

**PENTODE
MINIATURE**

Western Electric

DESCRIPTION

The 5590/401A* is a 7-pin miniature pentode having an indirectly heated cathode. It is designed for use in amplifier circuits at high and ultra high frequencies.

CHARACTERISTICS

Heater Voltage	6.3 volts
Plate Current ($E_b = E_{c2} = 90$ volts, $E_{c1} = -5.0$ volts)	3.9 milliamperes
Transconductance ($E_b = E_{c2} = 90$ volts, $E_{c1} = -5.0$ volts)	2000 micromhos



GENERAL CHARACTERISTICS

ELECTRICAL DATA

Heater Voltage		6.3 volts
Heater Current		150 milliamperes
Direct Interelectrode Capacitances		with
	without external shield	external shield (RMA #315)
Grid to Plate (max.)	0.017	*0.010 uuf
Input	3.2	* 3.4 uuf
Output	2.0	* 2.9 uuf

MECHANICAL DATA

Cathode	Coated Unipotential
Bulb	T 5½
Base	Small Button 7-pin
Mounting Position	Any
Dimensions and pin connections shown in outline drawing on Page 4	

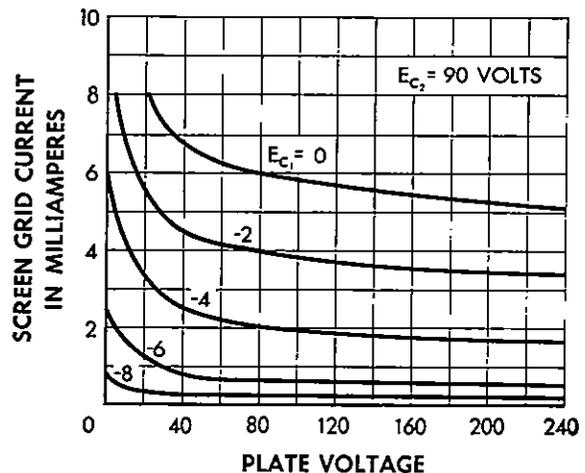
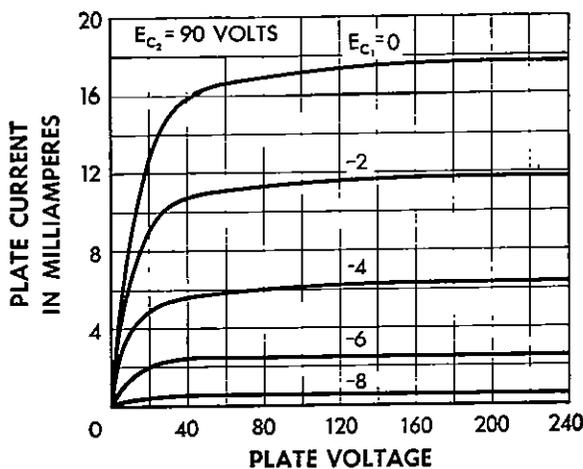
MAXIMUM RATINGS, Design-Center Values

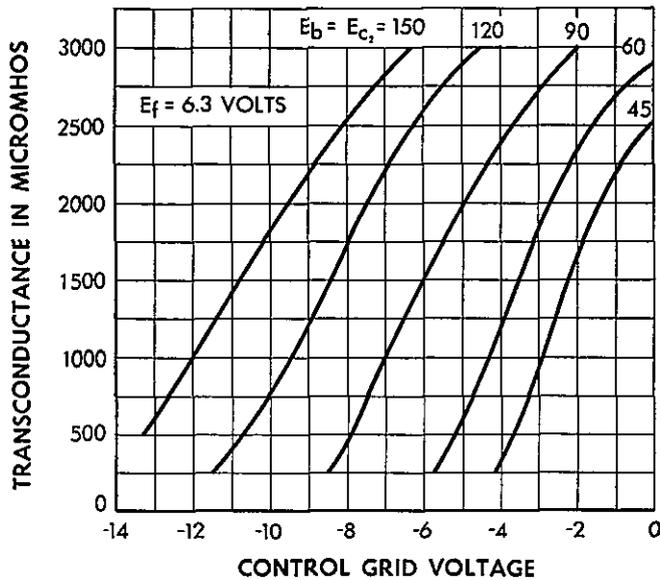
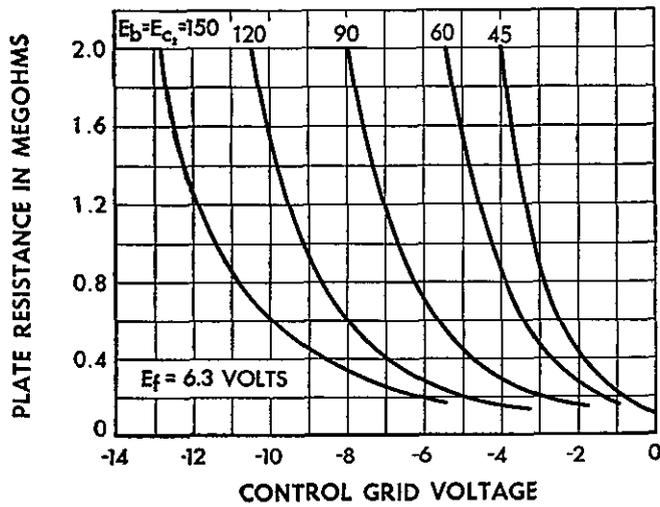
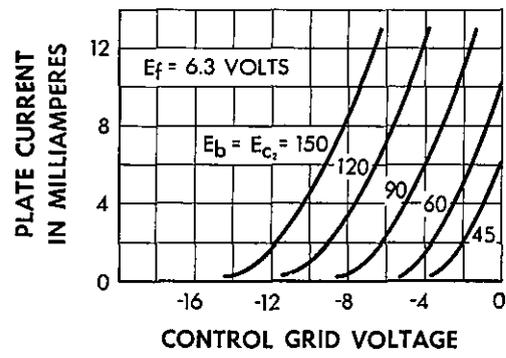
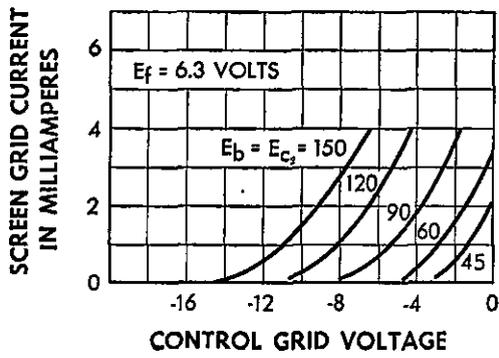
Plate Voltage	180 volts
Screen Voltage	140 volts
Plate Dissipation	1.7 watts
Screen Dissipation	0.5 watts
Cathode Current	18 milliamperes
Heater-Cathode Voltage	90 volts
Bulb Temperature	120 centigrade

