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engineering data service

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3S4

MECHANICAL DATA

Bulb	T-5½
Base	E7-1, Miniature Button, 7-Pin
Outline	5-2
Basing	7BA
Cathode	Coated Filament
Mounting Position	Any

ELECTRICAL DATA

FILAMENT CHARACTERISTICS

	Series	Parallel[1]	
Filament Voltage			
Battery Operation	3.2	1.6 Volts	Abs. Max.
AC/DC Line Operation (Design Center)	2.6	1.3 Volts	Max.
Filament Voltage (DC)	2.8	1.4 Volts	
Filament Current	50	100 Ma	

RATINGS (Design Center Values)

	Series Filament	Parallel[1] Filament	
Plate Voltage	90	90 Volts	Max.
Screen Voltage	67.5	67.5 Volts	Max.
Cathode Current[2] (Zero Signal)	6	12 Ma	Max.

CHARACTERISTICS AND TYPICAL OPERATION

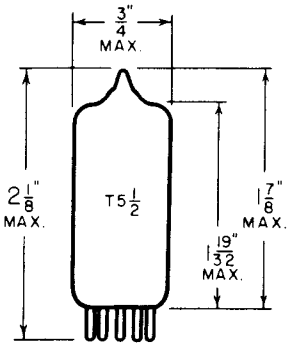
	Series Filament		Parallel[1] Filament		
Class A_1 Amplifier					
Plate Voltage	67.5	90	67.5	90	Volts
Screen Voltage	67.5	67.5	67.5	67.5	Volts
Negative Grid Voltage	−7	−7	−7	−7	Volts
Peak Signal Voltage	7	7	7	7	Volts
Zero Signal Plate Current	6.0	6.1	7.2	7.4	Ma
Zero Signal Screen Current	1.2	1.1	1.5	1.4	Ma
Transconductance	1400	1425	1550	1575	μmhos
Load Resistance	5000	8000	5000	8000	Ohms
Plate Resistance (approx.)	0.1	0.1	0.1	0.1	Megohms
Total Harmonic Distortion	12	13	10	10	Percent
Maximum Signal Power Output	160	235	180	270	Milliwatts

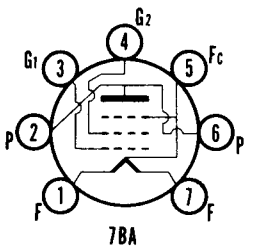
NOTES:

1. *For parallel operation, tie pins 1 and 7. Negative end of filament connected to pin No. 5.*
2. *When series filament connections are used, a shunting resistor should be used across the negative filament section (pins 1 and 5) to limit cathode current to the value specified. If other tubes in a series filament string contribute to the filament current, another resistor should be connected between pins 1 and 7 to carry any excess current over the ratings.*

QUICK REFERENCE DATA

The Sylvania Type 3S4 is a miniature power amplifier pentode designed for service in portable, battery operated equipment. The electrical characteristics of the 3S4 are similar to those of the 1S4. The Type 3S4, however, is designed for operation from either a 1.4 volt or 2.8 volt filament supply.





