Electronic TUBES

6CS6

HEPTODE

FOR GATED AMPLIFIER SERVICE

DESCRIPTION AND RATING

The 6CS6 is a miniature dual-control heptode designed primarily for use as a combined sync separator and sync clipper in television receivers. Each of the two independent control grids exhibits a sharp-cutoff characteristic.

GENERAL

Electrical

Cathode—Coated Unipotential

	3CS6	4CS6	6CS6	
Heater Voltage, AC or DC	3.15	4.2	6.3	Volts
Heater Current	0.6	0.45	0.3	Amperes
Heater Warm-up Time*	11	11	...	Seconds

Direct Interelectrode Capacitances, approximate†

Grid-Number 1 to Plate, maximum	0.07	μμf
Grid-Number 3 to Plate, maximum	0.36	μμf
Grid-Number 1 to All Except Plate	5.5	μμf
Grid-Number 3 to All Except Plate	7.0	μμf
Plate to All	7.5	μμf
Grid-Number 1 to Grid-Number 3, maximum	0.22	μμf

Mechanical

Mounting Position—Any
Envelope—T-5½, Glass
Base—E7-1, Miniature Button 7-Pin

MAXIMUM RATINGS

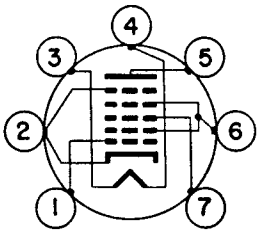
DESIGN-CENTER VALUES

Plate Voltage	300	Volts
Screen-Supply Voltage	300	Volts
Screen Voltage	100	Volts
Plate Dissipation	1.0	Watts
Screen Dissipation	1.0	Watts
DC Cathode Current	14	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Grid-Number 3 Circuit Resistance	2.2	Megohms
Grid-Number 1 Circuit Resistance	0.47	Megohms

GENERAL ELECTRIC

Supersedes ET-T877, dated 9-54

BASING DIAGRAM

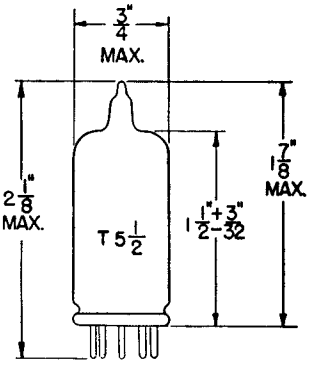


EIA 7CH

TERMINAL CONNECTIONS

Pin 1—Grid Number 1
Pin 2—Cathode and Grid Number 5
Pin 3—Heater
Pin 4—Heater
Pin 5—Plate
Pin 6—Grids Number 2 and 4 (Screen)
Pin 7—Grid Number 3

PHYSICAL DIMENSIONS



EIA 5-2

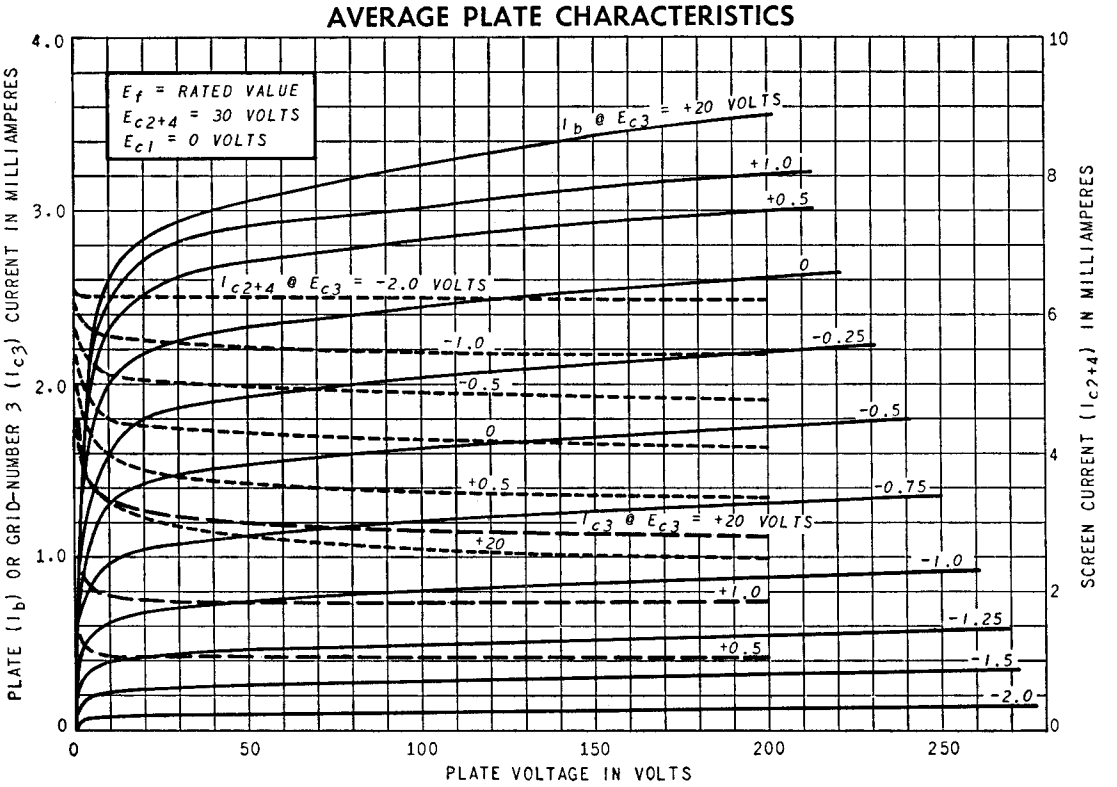
CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

