



5691

HIGH-MU TWIN TRIODE

5691
SPECIAL RED
TUBE

Intended for critical industrial applications where 10,000-hour life, extreme uniformity, rigid construction, and exceptional stability are paramount. Within its ratings, the 5691 may be used to replace its receiving-tube counterpart, type 6SL7-GT, where heater transformer will carry increased current.

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathodes:

Voltage. 6.3 $\pm$ 5%* . . . ac or dc volts
Current. 0.6 amp

Direct Interelectrode Capacitances:⁰

	<u>Min.</u>	<u>Au.</u>	<u>Max.</u>	
Triode No.1:				
Grid to Plate.	3.1	3.6	4.1	$\mu\mu\text{f}$
Grid to Cathode.	1.9	2.4	2.9	$\mu\mu\text{f}$
Plate to Cathode	1.8	2.3	2.8	$\mu\mu\text{f}$
Triode No.2:				
Grid to Plate.	3.1	3.6	4.1	$\mu\mu\text{f}$
Grid to Cathode.	2.2	2.7	3.2	$\mu\mu\text{f}$
Plate to Cathode	2.1	2.6	3.1	$\mu\mu\text{f}$
Plate of Triode No.1 to Plate of Triode No.2	0.27	0.32	0.37	$\mu\mu\text{f}$

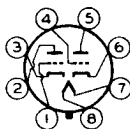
* May deviate $\pm 10\%$ from rated value provided such deviation occurs for less than 2% of the operating time.

⁰ With no external shield.

Mechanical:

Mounting Position. Any
Maximum Overall Length 2-7/8"
Maximum Seated Length. 2-5/16"
Maximum Diameter 1-9/32"
Bulb T-9
Base Short Intermediate-Shell Octal
8-Pin, Non-Hygroscopic
Basing Designation for BOTTOM VIEW 8BD

Pin 1-Grid of
Triode No.2
Pin 2-Plate of
Triode No.2
Pin 3-Cathode of
Triode No.2
Pin 4-Grid of
Triode No.1



Pin 5-Plate of
Triode No.1
Pin 6-Cathode of
Triode No.1
Pin 7-Heater
Pin 8-Heater

(continued on next page)

MAR. 15, 1948

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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HIGH-MU TWIN TRIODE

INDUSTRIAL SERVICE*Includes applications such as dc and audio amplifiers**Values are for each unit***Maximum Ratings, Absolute Values:**

DC PLATE VOLTAGE	275 max.	volts
DC PLATE-SUPPLY VOLTAGE.	330 max.	volts
GRID VOLTAGE:		
Negative bias range.	1 [•] min. to 100 max.	volts
Negative peak value.	200 max.	volts
DC GRID CURRENT.	2 max.	ma
DC CATHODE CURRENT	10 max.	ma
PLATE DISSIPATION.	1 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode. .	100 max.	volts
Heater positive with respect to cathode. .	100 max.	volts
AMBIENT TEMPERATURE RANGE.	-55 to +90	°C

- For resistance-coupled amplifier applications, the negative bias may be as low as 0.5 volt.

Maximum Circuit Value (for any operating condition):

Grid-Circuit Resistance.	2 max.	megohms
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Characteristics and Range Values:*Heater Volts, 6.3; Plate Volts, 250; Grid Volts, -2*

	<u>Min.</u>	<u>Au.</u>	<u>Max.</u>	
Heater Current	0.55	0.6	0.65	amp
Heater-Cathode Current with heater-cathode voltage of ± 100 volts.	-	-	5	μamp
Plate Current.	1.7	2.3	2.9	ma
Difference in Plate Current between triode units	-	-	0.9	ma
Plate Current for grid volt- age of -5.5 volts.	-	-	15	μamp
Reverse Grid Current	-	-	0.2	μamp
Amplification Factor	60	70	80	
Plate Resistance	-	44000	-	ohms
Transconductance	1300	1600	1900	μmhos

Typical Operation as Resistance-Coupled Amplifier (Each Unit)

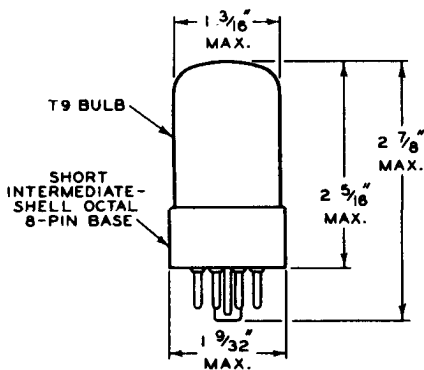
*See RESISTANCE-COUPLED AMPLIFIER CHART No. 7 at front of
Receiving Tube Section.*



