Electronic TUBES

6SC7—12SC7

TWIN TRIODE

FOR AF VOLTAGE AMPLIFIER APPLICATIONS

DESCRIPTION AND RATING

The 6SC7 is a high-mu twin triode designed primarily for use as an AF voltage amplifier. Featuring a special shielding arrangement to reduce hum, the tube is well suited for low-level audio amplifier service.

Except for heater ratings the 12SC7 is identical to the 6SC7.

GENERAL

ELECTRICAL

	6SC7	12SC7	
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	6.3	12.6	Volts
Heater Current	0.3	0.15	Amperes
Direct Interelectrode Capacitances, approximate*			
Grid to plate	2.0		μμf
Input	2.0		μμf
Output	3.0		μμf

MECHANICAL

Mounting Position—Any
Envelope—MT-8, Metal Shell
Base—B8-21, Small Wafer Octal 8-Pin
* With pin 1 connected to pin 6.

MAXIMUM RATINGS

DESIGN-CENTER VALUES, EACH SECTION

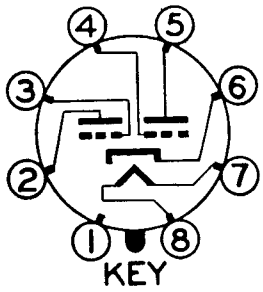
Plate Voltage	250	Volts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	90	Volts
Heater Negative with Respect to Cathode	90	Volts

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A_1 AMPLIFIER, EACH SECTION

Plate Voltage	250	Volts
Grid Voltage	−2.0	Volts
Amplification Factor	70	
Plate Resistance, approximate	53000	Ohms
Transconductance	1325	Micromhos
Plate Current	2.0	Milliamperes

BASING DIAGRAM

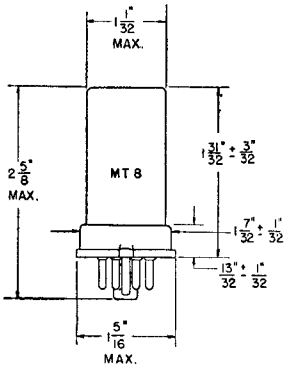


RETMA 8S

TERMINAL CONNECTIONS

Pin 1—Shell
Pin 2—Plate Number 2
Pin 3—Grid Number 2
Pin 4—Grid Number 1
Pin 5—Plate Number 1
Pin 6—Cathode
Pin 7—Heater
Pin 8—Heater

PHYSICAL DIMENSIONS



RETMA 8-1

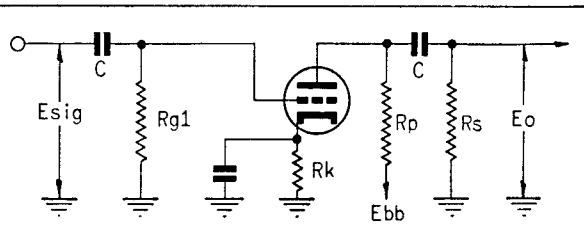
GENERAL ELECTRIC

Supersedes ET-T331, dated 5-46 and ET-T380, dated 5-46

CLASS A RESISTANCE-COUPLED AMPLIFIER

EACH SECTION

Rp Meg	Rg1 Meg	Rs Meg	Ebb = 90 Volts Rk	Gain	Eo	Ebb = 180 Volts Rk	Gain	Eo	Ebb = 300 Volts Rk	Gain	Eo
0.10	*	0.10	1800	19	6.0	910	25	18	680	29	32
0.10	*	0.24	2000	25	8.0	1000	29	24	750	34	42
0.24	*	0.24	3300	28	9.0	1800	35	23	1300	39	40
0.24	*	0.51	3600	33	10	2000	40	30	1500	42	51
0.51	*	0.51	5600	35	8.5	3000	43	27	2200	46	46
0.51	*	1.0	6200	38	12	3300	46	35	2400	49	55
0.24	10	0.24	0	29	7.5	0	36	23	0	39	44
0.24	10	0.51	0	33	10	0	41	30	0	43	55
0.51	10	0.51	0	36	9.5	0	44	26	0	46	51
0.51	10	1.0	0	40	12	0	48	36	0	50	62

