



T.R. CELL

A broad band T.R. self-operating in the frequency range 8490 Mc/s. to 9578 Mc/s. May be used in branched duplexer or balanced duplexer systems.
It is equivalent to the American type 1B63A.

PHYSICAL DATA.

Dimensions	...	See outline drawing overleaf.
Waveguide	...	W.G.16 (0.4" x 0.9").
Mounting Position	...	Any.
Max. Waveguide Pressure	...	30 lbs./Sq. in.

FREQUENCY RANGE ... 8490 to 9578 Mc/s.

RATINGS.

Max. Transmitter Line Power	...	200 kW.
Min. Transmitter Line Power	...	4 kW.
*Max. Primer Supply Voltage	...	-1500 volts.
*Min. Primer Supply Voltage	...	-650 volts.
†Max. Primer Current	...	180 μ A.
†Min. Primer Current	...	100 μ A.
Ambient Temperature Range (Storage)	...	-40 to +100 °C.

‡CHARACTERISTICS.

Low Power Level.

V.S.W.R. (8565-9487 Mc/s.)	...	1.4
V.S.W.R. (8490-9578 Mc/s.)	...	1.9
§Insertion Loss	...	0.9 dB.

High Power Level.

Leakage at 200 kW. peak :-		
Total Leakage Power	...	70 mW.
Spike Leakage Energy	...	0.2 ergs/pulse
Primer Breakdown Power	...	250 mW.
Recovery Time (to -6dB. loss)	...	4 μ sec.
Arc Loss (at 4 kW.)	...	0.8 dB.
**Position of Min. V.S.W.	...	0.058" to 0.072"

Primer Characteristics.

Primer Operating Voltage	...	200 to 375 volts.
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OPERATING NOTES.

- (1) For operation at a line power above 50 kW. a pre T.R. cell is recommended.
- (2) To ensure rapid primer breakdown, the electrode should be supplied from a negative voltage of 1000 volts D.C.
- (3) A suitable resistor should be connected in series with the electrode to limit the current to between 100 and 180 microamperes. At least 1 megohm should be connected directly to the primer electrode terminal to prevent relaxation oscillations at the "keep alive".
- (4) A balanced mixer should be used wherever possible.

*See "Operating Notes" (above) Note (2).

†See "Operating Notes" (above) Note (3).

‡The figures quoted are "limit" figures.

§With primer energised.

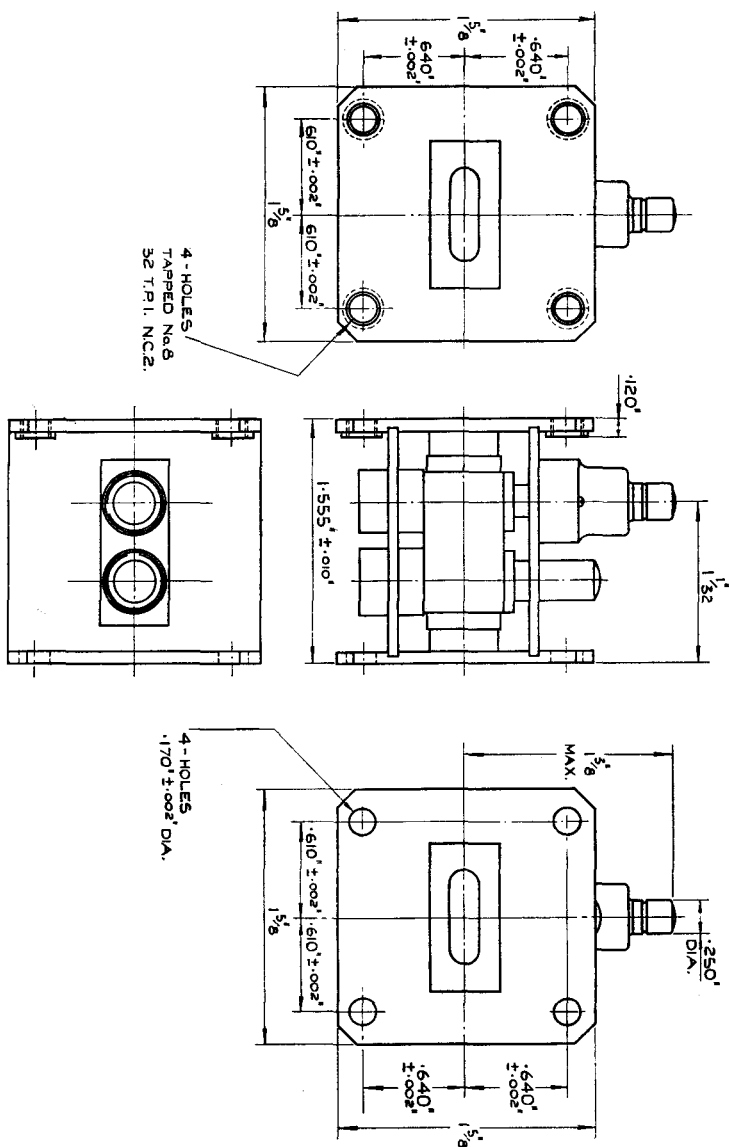
**Measured from input flange face.

WF45



WF45

Ferranti



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