

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID PENTODE

For Combined Oscillator-Mixer Applications
in TV Receivers Having an IF of 40 Mc

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	0.400	amp
Peak heater-cathode voltage (Each unit):		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 ^a max.	volts

Direct Interelectrode Capacitances:^b

Triode Unit:

Grid to plate	1.3	pf
Grid to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater.	2.4	pf
Plate to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater.	2.0	pf

Pentode Unit:

Grid No.1 to plate.	0.015 max.	pf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater.	5.0	pf
Plate to cathode & grid No.3, & internal shield, grid No.2, and heater.	3.4	pf
Heater to triode cathode and pentode cathode	5.5 ^c	pf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Supply Voltage.	125	125	volts
Grid-No.2 Supply Voltage.	—	125	volts
Cathode Resistor.	68	33	ohms
Amplification Factor.	40	—	
Plate Resistance (Approx.).	5000	125000	ohms
Transconductance.	8000	12000	μmhos
Plate Current	13	10	ma
Grid-No.2 Current	—	2.8	ma



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Grid-No.1 Voltage (Approx.)

for plate $\mu a =$

100	-5	-	volts
50.	-	-3	volts

Mechanical:

Operating Position.	Any
Type of Cathodes.	Coated Unipotential
Maximum Overall Length.	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip).	1-9/16" $\pm$ 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.	9DC

Pin 1-Triode Plate

Pin 2-Pentode

Grid No.1

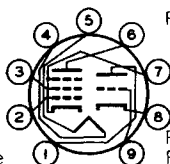
Pin 3-Pentode

Grid No.2

Pin 4-Heater

Pin 5-Heater

Pin 6-Pentode Plate



Pin 7-Pentode

Cathode,

Pentode

Grid No.3,

Internal

Shield

Pin 8-Triode Cathode

Pin 9-Triode Grid

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE	280 max.	280 max.	volts
GRID-No.2 SUPPLY VOLTAGE.	-	280 max.	volts
GRID-No.2 VOLTAGE	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
GRID-No.1 VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
CATHODE CURRENT	20 max.	20 max.	ma
GRID-No.2 INPUT:			
For grid-No.2 voltages			
up to 140 volts	-	0.5 max.	watt
For grid-No.2 voltages			
between 140 and 280 volts	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
PLATE DISSIPATION	2 max.	2 max.	watts

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation.	0.5 max.	0.25 max.	megohm
For cathode-bias operation.	1 max.	0.5 max.	megohm

^a The dc component must not exceed 100 volts.

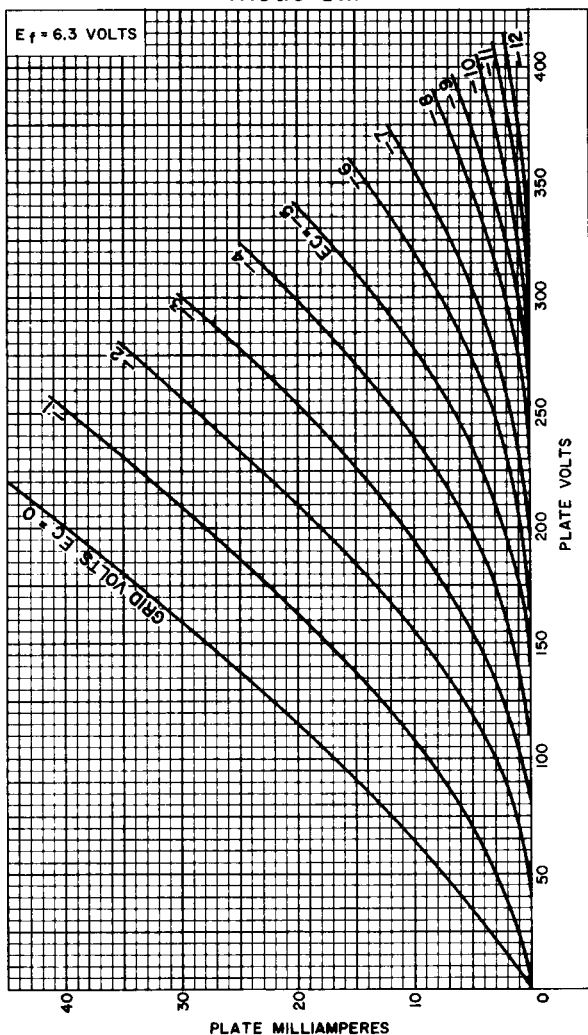
^b With external shield JEDEC No.315 connected to cathode of unit under test except as noted.

^c With external shield JEDEC No.315 connected to ground.



