



## S-BAND TR TUBE

### Service Type CV5990

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

### DESCRIPTION

Broad-band single primer TR tube.

### CHARACTERISTICS

Frequency range . . . . .	3000 to 3050	MHz
V.S.W.R. (see note 1) . . . . .	1.2:1	max
Maximum leakage:		
spike energy (see note 2) . . . . .	25	nJ/pulse
total power (see note 2) . . . . .	100	mW
low power . . . . .	500	mW
Recovery period to -3db (see note 2) . . . . .	25	μs max
Insertion loss (see note 3) . . . . .	1.0	db max
Arc loss (see note 2) . . . . .	0.8	db max
Position of short circuit (see notes 2 and 4) . . . . .	0.062 inch (1.6mm) nom	

### MAXIMUM AND MINIMUM RATINGS

	Min	Max	
Transmitter power (peak) . . . . .	-	1250	kW
Primer supply voltage (negative) (see note 5) . . . . .	900	1100	V
Primer current . . . . .	70	150	μA
Waveguide pressure . . . . .	-	300	kN/m <sup>2</sup>
		44	lb/in <sup>2</sup>
Ambient temperature (non-operating) . . . . .	-40	+100	°C

### GENERAL

Overall dimensions . . . . .	5.906 x 5.906 x 5.083 inches max 150.0 x 150.0 x 129.1mm max
Waveguide size . . . . .	no. 10 (2.840 x 1.340 inches internal)
Coupler . . . . .	NATO S.N. 5985-99-083-1560
Finish . . . . .	flange faces tin or silver plated
Mounting position . . . . .	any
Net weight . . . . .	4 1/4 pounds (1.9kg) approx

## NOTES

1. Measured at a power level below 10mW over the frequency range.
2. Measured at 1.0MW peak power, 1.0 $\mu$ s pulse length and 0.001 duty factor.
3. Measured at a power level below 10mW at the centre of the frequency range.
4. Distance of the effective r.f. short circuit behind front flange.
5. The primer supply voltage must be applied at least 5 seconds before the tube is required to operate. The primer current must be limited by a series resistance of 5.5M $\Omega$ , of which at least 0.5M $\Omega$  must be adjacent to the primer terminal.

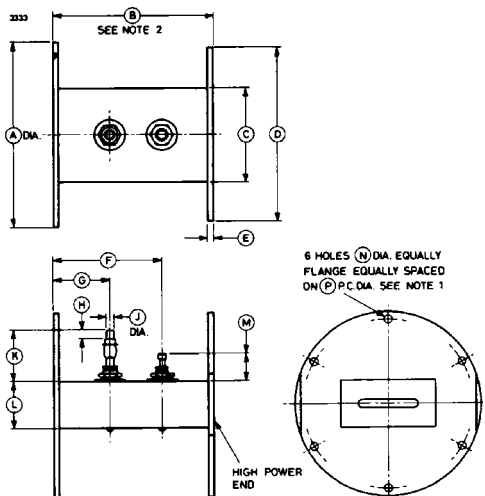


## Outline Dimensions (All dimensions without limits are nominal)

Ref	Inches	Millimetres
A	5.875 $\pm$ 0.016	149.2 $\pm$ 0.4
B	5.073 $\pm$ 0.010	128.9 $\pm$ 0.3
C	3.000 $\pm$ 0.031	76.20 $\pm$ 0.79
D	5.500 $\pm$ 0.031	139.7 $\pm$ 0.8
E	0.156 $\pm$ 0.031	3.96 $\pm$ 0.79
F	3.400	86.36
G	1.750	44.45
H	0.250	6.35
J	0.250	6.35
K	1.625 max	41.28 max
L	1.500 $\pm$ 0.031	38.10 $\pm$ 0.79
M	0.875 max	22.23 max
N	0.264 max	6.70 max
	0.257 min	6.53 min
P	5.375	136.5

Millimetre dimensions have been derived from inches except dimension N.

## OUTLINE



### Outline Notes

1. The flange holes fit a gauge with six parallel pegs, each 0.250 inch (6.35mm) diameter, equally spaced on 5.375 inch (136.5mm) pitch circle diameter. The corresponding holes of the flanges are in alignment within 0.020 inch (0.51mm).
2. The two flange faces are flat and parallel within 0.005 inch (0.13mm) within a circle of 5.125 inch (130.2mm) diameter concentric with the pitch circle of the flange holes.