



K350

OSCILLATOR KLYSTRON

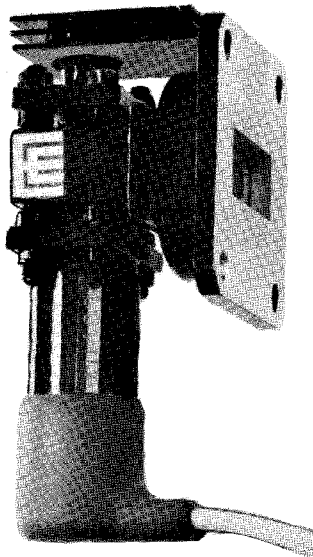
Service Type CV5426

The data should be read in conjunction with the Oscillator Klystron Preamble.

ABRIDGED DATA

Forced-air cooled, fixed frequency, two cavity oscillator klystron for airborne doppler. It features low noise modulation and good frequency stability, and can be used at high altitudes without pressurizing.

Frequency (see note 1)	8800 $\pm$ 5	MHz
Typical output power	1.5	W
Electronic tuning range	12	MHz
Output	to no. 16 waveguide (0.900 x 0.400 inch internal)	
Coupler	UG-39/U (154 I.E.C.-UBR100)	



June 1973

GENERAL

Electrical

Cathode	indirectly heated, oxide coated	
Heater voltage	6.3	V
Heater current	1.6	A

Mechanical

Overall dimensions (excluding leads) . . .	3.300 x 1.770 x 1.400 inches max 83.82 x 44.96 x 35.56mm max	
Net weight	5 ounces (140g) approx	
Mounting position	any	
Connections	flexible leads	

Cooling (See note 2) forced-air

MAXIMUM AND MINIMUM RATINGS (Absolute values) (See note 3)

No individual rating to be exceeded.

	Min	Max	
Heater voltage	5.8	6.8	V
Beam voltage (see note 4)	—	1100	V
Resonator dissipation	—	130	W
Radiator temperature (see note 2)	—	150	°C
Ambient pressure	25	—	mm Hg

RANGE OF CHARACTERISTICS AND TYPICAL OPERATION

Operating Conditions

Heater voltage	6.3	V
Load v.s.w.r.	1.1:1	max

Range of Characteristics

	Min	Typical	Max	
Heater current	1.5	1.6	1.75	A
Frequency	8795	8800	8805	MHz
Beam voltage for mode optimum	680	700	750	V
Beam current	55	70	80	mA
Output power	1.0	1.5	2.5	W
Electronic tuning range to -3db points	10	12	—	MHz
Beam voltage modulation sensitivity	100	200	300	kHz/V
Frequency pulling (see note 5)	—	2.0	2.5	MHz
Random frequency deviation (peak to peak) (see note 6)	—	1.0	3.0	kHz
Temperature coefficient of frequency	—	-100	—	kHz/°C

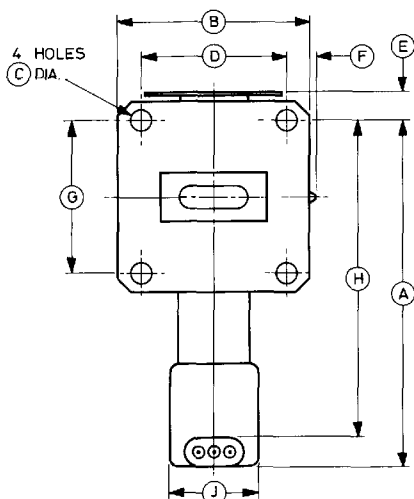
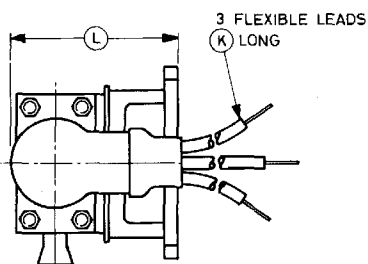
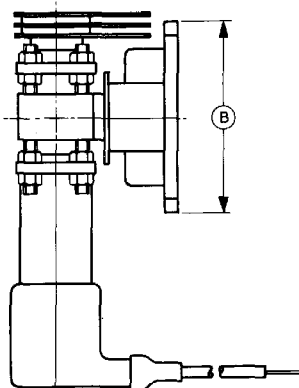


NOTES

1. Other frequencies can be supplied in the range 8500 to 10 000MHz.
2. Under typical operating conditions, an air flow of 30ft³/min (0.85m³/min) directed at the radiator fins is adequate. For best life, the radiator temperature should be kept below 100°C.
3. All voltages except the heater voltage are with respect to cathode.
4. The resonator is normally operated at earth potential.
5. With a mismatch of v.s.w.r. 1.5:1, varied through all phases.
6. The random deviations of output frequency from the carrier frequency, produced by random modulating frequencies in the range 150 to 11 000Hz.

OUTLINE

3642A



Lead Connections

Colour	Element
White	Heater, cathode
Yellow	Heater
Green	Cathode

Ref	Inches	Millimetres
A	2.900 max	73.66 max
B	1.625	41.28
C	0.169 ± 0.003	4.293 ± 0.076
D	1.220 ± 0.004	30.988 ± 0.102
E	0.400 max	10.16 max
F	0.345 max	8.76 max

Ref	Inches	Millimetres
G	1.280 ± 0.004	32.512 ± 0.102
H	2.650 max	67.31 max
J	0.750 max	19.05 max
K	8.000 min	203.2 min
L	1.400 max	35.56 max

Millimetre dimensions have been derived from inches.