



# HIGH VACUUM RECTIFIER

# A237

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Service Type CV482

## INTRODUCTION

The A237 is a high vacuum rectifier with maximum ratings (in air) of 65kV peak inverse voltage and 1.5A peak anode current. It is of compact construction and has been designed for very reliable operation at high voltage.

## GENERAL DATA

(See also Preamble to Rectifier Section of this Catalogue)

### Electrical

Filament	.. .. .	Thoriated Tungsten
Filament Voltage	.. .. .	4.0 V
Filament Current	.. .. .	12.0 A
Max Peak Inverse Voltage	.. .. .	40 65 kV
Max Continuous Anode Dissipation:		
Natural Cooling	.. .. .	120 100 W
Forced-air Cooling (See Note 1)	.. .. .	160 100 W
Max Anode Current:		
Peak	.. .. .	1.5 A
Mean (See Note 2)	.. .. .	250 mA
Nominal Impedance (at 350mA)	.. .. .	1000 Ω

### Mechanical

Overall Length	.. .. .	9.85 inches (250 mm)	Max
Overall Diameter	.. .. .	2.37 inches (60 mm)	Max
Net Weight	.. .. .	9 ounces (260 gm)	Approx
Base	.. .. .		Goliath Edison Screw
Mounting Position (See Installation on page 2)	.. .. .		Vertical
Max Temperature of bulb	.. .. .	200	°C

## NOTES

1. With forced-air cooling the continuous anode dissipation may be increased up to the absolute maximum of 160W provided that the peak inverse voltage does not exceed 40kV and also provided that the temperature of the glass envelope does not exceed 200°C at any point. Above 40kV the continuous anode dissipation must not exceed 100W under any conditions. The airflow ← must be such that all-round cooling is achieved and no part of the glass envelope must attain a temperature greater than 200°C. Normally the hottest part is the area round the anode, but the anode seal may also require attention.
2. The mean value of the anode current is a function of the waveform. It should ← be determined for each particular application and must be such that the maximum anode dissipation is not exceeded.

← Indicates a change

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### INSTALLATION

The valve should be operated in a vertical position, with the base screw at the bottom. The reversed position is permitted if overheating of the base can be avoided. The holder of the valve should be sprung to avoid the transmission of sharp shocks which might cause breakage of the thoriated tungsten filament.

In view of the low voltage high current filament supply it is essential that the valve is screwed tightly into the socket and that a very good contact is always maintained.

Sufficient clearance must be allowed to avoid sparking or corona at high voltages. It is also important that the air round the valve is not confined, but allowed to circulate freely to dissipate the heat generated. When working at or near the maximum rating for natural cooling it is advisable to provide channels in order to increase the convection by chimney effect.

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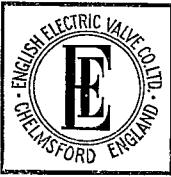
### X-RAY WARNING

X-rays are produced when the A237 is operated with a peak inverse anode voltage above 16kV (absolute value). These rays can constitute a health hazard unless the valve is adequately shielded for X-ray radiation. This is entirely a function of high voltage devices and does not reflect upon the design of the valve.

