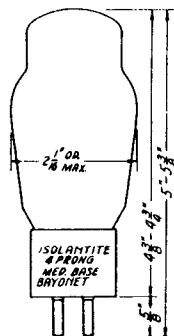


841
842
864

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	μmf
Input	4	μmf
Output	3	μmf

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 $\pm$	1000 $\pm$	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	μmhos
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		Telegraphy		
	Plate	Modulation			
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

$\pm$ 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	μmf
Input	4	μmf
Output	3	μmf

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	μmf
Input	2.3	μmf
Output	2.1	μmf

A-F AMPLIFIER—CLASS A

MAXIMUM RATING		
D-C Plate Voltage	135	volts

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	μmhos
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

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

TYPICAL OPERATION

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