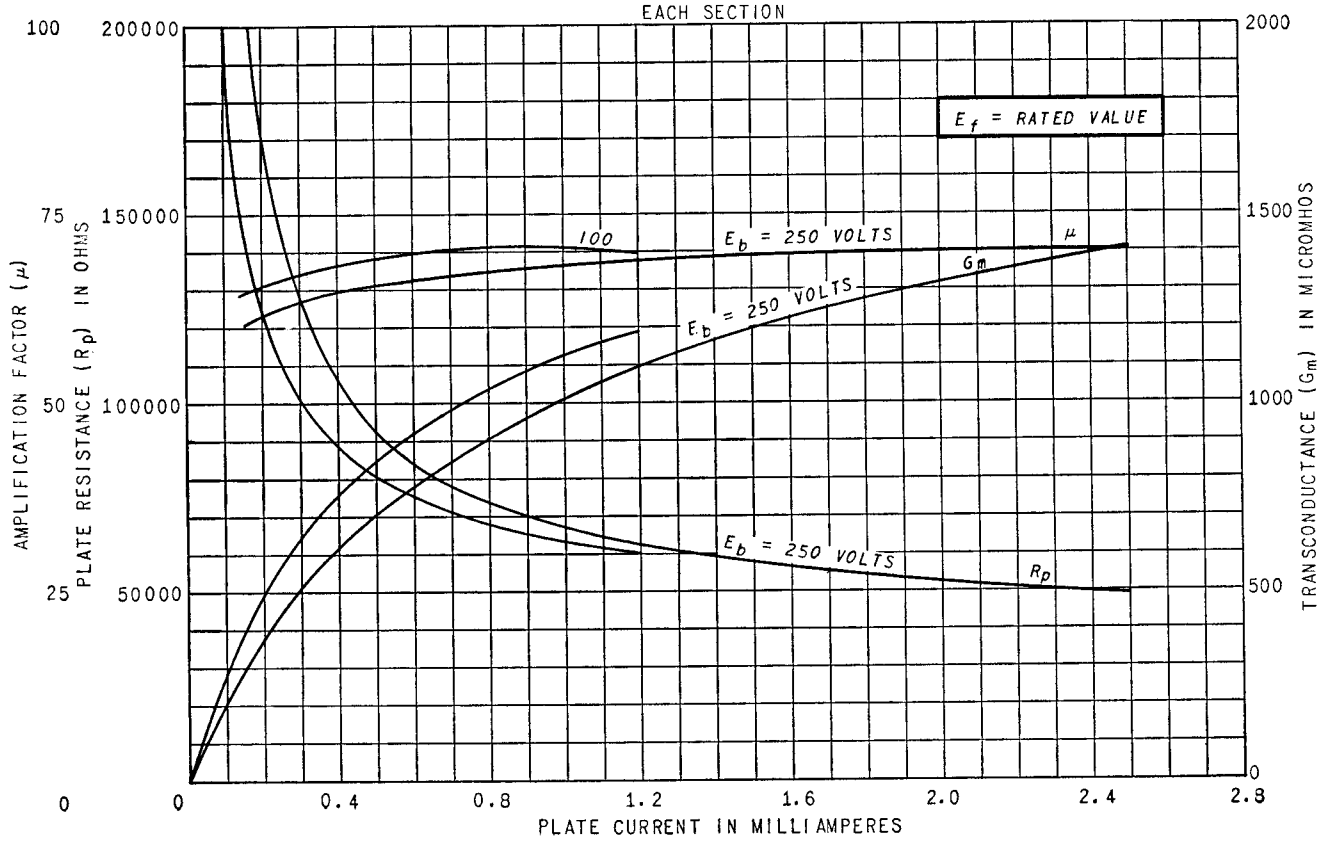


Note: Coupling capacitors (C) should be selected to give desired frequency response. Rk should be adequately by-passed.

