

ELECTRONIC TUBE REFERENCE

QF42A

Specialized - Switching Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
MICROWAVETR SWITCH

Medium-Q X-band integral-cavity TR gas-discharge cell for circular waveguide, using a preset tuner for radar receiver protection.

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 QF42A is a medium-Q X-band integral-cavity T.R. gas-discharge cell intended for circular waveguide. It incorporates preset tuning and a primer electrode, with 50 kW peak transmitter rating and defined high-power leakage behavior.

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum transmitter power	50 kW	Peak
Primer supply voltage	-1500--700 V	Negative D.C. supply limits
Primer current	100-200 uA	Primer electrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Preset tuning span	75 Mc/s	Approximately ± 75 Mc/s
Loaded Q	—160	Low power, approximate limit
VSWR at resonance	—1.4	Low power; average and limit
Insertion loss	—1.2 dB	Low power; average and limit
Flat leakage power	—30 mW	40 kW high-power test
Spike leakage energy	—0.1 erg/pulse	40 kW high-power test
Breakdown power	—250 mW	High power
Recovery time to -6 dB	—4 us	High power
Primer operating voltage	250-450 V	Approximate operating range from table

FREQUENCY		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating frequency	9005-9155 Mc/s	QF42A suffix range as listed on sheet

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