



5731

UHF TRIODE

Acorn Type

The 5731 is an acorn triode of the heater-cathode type for use at frequencies up to 600 megacycles. It is intended particularly for radiosonde applications.

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3	volts
Current	0.15	ampere

Direct Interelectrode Capacitances:^o

Grid to Plate	1.3	μf
Grid to Cathode	1.0	μf
Plate to Cathode	0.4	μf

Mechanical:

Mounting Position	Any
Overall Length	1-7/32" ± 5/32"
Overall Diameter	1-3/32" ± 1/16"
Bulb	T-4-1/2
Base	Small Radial 5-Pin
Outline	JETEC 4-1
Basing Designation	5BC

AF AMPLIFIER—Class A₁

Maximum Ratings, Design-Center Values:

DC PLATE VOLTAGE	250 max.	volts
PLATE DISSIPATION	1.6 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	80 max.	volts
Heater positive with respect to cathode	80 max.	volts

Characteristics:

DC Plate Voltage	90	135	180	250	volts
DC Grid Voltage	-2.5	-3.75	-5	-7	volts
Amplification Factor	25	25	25	25	
Plate Resistance	14700	13200	12500	11400	ohms
Transconductance	1700	1900	2000	2200	micromhos
DC Plate Current	2.5	3.5	4.5	6.3	ma
Load Resistance	-	-	20000	-	ohms

^o With no external shield.



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Characteristics (Cont'd):

2nd Harmonic Distortion.	-	-	5	-	%
Power Output	-	-	135	-	mw

RF POWER AMPLIFIER & OSCILLATOR--Class C

Plate Modulated or CW

Maximum Ratings, Design-Center Values:

DC PLATE VOLTAGE		180 max.	volts
DC PLATE CURRENT		8 max.	ma
DC GRID CURRENT.		2 max.	ma
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.		80 max.	volts
Heater positive with respect to cathode.		80 max.	volts

Typical Operation:

DC Plate Voltage	180	volts
DC Grid Voltage (Approx.)	-35	volts
DC Plate Current	7	ma
DC Grid Current (Approx.)	1.5	ma
Power Output (Approx.)*	0.5	watt

* At 5 meters. Only moderate reduction in this value will be found for wavelengths as low as 1 meter. Below 1 meter, the power output decreases as the wavelength is increased.

CHARACTERISTICS RANGE VALUES

	<u>Note</u>	<u>Min.</u>	
Emission	1	25	ma
Oscillator Grid Current.	2	250	ma μ a

Note 1: With 5.5 volts on heater, +15 volts on grid, and +15 volts on plate.

Note 2: With 5.5 volts on heater, 150 volts on plate, grid resistor of 10000 ohms, and oscillator frequency of 600 megacycles. Circuit has tuned line input to grid which is capacitively coupled to plate.

Outline, Basing Diagram, and Curves are the same as for RCA-955