

## HALF-WAVE RECTIFIER

Vacuum half-wave rectifier for use in high voltage  
rectifier circuits and surge limiting circuits

# RY12-100

### PRELIMINARY DATA

#### FILAMENT

thoriated tungsten

*Filament voltage	5.0 ± 5%	V
Filament current at 5.0V	6.0 ± 0.5	A

\*The filament voltage may be raised to 5.8 ± 5% V in surge limiting service.

#### LIMITING VALUES (absolute ratings, not design centre)

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

##### Rectifier service

Max. peak inverse anode voltage	40	kV
Max. anode dissipation	60	W
Max. cathode current		
Peak	750	mA
Average	100	mA
Max. temperature of anode seal	225	°C

##### Limiter service

Max. forward anode voltage	12.5	kV
Max. anode dissipation	75	W

#### CHARACTERISTICS

##### Electrical

Anode voltage drop ( $I_k = 100\text{mA}$ )	200	V
$C_{a-f}$	1.4	pF

##### Mechanical

Cooling	Radiation and convection		
Mounting position	Vertical, base down		
Max. net weight	{ 90	g	
	{ 3.2	oz	
Shipping weight	{ 1.06	kg	
	{ 36.6	oz	



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### HEATING UP TIME

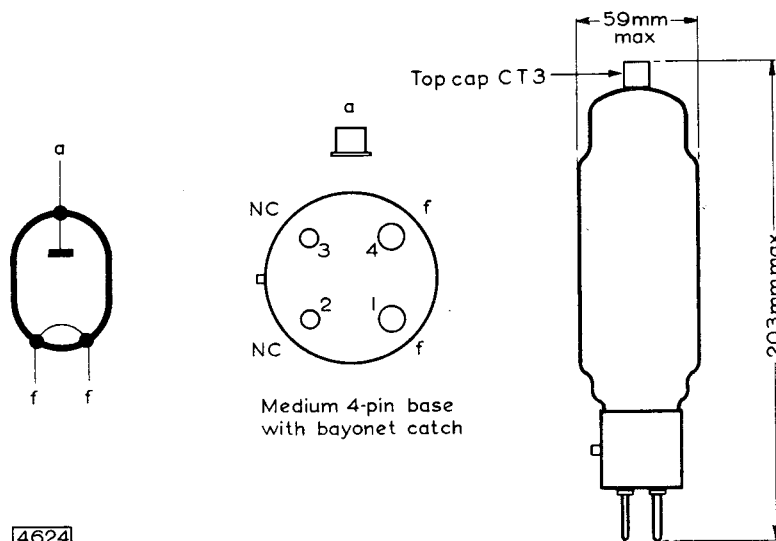
Minimum cathode heating time 5.0 s

### FULL LOAD OPERATING CONDITIONS

For peak inverse voltage of 40kV

Circuit	No. of valves	Applied a.c. voltage (kV <sub>r.m.s.</sub> ) (per valve)	Full load d.c. output capacitor input filter*		Full load d.c. output choke input filter	
			(kV)	(mA)	(kV)	(mA)
Single phase half wave	1	14	17	80	—	—
Single phase full wave	2	14	17	160	12.5	200
Single phase bridge	4	28	34	160	25	200

\*With a capacitor input filter a limiting resistor may be necessary to limit the peak current to within the maximum permissible value.

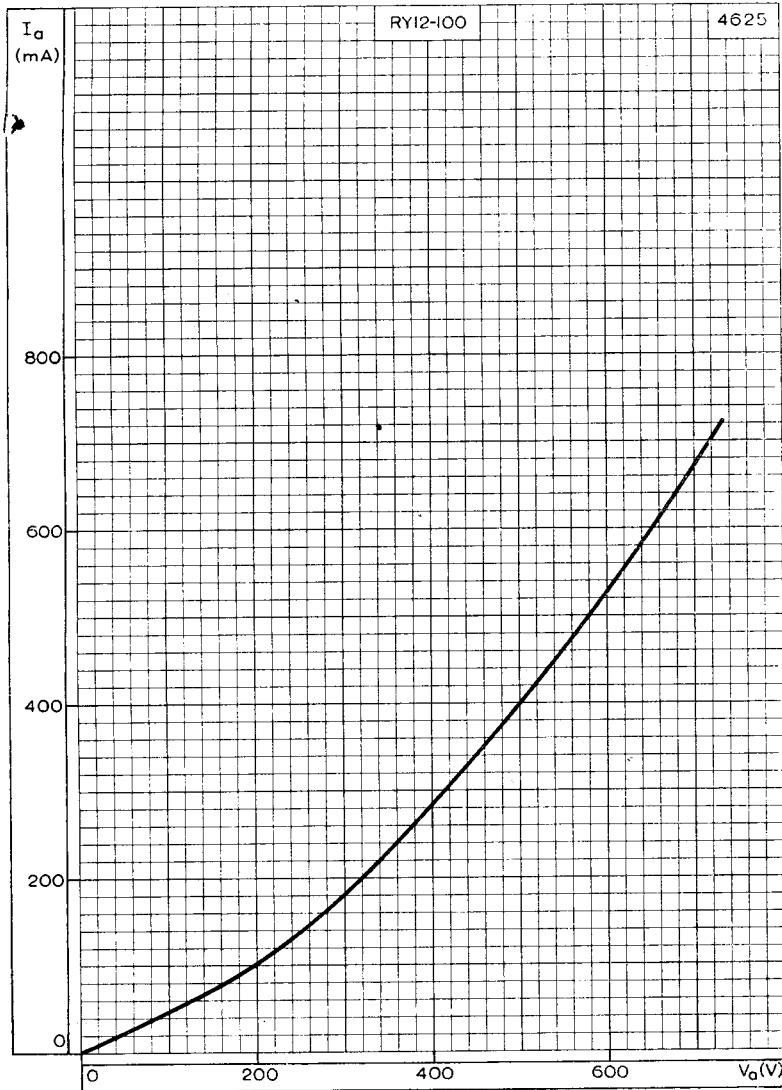


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ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE

