

VACUUM TUBE

TYPE OK-159

RAYTHEON

TYPE OK-159

Velocity Modulation Reflex Oscillator Type OK-159

General Characteristics

Microwave oscillator employing self-contained tunable cavity. Oxide coated, unipotential cathode.

|                      |     |             |
|----------------------|-----|-------------|
| Heater Voltage ..... | 6.3 | Volts AC-DC |
| Heater Current ..... | .65 | Amperes     |

Maximum Ratings

|                         |           |             |
|-------------------------|-----------|-------------|
| Heater Voltage .....    | 6.3       | ± 10% Volts |
| Grid #1 .....           | 300       | Volts DC    |
| Grid #2 and #3 .....    | 300       | Volts DC    |
| Cathode Current .....   | 45        | Ma DC       |
| Reflector Voltage ..... | 0 to -300 | Volts DC    |
| Frequency Range .....   | 400       | Mc.         |

Typical Operation

|   |              |          |
|---|--------------|----------|
| Grid #1 .....   | 300          | Volts DC |
| Grid #2 and #3 .....                                      | 300          | Volts DC |
| Reflector Voltage .....                                   | -100 to -175 | Volts DC |
| Cathode Current .....                                     | 20           | Ma DC    |
| Frequency Range .....                                     | 2950 - 3275  | Mc.      |
| Power Output .....  | 150          | Mw.      |
| Electrical Tuning Range<br>between 1/2 power points ..... | 20           | Mc.      |
| Maximum Frequency change in<br>any 20°C range .....       | 3.0          | Mc.      |

Mechanical

Base: Standard Intermediate Octal

|         |                          |        |         |                |        |           |
|---------|--------------------------|--------|---------|----------------|--------|-----------|
| Pin No: | 1                        | 2      | 3       | 6              | 7      | Top Pin   |
|         | Shell, G <sub>2</sub> &3 | Heater | Cathode | G <sub>1</sub> | Heater | Reflector |

Maximum Overall Dimensions

|                      |   |
|----------------------|---|
| Height .....         | Max. 4.5"   |
| Diameter - (a) ..... | Max. with tuning screws<br>turned out 3-3/16"         |
| - (b) .....          | Max. tube dimension with no<br>tuning screws 1-15/16" |
| Mounting .....       | Any position  |
| Cooling .....        | Freely circulating air                                |

RAYTHEON MANUFACTURING COMPANY

POWER TUBE DIVISION

OUTLINE DRAWING

