



DESCRIPTION AND RATING

The 2C40 is a triode of lighthouse construction designed for use as an oscillator or radio-frequency amplifier at frequencies as high as 3370 megacycles.

The radio-frequency cathode connection is made through a disk-type capacitor which is incorporated in the tube. This results in a low-impedance radio-frequency path from the cathode to the external circuit.

The envelope construction results in low losses, provides convenient electrode contact surfaces, and enables the tube to fit easily into coaxial circuits.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential	
Heater Characteristics and Ratings	
Heater Voltage, AC or DC*	6.3 ± 0.3 Volts
Heater Current†	0.75 Amperes
Direct Interelectrode Capacitances‡	
Grid to Plate: (g to p)	1.3 pf
Grid to Cathode: (g to k)	2.15 pf
Plate to Cathode: (p to k), maximum	0.03 pf
Cathode RF Connection to Cathode	100 pf

MECHANICAL

Mounting Position—Any	
Net Weight, approximate	1.2 Ounces
Cooling—Convection and Conduction	

MAXIMUM RATINGS

ABSOLUTE-MAXIMUM VALUES

Radio-Frequency Power Amplifier or Oscillator—Class C	
Frequency	3370 Megacycles
DC Plate Voltage	500 Volts
DC Grid Voltage	—50 Volts
DC Plate Current	25 Milliamperes
DC Grid Current	8.0 Milliamperes
Plate Dissipation	6.5 Watts
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	90 Volts

Heater Negative with Respect to Cathode	
Cathode	90 Volts
Cathode-Cathode RF Connection Voltage	
Cathode RF Connection Positive with Respect to Cathode	90 Volts
Cathode RF Connection Negative with Respect to Cathode	90 Volts
Envelope Temperature at Hottest Point	175 C

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of

all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or

elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Heater Voltage.....	6.3	Volts
Plate Voltage.....	250	Volts
Cathode-Bias Resistor.....	200	Ohms
Amplification Factor.....	36	
Transconductance.....	4850	Micromhos
Plate Current.....	17	Milliamperes

RADIO-FREQUENCY OSCILLATOR

Frequency.....	3370	Megacycles
DC Plate Voltage.....	250	Volts
Grid Resistor.....	10000	Ohms
DC Grid Voltage.....	-5.0	Volts
DC Grid Current, approximate.....	0.5	Milliamperes
DC Plate Current.....	20	Milliamperes
Power Output.....	75	Milliwatts

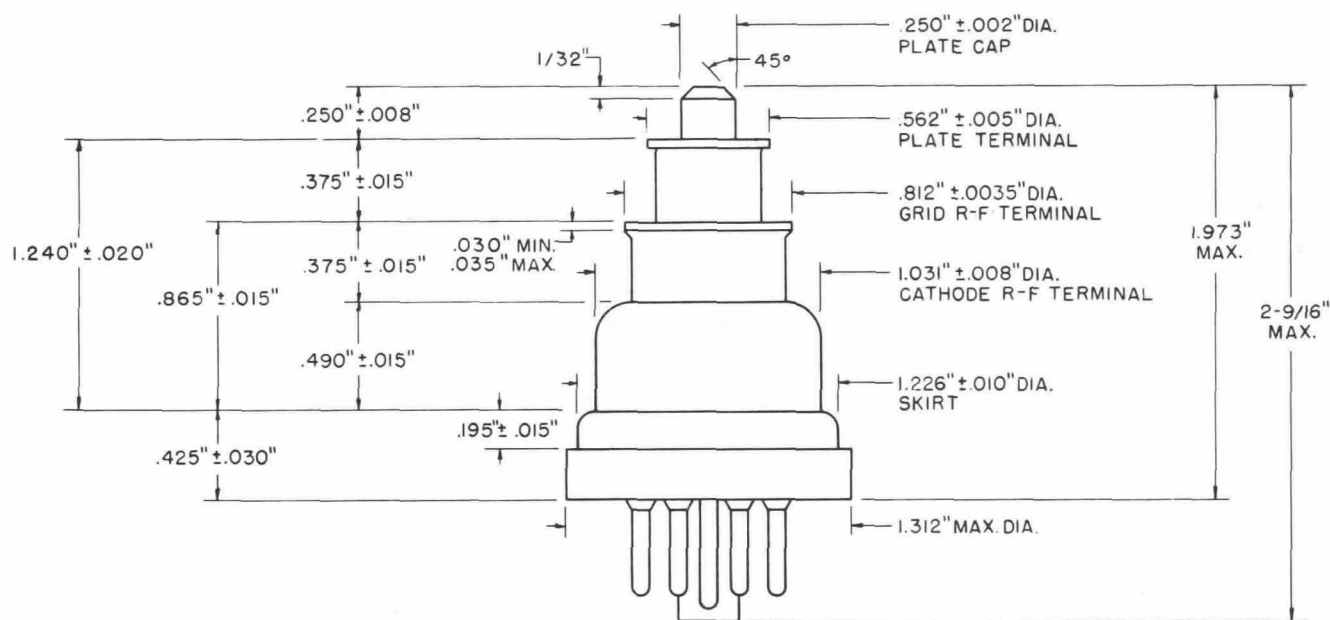
* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater

voltage within the specified tolerance.

† Heater current of a bogey tube at $E_f = 6.3$ volts.

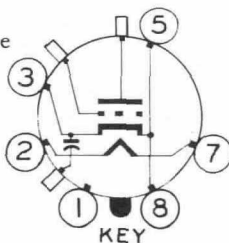
‡ Without external shield.

