

ITT ELECTRON TECHNOLOGY

P.O. Box 100
Easton, Pennsylvania 18044-0100
Telephone 215 252-7331

F-8386N F-8388N POWER TRIODES

DESCRIPTION

The F-8386N and F-8388N tubes are general purpose metal and ceramic triodes designed for use in industrial heating applications. The grid is specially treated to inhibit secondary emission over a wide range of grid and plate voltage. The cathode is a thoriated tungsten filament. The F-8386N has a heavy wall anode capable of dissipating 100 kilowatts with circulating water. The F-8388N has a grooved, extra-heavy walled anode with exceptional momentary overload capacity and is capable of dissipating 100 kilowatts with reduced circulating water. Maximum CW ratings apply up to 30 mc.

ELECTRICAL

Filament Voltage	14.5	Volts
Filament Current	330	Amperes
Filament Starting Current	1,000	Amperes
Filament Heating Time, Minimum	15	Seconds
Filament Cold Resistance	.006	Ohms
Amplification Factor	22	
Interelectrode Capacitance		
Grid-Plate	85	µpf
Grid-Filament	120	µpf
Plate-Filament	6.0	µpf

MECHANICAL

Mounting Position	Vertical, Anode Down	
	F-8386N	F-8388N
Plate Dissipation	F 100*	100**
Water Flow	30	10
Water Jacket Pressure Drop	16	6
Maximum Outgoing Water Temperature	70	90
Maximum Water Pressure	80	80
Maximum Ceramic & Seal Temperature***.	250	250
Net Weight (Approximate)	36	71

*Using water jacket RT-57607

**Using water jacket RT-56621

***A temperature sensitive lacquer is convenient for this measurement.
Approximately 250 cfm air flow is required on the envelope and seals.

Radio-Frequency Power Amplifier and Oscillator - Class C Telegraphy
 (Key-down conditions per tube without amplitude modulation)¶

Maximum Ratings, Absolute Values

DC Plate voltage	17,000	Volts
DC Grid Voltage	-2,000	Volts
DC Plate Current	19	Amps
DC Grid Current	3.5	Amps
Plate Input	250	Kilowatts
Plate Dissipation (Refer to Plate Dissipation Ratings on Page 1)		

¶Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 percent of the carrier conditions.

Typical Operation

Grid Drive

DC Plate Voltage	12,000	15,500	Volts
DC Grid Voltage	-1,500	-1,800	Volts
Peak RF Grid Voltage	2,200	2,500	Volts
Peak RF Plate Voltage	9,250	12,500	Volts
DC Plate Current	16.2	16	Amperes
DC Grid Current	2.2	2.5	Amperes
RF Load Resistance	315	440	Ohms
Driving Power (Approximate) . .	5,700	6,500	Watts
Power Output (Approximate) . . .	135	180	Kilowatts

