. 1	Triode No. 2	
Plate Voltage	250	250	Volts
Grid Voltage	-8.5	-10.5	Volts
Plate Current	10.5	19	Ma.
Plate Resistance	7700	3450	Ohms
Transconductance	2200	4500	μmhos
Amplification Factor	17	15.5	
Grid Voltage for Plate Current of 3 Ma.		-16	Volts
Grid Cutoff Voltage	-24★	-22♣	Volts

★ For Plate Current of 10 μa.

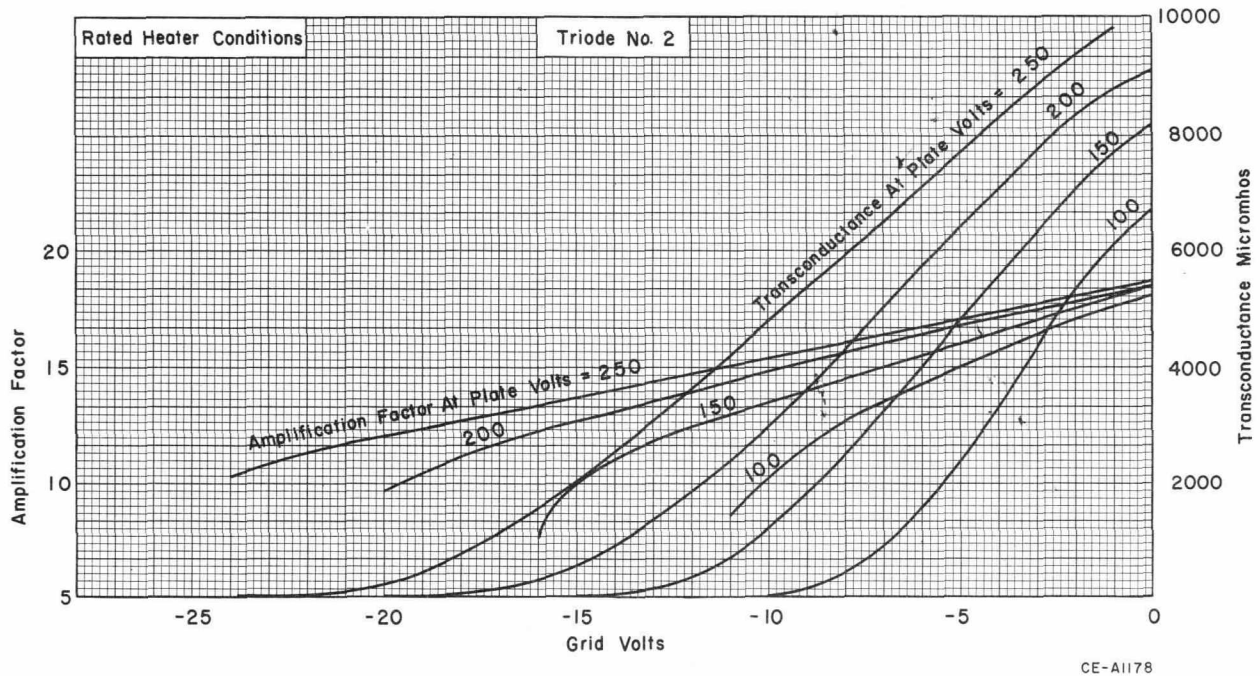
♣ For Plate Current of 50 μa.

▲ 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 three times rated heater voltage divided by rated heater current.

