

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, POWER  
 TYPE 8167

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the electron tube described herein shall consist of this document and the latest issue of MIL-PRF-1.

DESCRIPTION: Tetrode, metal-ceramic.

See figure 1.

Mounting position: Any.

Weight: 4 ounces (105.4 grams) nominal.

ABSOLUTE RATINGS: F = 500 MHz.

| Parameter:       | Ef              | Eb    | Ec1  | Ec2  | Ib    | Ehk  | Pg1 | Pg2 |
|------------------|-----------------|-------|------|------|-------|------|-----|-----|
| Unit:            | V ac <u>1</u> / | V dc  | V dc | V dc | mA dc | V dc | W   | W   |
| <u>Maximum:</u>  |                 |       |      |      |       |      |     |     |
| Class C Teleg:   | 6.0 ± 5%        | 1,500 | -250 | 300  | 200   | ±150 | 2   | 12  |
| Class C Teleg:   | 6.0 ± 5%        | 2,000 | -250 | 300  | 250   | ±150 | 2   | 12  |
| Class AB1:       | 6.0 ± 5%        | 2,500 | ---  | 400  | 250   | ±150 | 2   | 12  |
| Test conditions: | 6.0             | 1,000 | Adj  | 300  | 150   | ---  | --- | --- |

ABSOLUTE RATINGS: F = 500 MHz.

| Parameter:       | Pp  | T(seal and anode core) | tk        | Cooling    | Barometric pressure, reduced |
|------------------|-----|------------------------|-----------|------------|------------------------------|
| Unit:            | W   | °C                     | sec (min) | <u>2</u> / | mmHg (min)                   |
| <u>Maximum:</u>  |     |                        |           |            |                              |
| Class C Teleg:   | 200 | 250                    | 30        | ---        | 141 ± 5                      |
| Class C Teleg:   | 300 | 250                    | 30        | ---        | 141 ± 5                      |
| Class AB1:       | 300 | 250                    | 30        | ---        | 141 ± 5                      |
| Test conditions: | --- | ---                    | 120       | <u>3</u> / | ---                          |

GENERAL:

Qualification: Required.

TABLE I. Testing and inspection.

| Inspection                            | Method<br>MIL-STD-1311 | Notes | Conditions   | Acceptance<br>Level<br>14/ | Symbol                 | Limits            |                    | Unit          |
|---------------------------------------|------------------------|-------|--|----------------------------|------------------------|-------------------|--------------------|---------------|
|                                       |                        |       |  |                            |                        | Min               | Max                |               |
| <u>Conformance inspection, part 1</u> |                        |       |  |                            |                        |                   |                    |               |
| Electrode current (screen)            | 1256                   | ---   |  | 0.65                       | Ic2                    | ---               | -5.0<br>+3.0       | mA dc         |
| Total grid current                    | 1266                   | 4/    | Eb = 2,000 V dc  | 0.65                       | Ic1                    | ---               | -15                | μA dc         |
| Electrode voltage (grid)              | 1261                   | ---   |  | 0.65                       | Ec1                    | -32.0             | -45.0              | V dc          |
| Primary-grid emission (control)       | 1266                   | ---   | Ic1 = 70 mA dc;<br>t = 15 seconds; anode and<br>g2 floating  | 0.65                       | Isg1                   | ---               | -25                | μA dc         |
| Primary-grid emission (screen)        | 1266                   | ---   | Ec1 = 0; t = 15 seconds;<br>Ic2 = 100 mA dc;<br>anode floating   | 0.65                       | Isg2                   | ---               | -250               | μA dc         |
| Pulse emission (1)                    | 2212                   | 5/    | Eb = Ec2 = 250 V dc;<br>Ec1 = -100 V dc;<br>egk/ik = 1.5 a;<br>Ef = 5.4 V ac;<br>tp = 4,500 μs (min);<br>prr = 11 ± 1;<br>tr = tf = 25 μs;<br>slope = 0.5 percent;<br>ripple = 0.1 percent | 0.65                       | Δik                    | ---               | 200                | ma            |
| Current division (method A)           | 1372                   | ---   | Eb = Ec2 = 250 V dc;<br>Ec1 = -100 V dc;<br>egk/lb = 1.0 a;<br>tp = 4,500 μs (min);<br>prr = 11 ± 1  | 0.65                       | {<br>egk<br>ic1<br>ic2 | 8.0<br>---<br>--- | 18.0<br>250<br>250 | v<br>ma<br>ma |
| <u>Conformance inspection, part 2</u> |                        |       |  |                            |                        |                   |                    |               |
| Heater current                        | 1301                   | ---   |  | ---                        | If                     | 2.6               | 3.1                | A ac          |
| Stability                             | ---                    | ---   | Eb = 2,000 V dc;<br>Ec1/lb = 150 mA dc at<br>t = 0; read Δlb at t = 120<br>seconds   | ---                        | Δlb                    | ---               | 10                 | mA dc         |
| Interelement leakage resistance, cold | 1366                   | 13/   | Rs = 2.5 MegΩ; E = 100 V<br>dc, g1 negative<br>E = 500 V dc, g2 positive;<br>E = 500 V dc, p positive  | ---                        | Rg1k                   | 50                | ---                | MegΩ          |
|                                       |                        |       |  |                            | Rg1g2                  | 50                | ---                | MegΩ          |
|                                       |                        |       |  |                            | Rg2p                   | 50                | ---                | MegΩ          |

