ELECTRONIC TUBE REFERENCE

SZ22

Specialized - Klystron electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
KLYSTRON

Rugged water-cooled two-cavity fixed-tuned klystron oscillator for X-band transmitter service near 9.5 GHz, typically producing approximately 10–20 W.

General characteristics

BASE DESIGNATION	_	**BASE PINS**	_
NOMINAL HEATER	_ / _	**PARALLEL HEATER**	_ / _
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Klystron

MAXIMUM PLATE VOLTAGE	8000 V
MAXIMUM CATHODE CURRENT	40 mA

Klystron beam/resonator anode voltage is promoted to MaxPlateVoltage where applicable; original published labels and conditions are retained in parameter rows.

Ferranti SZ22 is a rugged water-cooled two-cavity fixed-tuned klystron oscillator for X-band transmitter service. It is nominally tuned near 9.5 GHz and typically delivers about 10-20 W RF output.

SOURCE OPERATING CONDITIONS

1963 Ferranti

SOURCE PDF

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

1963 FERRANTI

Section 1 · Klystron

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater voltage	**7–8.5 V**	—
Heater input power	**15.5–21 W**	—
Heater resistance at 18 W	**1.9–2.1 ohm**	—
Cold heater resistance	**0.2 ohm**	—
Maximum heater switching surge	**8 A**	—
Maximum beam voltage	**8 kV**	—
Maximum beam current	**40 mA**	—
Typical beam voltage	**7.2–7.8 kV**	—
Typical beam current	**30–40 mA**	—
Output power	**10–20 W**	—

FREQUENCY		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Operating frequency	**9500 Mc/s**	Fixed tuned, ±25 Mc/s
Tuning range	**0 Mc/s**	Fixed tuned

COOLING		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Minimum water flow	**0.5 L/min**	At 25 C

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Beam voltage at low end of mode	**5.6–6.2 kV**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Electronic tuning range	**2 Mc/s**	For 600 V ±100 V
Frequency pushing with beam voltage	**42 kc/s/V**	—
Frequency pushing with heater current	**150 c/s/A**	—
Frequency pulling	**1.1 Mc/s**	—
Frequency drift	**<2 kc/s/hour**	Constant temperature
Temperature coefficient	**150 kc/s/C**	—

Tube Tinker

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