PHYSICAL DIMENSIONS



TERMINAL CONNECTIONS

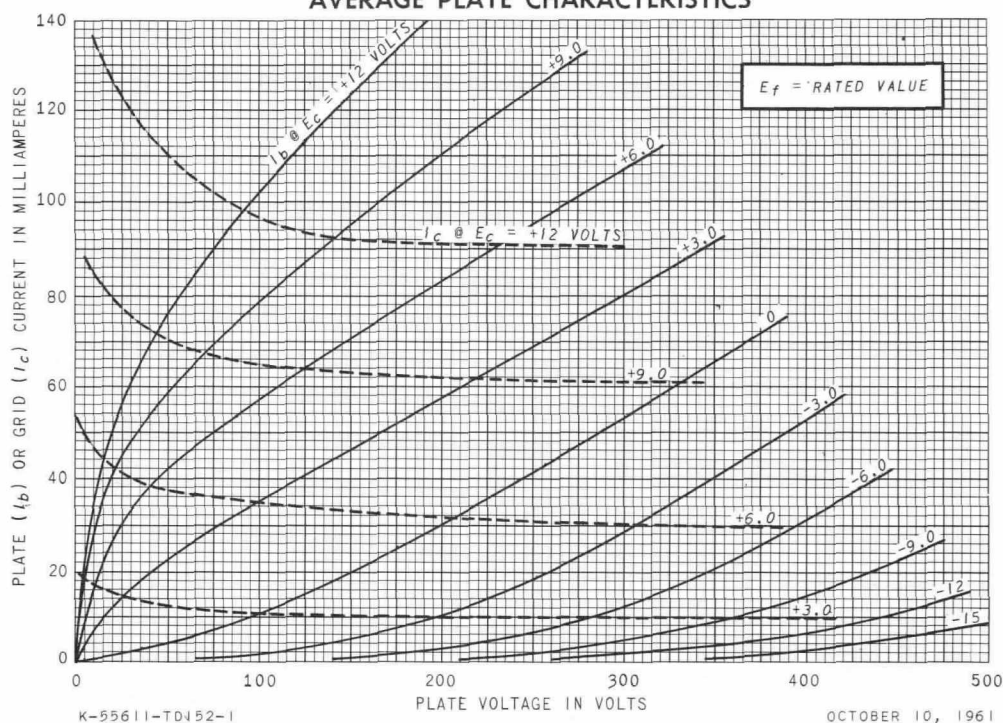
- Pin 1—Internal Connection—Do Not Use
- Pin 2—Heater
- Pin 3—Cathode
- Pin 5—Cathode
- Pin 7—Heater
- Pin 8—Cathode
- Top Cap—Plate
- Disk Terminal—Grid
- Shell—Cathode RF Terminal



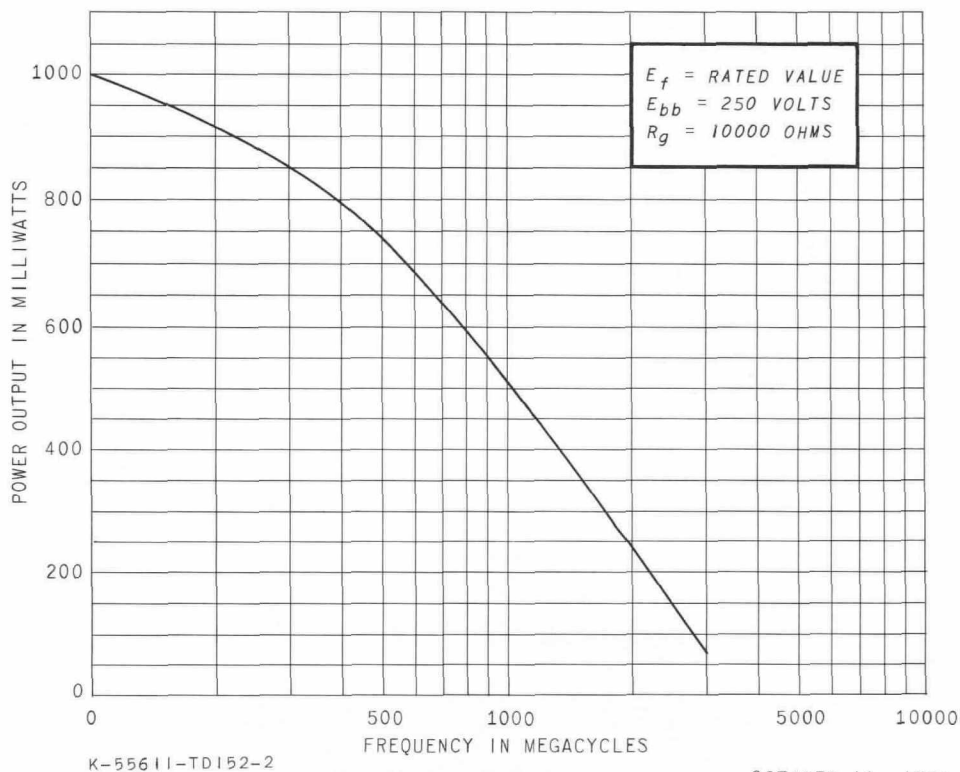
NOTES:

1. Glass shall not protrude beyond edge of anode RF terminal or grid RF terminal.
2. Plate cap and grid RF terminal to be concentric with respect to the cathode RF terminal within 1/64 inch (run-out of 1/32 inch maximum).

AVERAGE PLATE CHARACTERISTICS



POWER OUTPUT VS. FREQUENCY



RECEIVING TUBE DEPARTMENT

GENERAL  **ELECTRIC**

Owensboro, Kentucky