MECHANICAL DATA

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

ELECTRICAL DATA

FILAMENT CHARACTERISTICS

	Series	Parallel	
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

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Control Grid to Plate . . . . 0.20 μμf   Max.
Input . . . . 5.5 μμf
Output . . . . 3.8 μμf

RATINGS (Design Center Values)

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

CHARACTERISTICS AND TYPICAL OPERATION

Class A₁ Amplifier	Series Filament	Parallel Filament		
Plate Voltage	90	85	90	Volts
Screen Voltage	90	85	90	Volts
Negative Grid Voltage	−4.5	−5	−4.5	Volts
Peak Signal Voltage	4.5	5	4.5	Volts
Zero Signal Plate Current	7.7	6.9	9.5	Ma
Zero Signal Screen Current	1.7	1.5	2.1	Ma
Transconductance	2000	1975	2150	μmhos
Load Resistance	10,000	10,000	10,000	Ohms
Total Harmonic Distortion	7	10	7	Percent
Maximum Signal Power Output	0.24	0.25	0.27	Watt

NOTE:

1. 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 3Q4 is a miniature power amplifier pentode designed for service in the output stage of portable equipment. The filament is center-tapped to permit operation from a 1.4 volt or 2.8 volt source. Except for basing, the Type 3Q4 is identical to the Type 3V4.
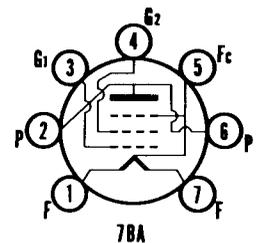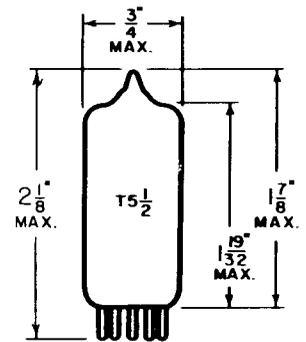
7BA

AVERAGE PLATE CHARACTERISTICS

$E_f = 1.4$ VOLTS D.C.
SCREEN VOLTS = 90

$E_{C1} = 0$

-1.5

-3.0

CONTROL - GRID VOLTS $E_{C1} = 4.5$

-6.0

-7.5

-9.0

-10.5

I_b

I_b

I_{C2}

$E_{C1} = 0$

-4.5

PLATE VOLTS

PLATE (I_b) OR SCREEN (I_{C2}) MILLIAMPERES
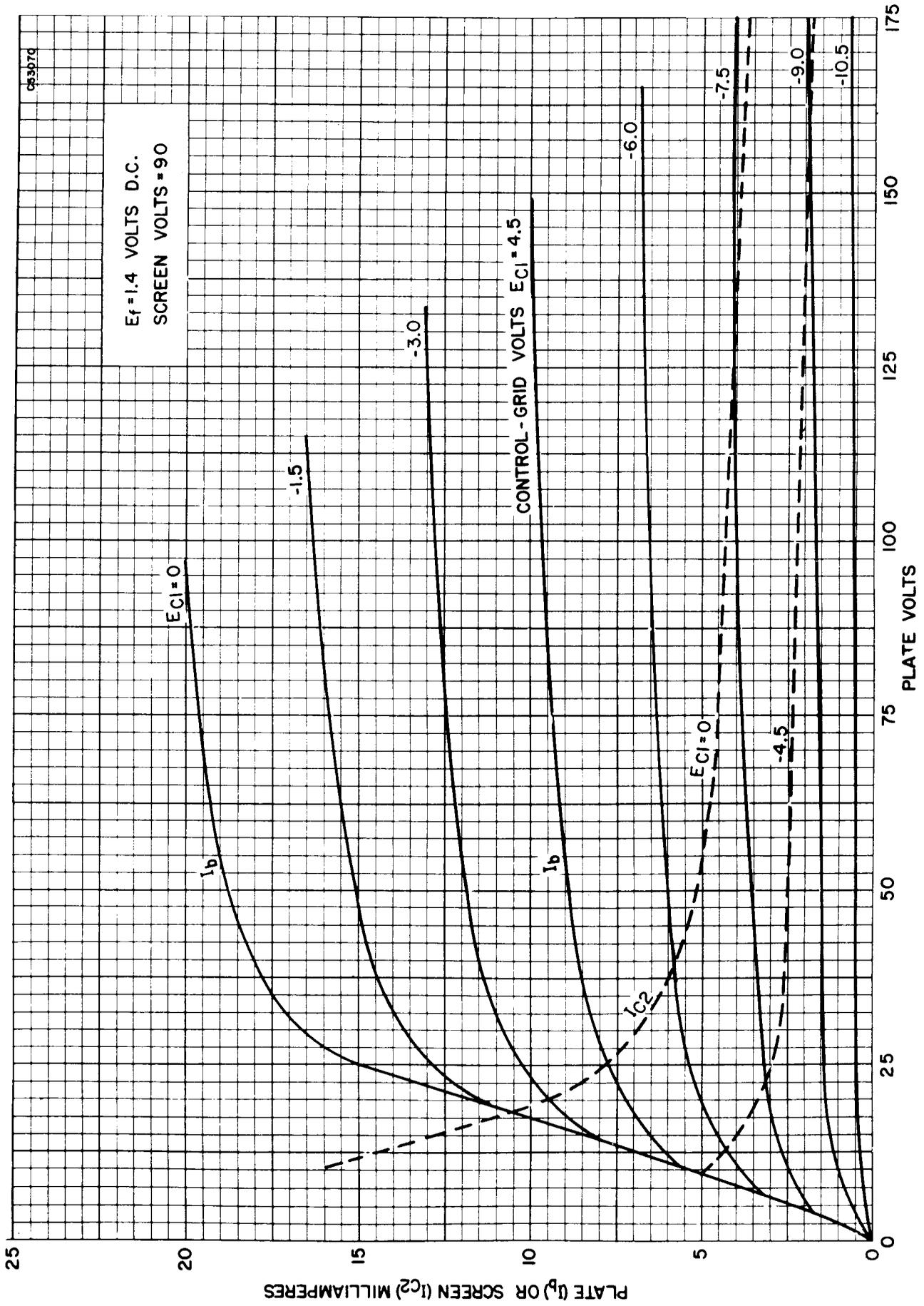
AVERAGE OPERATION CHARACTERISTICS

C53071

E_f = 1.4 VOLTS D.C.   CONTROL-GRID VOLTS = -4.5

PLATE VOLTS = 90   SCREEN VOLTS = 90

POWER OUTPUT

DISTORTION

TOTAL HARMONIC DISTORTION - PER CENT

POWER OUTPUT - MILLIWATTS

LOAD RESISTANCE - OHMS