



5963

5963

MEDIUM-MU TWIN TRIODE

9-PIN MINIATURE TYPE

For "on-off" control applications involving
long periods of operation under cutoff conditions

GENERAL DATA**Electrical:**

Heater, Pure Tungsten, for Unipotential Cathodes:

	Series	Parallel	
Voltage	12.6 $\pm$ 10%	6.3 $\pm$ 10%	ac or dc volts
Current	0.15	0.3	amp

Microphonism. Not Tested

Direct Interelectrode Capacitances (Approx.):^o

	Unit No. 1	Unit No. 2	
Grid to plate	1.5	1.5	μ f
Grid to cathode and heater. .	1.9	1.9	μ f
Plate to cathode and heater .	0.5	0.35	μ f
Grid of unit No. 1 to grid of unit No. 2	0.1 max.		μ f

Characteristics, Class A₁ Amplifier (Each Unit):

Plate Voltage	67.5	volts
Grid Voltage.	0	volts
Amplification Factor.	21	
Plate Resistance (Approx.).	6600	ohms
Transconductance.	3200	μ mhos
Plate Current	8.5	ma

Mechanical:

Mounting Position	Any
Maximum Overall Length.	2-3/16"
Maximum Seated Length	1-5/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" $\pm$ 3/32"
Maximum Diameter.	7/8"
Dimensional Outline	See General Section
Bulb.	T-6-1/2
Base.	Small-Button Noval 9-Pin (JETEC No. E9-1)
Basing Designation for BOTTOM VIEW.	9A

Pin 1 - Plate of Unit No. 2	Pin 6 - Plate of Unit No. 1
Pin 2 - Grid of Unit No. 2	Pin 7 - Grid of Unit No. 1
Pin 3 - Cathode of Unit No. 2	Pin 8 - Cathode of Unit No. 1
Pins 4 & 9 - Heater of Unit No. 2	Pin 9 - Heater Mid-Tap
Pins 5 & 9 - Heater of Unit No. 1	

^o without external shield.

← Indicates a change.

SEPT. 1, 1955

TUBE DIVISION

DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

5963



5963

MEDIUM-MU TWIN TRIODE

FREQUENCY DIVIDER IN COMPUTER SERVICE and "ON-OFF" CONTROL SERVICE

Values are for Each Unit

Maximum Ratings, Absolute Values:

PLATE VOLTAGE.	250 max.	volts
GRID VOLTAGE:		
Negative bias value.	100 max.	volts
Positive bias value.	0 max.	volts
Peak negative value.	200 max.	volts
PLATE DISSIPATION.	2.5 max.	watts
GRID INPUT.	0.5 max.	watt
CATHODE CURRENT:		
Peak.	100 max.	ma
DC.	20 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	90 max.	volts
Heater positive with respect to cathode.	90 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	120 max.	°C

Typical Operation as Frequency Halfer:

	Cutoff Condition	Zero-Bias Condition	
Plate-Supply Voltage	150	150	volts
Grid Voltage	-15	0	volts
Plate-Circuit Resistance	20000	20000	ohms
Grid-Circuit Resistance.	47000	47000	ohms
Plate Current.	0	5.1	ma

Maximum Circuit Values:

Grid-Circuit Resistance:		
For fixed-bias operation	0.5 max.	megohm
For cathode-bias operation	1.0 max.	megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Cutoff Condition				
Plate Current.	1	-	50	μamp
Difference in Plate Current Between Units.	-	-	50	μamp
Zero-Bias Condition				
Plate Current.	2	4.6	5.4	ma
Difference in Plate Current Between Units.	-	-	0.8	ma

Note 1: For conditions with 12.6 volts on heater, plate-supply volts = 150, grid-supply volts = -15, plate-circuit resistance (ohms) = 20000, and grid-circuit resistance (ohms) = 47000.

Note 2: Conditions are same as for Note 1 except that grid-supply volts = 0.

→ Indicates a change.



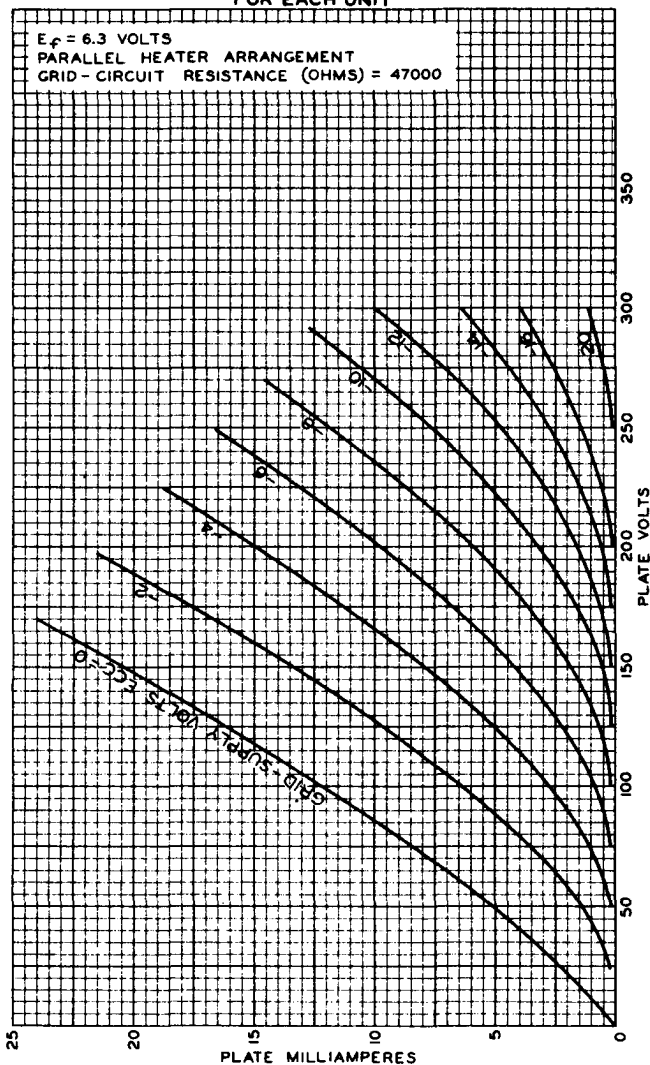
5963

5963

AVERAGE OPERATION CHARACTERISTICS
FOR EACH UNIT $E_f = 6.3$ VOLTS

PARALLEL HEATER ARRANGEMENT

GRID-CIRCUIT RESISTANCE (OHMS) = 47000



MAY 19, 1950

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7493