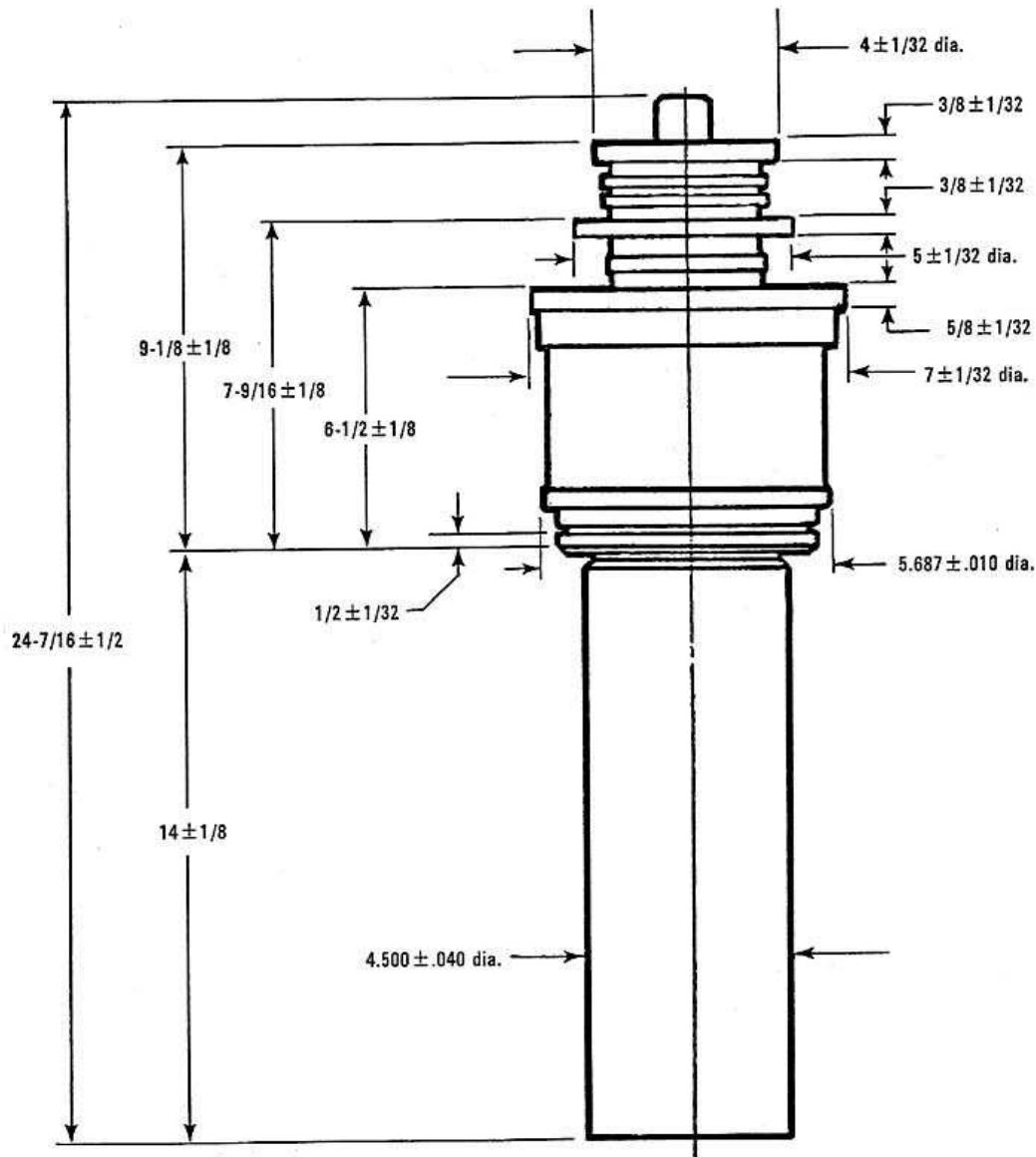
PULSE SERVICE OPERATIONS

In pulse RF amplifier service, it is possible to operate the tube under conditions not permissible in CW operation. Because of the wide variety of operating conditions, it is advisable that tube operation recommendations be obtained from our Engineering Department for specific conditions.

Additional information for specific applications can be obtain from:

