



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, $I_b = 22 \text{ ma}$ 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

	<u>Typical Operation</u>	<u>Maximum Ratings</u>
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

	<u>Typical Operation</u>	<u>Maximum Ratings</u> *
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

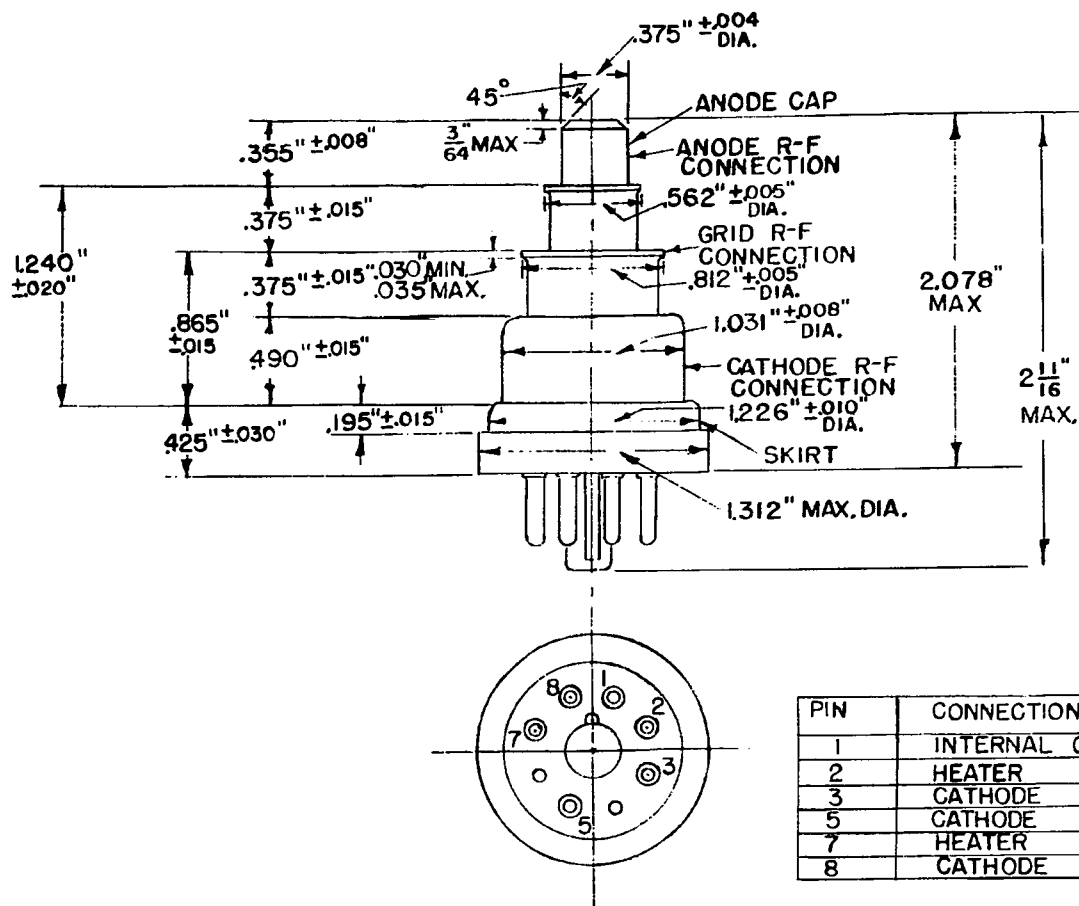
* A useful tube life of approximately 150 hours can be expected at these maximum ratings.

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 1/64 IN.