

TUBE TYPE 7237A

The 7237A is a ceramic-metal envelope, forced air cooled triode designed for use in industrial R.F. generators. An exclusive specially processed grid makes possible its high grid current rating and overload characteristics. In addition, the ceramic-metal construction and thoriated tungsten filament make the 7237A particularly reliable in heavy-duty industrial applications.

Maximum ratings apply to 30 MHz at which a power output of 10 kW can be obtained. Typical conditions for Class C industrial operation at 50 MHz and 6 kW power output is presented herein.

GENERAL CHARACTERISTICS

MECHANICAL

Mounting Position	vertical, anode up or down
Max. Temperature of Filament Seals	250° C
Max. Temperature of Grid & Anode Seals	250° C
Accessories	
Filament Connector	S-3707
Filament Center Pin Connector ¹	S-21000
Grid Connector (for use up to 30 MHz)	S-17288
Grid Connector (for use above 30 MHz)	S-3706
Net Weight (approx.)	7 lbs.
Cooling	forced-air

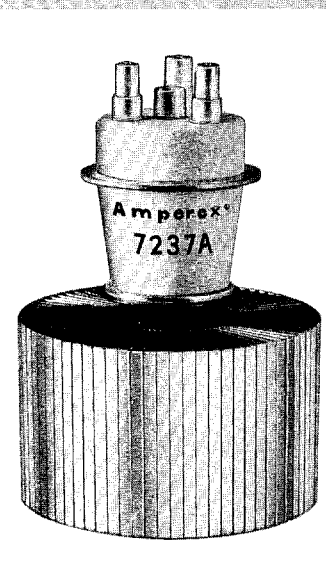
COOLING CHARACTERISTICS

Plate Dissipation (kilowatts)	Altitude (feet)	Inlet Air Temperature (°C)	Min. Air Flow (cu. Ft./minute)	Inlet Air Pressure (inlet water)
2	0	35	75	0.26
	0	45	90	0.35
	5000	35	90	0.33
	10000	25	97	0.33
4	0	35	230	1.75
	0	45	270	2.30
	5000	35	270	2.20
	10000	25	310	2.90
6	0	35	301	2.80
	0	45	350	3.65
	5000	35	367	3.65
	10000	25	385	4.40

ELECTRICAL

Filament Voltage	12.6 volts
Filament Current	33 amps
Amplification Factor ($I_b = 1$ amp; $E_b = 6000$ volts)	32

¹ The filament center tap pin (0.413 dia.) must not be used for filament current supply. The filament center pin connector (S-21000) must, however, be used for cooling of this pin.



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ELECTRICAL (Continued)

Transconductance ($I_b = 1$ amp; $E_b = 6000$ volts)	15,000 micromhos
Direct Interelectrode Capacitances	
Grid to Plate	11 pF
Grid to Filament	16 pF
Plate to Filament	0.3 pF

A. F. POWER AMPLIFIER & MODULATOR
CLASS B

Maximum Ratings, Absolute Values (per tube)

D.C. Plate Voltage	7.2 kV
D.C. Plate Current	2.2 amps
Plate Input	14 kW
Plate Dissipation	6 kW
Grid Resistor	15 kohms

Typical Operation (two-tubes in push-pull)

D.C. Plate Voltage	7000	5000	5000	4000 volts
D.C. Grid Voltage	-210	-145	-145	-120 volts
Peak AF Grid to Grid Voltage	1220	840	690	900 volts
Zero Signal DC Plate Current	2x0.2	2x0.15	2x0.15	2x0.1 amps
Max Signal DC Plate Current	2x2	2x1.25	2x1.1	2x1.25 amps
Effective Load Resistance, Plate to Plate	4150	4800	5500	3800 ohms
Max. Signal Drive Power (approx.)	2x310	2x130	2x65	2x140 watts
Max. Signal Power Output (approx.)	20	9	8	7.1 kW

PLATE MODULATED R.F. POWER AMPLIFIER
CLASS C - TELEPHONY

(Carrier conditions per tube with a maximum modulation factor of 1.0)

Maximum Ratings, Absolute Values

Frequency	30 MHz
D.C. Plate Voltage	5.5 kV
D.C. Grid Voltage	1250 volts
D.C. Plate Current	1.8 amps
D.C. Grid Current	0.6 amps
Plate Input	9 kW
Plate Dissipation	4 kW

Typical Operation

D.C. Plate Voltage	5	5	4 kV
D.C. Grid Voltage ²	-400	-400	-300 volts
Peak RF Grid Voltage	800	730	680 volts
D.C. Plate Current	1.6	1.4	1.6 amps
D.C. Grid Current	0.6	0.5	0.6 amps
Driving Power	432	328	367 watts
Power Output	6.4	5.6	5.0 kW

² Grid bias partially obtained by the grid resistor.

