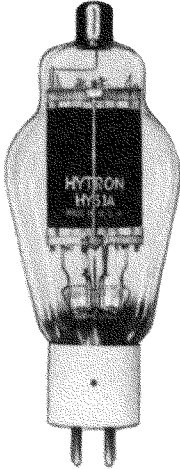


Type HY51A - HY51B



PHYSICAL DATA

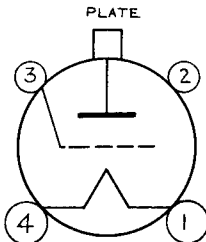
Plate	Processed Graphite
Grid	Molybdenum-Nickel
Filament	Thoriated Tungsten
Insulation	Processed Lava
Base	4 Pin UX Iso.
Plate Lead	Large Metal Cap
Max. Overall Length	6 9/16"
Max. Diameter	2 7/16"
Bulb	ST-19
Net Weight	3 1/4 oz.

INTERELECTRODE CAPACITANCE

Grid to Plate	7.5 uuf
Grid to Filament	6.0 uuf
Plate to Filament	2.0 uuf

ELECTRICAL DATA

	HY51A	HY51B
Filament Voltage	7.5 Volts	10.0 Volts
Filament Current	3.5 Amperes	2.25 Amperes
D.C. Plate Voltage	1000. Volts Max.	
Plate Dissipation	65. Watts Max.	
Max. Plate Current	155. ma.	
Max. Grid Current	25. ma.	
Average Amp. Factor	25	
Mutual Conductance	6500 umhos	



BASE PIN CONNECTIONS

- 1 - Filament
- 2 - No Connection
- 3 - Control Grid
- 4 - Filament

HY51A - HY51B

R.F. POWER AMPLIFIER, OSCILLATOR, CLASS "B" MODULATOR
GENERAL PURPOSE-HIGH EFFICIENCY TRIODE

The Hytron HY51A and HY51B tubes are high efficiency triodes of rugged construction. Because of their high values of transconductance they operate at high efficiency as R.F. Amplifiers requiring low driving power. Their internal structure permits operation at maximum rating at frequencies up to 60 megacycles.

GENERAL DESCRIPTION

The Types HY51A and HY51B differ only with respect to the filament Voltage and filament Current. The versatility of the two popular filament supply voltages makes the tubes adaptable to any triode use.

The construction of the HY51A and HY51B is similar to that of higher priced tubes. A large sturdy graphite anode with plate lead at top of bulb isolates the plate from all stem wires. All insulating material is of specially processed lava. The mechanical assembly is mounted on heavy four way supports as well as mica top snubbers in the dome of the bulb.

The materials and workmanship in this product have been carefully prepared and are the result of lengthy research into the problems surrounding Amateur Radio. The quality and performance of these and other Hytron tubes is definitely assured by 17 years of successful manufacturing experience in the radio tube field.

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONSA.F. Power Amplifier and Modulator Class "B"

D.C. Plate Voltage	1000 max. volts
Maximum Signal D.C. Plate Current*	150 max. ma.
Maximum Signal Plate Input*	150 max. watts
Plate Dissipation*	65 max. watts

* Averaged over any Audio Frequency Cycle.

Typical Operation Two Tubes:

(Unless otherwise specified values are for 2 tubes.)

D.C. Plate Voltage	800	1000	volts
D.C. Grid Voltage	-27	-35	volts
Static Plate Current	20	20	ma.
Peak A.F. grid to grid voltage	175	190 approx.	volts
Maximum Signal D.C. Plate Current	300	300	ma.
Load Resistance per tube	1450	1750	ohms
Effective Load Resis. Pl.-Pl.	5800	7000	ohms
Maximum Signal Driving Power	5	6 approx.	watts
Maximum Signal Power Output	150	180 approx.	watts

R.F. POWER AMPLIFIER - CLASS "B" TELEPHONY
(Carrier conditions per tube for use with a max. modulation factor of 1.0)

D.C. Plate Voltage	1000 max. volts
D.C. Plate Current	100 max. ma.
Plate Input	100 max. watts
Plate Dissipation	60 max. watts

Typical Operation:

D.C. Plate Voltage	800	1000	volts
D.C. Grid Voltage	-27	-35	volts
Peak R.F. Grid Voltage	60	60	volts
D.C. Plate Current	100	90	ma.
D.C. Grid Current**	7	6	approx. ma.
Driving Power Required**	8	5.5	approx. watts
Power Output	25	30	approx. watts

R.F. POWER AMPLIFIER AND OSCILLATOR - CLASS "C" TELEGRAPHY
(Key down conditions per tube without modulation.)