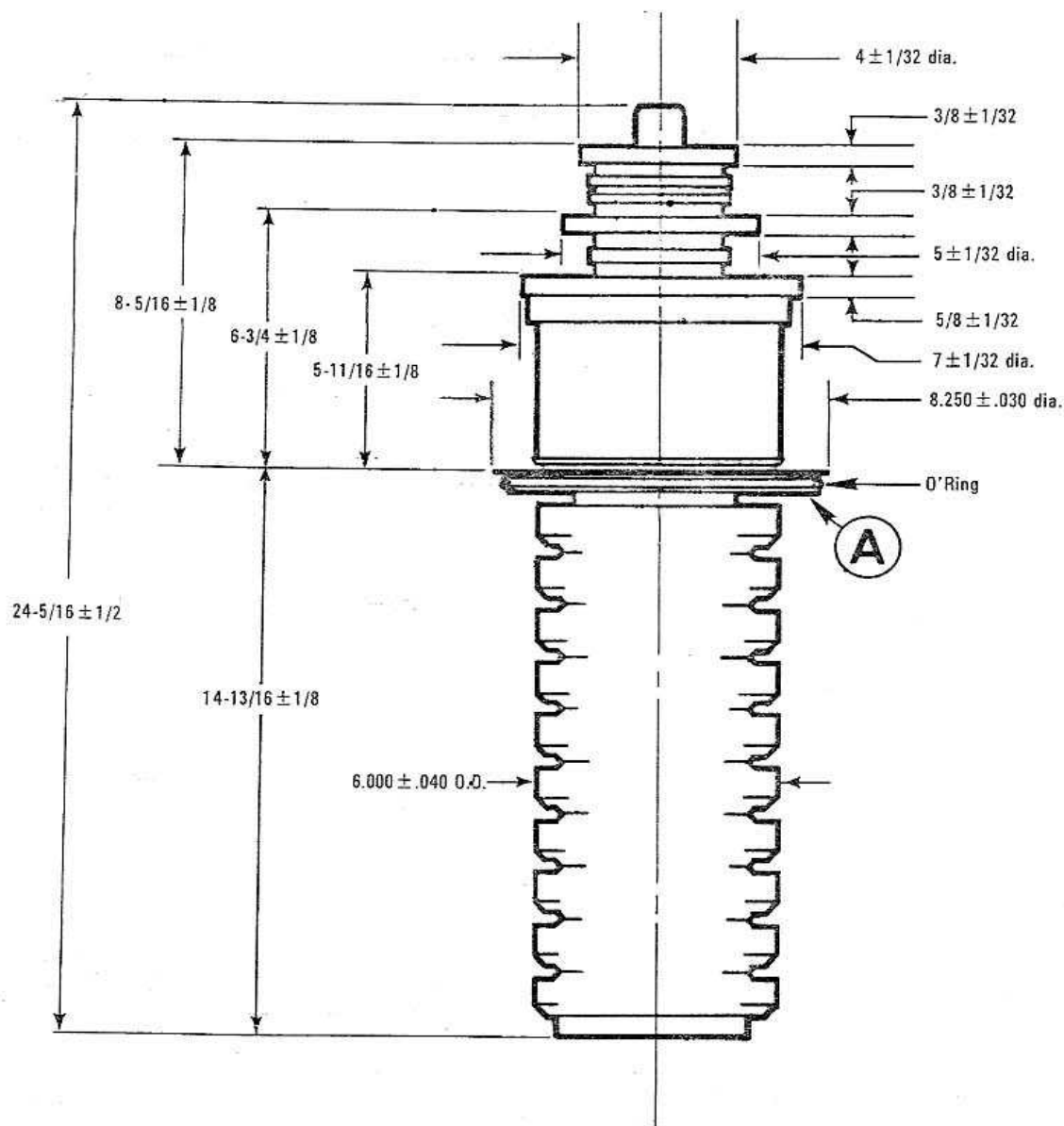
ITT ELECTRON TECHNOLOGY DIVISION
 Applications Department
 P.O. Box 100
 Easton, Pennsylvania 18044-0100

F-8386N

ACCESSORIES

Water Jacket	- RT-57067
'O' Ring	- RT-70050
Grid Conn Assy.	- RT-55464
Conn. Fil. #1 Assy.	- RT-55476
Conn. Fil. #2 Assy.	- RT-55469

F-8388N



Accessories

Grid Conn. Assy. -RT-55464
Conn. Fil.#1 Assy.--RT-55476
Conn. Fil.#2 Assy.-RT-55469

O Ring	-70058
Water Jacket	-56621

ELECTRON TECHNOLOGY DIVISION **ITT**
BOX 100 EASTON, PA. 18044-0100

