

# 6CW4

## High-Mu Triode

### NUVISTOR TYPE

For Use as Grounded-Cathode, Neutralized RF-Amplifier  
Tube in Tuners of VHF Television and FM Receivers

### GENERAL DATA

#### Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) . . . . .	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . . . .	0.135	amp

Peak heater-cathode voltage:

Heater negative with respect to cathode . . . . .	100 max.	volts
Heater positive with respect to cathode . . . . .	100 max.	volts

Direct Interelectrode Capacitances (Approx.):

Grid to plate . . . . .	0.92	pf
Grid to cathode, shell, and heater . . . . .	4.3	pf
Plate to cathode, shell, and heater . . . . .	1.8	pf
Plate to cathode . . . . .	0.18	pf
Heater to cathode . . . . .	1.6	pf

#### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Supply Voltage . . . . .	110	volts
Grid Supply Voltage . . . . .	0	volts
Cathode Resistor . . . . .	130	ohms
Amplification Factor . . . . .	65	
Plate Resistance (Approx.) . . . . .	6600	ohms
Transconductance . . . . .	9800	μmhos
Plate Current . . . . .	7	ma
Grid Voltage (Approx.) for plate $\mu a = 10$ . . . . .	-4	volts

#### Mechanical:

Operating Position . . . . .	Any
Type of Cathode . . . . .	Coated Unipotential
Maximum Overall Length . . . . .	0.800"
Maximum Seated Length . . . . .	0.625"
Maximum Diameter . . . . .	0.440"
Envelope . . . . .	Metal Shell MT4
Socket . . . . .	Cinch Mfg. Corp. No. 133 65 10 001, Industrial Electronic Hardware Co. No. Nu 5044 or No. Nu 5060, or equivalent
Base . . . . .	Medium Ceramic-Wafer Twelvar 5-Pin (JEDEC No. E5-65)

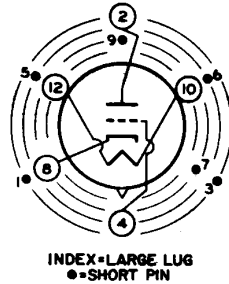
← Indicates a change.



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Basing Designation for BOTTOM VIEW. . . . . 12AQ

- Pin 1<sup>a</sup> - Do Not Use
- Pin 2 - Plate
- Pin 3 - Same as Pin 1
- Pin 4 - Grid
- Pin 5 - Same as Pin 1
- Pin 6 - Same as Pin 1
- Pin 7 - Same as Pin 1
- Pin 8 - Cathode
- Pin 9 - Same as Pin 1
- Pin 10 - Heater
- Pin 12 - Heater



### AMPLIFIER — Class A<sub>1</sub>

#### Maximum Ratings, Design-Maximum Values:

PLATE SUPPLY VOLTAGE. . . . .	300 <sup>b</sup> max.	volts
→ PLATE VOLTAGE . . . . .	135 max.	volts
GRID VOLTAGE:		
Negative-bias value . . . . .	55 max.	volts
Peak-positive value . . . . .	0 max.	volts
CATHODE CURRENT . . . . .	15 max.	ma
→ PLATE DISSIPATION:		
With a minimum series plate-circuit		
resistance of 5000 ohms . . . . .	1.5 max.	watts
For lower values of series		
plate-circuit resistance. . . . .	See accompanying <i>Plate-Dissipation-Rating Chart</i>	

#### Typical Operation:

Plate Voltage . . . . .	70	volts
Grid Supply Voltage . . . . .	0	volts
Grid Resistor . . . . .	47000	ohms
Amplification Factor. . . . .	68	
Plate Resistance (Approx.). . . . .	5440	ohms
Transconductance. . . . .	12500	μmhos
→ Plate Current. . . . .	7.2	ma

