



## PLUG-IN PRE-TR TUBE

Service Type CV6028

The data should be read in conjunction with the Duplexer Device Preamble.

### DESCRIPTION

Broad-band, low loss, plug-in pre-TR tube with no external connections.

### CHARACTERISTICS (See note 1)

Frequency range (see note 2)	2.0 to 12	GHz
Breakdown power (see note 3)	20	kW max
Recovery period to -3db (see note 4)	25	$\mu$ s max

### MAXIMUM AND MINIMUM RATINGS

	Min	Max	
Transmitter power (see note 5):			
peak	—	2.5	MW
mean	—	3.0	kW
Pulse length	—	2.5	$\mu$ s
Waveguide pressure	—	300	kN/m <sup>2</sup>
	—	44	lb/in <sup>2</sup>
Ambient temperature	-50	+100	°C

### GENERAL

Overall dimensions	see Outline
Radio-active content (see note 6)	10 microcuries approx
Mounting position (see note 7)	any
Net weight	10g approx

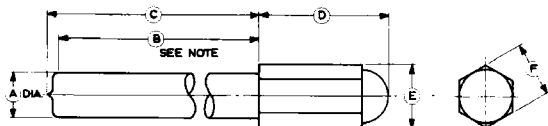
### NOTES

1. The tube is tested at  $9.5 \pm 0.5$ GHz in a balanced duplexer in WG16 waveguide; the maximum v.s.w.r. looking outwards from the duplexer does not exceed 1.2:1 on any arm. A pulse length of  $0.2\mu$ s  $\pm$  10% at a duty cycle of  $0.0002 \pm 10\%$  is used.
2. The tube may be used in a suitable waveguide mount at any frequency within this range. The bandwidth and matching are determined by the design of the mount.

3. The power incident on a balanced duplexer.
4. Measured with peak input power  $50\text{kW} \pm 10\%$ .
5. The power incident on a balanced duplexer where two tubes are each operating across both arms of the duplexer.
6. The radio-activity is low energy  $\beta$  emission, which is completely absorbed by the silica envelope of the tube.
7. The hole through which the tube passes should be  $0.3576 \pm 0.0005$  inch ( $9.083 \pm 0.013\text{mm}$ ) diameter.

## OUTLINE

2213



Ref	Inches	Millimetres
A	$0.3568 \pm 0.0002$	$9.063 \pm 0.005$
B	6.500 min	165.1 min
C	7.000 max	177.8 max
D	$1.000 \pm 0.010$	$25.40 \pm 0.25$
E	0.505 max	12.83 max
F	$0.434 \pm 0.003$	$11.024 \pm 0.076$

Millimetre dimensions have been derived from inches.

**Outline Note** Dimension B refers to the ground length.