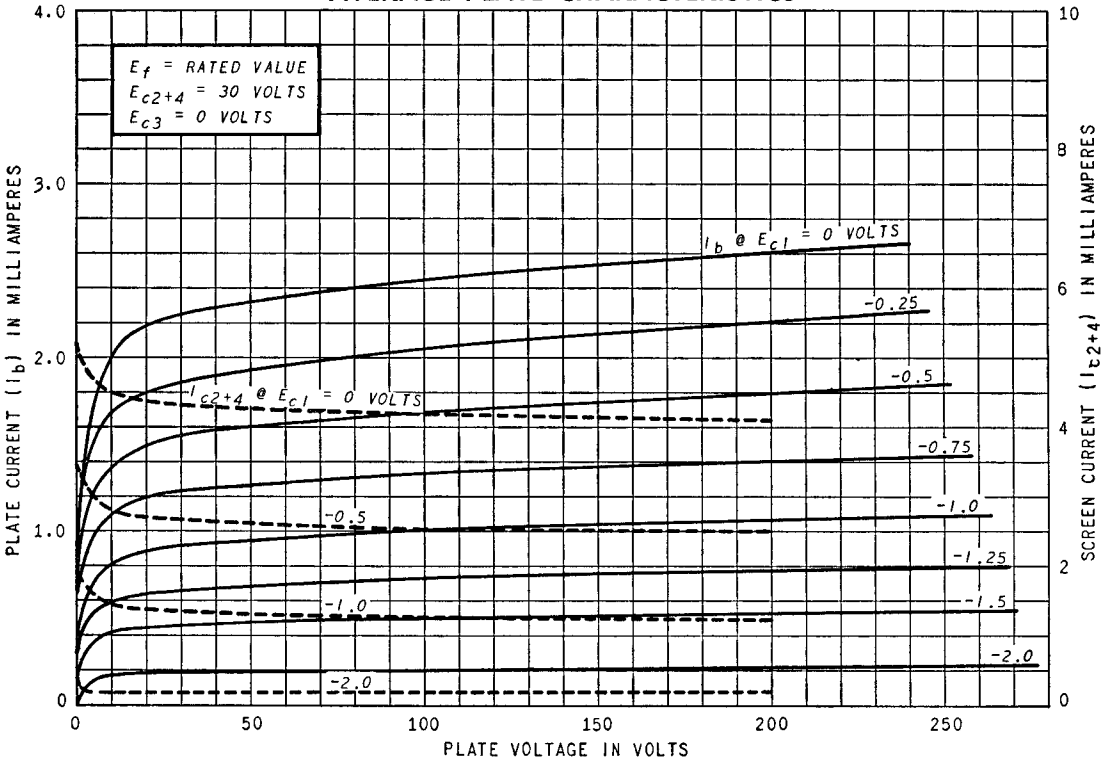
Plate Voltage	10	100	100	Volts
Screen Voltage	30	30	30	Volts
Grid-Number 3 Voltage	0	−1.0	0	Volts
Grid-Number 1 Voltage	0	0	−1.0	Volts
Plate Resistance, approximate		0.7	1.0	Megohms
Grid-Number 3 Transconductance		1500	...	Micromhos
Grid-Number 1 Transconductance		....	1100	Micromhos
Plate Current	2.0	0.8	1.0	Milliamperes
Screen Current	4.5	5.5	1.3	Milliamperes
Grid-Number 3 Voltage, approximate Ib=50 Microamperes		−2.2	....	Volts
Grid-Number 1 Voltage, approximate Ib=50 Microamperes		....	−2.5	Volts

* The time required for the voltage across the heater to reach 80 percent 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 the rated heater voltage divided by the rated heater current.

