

HALF-WAVE RECTIFIER

RG1-240A

Voltage: 6.5kV peak inverse.
Current: 250mA maximum average
Application: Power rectification.
Gas filling: Mercury vapour.

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – GAS-FILLED RECTIFIERS which precede this section of the handbook.

ABSOLUTE MAXIMUM RATINGS

It is important that these ratings are never exceeded and such variations as mains fluctuations, component tolerances and switching surges must be taken into consideration in arriving at the actual operating conditions.

Maximum peak inverse anode voltage	6.5	kV
Condensed-mercury temperature		
Maximum	65	°C
Minimum	25	°C
Maximum cathode current		
Average	250	mA
Peak	1.25	A
Surge (fault protection, maximum duration = 0.1s)	25	A
Maximum operating frequency	150	c/s

CHARACTERISTICS

Filament voltage	4.0	V
Nominal filament current at 4.0V	2.7	A
Nominal anode voltage drop	12	V
Nominal ignition voltage (see note 1)	12	V
Equilibrium condensed-mercury temperature rise above ambient	See note 2	
Heating time	See note 3	
Net weight (approx.)	{ 2.6 75	oz g
Weight of valve in carton (approx.)	{ 8.1 230	oz g
Nominal dimensions of carton	{ 8.5 × 3.5 × 3.5 220 × 90 × 90	in mm

FULL LOAD OPERATING CONDITIONS

These figures are based upon the absolute maximum ratings of the valve and no account has been taken of mains variations or transformer, valve and choke losses. In practice, due consideration must be given to these factors.

See, also, appropriate sections of 'General Operational Recommendations - Gas-Filled Rectifiers'.

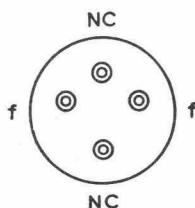
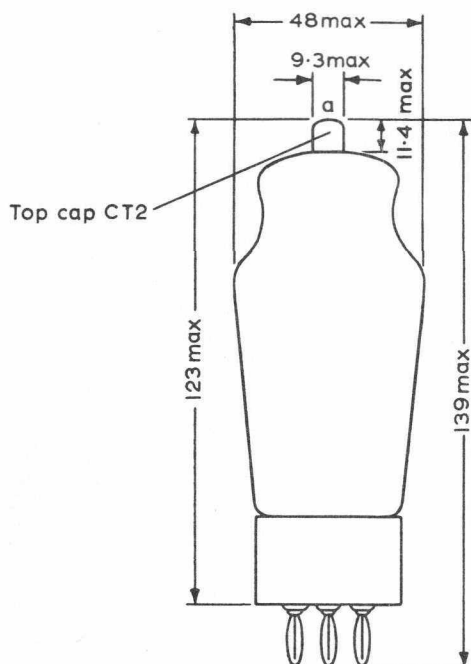
Circuit	No. of valves	Full load d.c. output		Applied a.c. voltage (kV _{r.m.s.})	Initial filter elements	
		(kV)	(mA)		L (H)	C (μ F)
Single phase full-wave	2	2.0	500	2.22 (per valve)	7.0	5.0
Single phase bridge	4	4.0	500	4.44	14	2.5
Three phase half-wave	3	2.75	750	2.35 (per phase)	2.5	2.0
Three phase full-wave	6	6.0	750	2.57 (per phase)	5.0	1.0

OPERATING NOTES

1. In order to obtain an ignition delay time of approximately 10 μ s, an anode voltage of at least 50V is required.
2. Under normal conditions, if the ambient temperature lies within the range of approximately 10 to 40°C, the absolute maximum ratings for condensed-mercury temperature will probably be satisfied.
3. It is recommended that a period of at least 1 min. shall elapse between the time the filament voltage is applied and the application of anode voltage. Under normal conditions cathode current may be drawn when the condensed-mercury temperature is approximately within 7°C of the minimum value given. (See appropriate section of 'General Operational Recommendations - Gas-Filled Rectifiers').

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British 4-Pin Base

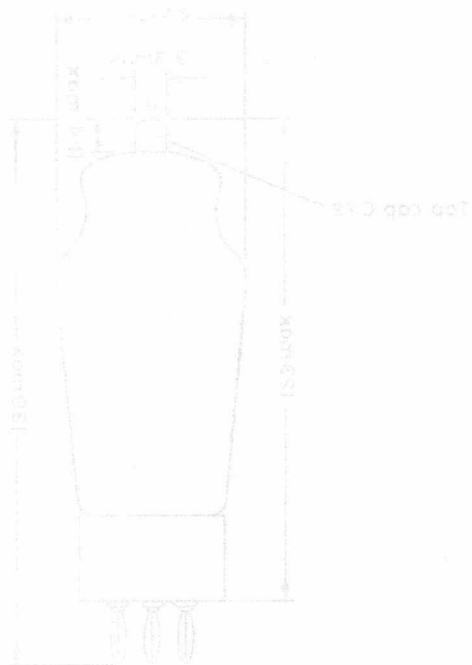
All dimensions in mm

8709



RG-1 340V

HALF-WAVE RECTIFIER



Top View of Base



RG-1

All dimensions in mm.

