RCA

5751

PREMIUM TYPE 5751

HIGH-MU TWIN TRIODE

9-PIN MINIATURE TYPE

Intended for applications where dependable performance under shock and vibration is paramount

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:			
Heater Arrangement	*Series*	*Parallel*	
Voltage (AC or DC)	12.6 ± 10%	6.3 ± 10%	volts
Current	0.175	0.35	amp

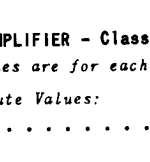
Characteristics, Class A_1 Amplifier:

Plate Voltage	100	250	volts
Grid Voltage	-1	-3	volts
Amplification Factor	70	70	
Plate Resistance	58000	58000	ohms
Transconductance	1200	1200	μmhos
Plate Current	0.9	1.0	ma

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ±3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin (JETEC No.E9-1)

BOTTOM VIEW



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

AMPLIFIER - Class A_1

Values are for each unit

Maximum Ratings, *Absolute Values:*

PLATE VOLTAGE	330 max.	volts
GRID VOLTAGE:		
Negative bias value	55 max.	volts
Positive bias value	0 max.	volts
PLATE DISSIPATION	0.8 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	165 max.	°C

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CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN*

	Note	Min.	Max.	
Heater Current	1	0.160	0.190	amp
Amplification Factor	1,2	55	85	
Plate Current	1,2	0.4	1.8	ma
Plate Current	1,3	–	10.5	μamp
Transconductance	1,2	900	1600	μmhos
Reverse Grid Current	1,4	–	0.4	μamp
Heater-Cathode Leakage Current:				
Heater negative with respect to cathode	1,5	–	10	μamp
Heater positive with respect to cathode	1,5	–	10	μamp
Leakage Resistance:				
Between Grid and All Other Electrodes Tied Together	1,6	500	–	megohms
Between Plate and All Other Electrodes Tied Together	1,7	500	–	megohms

* Each tube is stabilized before characteristics testing by continuous operation for at least 45 hours at room temperature and with dissipation values equivalent to life test conditions.

Note 1: With 12.6 volts ac or dc on heater (series connected).

Note 2: With dc plate voltage of 250 volts and dc grid voltage of −3 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 3: With dc plate voltage of 250 volts, plate load resistance of 0.1 megohm, and dc grid voltage of −10.5 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 4: With dc plate voltage of 250 volts, grid resistor of 1.0 megohm, and dc grid voltage of −3 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 5: With 100 volts dc between heater and cathode, and units connected in parallel.

Note 6: With grid 100 volts negative with respect to all other electrodes tied together.

Note 7: With plate 300 volts negative with respect to all other electrodes tied together.

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:

Impact Acceleration . . . . . 600 max. g

Tubes are held rigid in three different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 600 g impact acceleration.

Fatigue Rating:

Vibrational Acceleration . . . . . 2.5 max. g

Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.

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Low-Frequency Vibration Performance:

RMS Output Voltage . . . . . 100 max. mv
Under the following conditions and with units connected in parallel; heater voltage of 12.6 volts (series connected), dc plate voltage of 250 volts, dc grid voltage of −3 volts, plate load resistance of 2000 ohms, and vibrational acceleration of 2.5 g at 25 cycles per second.

Heater-Cycling Life Performance:

Cycles of Intermittent Operation . . . . . 2000 min. cycles
Under the following conditions and with parallel heater arrangement: heater voltage of 7.5 volts cycled one minute on and one minute off, heater 100 volts positive with respect to cathode, and plate and grid voltage = 0 volts.

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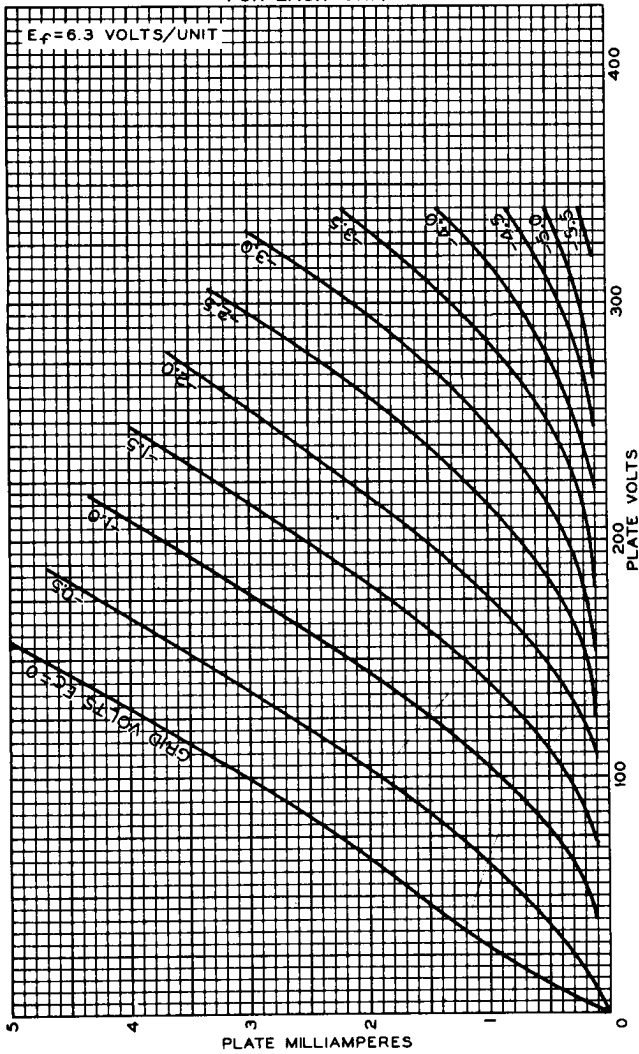
AVERAGE PLATE CHARACTERISTICS

FOR EACH UNIT



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AVERAGE CHARACTERISTICS
FOR EACH UNIT