## — TUNG.201 —

## **UHF POWER TRIODE** PENCIL TYPE

#### FÒR

## RF POWER AMPLIFIER, OSCILLATOR

AND FREQUENCY MULTIPLIER APPLICATIONS IN MOBILE. AND AIRCRAFT EQUIPMENT PHYSICAL

ELECTRODE **TERMINATIONS** SEE

DIMENSIONS SEE OUTLINE

COATED UNIPOTENTIAL CATHODE

OUTLINE DRAWING

DRAWING ANY MOUNTING POSITION

THE 6263A IS A COAXIAL METAL-GLASS PENCIL-TYPE MEDIUM MU TRIODE WITH AN EXTERNAL PLATE RADIATOR, ITS MAXIMUM PLATE DISSIPATION IS 13 WATTS ICAS, THE TUBE MAY BE OP-ERATED WITH FULL RATINGS UP TO A FREQUENCY OF 500 MC/S, AND WITH REDUCED RATINGS UP TO 1700 MC/S.

#### ELECTRICAL DATA

## DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

| GRID TO PLATE    |      | 1.7  | рf |
|------------------|------|------|----|
| GRID TO CATHODE  |      | 2.9  | pf |
| PLATE TO CATHODE | MAX. | 0.08 | рf |

#### HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES - SEE EIA STANDARD RS-239

| AVERAGE CHARACTERISTICS          | 6.0     | VOLTS | 280       | MA.          |
|----------------------------------|---------|-------|-----------|--------------|
| LIMITS OF APPLIED VOLTAGE        |         |       |           |              |
| UNDER TRANSMITTING CONDITIONS    |         |       | 6.0 ± 0.6 | <b>VOLTS</b> |
| UNDER STANDBY CONDITIONS - MAXII | MUM     |       | 6.3       | VOLTS        |
| MAXIMUM HEATER-CATHODE VOLTAGE:  |         |       |           |              |
| HEATER NEGATIVE WITH RESPECT TO  | CATHODE |       | 50        | VOLTS        |
| HEATER POSITIVE WITH RESPECT TO  | CATHODE |       | - 50      | VOLTS        |

#### **AVERAGE STATIC CHARACTERISTICS**

| PLATE VOLTAGE        | 200   | VOLTS       |
|----------------------|-------|-------------|
| PLATE CURRENT        | 27    | MA.         |
| TRANSCONDUCTANCE     | 7,000 | <b>MHOS</b> |
| AMPLIFICATION FACTOR | 27    |             |

#### CLASS C TELEGRAPHY - RF POWER AMPLIFIER AND OSCILLATOR

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

|                    | ccs  | ICAS |       |
|--------------------|------|------|-------|
| DC PLATE VOLTAGE   | 330  | 400  | VOLTS |
| DC GRID VOLTAGE    | -100 | -100 | VOLTS |
| DC PLATE CURRENT   | 40   | 55   | MA.   |
| DC GRID CURRENT    | 25   | 25   | MA.   |
| DC CATHODE CURRENT | 55   | 70   | MA.   |
|                    |      |      |       |

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## — TUNS-SOL —

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# CLASS C TELEGRAPHY - RF POWER AMPLIFIER AND OSCILLATOR - cont'd. MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

CCS ICAS PLATE INPUT 13.2 22 WATTS PLATE DISSIPATION 13 8 WATTS PLATE SEAL TEMPERATURE 175 175 °C FREQUENCY FOR OPERATION AT FULL RATINGS 500 500 MC/S ALTITUDE FOR OPERATION AT FULL RATINGS 60,000 60,000 FEET GRID CIRCUIT RESISTANCE 0.1 0.1 MEGOHMS

#### TYPICAL OPERATION AS RF AMPLIFIER WITH CATHODE DRIVE AT 500 MC/S

| DC PLATE-TO-GRID VOLTAGE DC CATHODE-TO-GRID VOLTAGE | 348<br>48 | 408<br>58 | VOLTS<br>VOLTS |
|---|-----------|-----------|----------------|
| FROM GRID RESISTOR OR COMBINATION OF GRID RES       | -         |           |                |
| DC PLATE CURRENT                                    | 35        | 40        | MA.            |
| DC GRID CURRENT                                     | 13        | 15        | MA.            |
| DRIVING POWER                                       | 2.2       | 3         | WATTS          |
| USEFUL POWER OUTPUT                                 | 7         | 10        | WATTS          |
| WITH APPROX. 75% OUTPUT CIRCUIT EFFICIENC           | Υ         |           |                |

