



Reflex Klystron

Code : Z239/1G (CV2187)

The Z239/1G is a Reflex Klystron developed for use as a frequency modulated transmitter and capable of delivering an output of approximately one watt.

ELECTRICAL DATA.

Cathode

Indirectly-heated, oxide-coated

Heater voltage	6.3	V
Nominal current	1.0	A
Cathode heating time	60	secs

Characteristics

Frequency range	3600 to 4200	Mc/s
Minimum output power	1.0	W
Bandwidth to half power	40	Mc/s

MECHANICAL DATA.

Mounting position :—Vertical, base up or down

Maximum overall length, less leads 141.81 mm

Maximum diameter over seals 35.027 mm

Base : None, connections made to flexible leads

Net weight 42 g

Top cap Skirted CT.1

Resonant cavity :

Not an integral part of valve ; various sizes may be fitted to the valve. (Minimum contact diameter of resonator 1.15 in.)

Air flow required with recommended cooler :

When operated with gun end uppermost
(approx.) 7 cu ft/min

When operated with gun end down
(approx.) 5 cu ft/min

Maximum seal temperature 90 °C

The cooling air should be directed towards the gun end of the valve.

Tentative data

May 1952

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MAXIMUM RATINGS.

Maximum direct resonator voltage	1100	V
Maximum direct reflector voltage	-700	V
Maximum direct resonator current	70	mA

TYPICAL OPERATING CONDITIONS.**Mode 7 at 7.6 cm**

Direct resonator voltage	950 to 1100	V
Direct reflector voltage (Relative to cathode)	-150 to -250	V
Direct resonator current	60	mA
Bandwidth to half power	45 to 70	Mc/s
Modulation sensitivity, approx.	0.5	Mc/s/V
Modulation capacity, approx.	3	pF
Power output	1.2	W

OPERATING DETAILS.

All tabulated data shown for the Z239/1G were taken with the recommended cavity and waveguide. The dynamic figures shown relate to operation into a resistive load with a standing wave ratio of at least 0.94 and are measured at the highest frequency and at mid-band.

When switching on care should be taken to ensure that the reflector is never allowed to receive a positive bias.

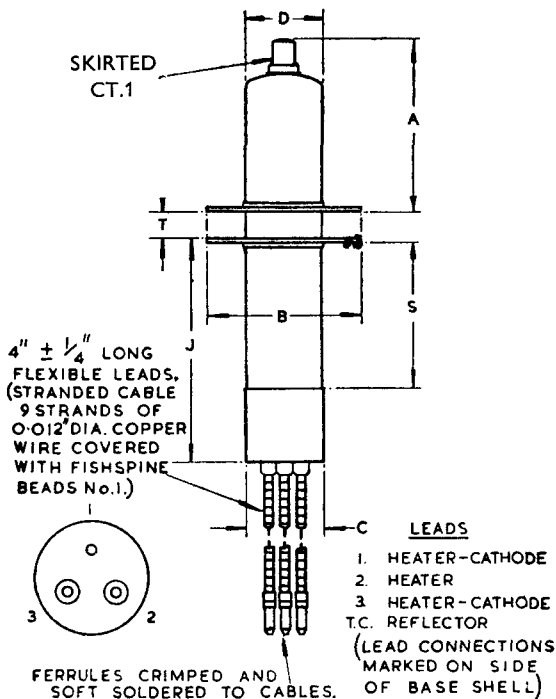
The valve should normally be operated with the resonator earthed and the cathode negative.

Two heater-cathode leads are brought out from the valve so that one can be used as a separate d.c. return path to avoid hum.



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DIM.	MILLIMETRES	INCHES
A	55.56 $\pm$ 4.75	2 ³ / ₁₆ $\pm$ 3/16
B	34.9 $\pm$ 0.127	1.375 $\pm$ 0.005
C	22.23 MAX.	0.875 MAX.
D	22.2 MAX.	7/8 MAX.
J	73.03 MAX.	2 ⁷ / ₈ MAX.
S	50.80 $\pm$ 3.18	2 $\pm$ 1/8
T	7.97 $\pm$ 0.5	0.314 $\pm$ 0.020

NOTE: BASIC FIGURES ARE INCHES