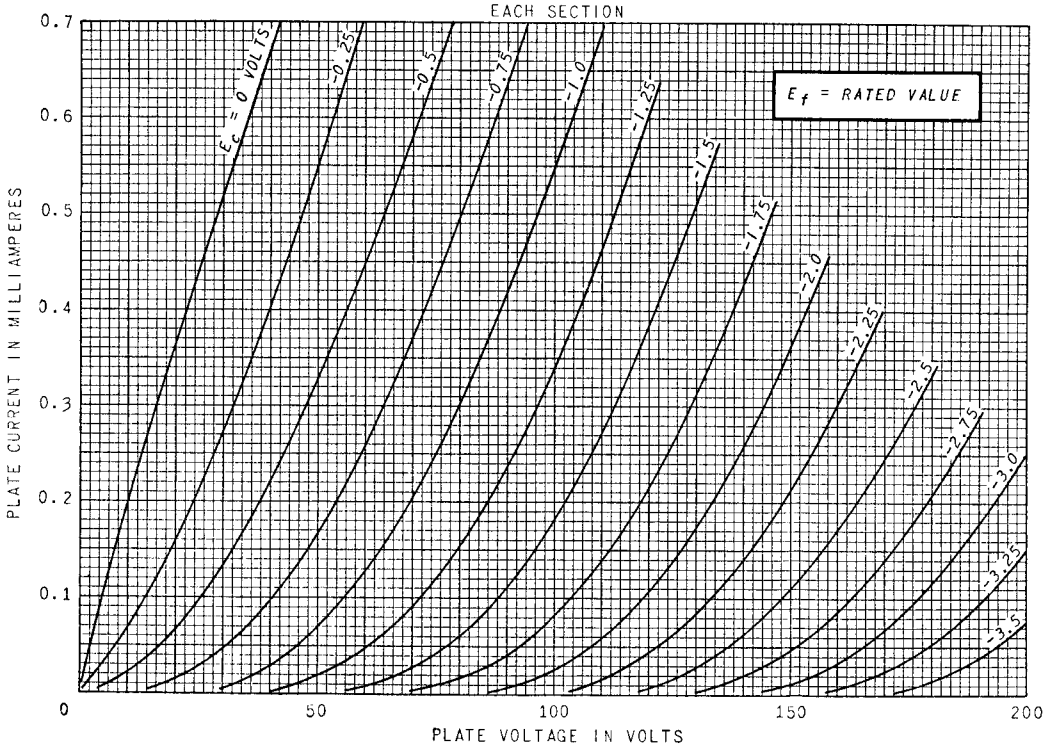
Notes: 1. Eo is maximum rms voltage output for five percent (5%) total harmonic distortion. 2. Gain measured at 2.0 volts rms output. 3. For zero-bias data generator impedance is negligible. *Value of Rg1 is non-critical.

