



# BS52

## X-BAND TR TUBE

### Service Type CV1841

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

### DESCRIPTION

Broad-band single primer TR tube.

### CHARACTERISTICS

Frequency range . . . . .	9320 to 9500	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 3) . . . . .	100	mW
low power . . . . .	500	mW
Recovery period to -3db (see note 3) . . . . .	3.0	$\mu$ s max
Insertion loss (see note 4) . . . . .	0.7	db max
Arc loss (see note 3) . . . . .	0.8	db max

### MAXIMUM AND MINIMUM RATINGS

	Min	Max	
Transmitter power (peak) . . . . .	5.0	200	kW
Primer supply voltage (negative) (see note 5) . . . . .	900	1100	V
Primer current . . . . .	70	150	$\mu$ A
Waveguide pressure . . . . .	—	300	kN/m <sup>2</sup>
		44	lb/in <sup>2</sup>
Ambient temperature (non-operating) . . . . .	-40	+100	$^{\circ}$ C

### GENERAL

Overall dimensions . . . . .	1.555 x 1.625 x 2.187 inches nom 39.50 x 41.28 x 55.55mm nom
Waveguide size . . . . .	no. 16 (0.900 x 0.400 inch internal)
Coupler . . . . .	UG-39/U
Finish . . . . .	flange faces tin or silver plated
Mounting position . . . . .	any
Net weight . . . . .	4 ounces (110g) approx

## NOTES

1. Measured at a power level below 10mW over the frequency range 9320 to 9500MHz.
2. Measured at 40kW peak power, 0.1 $\mu$ s pulse length and 3000p.p.s.
3. Measured at 40kW peak power, 1.0 $\mu$ s pulse length and 1000p.p.s.
4. Measured at a power level below 10mW at the centre of the frequency range.
5. Connected to the primer via a resistance of 5.5M $\Omega$ , of which at least 0.5M $\Omega$  must be adjacent to the primer top cap.

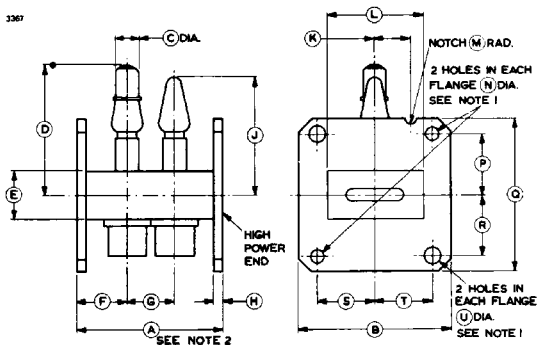
## Outline Dimensions (All dimensions without limits are nominal)

Ref	Inches	Millimetres
A	1.555 $\pm$ 0.002	39.497 $\pm$ 0.051
B	1.625	41.28
C	0.250	6.35
D	1.375 max	34.93 max
E	0.500	12.70
F	0.531	13.49
G	0.500	12.70
H	0.094 min	2.39 min
J	1.250 max	31.75 max
K	0.375 $\pm$ 0.005	9.53 $\pm$ 0.13
L	1.000	25.40
M	0.062 $\pm$ 0.031	1.57 $\pm$ 0.79
N	0.147	3.73
P	0.640 $\pm$ 0.002	16.256 $\pm$ 0.051
Q	1.625	41.28
R	0.640 $\pm$ 0.002	16.256 $\pm$ 0.051
S	0.610 $\pm$ 0.002	15.494 $\pm$ 0.051
T	0.610 $\pm$ 0.002	15.494 $\pm$ 0.051
U	0.1695 $\pm$ 0.004	4.305 $\pm$ 0.102

Millimetre dimensions have been derived from inches.

## OUTLINE

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### Outline Notes

1. The corresponding holes in both flanges will be coaxial. Two of the diametrically opposite holes are suitable for locating on dowel pegs, while the remaining two are used for clamping. The notch at the top of the flange may be used to locate the input (high power) end against a peg and prevent accidental insertion of the tube the wrong way round.
2. The two flanges are flat and parallel within 0.002 inch (0.051mm).