

HALF-WAVE RECTIFIER

RY12-100

QUICK REFERENCE DATA (maximum values)

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

P.I.V. max.	40	kV
$I_{k(av)}$ max.	100	mA

FILAMENT thoriated tungsten

* Filament voltage 5.0 ± 5% V

Filament current at 5V 6.0 ± 0.5 A

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

RATINGS - ABSOLUTE MAXIMUM SYSTEM

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 the actual operating conditions.

Rectifier service

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

Limiter service

Maximum forward anode voltage	12.5	kV
Maximum 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	
Maximum net weight	90	g
	3.2	oz
Shipping weight	1.06	kg
	36.6	oz



HEATING UP TIME

Minimum cathode heating time

5.0

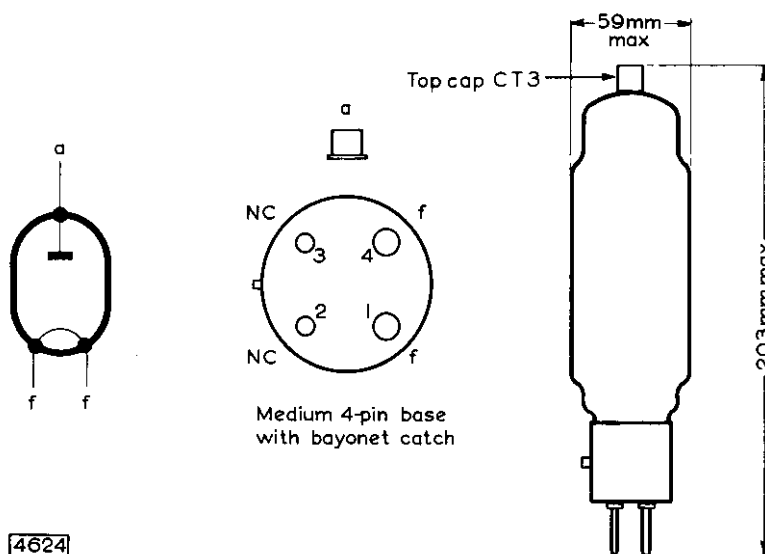
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FULL LOAD OPERATING CONDITIONS

For peak inverse voltage of 40kV

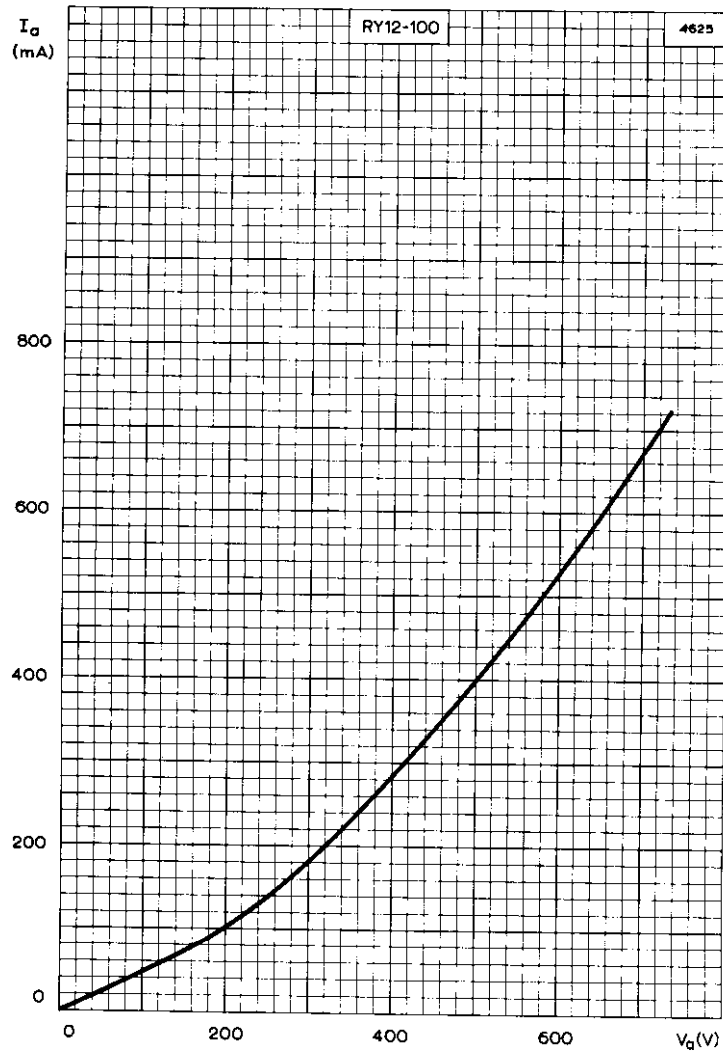
Circuit	No. of valves	Applied a.c. voltage (kV r.m.s.) (per valve)	Full load d.c. output capacitor input filter*		Full load d.c. output choke input filter	
			(kV)	(mA)	(kV)	(mA)
Single phase half wave	1	14	17	80	-	-
Single phase full wave	2	14	17	160	12.5	200
Single phase bridge	4	28	34	160	25	200

*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

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