R.F. POWER AMPLIFIER & OSCILLATOR
CLASS C - TELEGRAPHY

Maximum Ratings, Absolute Values

Frequency	30 MHz
D.C. Plate Voltage	7.2 kV
D.C. Grid Voltage	-1250 volts
D.C. Plate Current	2.2 amps
D.C. Grid Current	0.6 amp
Plate Input	14 kW
Plate Dissipation	6 kW

Typical Operation

D.C. Plate Voltage	6.5	6.5	6.0	6.0	5.0	5.0 kV
D.C. Grid Voltage	-450	-450	-400	-400	-300	-300 volts
Peak RF Grid Voltage	850	820	820	780	700	660 volts
D.C. Plate Current	2.0	2.0	2.0	2.0	2.0	2.0 amps
D.C. Grid Current	0.6	0.5	0.6	0.5	0.6	0.5 amp
Driving Power	460	370	443	350	378	297 watts
Power Output	10	9.5	9.2	8.5	7.3	7.1 kW

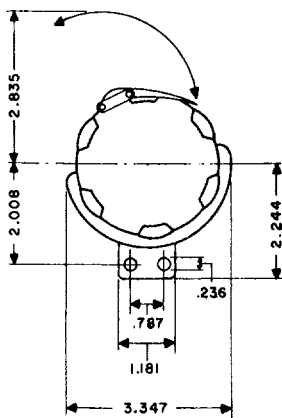
CLASS C OSCILLATOR
RECTIFIED, UNFILTERED, THREE-PHASE, HALF-WAVE PLATE SUPPLY

Maximum Ratings, Absolute Values

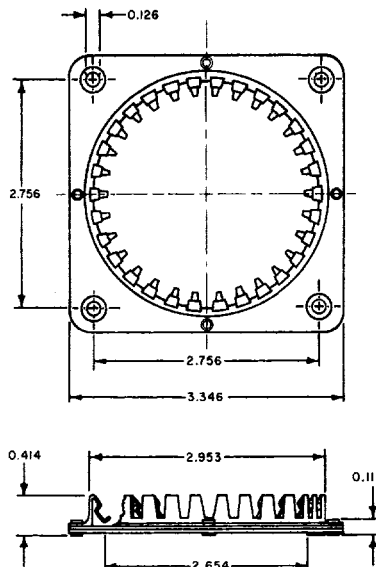
Frequency	55 MHz
D.C. Plate Voltage	7 kV
D.C. Grid Voltage	-1250 volts
D.C. Plate Current	1.8 amps
D.C. Grid Current (Full Load)	0.5 amp
D.C. Grid Current (No Load)	0.7 amp
Plate Power Input	11 kW
Plate Dissipation	6 kW
Grid Resistor	10 kohms

Typical Operation

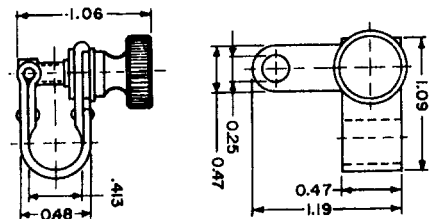
Frequency	50 MHz
Transformer Secondary Voltage (rms)	5.1 kV
D.C. Plate Voltage	6 kV
D.C. Plate Current	1.5 amps
D.C. Grid Current (Full Load)	0.4 amp
D.C. Grid Current (No Load)	0.7 amp
Grid Resistor	1000 ohms
Plate Power Input	9 kW
Plate Dissipation	2.7 kW
Plate Power Output	6 kW



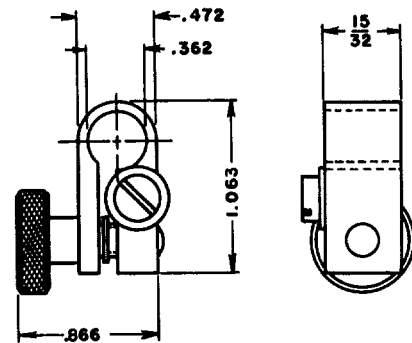
GRID CONNECTOR
S-17288



GRID CONNECTOR
S-3706



FILAMENT CENTER PIN CONNECTOR
S-21000



FILAMENT CONNECTOR
S-3707

7237A