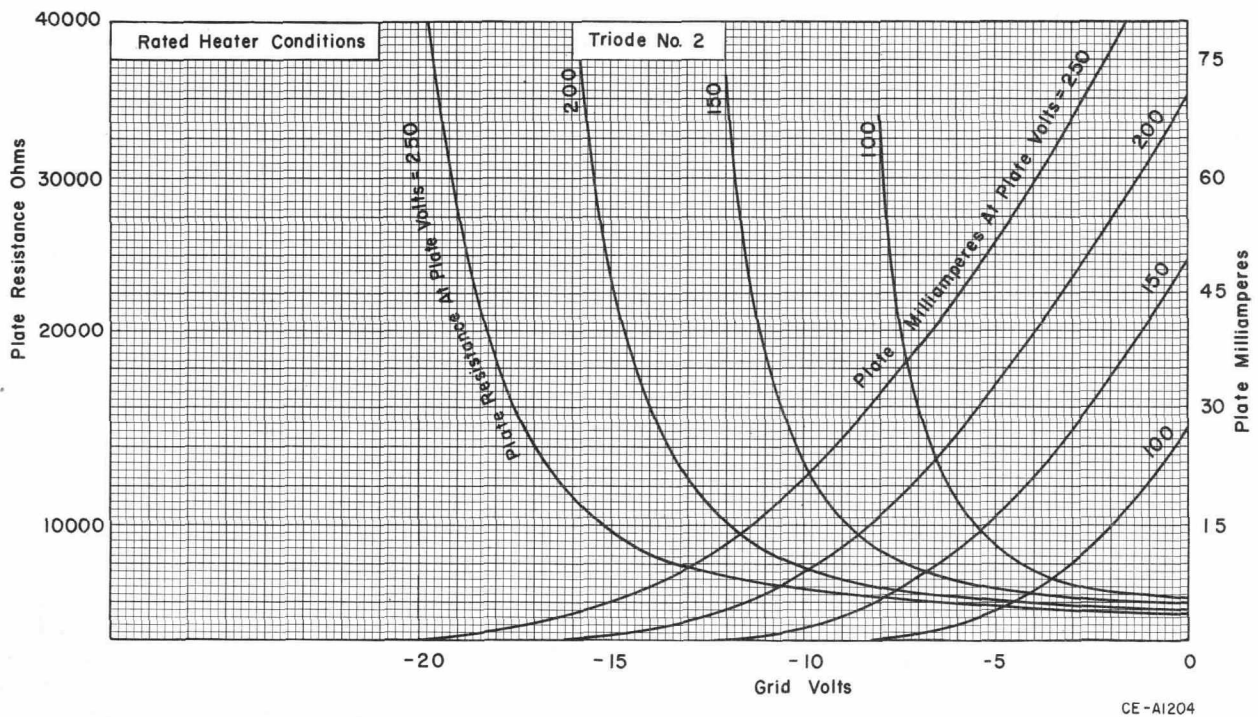
§ For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Station, Federal Communications Commission". The duty cycle of the voltage pulse must not exceed 15 per cent of one scanning cycle.