D.C. Plate Voltage	1000 max. volts
D.C. Grid Voltage	-150 max. volts
D.C. Plate Current	155 max. ma.
D.C. Grid Current	25 max. ma.
Plate Input	155 max. watts
Plate Dissipation	65 max. watts

Typical Operation:

D.C. Plate Voltage	600	800	1000	volts
D.C. Grid Voltage	-45	-60	-75	volts
Peak R.F. Grid Voltage	165	170	175	volts
D.C. Plate Current	140	140	140	ma.
D.C. Grid Current**	20	20	20	approx. ma.
Driving Power Required**	5	5	5	approx. watts
Power Output	55	80	100	approx. watts

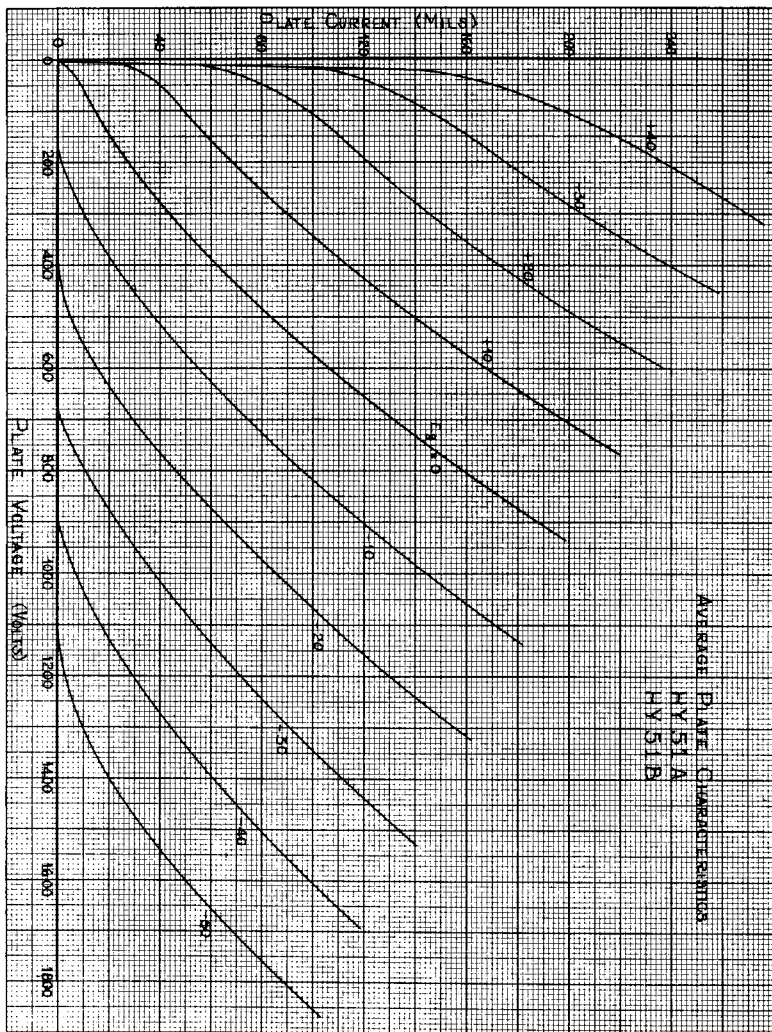
** Subject to wide variations controlled by circuit constants and operating characteristics of associated input and output circuits.

PLATE MODULATED R.F. POWER AMPLIFIER - CLASS "C" TELEPHONY
(Carrier conditions per tube for use with a max. modulation factor of 1.0)

D.C. Plate Voltage	800 max. volts
D.C. Grid Voltage	-200 max. volts
D.C. Plate Current	110 max. ma.
D.C. Grid Current	25 max. ma.
Plate Input	88 max. watts
Plate Dissipation	45 max. watts

Typical Operation:

D.C. Plate Voltage	600	800	volts
D.C. Grid Voltage	-55	-67.5	volts
Peak R.F. Grid Voltage	185	195	volts
D.C. Plate Current	100	100	volts
D.C. Grid Current**	20	15	approx. ma.
Driving Power Required**	4.5	3.5	approx. watts
Power Output	40	55	approx. watts



DIVISION OF

HYTRON CORPORATION - SALEM, MASS., U.S.A.