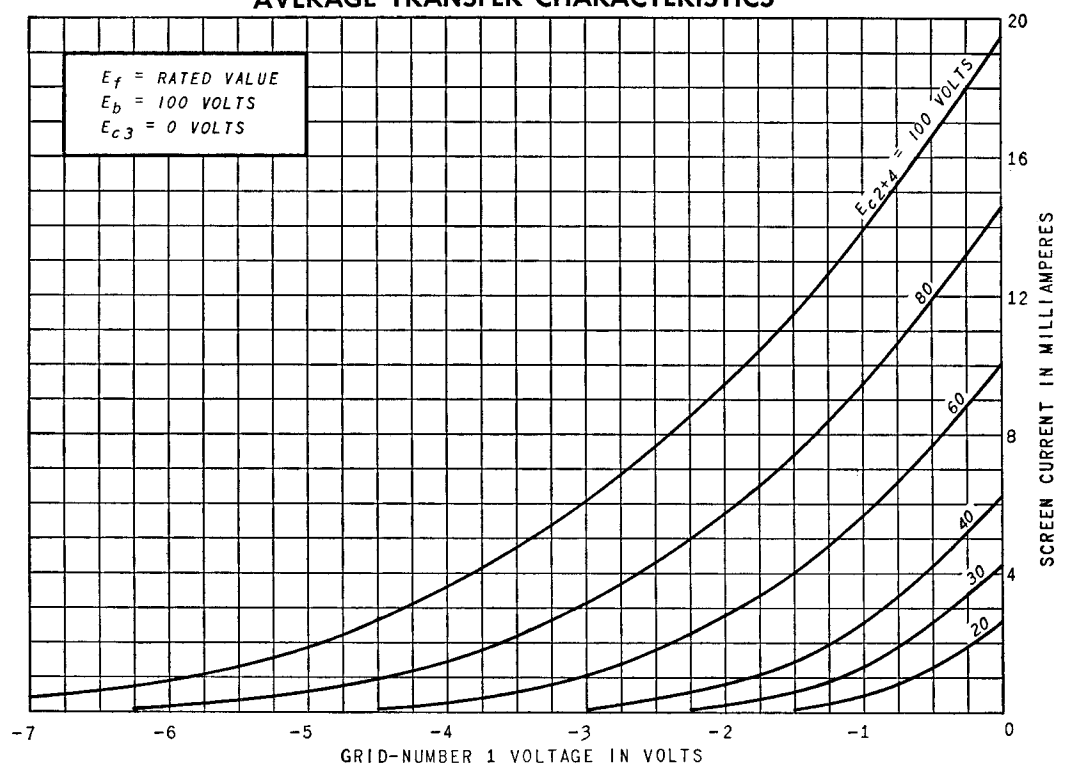
† Without external shield.



