

Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For Equipment Having Series Heater-String Arrangement

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Heater arrangement	Series	Parallel	
Voltage (AC or DC)	12.6 $\pm$ 10%	6.3	volts
Current	0.3	0.6 $\pm$ 6%	amp
Warm-up time (Average)	—	11	sec

Direct Interelectrode Capacitances:^a

Grid No.1 to plate	0.063	μf
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	10.2	μf
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	3.5	μf

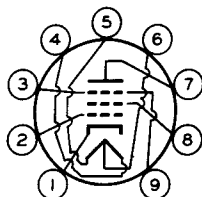
Characteristics, Class A₁ Amplifier:

Plate Supply Voltage	250	volts
Grid No.3	<i>Connected to cathode at socket</i>	
Grid-No.2 Supply Voltage	180	volts
Cathode Resistor	100	ohms
Plate Resistance (Approx.)	93000	ohms
Transconductance	11000	μmhos
Plate Current	26	ma
Grid-No.2 Current	5.75	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20	-11.6	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" $\pm$ 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See <i>General Section</i>
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW	9BF

Pin 1—Cathode
Pin 2—Grid No.1
Pin 3—Grid No.3,
Internal
Shield
Pin 4—Heater
Pin 5—Heater



Pin 6—Heater Tap
Pin 7—Plate
Pin 8—Grid No.2
Pin 9—Grid No.3,
Internal
Shield

← Indicates a change.



12BY7-A

→ AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	330 max.	volts
GRID No.3 (SUPPRESSOR GRID) . . .	<i>Connect to cathode at socket</i>	
GRID-No.2 (SCREEN-GRID) VOLTAGE	190 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	55 max.	volts
Positive-bias value	0 max.	volts
GRID-No.2 INPUT	1.2 max.	watts
PLATE DISSIPATION	6.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 ^b max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation.	0.25 max.	megohm
For cathode-bias operation.	1 max.	megohm

^a Without external shield.

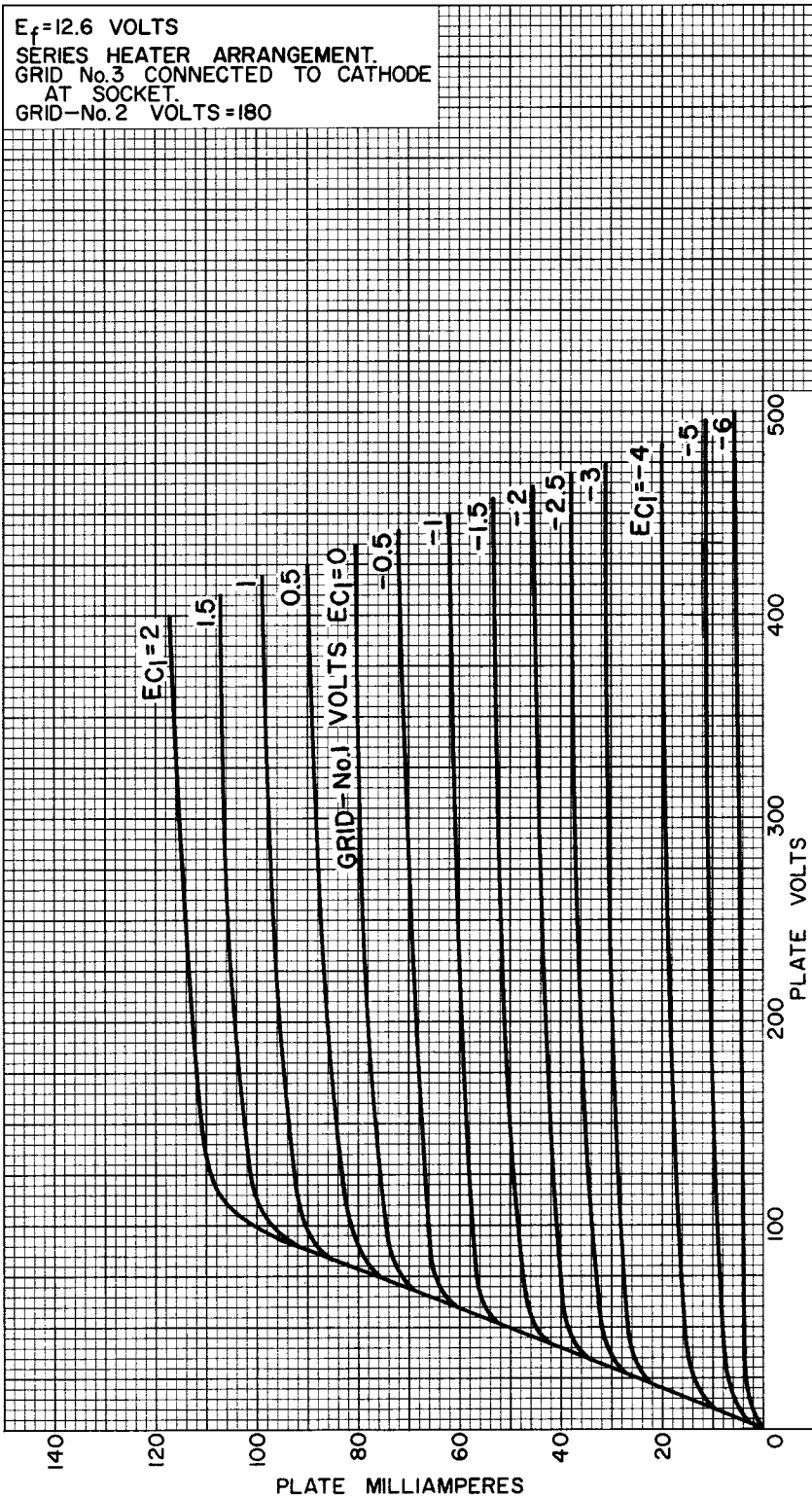
^b The dc component must not exceed 100 volts.