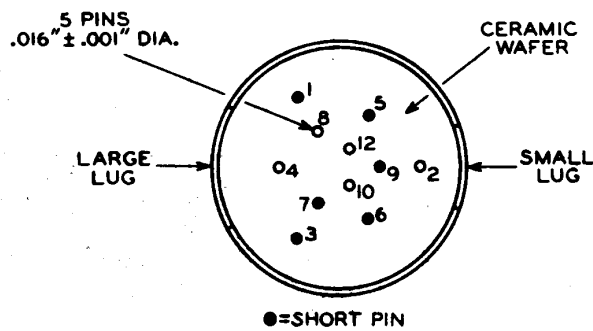
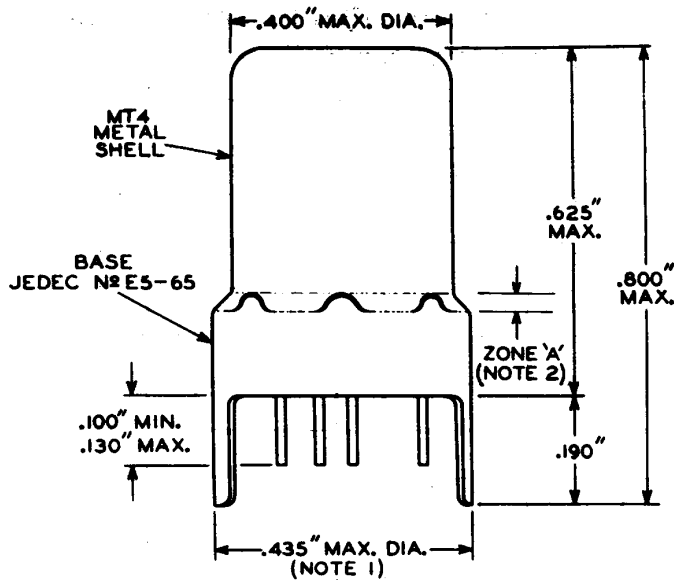
#### Maximum Circuit Values:

Grid-Circuit Resistance: <sup>c</sup>		
For fixed-bias operation. . . . .	0.5 max.	megohm
For cathode-bias operation. . . . .	2.2 max.	megohms

- <sup>a</sup> Pin 1 is of a length such that its end does not touch the socket insertion plane.
- <sup>b</sup> A plate supply voltage of 300 volts may be used provided sufficient plate-circuit resistance and agc voltage are used to limit the voltage at the plate of the tube to 135 volts under conditions of maximum-rated plate dissipation (1.5 watts).
- <sup>c</sup> For operation at metal-shell temperatures up to 135° C.

→ Indicates a change.