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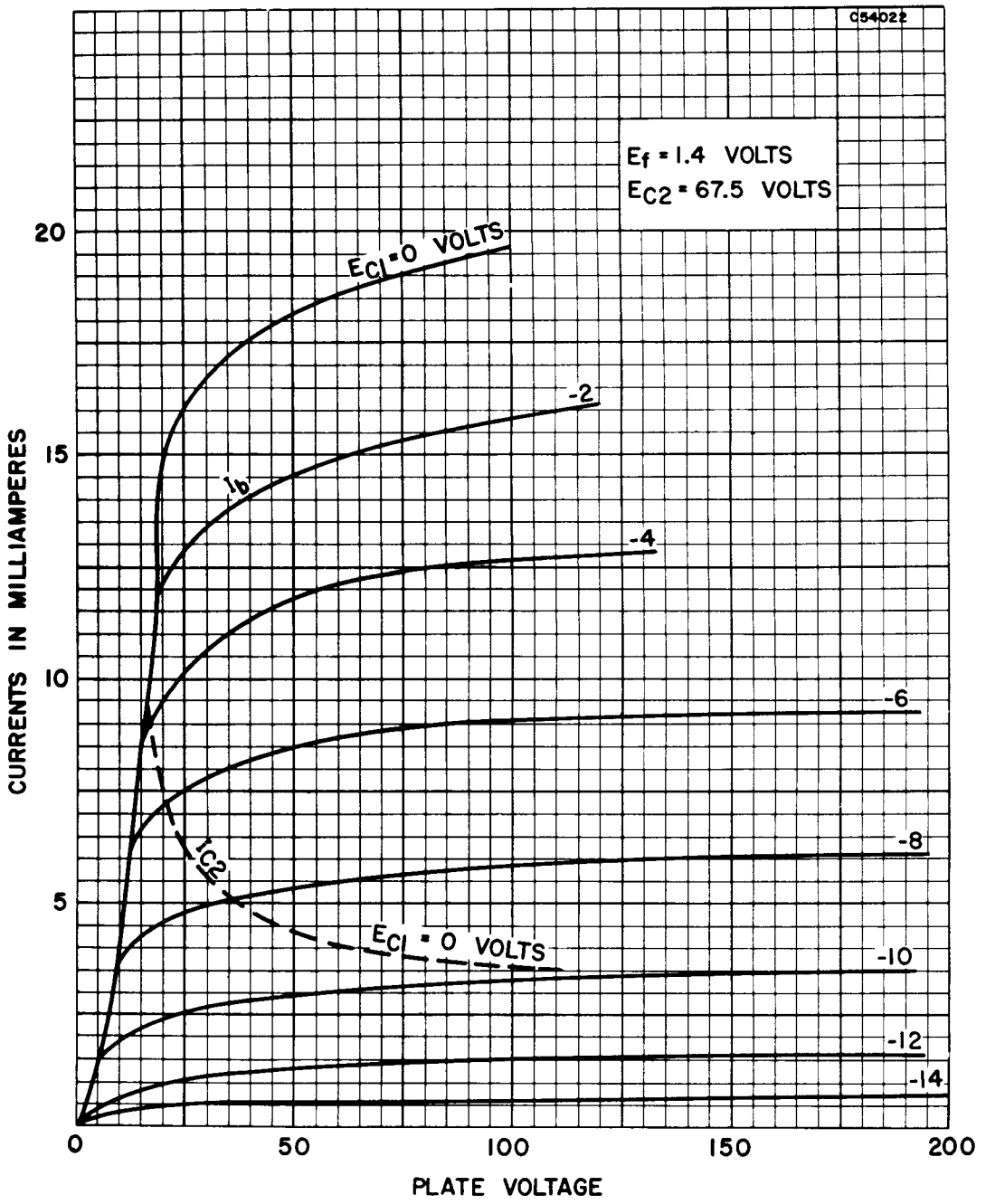
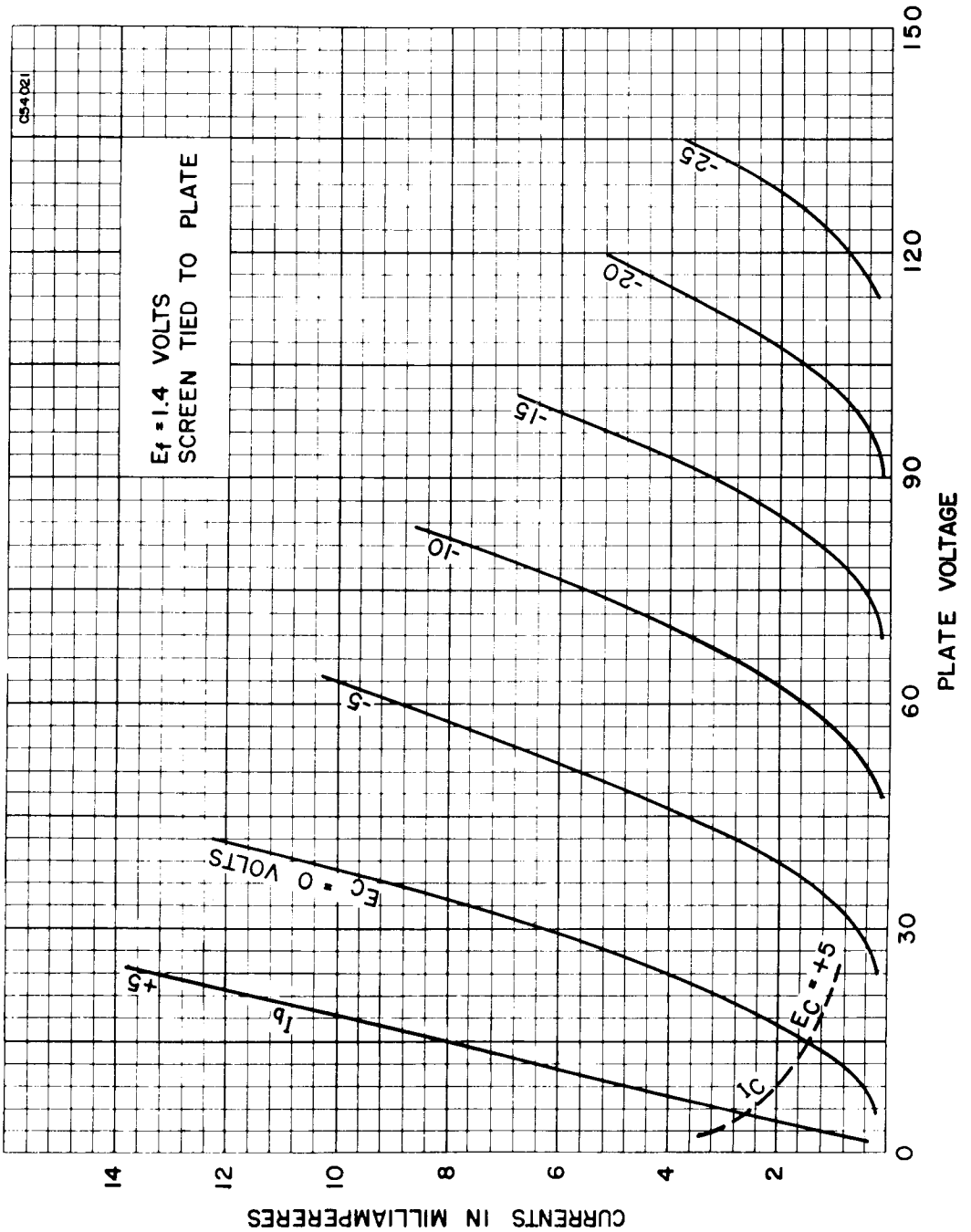
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



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AVERAGE OPERATION CHARACTERISTICS