BS814

**X-BAND
TR LIMITER**

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

DESCRIPTION

Broad-band single primer TR limiter.

CHARACTERISTICS

Frequency range	9000 to 9700	MHz
V.S.W.R. (see note 1)	1.3:1	max
Maximum leakage:		
spike energy (see note 2)	2.0	nJ/pulse
total power (see note 3)	30	mW
low power	50	mW
Recovery period to −3db (see note 3) . . .	3.0	µs max
Insertion loss (see note 4)	0.8	db max
Arc loss (see note 3)	0.8	db max

MAXIMUM AND MINIMUM RATINGS

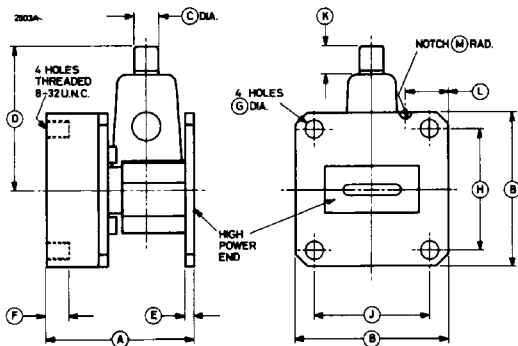|	Min	Max	
Transmitter power (peak) (see note 5) . .	1.0	200	kW
Primer supply voltage (negative)			
(see note 6)	950	1100	V
Primer current	70	150	µA
Waveguide pressure	--	300	kN/m²
	--	44	lb/in²
Ambient temperature (non-operating) .	−40	+70	°C

GENERAL

Overall dimensions	1.555 x 1.625 x 2.437 inches nom
	39.50 x 41.28 x 61.90mm 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	8 ounces (230g) approx

NOTES

1. Measured at a power level below 2mW over the frequency range.
2. Measured at 40kW peak power, 0.1μs pulse length and 1000p.p.s.
3. Measured at 40kW peak power, 1.0μs pulse length and 1000p.p.s.
4. Measured at a power level below 2mW at the centre of the frequency range.
5. Operation at power levels above 50kW results in reduced life and it is recommended that in such cases the tube be preceded by a pre-TR tube.
6. Connected to the primer via a resistance of 5.5MΩ, of which at least 0.5MΩ must be adjacent to the primer top cap. The primer supply voltage must be applied at least 5 seconds before the magnetron fires.

OUTLINE (All dimensions without limits are nominal)

Ref	Inches	Millimetres	Ref	Inches	Millimetres
A	1.555 ± 0.005	39.50 ± 0.13	G	0.173 ± 0.004	4.4 ± 0.1
B	1.625	41.28	H	1.280	32.51
C	0.250	6.35	J	1.220	30.99
D	1.625 max	41.28 max	K	0.250 min	6.35 min
E	0.094 min	2.39 min	L	0.437	11.10
F	0.250	6.35	M	0.062 ± 0.031	1.57 ± 0.79

Millimetre dimensions have been derived from inches except dimension G.