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AVERAGE PLATE CHARACTERISTICS EACH TRIODE UNIT

 $E_f = 6.3$ VOLTS

PLATE MILLIAMPERES - DASHED LINE CURVES

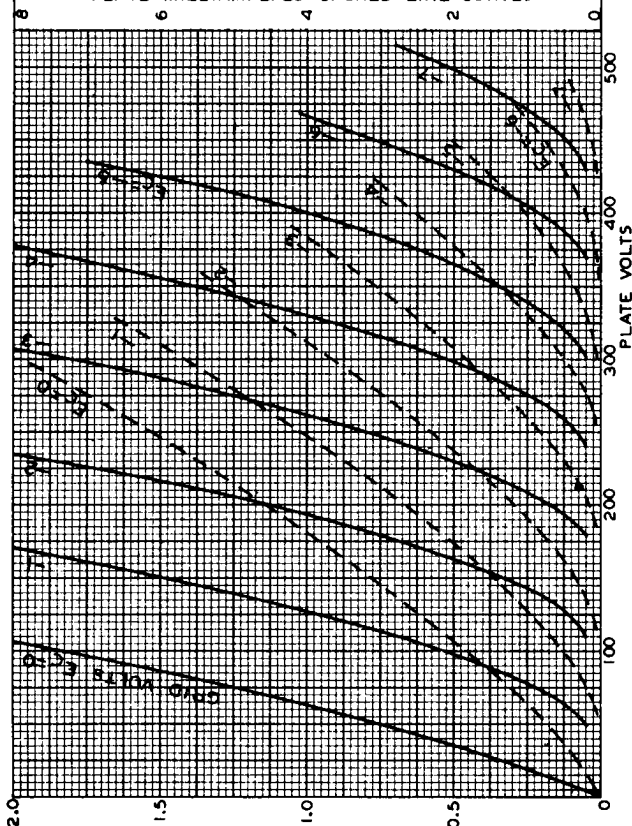


PLATE MILLIAMPERES - SOLID LINE CURVES

JUNE 16, 1941

TUBE DEPARTMENT

92C-6298

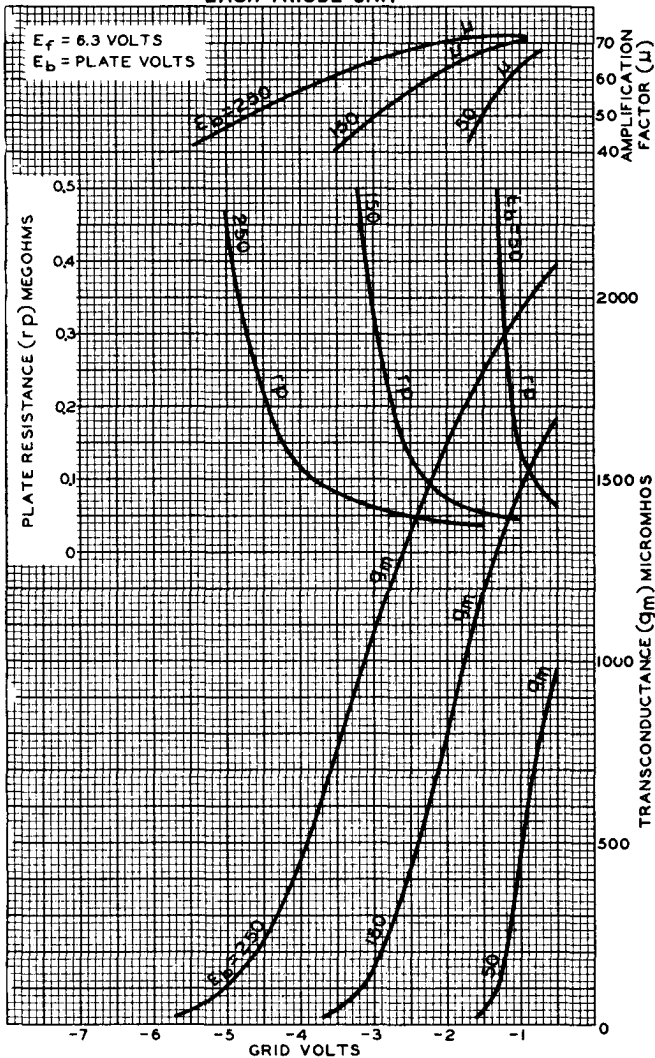
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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AVERAGE CHARACTERISTICS
EACH TRIODE UNIT

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NOV. 21, 1947

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