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92CS-10970R3

**NOTE 1:** MAXIMUM OUTSIDE DIAMETER OF 0.440" IS PERMITTED ALONG 0.190" LUG LENGTH.

**NOTE 2:** SHELL TEMPERATURE SHOULD BE MEASURED IN ZONE "A" BETWEEN BROKEN LINES.

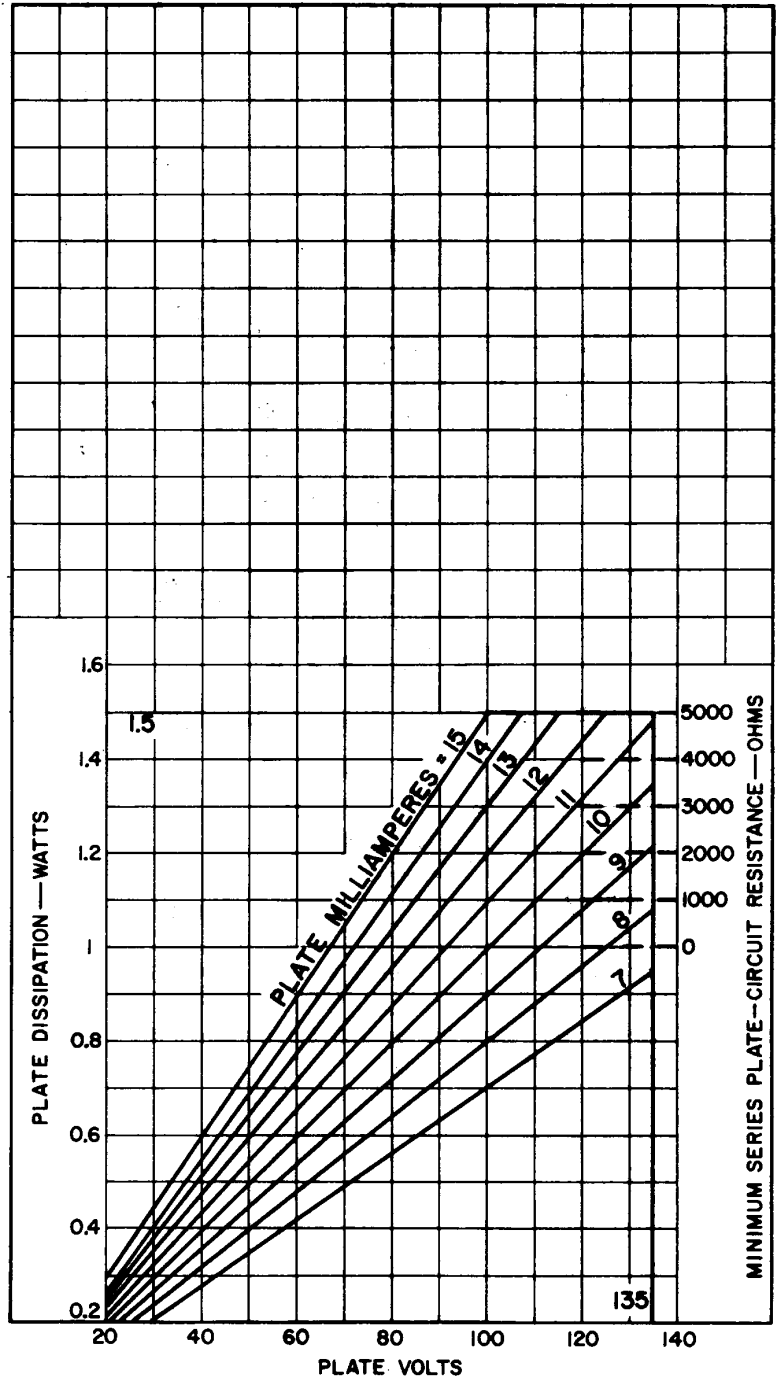


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DATA 2  
1-63

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## PLATE-DISSIPATION-RATING CHART



92CM-11681

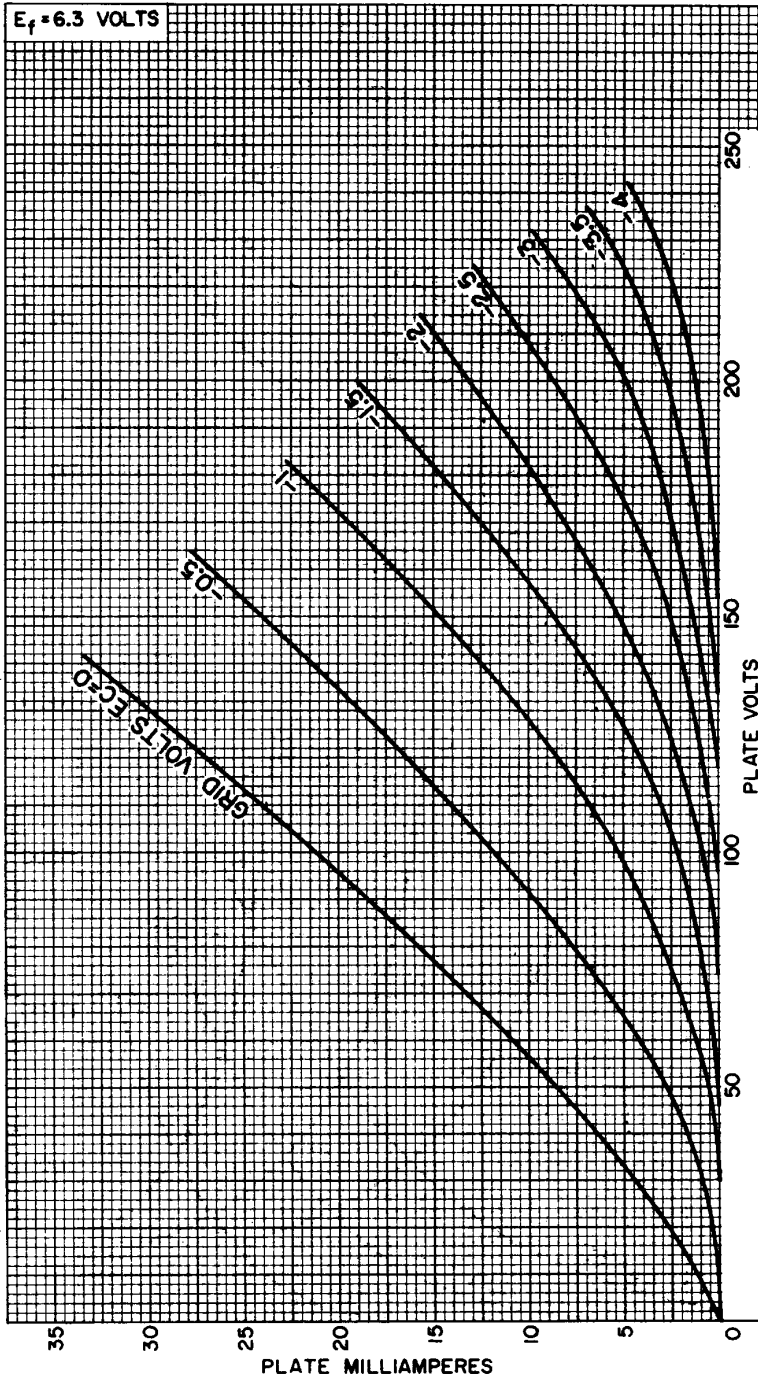
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## AVERAGE PLATE CHARACTERISTICS



