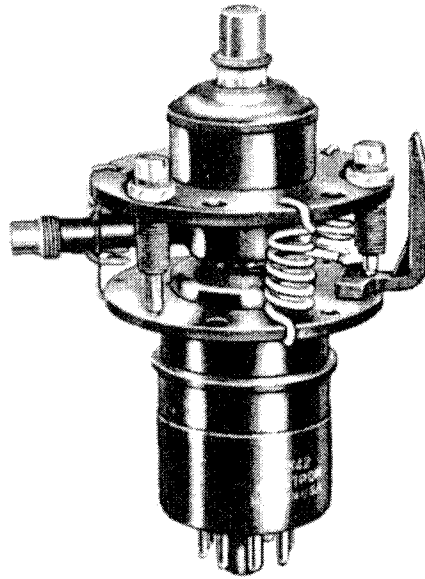


SPERRY

3300-4200 MC

2K42 Reflex Oscillator Klystron

MICROWAVE
TUBES



Standard oscillator for general use

- Long-life vernier tuning
- Low cost; medium power
- Convenient modulation

Description

Reflex oscillator klystron operating over a frequency range of 3300 to 4200 Mc and producing 250 mW (min.) and 750 mW (typical) at 1250-v beam voltage.

Applications

Medium-power oscillator for signal generator purposes; local oscillator for microwave receivers; low-power transmitting tube for communication and radar systems.

Features

Simple tuning, and adequate output power; integral cavity and tuner; Sperry SKL coaxial output fitting.

Note 1: The full tuning range is covered by approximately one complete turn of the strut screws. To adjust the frequency, successively turn each screw an equal amount (not more than a quarter turn) and recheck frequency before proceeding. Turning the struts unequally or more than a half turn may seriously damage the grids or diaphragm. The usable frequency range shifts toward the lower frequencies as the beam voltage is decreased.

General Characteristics

Frequency Range ¹	3300 to 4200 Mc
Vernier Tuning Range ²	
Minimum at 3300 Mc	300 Mc
Minimum at 4200 Mc	200 Mc
Output Power	1/4 to 1 w
Heater Voltage (a-c or d-c)	6.3 v
Heater Current	1 amp
Electronic-tuning Bandwidth ³	10 to 20 Mc

Maximum Ratings

Beam Voltage	1250 v
Beam Current	60 mA
Input Beam Power	75 w
Reflector Voltage	0 to -750 v
Control-electrode Voltage	+30 to -200 v
Control-electrode Current	15 mA
Heater-cathode Voltage	±45 v
Operating Temperature	
Shell	100° C
Base	75° C

Note 2: The vernier tuning range is limited by the mechanical motion of the vernier tuning lever.

Note 3: Varies with operating mode. The electronic-tuning bandwidth is the frequency difference between the half-power points of the reflector-voltage modulation characteristic.

SPERRY

ELECTRONIC
TUBE
DIVISION

SPERRY RAND CORPORATION
GAINESVILLE, FLORIDA

Mechanical Specifications

Cathode Type	Oxide coated
Cooling	Forced air
Weight	
Tube Only	8 oz
With Model 12 Tuner	12 oz
Tuner	Integral part of the tube, designed for use with Sperry Model 12 tuner
Base Connections	See outline drawing
Physical Dimensions	See outline drawing
Mounting Position	Any

Typical Operation

Frequency	3750 Mc
Output Power	750 mW
Load Impedance	optimum
Beam Voltage ⁴	1250 v
Beam Current	50 mA
Reflector	
Voltage	—600 v
Control-electrode	
Voltage	0 v
Heater Voltage	6.3 v
Heater Current	1 A

Suggested Output Fittings

(Not Supplied With Tube)

Description	JAN Type No.
Straight Plug	UG-275/U
Right-angle Plug	UG-276/U
Plug to Type N Jack Adapter	UG-131/U
Coaxial Cable for Fittings	RG-5/U, RG-5A/U, RG-5B/U, RG-21/U (attenuating), RG-21A/U (attenuating)

Note 4: The tube shell (beam positive) is normally operated at ground potential and special precautions must be observed if the cathode is grounded.

