RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

Release No. 468

February 2, 1946

sponsor:
General Electric Co.

RMA TYPE

2C42

The 2C42 is a three-electrode tube of the disk-seal type designed for stable operation as a plate-pulsed oscillator at frequencies up to 1300 megacycles.

GENERAL CHARACTERISTICS

Number of Electrodes	3	
Electrical		
Cathode - Indirectly Heated		
Heater Voltage	6.3	Volts
Heater Current	0.9	Amperes
Average Characteristics		
Amplification Factor	48	
Grid-Plate Transconductance, Ib = 22 ma	8000	Micromhos
Direct Interelectrode Capacitances		
Grid-Plate	1.7	Micromicrofarads
Grid-Cathode	2.9	Micromicrofarads
Plate-Cathode, maximum	0.05	Micromicrofarads
Cathode R-F Connection - Cathode	100	Micromicrofarads
Mechanical		
Type of Cooling - Convection or Forced Air and conduction		
Maximum Seal Temperature	200	C
Base Description	6-pin Octal	
Mounting Position	Any	
Net Weight, approximate	3	Ounces
Shipping Weight, approximate	3	Pounds

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Power Oscillator - Low Duty Cycle Plate Pulsed

	Typical Operation	Maximum Ratings	
Peak Anode Voltage	3000	3000	Volts
Grid Resistance	50		Ohms
D-c Plate Current, average	2.0		Milliamperes
Peak Cathode Current	2.5	4.0	Amperes
Pulse Width	1.0	3.0	Microseconds
Repetition Rate	1000		Pulses per Second
Plate Dissipation	4.25	12	Watts
Peak Power Output, approximate	1750		Watts
Frequency	1050	1300	Megacycles

Power Oscillator - High Duty Cycle Plate Pulsed

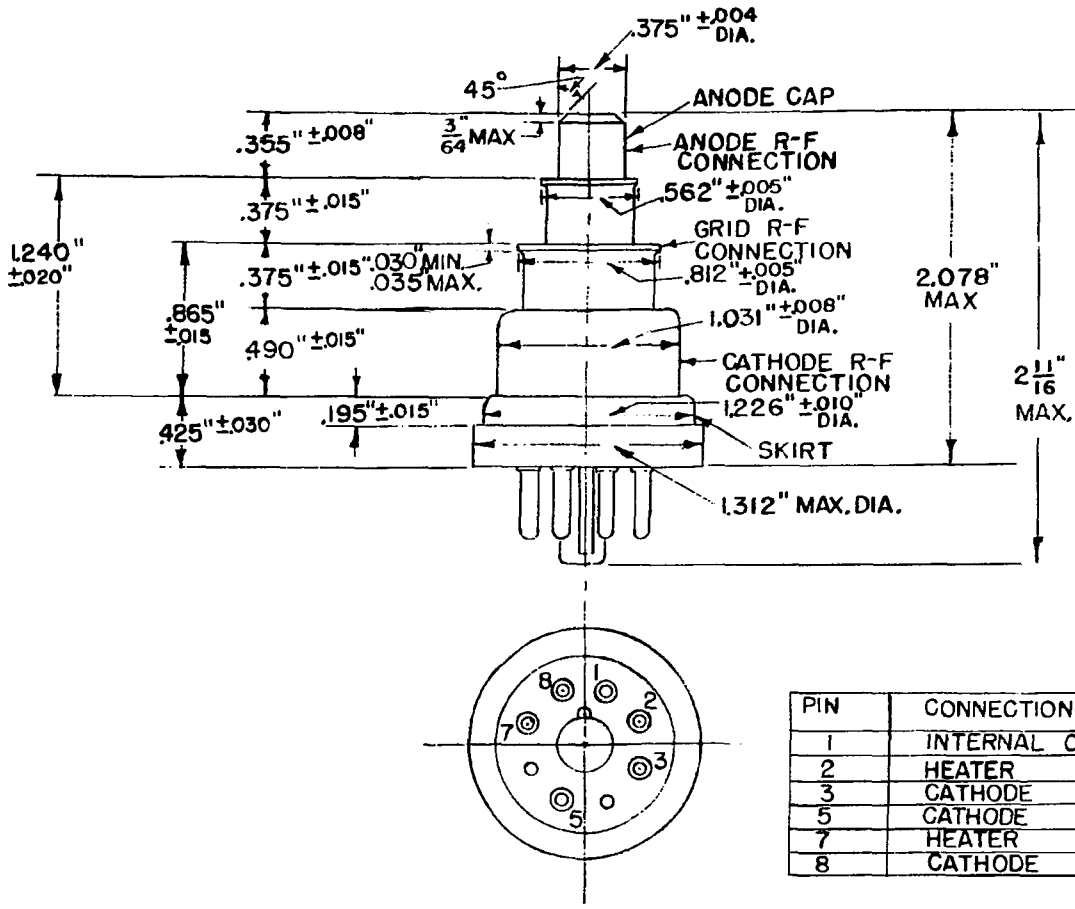
	Typical Operation	Maximum Ratings *	
Peak Anode Voltage	2000	2000	Volts
Grid Leak Resistance	50		Ohms
D-c Plate Current, average	7.2		Milliamperes
Peak Cathode Current	1.5	1.5	Amperes
Pulse Width	3.0	9.0	Microseconds
Repetition Rate	2000		Pulses per Second
Plate Dissipation	9.9	25	Watts
Peak Power Output, approximate	750		Watts
Frequency	1050	1300	Megacycles

* A useful tube life of approximately 150 hours can be expected at these maximum ratings.

December 24, 1945.

RMA TYPES

2C42 2C46



PIN	CONNECTION
1	INTERNAL CONNECTION
2	HEATER
3	CATHODE
5	CATHODE
7	HEATER
8	CATHODE

NOTE 1: GLASS SHALL NOT PROTRUDE BEYOND EDGE OF ANODE R-F CONNECTION OR GRID R-F CONNECTION

NOTE 2: EXPOSED METAL R-F PARTS TO BE PLATED WITH 100 MSI SILVER EXCEPT BASE PINS

NOTE 3: ANODE CAP, GRID R-F CONNECTION, AND CATHODE R-F CONNECTION TO BE CONCENTRIC WITH RESPECT TO EACH OTHER WITHIN $\frac{1}{64}$ IN.