92CM-10524RI

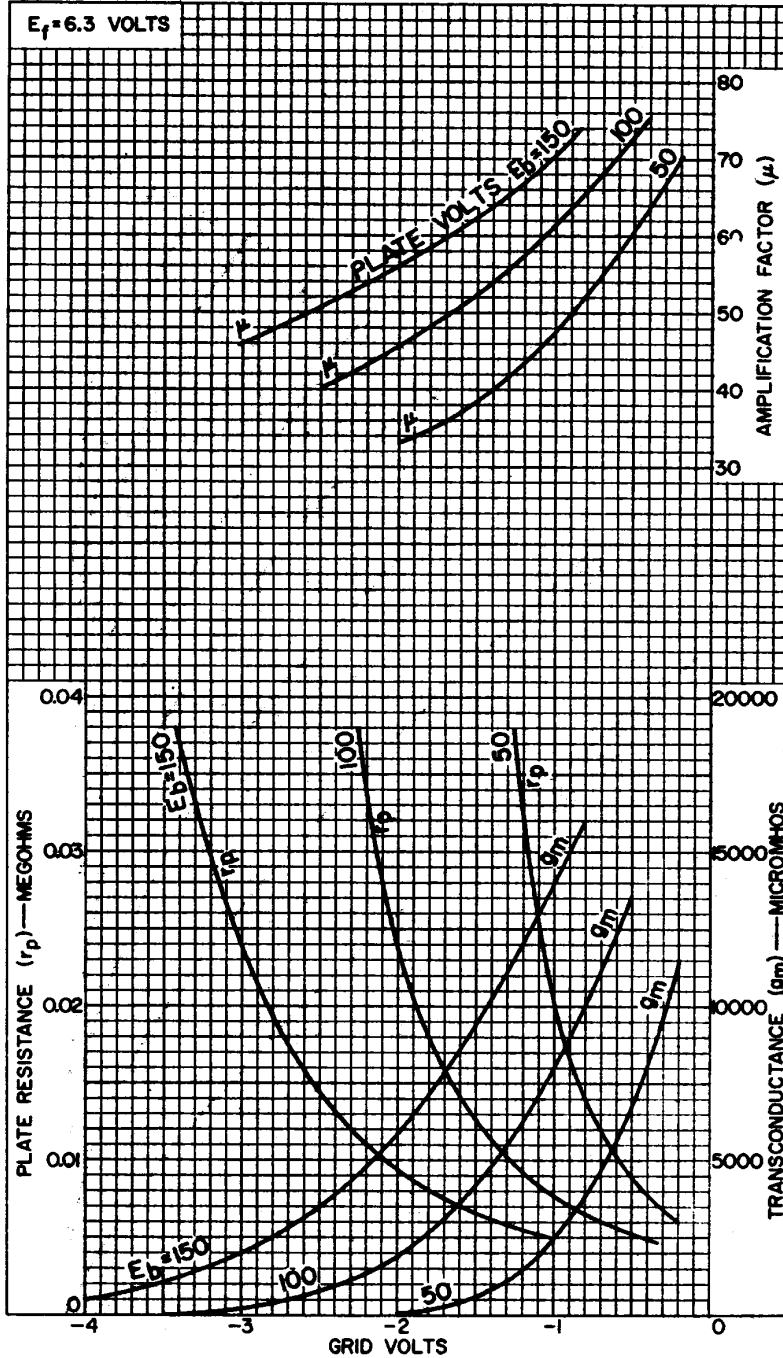


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DATA 3  
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## AVERAGE CHARACTERISTICS



92CM-10520R1

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