AVERAGE PLATE CHARACTERISTICS

Triode Unit

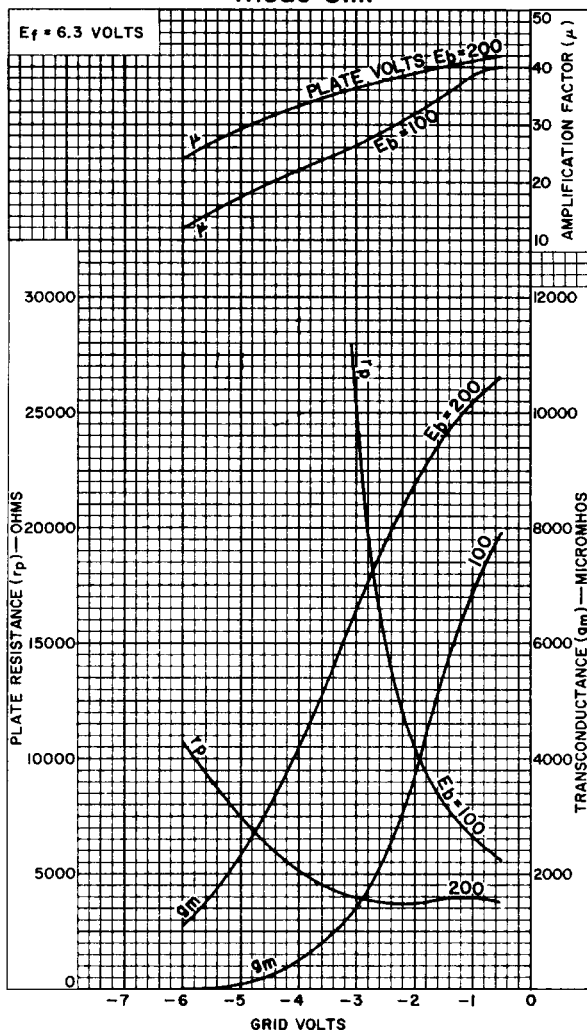


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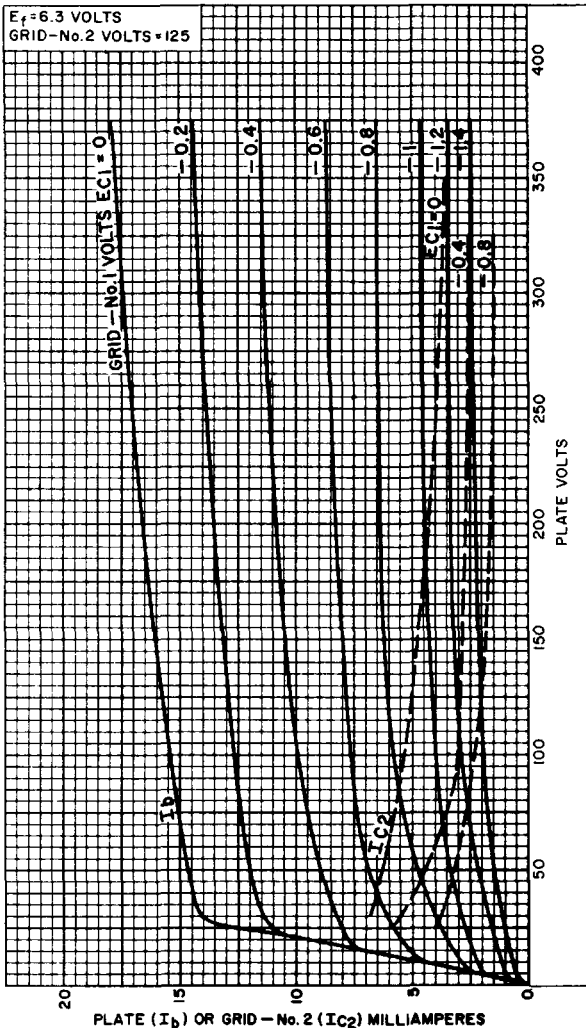
AVERAGE CHARACTERISTICS Triode Unit



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AVERAGE CHARACTERISTICS Pentode Unit

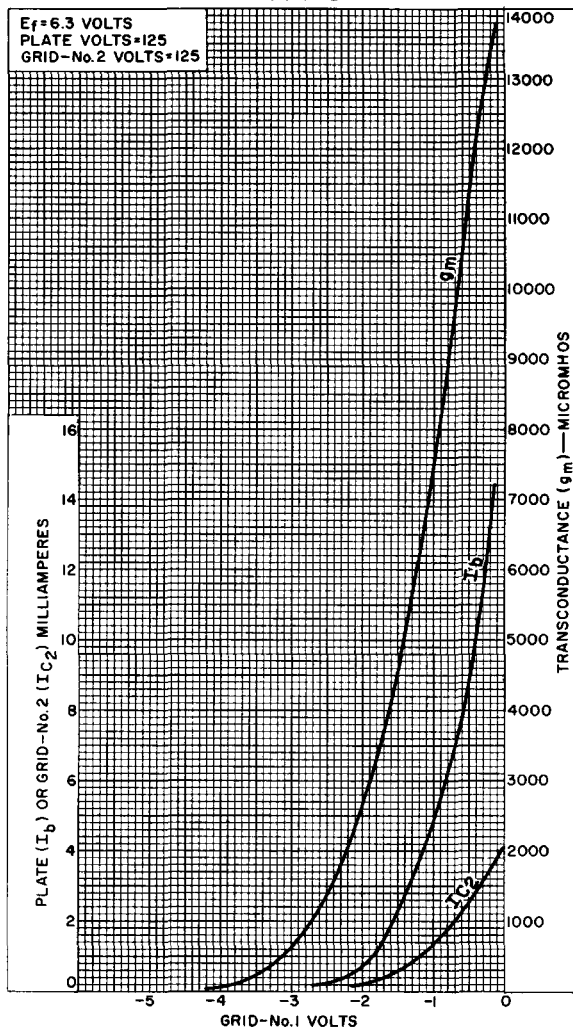


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AVERAGE CHARACTERISTICS Pentode Unit



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