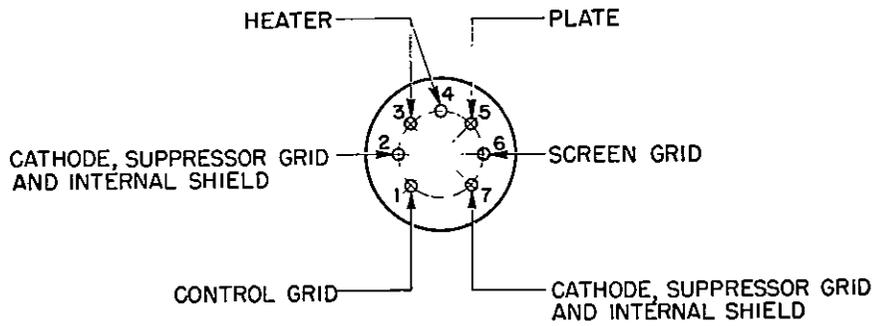
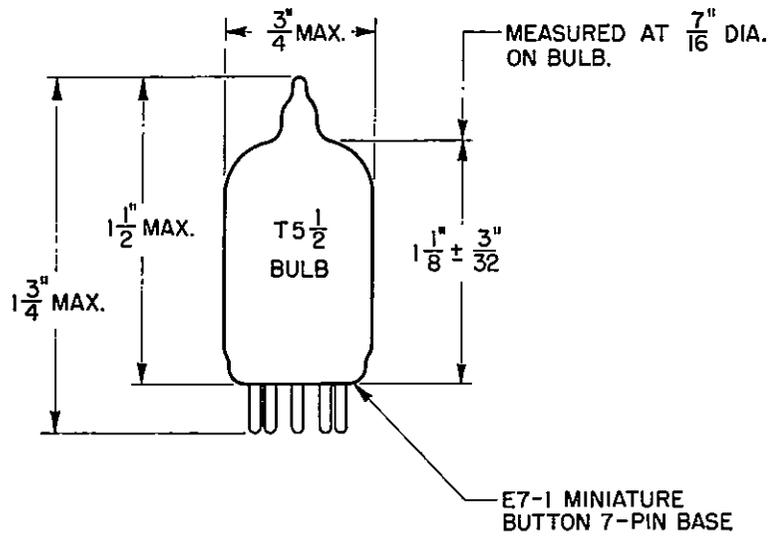
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS, CLASS A₁ AMPLIFIER

Plate Voltage	45	90	90	120 volts
Screen Grid Voltage	45	90	90	120 volts
Control Grid Voltage	-1.5	-5.0	-7.0 volts
Cathode Bias Resistor	820 ohms
Plate Current	3.0	3.9	4.3	5.1 milliamperes
Screen Grid Current	1.1	1.3	1.4	1.8 milliamperes
Plate Resistance	0.29	0.45	0.41	0.41 megohm
Transconductance	2000	2000	2100	2200 micromhos
Grid Voltage (approximate) for Plate Current of 10 microamperes	-5.3	-10.6	-14.3 volts

⇒External shield connected to cathode pins 2 and 7







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A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company