

ELECTRONIC TUBE REFERENCE

WF44

Specialized - Switching Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
MICROWAVETR SWITCH

Broadband X-band TR gas-discharge cell with separate DC and pre-pulse keep-alive electrodes, designed for branched or balanced radar duplexer systems.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	— / —	PARALLEL HEATER	— / —
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 MicrowaveTRSwitch
No fixed ratings recorded.
Microwave T.R. gas-discharge cell; device-specific primer, breakdown, leakage, recovery, frequency and power data are retained in parameter rows.

Ferranti WF44 is a broadband X-band T.R. gas-discharge cell with separate D.C. and pre-pulse keep-alive electrodes. It supports branched or balanced duplexer systems and is rated to 200 kW peak transmitter line power.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Ferranti

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 FERRANTI

Section 1 · Microwave TR Switch

FREQUENCY		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency range	8500–10000 Mc/s	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum transmitter line power	200 kW	Peak
Minimum transmitter line power	4 kW	—
D.C. primer supply voltage	-1500--950 V	Negative D.C.
D.C. primer current	100–185 uA	—
Maximum pre-pulse primer voltage	-650 V	Peak, ±10%
Maximum pre-pulse primer current	10 mA	—
Pre-pulse duration	2 us	Peak amplitude 650 V ±10%, precedes RF pulse by 0.2 us
Storage ambient temperature	-40–100 C	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum VSWR, low band	1.4	8500-8850 Mc/s
Maximum VSWR, mid band	1.25	8850-9850 Mc/s
Maximum VSWR, high band	1.3	9850-10000 Mc/s
Maximum insertion loss	1 dB	Primer energized
Maximum total leakage power	100 mW	200 kW peak, unpulsed

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum spike leakage energy, unpulsed	0.3 erg/pulse	200 kW peak
Maximum spike leakage energy, pre-pulsed	0.1 erg/pulse	200 kW peak
Maximum primer breakdown power	250 mW	—
Maximum recovery time to -6 dB	3 us	—
Maximum arc loss at 4 kW	0.8 dB	—
D.C. primer operating voltage	180–280 V	—