

Tunable Q-band TR gas-discharge cell with primer electrodes for microwave receiver protection. Ionization rapidly isolates sensitive circuitry during transmission.

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 QF50 is a tuneable Q-band T.R. gas-discharge cell using primer electrodes. It is characterized for roughly 20 kW nominal peak power, low leakage and microsecond recovery for microwave receiver protection.

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Loaded Q	—150	Low level maximum
Insertion loss	—2 dB	Low level maximum
Nominal peak power	20 kW	High power
Nominal mean power	8 W	High power
Maximum spike leakage energy	0.045 erg/pulse	High power
Maximum flat leakage power	25 mW	High power
Maximum recovery time to 3 dB	2 us	High power
Maximum recovery time to 1 dB	4 us	High power

FREQUENCY		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tuning wavelength	8.4–8.8 mm	Q-band tuning range

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Primer supply voltage	-2000 V	Negative D.C.
Primer current	50–75 uA	Primer electrode