AVERAGE CHARACTERISTICS

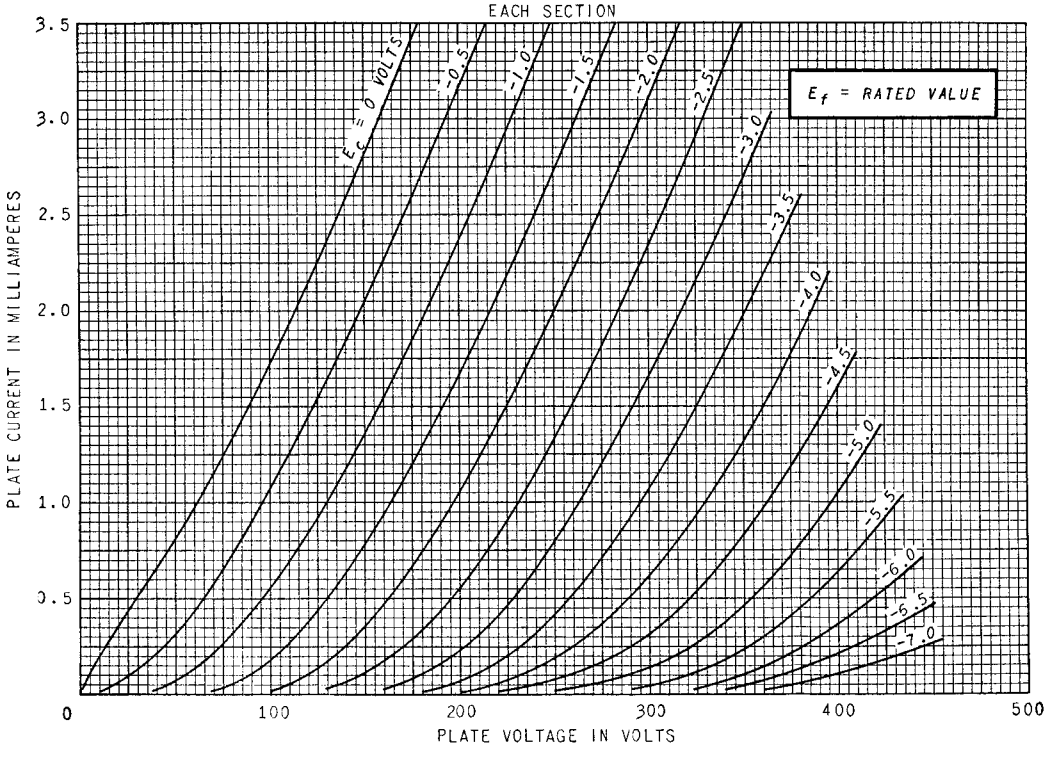
EACH SECTION



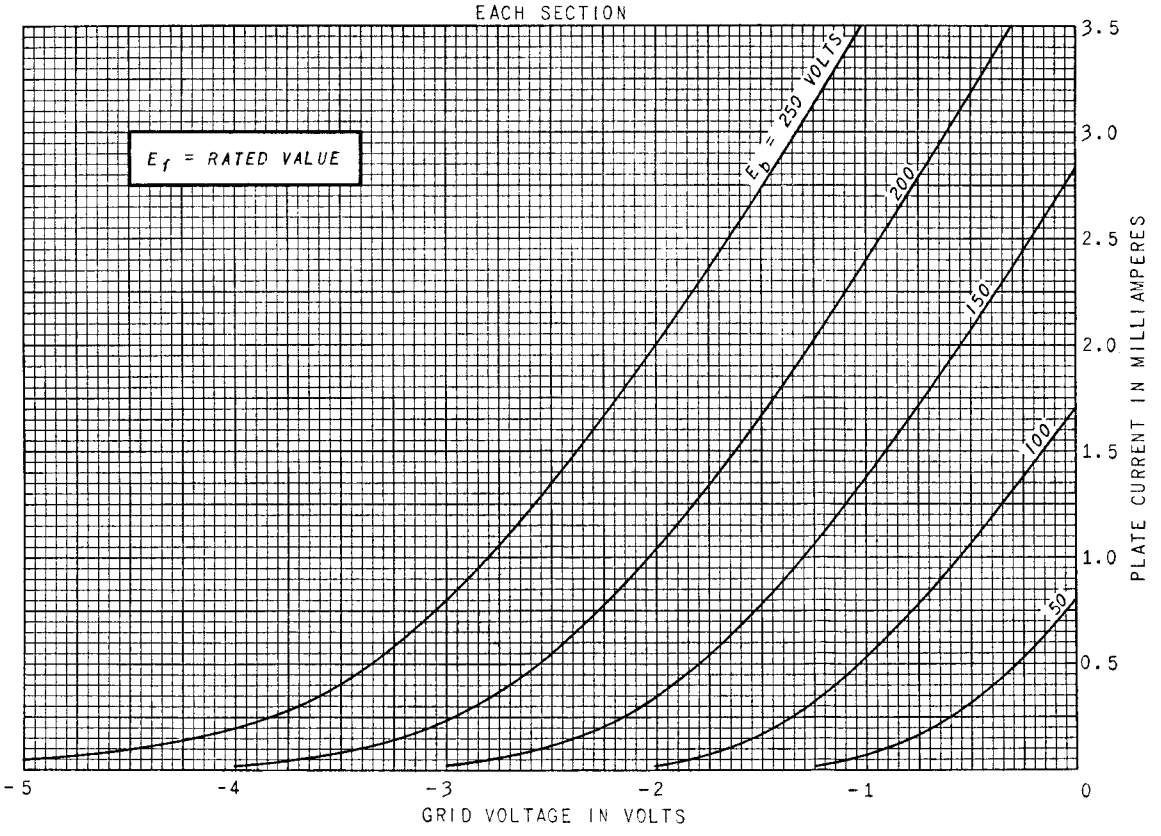
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION

GENERAL ELECTRIC

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