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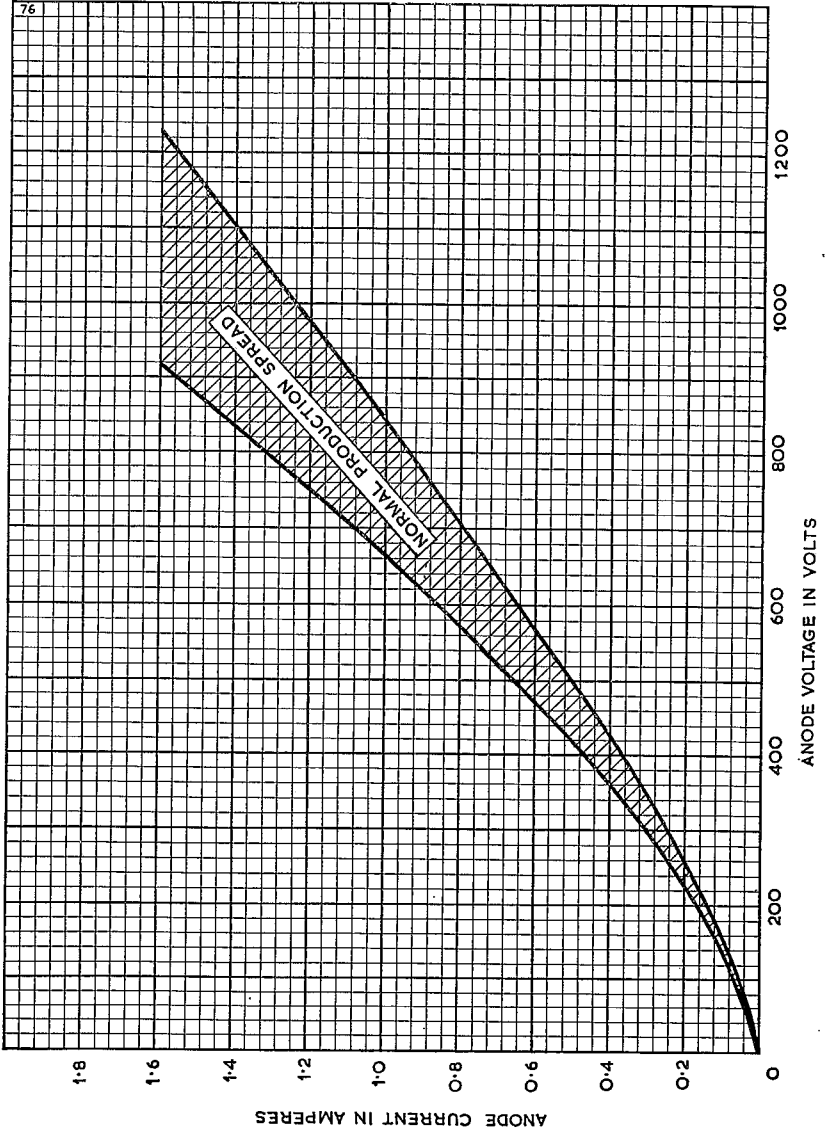


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### ANODE CHARACTERISTIC





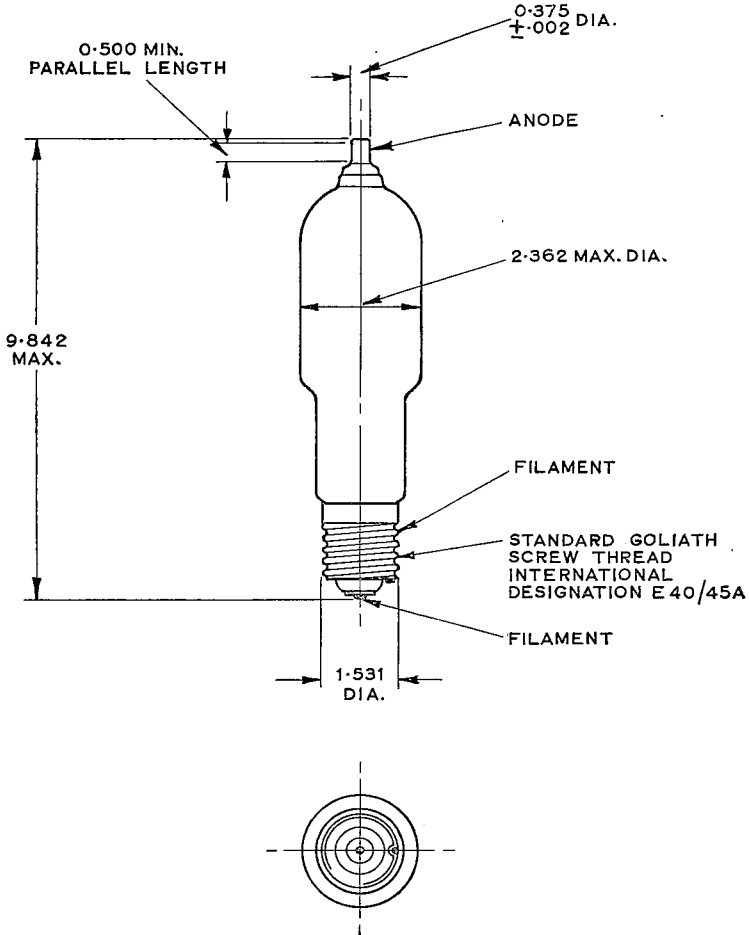
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## OUTLINE

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ALL DIMENSIONS IN INCHES

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