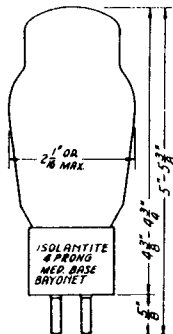


841
842
864

RAYTHEON AMATEUR TUBES

841
842
864**841
TRIODE
POWER AMPLIFIER
OSCILLATOR**

The 841 is a high- μ triode type power amplifier tube having a thoriated tungsten filament and an isolantite base. It is designed for use as a power amplifier or oscillator.

FILAMENT RATING

Filament Volt.	7.5	volts
Filament Cur.	1.25	amp

DIR. INTERELEC. CAPAC.

Grid to Plate	7	μ mf
Input	4	μ mf
Output	3	μ mf

A-F AMPLIFIER—CL. A—RES. COUPLED**MAXIMUM RATINGS**

D-C Plate Voltage	425	volts
D-C Plate Supply Voltage	1250	volts
Plate Dissipation	12	watts

TYPICAL OPERATION

D-C Plate Supply Voltage	425±	1000±	volts
D-C Grid Voltage	-6	-9	volts
D-C Plate Current	0.7	2.2	ma
Amplification Factor	30	30	
Plate Resistance	63000	40000	ohms
Transconductance	450	750	μ mhos
Peak A-F Grid Voltage	6	9	volts
Load Resistance	0.25	0.25	megohm
Voltage Output (5% second harmonic)	126	225	volts

A-F POWER AMPLIFIER—CLASS B—TWO TUBES**MAXIMUM RATINGS**

D-C Plate Voltage	425	volts
D-C Plate Current (with signal—per tube)	60	ma
Plate Dissipation (per tube)	15	watts

TYPICAL OPERATION

D-C Plate Voltage	350	425	volts
D-C Grid Voltage	-5	-5	volts
D-C Plate Current (no signal)	7	13	ma
D-C Plate Current (max. signal)	114	120	ma
Peak A-F Grid Voltage (grid to grid)	176	180	volts
Load Resistance (plate to plate)	5200	7000	ohms
Power Output (max. signal) (approximate)	21	28	watts
Driving Power (max. signal) (approximate)	3.2	3.6	watts

R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C**MAXIMUM RATINGS**

D-C Plate Voltage—Telegraphy	450	volts
D-C Plate Voltage—Telephony—Plate Modulation	350	volts
D-C Plate Current	60	ma
D-C Grid Current	20	ma
R-F Grid Current	4	amp
Plate Dissipation—Telegraphy	15	watts
Plate Dissipation—Telephony—Plate Modulation	10	watts

TYPICAL OPERATION

	Telephony Plate Modulation	Telegraphy	
D-C Plate Voltage	250 350	350 450	volts
D-C Grid Voltage	-40 -47	-30 -34	volts
D-C Plate Current	50 50	50 50	ma
D-C Grid Current	15 15	15 15	ma
Peak R-F Grid Voltage	125 130	115 120	volts
R-F Driving Power	2 2	1.8 1.8	watts
Carrier Power Output	7 11	11 15	watts
A-F Modulating Power	6.3 8.8	—	watts
Peak Power Output	28 44	—	watts

±Voltage effective at the plate is less than the plate supply voltage by the drop in the load resistor.

**842
TRIODE
POWER AMPLIFIER**

The 842 is a low- μ triode type power amplifier tube having a thoriated tungsten filament and an isolantite base. It is designed for use as an audio frequency power amplifier.

FILAMENT RATING

Filament Voltage	7.5	volts
Filament Current	1.25	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	7	μ mf
Input	4	μ mf
Output	3	μ mf

A-F POWER AMPLIFIER—CLASS A**MAXIMUM RATINGS**

D-C Plate Voltage	425	volts
Plate Dissipation	12	watts

TYPICAL OPERATION

D-C Plate Voltage	350	425	volts
D-C Grid Voltage	-72	-100	volts
D-C Plate Current	34	28	ma
Peak A-F Grid Voltage	67	95	volts
Amplification Factor	3	3	
Transconductance	1250	1200	μ mhos
Plate Resistance	2400	2500	ohms
Load Resistance	5000	8000	ohms
Power Output (5% second harmonic)	2.1	3.0	watts

For tube outline and basing view see type 841.

**864
TRIODE
AMPLIFIER
DETECTOR**

The 864 is a filament type triode amplifier tube designed for use as a detector or audio frequency amplifier in applications requiring a non-microphonic tube.

FILAMENT RATING

Filament Volt.	1.1	volts
Filament Cur.	0.25	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	5.3	μ mf
Input	2.3	μ mf
Output	2.1	μ mf

A-F AMPLIFIER—CLASS A**MAXIMUM RATING**

D-C Plate Voltage	135	volts
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TYPICAL OPERATION

D-C Plate Voltage	90	135	volts
D-C Grid Voltage	-4.5	-9.0	volts
D-C Plate Current	2.9	3.5	ma
Amplification Factor	8.2	8.2	
Transconductance	610	645	μ mhos
Plate Resistance	13500	12700	ohms

Grid Coupling Resistor, if used, must not exceed 2.0 megohms.

DETECTOR—BIASED TYPE**MAXIMUM RATING**

D-C Plate Voltage	135	volts
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TYPICAL OPERATION

D-C Plate Voltage	90	135	volts
D-C Grid Voltage	-10.5	-15	volts
D-C Plate Current	Adjusted to 0.2 ma	with no signal	

DETECTOR—GRID LEAK TYPE**MAXIMUM RATING**

D-C Plate Voltage	45	volts
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TYPICAL OPERATION

D-C Plate Voltage	45	volts
Grid Leak	0.25-5	megohms
Grid Condenser	0.0025	μ f