See footnotes at end of table.

MIL-PRF-1/1313F

TABLE I. Testing and inspection - Continued.

| Inspection  | Method<br>MIL-STD-<br>1311 | Notes | Conditions   | Acceptance<br>level<br>14/ | Symbol               | Limits             |                     | Unit           |
|---|----------------------------|-------|--|----------------------------|----------------------|--------------------|---------------------|----------------|
|   |                            |       |  |                            |                      | Min                | Max                 |                |
| <u>Conformance inspection, part 2</u> – Continued             |                            |       |  |                            |                      |                    |                     |                |
| Direct-interelectrode capacitance (ground cathode connection) | 1331                       | ---   | Test in fixture in accordance with DESC Drawing 67001, or equivalent   | ---                        | { Cgp<br>Cin<br>Cout | ---<br>25.0<br>3.5 | 0.06<br>33.0<br>4.5 | pF<br>pF<br>pF |
| Heater-cathode leakage  | 1336                       | ---   | Ehk = +250 V dc;<br>Ehk = -250 V dc  | ---                        | Ihk<br>Ihk           | ---<br>---         | 150<br>150          | μA dc<br>μA dc |
| Pulse emission (2)  | 2212                       | 5/    | Pulse emission (1), except Ef = 6.0 V ac   | ---                        | Δik                  | ---                | 100                 | ma             |
| RF useful output power  | 2214                       | ---   | Class C amplifier;<br>F = 450 to 500 MHz;<br>Eb = 2,000 V dc;<br>Ec1 = -90 V dc;<br>Ec2 = 250 to 300 V dc;<br>Ic1 = 25 mA dc (max);<br>Eg1/lb = 250 mA dc;<br>Ef = 5.0V ac; circuit and cavity in accordance with Drawing 285-JAN, or equivalent | ---                        | Po                   | 225                | ---                 | W              |
| <u>Conformance inspection, part 3</u>                         |                            |       |  |                            |                      |                    |                     |                |
| Vibration (noise)   | ---                        | 6/ 7/ | Ef = 6.0 V (ac or dc);<br>Ebb = 2,500 V dc;<br>Ec2 = 350 V dc;<br>Rp = 4,900 ohms;<br>Ec1/lb = 100 mA dc;<br>accel = 20 G peak (min);<br>F = 100 to 750 Hz,<br>ascending sweep only  | ---                        | Ep                   | ---                | 20                  | V ac           |
| Vibration (noise) end points:                                 | ---                        |       |  |                            |                      |                    |                     |                |
| Total grid current  | 1266                       | ---   |  | ---                        | Ic1                  | ---                | -20                 | μA dc          |
| Electrode voltage (grid)                                      | 1261                       | ---   |  | ---                        | Ec1                  | -32.0              | -45.0               | V dc           |
| Long duration shock   | ---                        | 6/ 8/ | Eb = 2,000 V dc;<br>Ec2 = 350 V dc;<br>Ec1 = -150 V dc;<br>shock = 11 ± 2 ms;<br>accel = 90 G peak (min);<br>total impacts = 18  | ---                        | ---                  | ---                | ---                 | ---            |

See footnotes at end of table.