AVERAGE CHARACTERISTICS

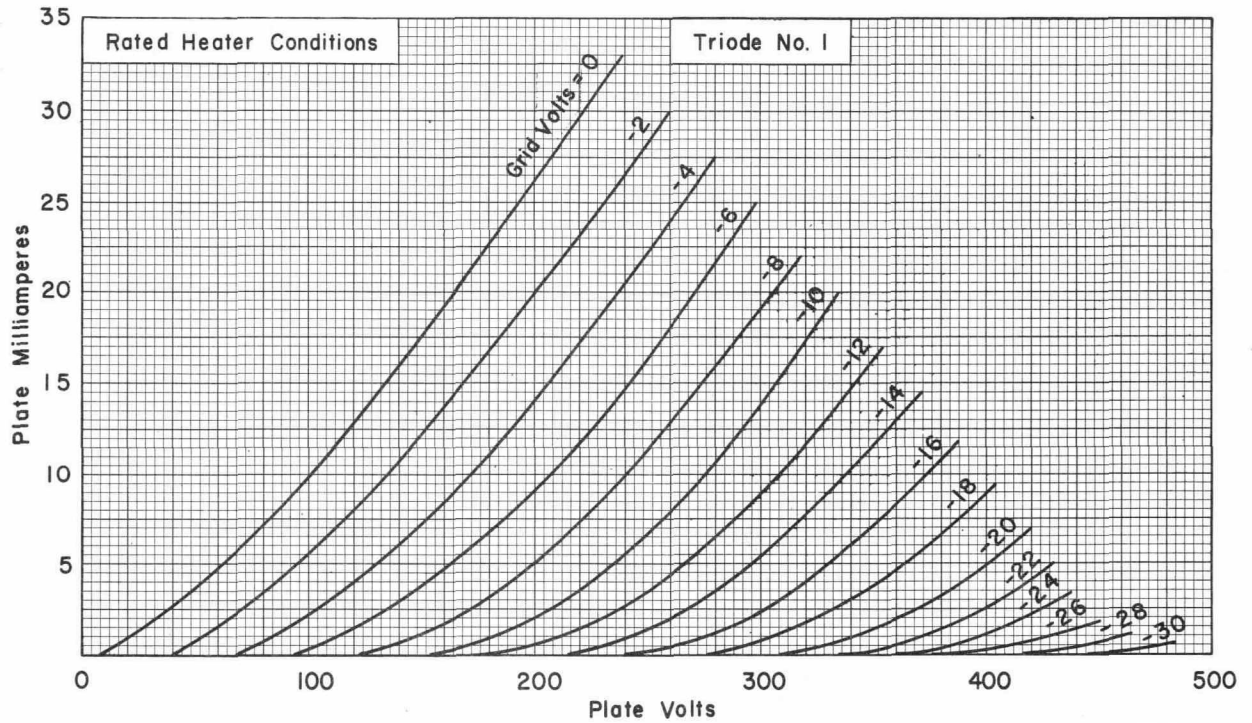


AVERAGE TRANSFER CHARACTERISTICS



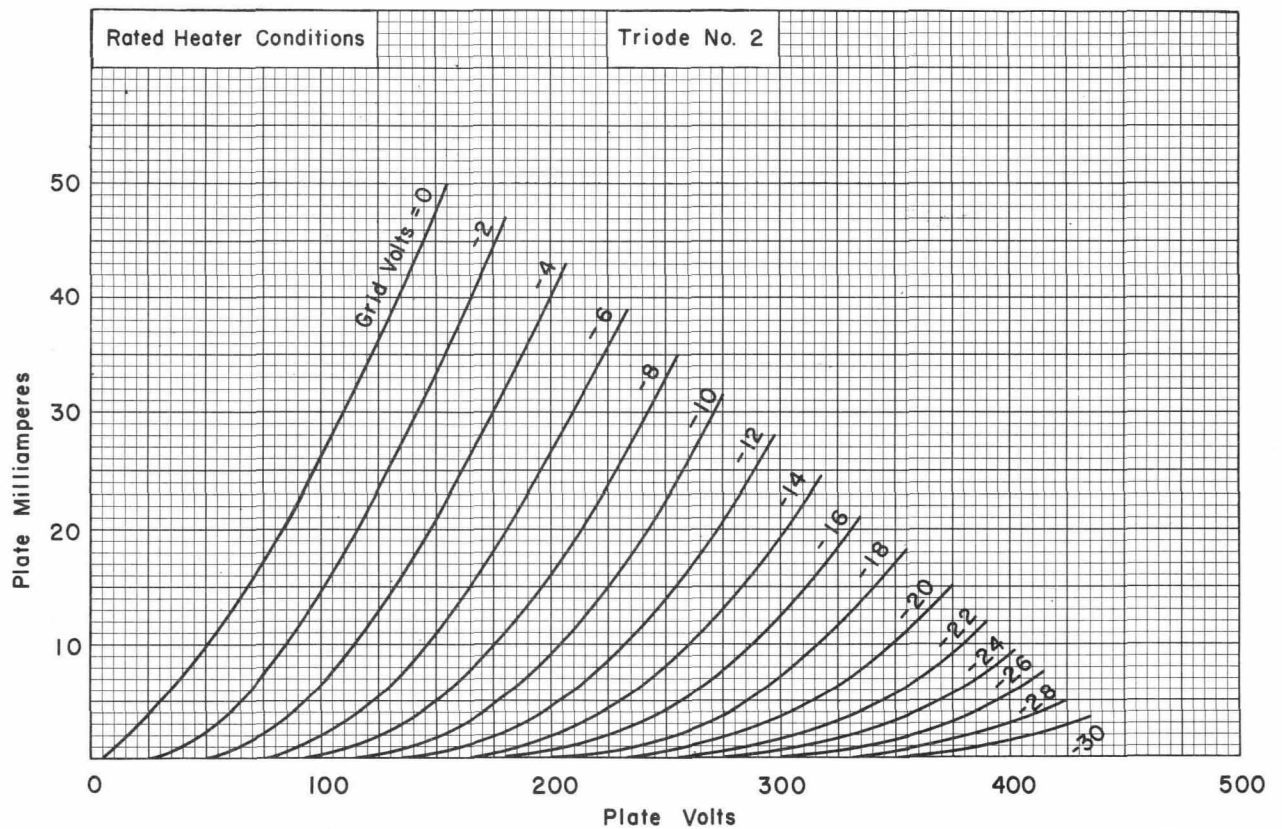
AVERAGE PLATE CHARACTERISTICS

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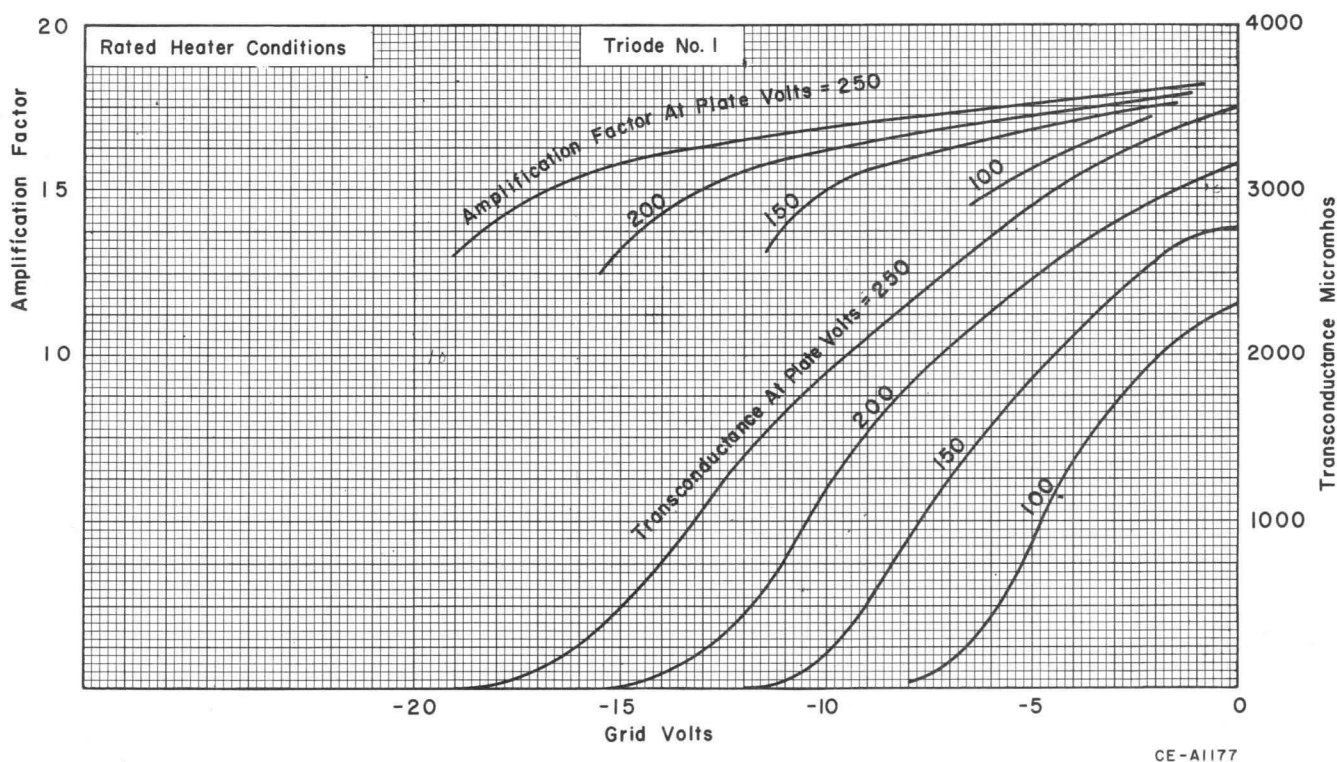
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AVERAGE PLATE CHARACTERISTICS



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AVERAGE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