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



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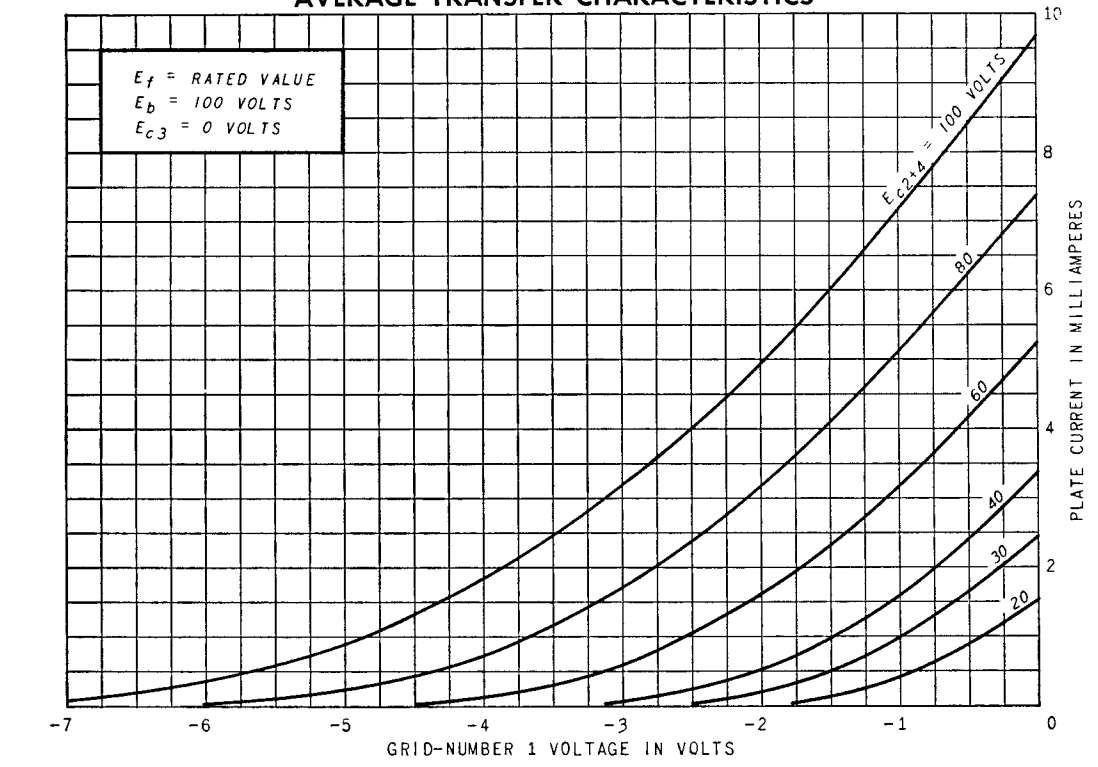

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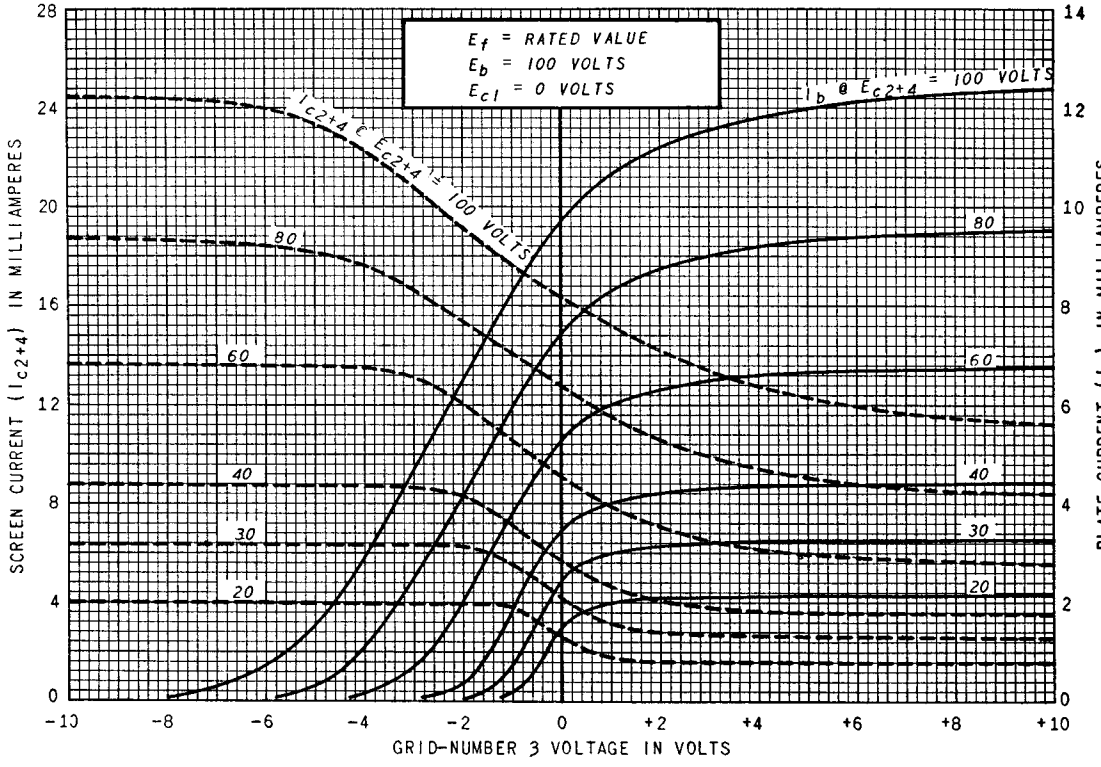

ELECTRONIC COMPONENTS DIVISION

GENERAL ELECTRIC

Schenectady 5, N. Y.