## CLASS C TELEPHONY - PLATE-MODULATED RF POWER AMPLIFIER MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

|   | CCS    | ICAS   |         |
|---|--------|--------|---------|
| DC PLATE VOLTAGE                        | 275    | 330    | VOLTS   |
| DC GRID VOLTAGE                         | -100   | -100   | VOLTS   |
| DC PLATE CURRENT                        | 33     | 46     | MA.     |
| DC GRID CURRENT                         | 25     | 25     | MA.     |
| DC CATHODE CURRENT                      | 50     | 60     | MA.     |
| PLATE I NPUT                            | 9      | 1.5    | WATTS   |
| PLATE DISSIPATION                       | 5.5    | 9      | WATTS   |
| PLATE SEAL TEMPERATURE                  | 175    | 175    | °C      |
| FREQUENCY FOR OPERATION AT FULL RATINGS | 500    | 500    | MC/S    |
| ALTITUDE FOR OPERATION AT FULL RATINGS  | 60,000 | 60,000 | FEET    |
| GRID CIRCUIT RESISTANCE                 | 0.1    | 0.1    | MEGOHMS |

#### TYPICAL OPERATION - CATHODE DRIVEN AT 500 MC/S

| DC PLATE-TO-GRID VOLTAGE                        | 317                | 372            | VOLTS    |
|---|--------------------|----------------|----------|
| DC CATHODE TO GRID VOLTAGE                      | 42                 | 52             | VOLTS    |
| FROM GRID RESISTOR OR COMBINATION OF GRID RESIS | TOR WITH FIXED SUF | PLY OR CATHODE | RESISTOR |
| DC PLATE CURRENT                                | 35                 | 35             | MA.      |
| DC GRID CURRENT                                 | 13                 | 12             | MA.      |
| DRIVING POWER                                   | 2                  | 2.4            | WATTS    |
| USEFUL POWER OUTPUT                             | 6.7                | 8              | WATTS    |
| WITH APPROX. 75% OUTPUT CIRCUIT EFFICIENC       | Υ                  |                |          |

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## TUMB-SOL .

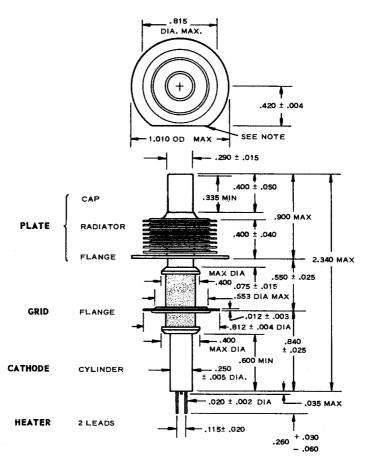
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#### SPECIAL TESTS AND PERFORMANCE DATA

CONTROLLED ON A SAMPLING BASIS

LOW-PRESSURE VOLTAGE BREAKDOWN TEST HIGH-FREQUENCY VIBRATION TEST SEAL FRACTURE HEATER CYCLING 1 - HOUR STABILITY LIFE PERFORMANCE 50 - HOUR SURVIVAL LIFE PERFORMANCE 500 - HOUR INTERMITTENT LIFE PERFORMANCE

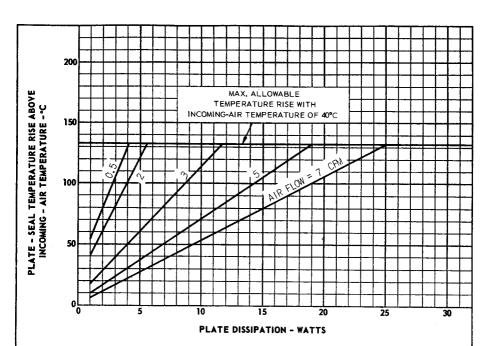
#### **OUTLINE DRAWING**



### NOTE:

THE STRAIGHT EDGE ON THE PERIMETER OF THE LARGE FIN (PLATE TERMINAL) IS PARALLEL TO A PLANE THROUGH THE CENTERS OF THE HEATER PINS AT THEIR SEALS WITHIN 15°.

ALL DIMENSIONS IN INCHES



#### COOLING REQUIREMENTS

MAXIMUM PLATE - SEAL TEMPERATURE = 175° C AIR-DUCT O PENING = 1 5/32" X 1 5/32" WITH AIR-DUCT LOCATED AS SHOWN ON SKETCH