→ Indicates a change.



AVERAGE PLATE CHARACTERISTICS

$E_f = 12.6$ VOLTS
 SERIES HEATER ARRANGEMENT.
 GRID No.3 CONNECTED TO CATHODE
 AT SOCKET.
 GRID-No.2 VOLTS = 180

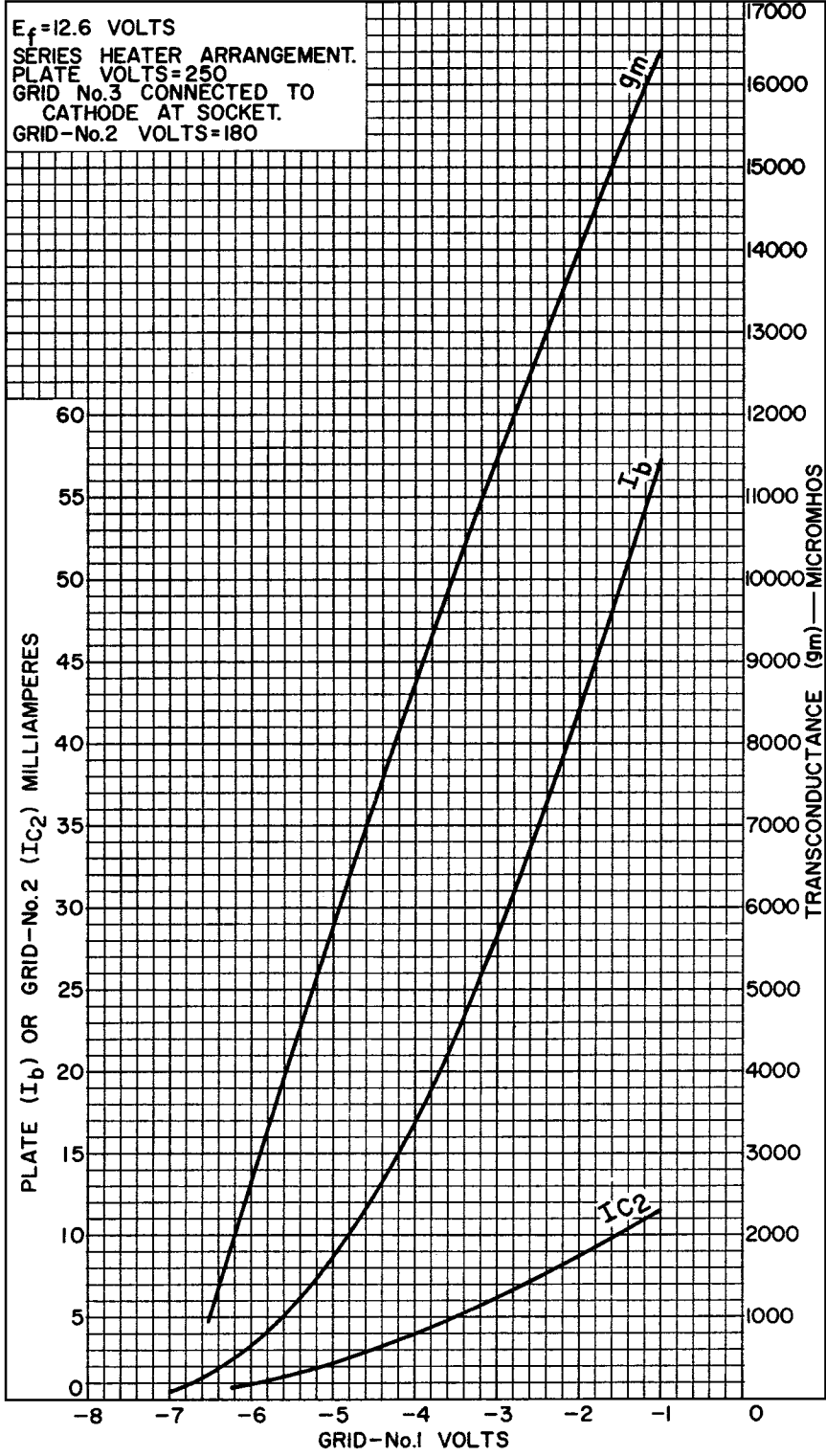


92CM-9234R2



12BY7-A

AVERAGE CHARACTERISTICS



92CM-11051