TABLE I. Testing and inspection - Continued.

| Inspection  | Method<br>MIL-STD-<br>1311 | Notes | Conditions  | Acceptance<br>level<br>14/ | Inspection<br>level or<br>code | Symbol                     | Limits            |                   | Unit                      |
|---|----------------------------|-------|---|----------------------------|--------------------------------|----------------------------|-------------------|-------------------|---------------------------|
|   |                            |       |   |                            |                                |                            | Min               | Max               |                           |
| <u>Conformance inspection, part 3</u> - Continued |                            |       |   |                            |                                |                            |                   |                   |                           |
| Long duration shock end points:                   | ---                        |       |   |                            |                                |                            |                   |                   |                           |
| Total grid current                                | 1266                       | ---   |   | ---                        | ---                            | Ic1                        | ---               | -20               | μA dc                     |
| Electrode voltage (grid)                          | 1261                       | ---   |   | ---                        | ---                            | Ec1                        | -32.0             | -45.0             | V dc                      |
| Linear amplifier power output and distortion      | 2204                       | 6/    | Eb = 2,000 V dc;<br>Ec2 = 350 V dc;<br>Ec1/lbo = 125 mA dc;<br>Eg1/lb = 250 mA dc 1 tone;<br>Rl = 4,150 ± 150 ohms;<br>Rg = 1,000 ohms (max);<br>F = 2 to 10 MHz; anode tank Q = 10 to 15 | ---                        | ---                            | Po<br>3rd IM<br>5th IM     | 225<br>-25<br>-30 | ---<br>---<br>--- | W<br>(useful)<br>dB<br>dB |
| Life test (5)                                     | ---                        | 10/   | Group C; linear amplifier power output and distortion; t = 500 hours  | ---                        | ---                            | Po (initial)               | 225               | ---               | W (useful)                |
| Life test (5) end points:                         | ---                        |       |   |                            |                                |                            |                   |                   |                           |
| Interelement leakage resistance, cold             | 1366                       | 13/   |   | ---                        | ---                            | {<br>Rg1k<br>Rg1g2<br>Rg2p | 10                | ---               | MegΩ                      |
|   |                            |       |   |                            |                                |                            | 10                | ---               | MegΩ                      |
|   |                            |       |   |                            |                                |                            | 15                | ---               | MegΩ                      |
| Linear amplifier power output and distortion      | 2204                       | ---   |   | ---                        | ---                            | Po                         | 210               | ---               | W (useful)                |
| Life test (5)                                     | ---                        | 10/   | t = 500 hours   | ---                        | ---                            | 3rd IM<br>5th IM<br>Po     | -24<br>-29<br>210 | ---<br>---<br>--- | dB<br>dB<br>W (useful)    |
|   |                            |       |   |                            |                                | Δlb                        | ---               | 35                | mA dc                     |
| Life test (2)                                     | ---                        | ---   | Group C;<br>Ef = 6.6 V ac;<br>Ec1 = Ec2 = Eb = 0;<br>t = 500 hours  | ---                        | ---                            | ---                        | ---               | ---               | ---                       |
| Life-test (2) end points:                         | ---                        |       |   |                            |                                |                            |                   |                   |                           |
| Interelement leakage resistance, cold             | 1366                       | 13/   |   | ---                        | ---                            | {<br>Rg1k<br>Rg1g2<br>Rg2p | 10                | ---               | MegΩ                      |
|   |                            |       |   |                            |                                |                            | 10                | ---               | MegΩ                      |
|   |                            |       |   |                            |                                |                            | 15                | ---               | MegΩ                      |
| Life test (4)                                     | ---                        | 11/   | Group C;<br>Ec1 = -100 V dc;<br>g2 and p floating;<br>t = 200 hours   | ---                        | ---                            | ---                        | ---               | ---               | ---                       |

See footnotes at end of table.

TABLE I. Testing and inspection - Continued.

| Inspection  | Method<br>MIL-STD-<br>1311 | Notes  | Conditions   | Acceptance<br>level<br>14/ | Symbol  | Limits |                   | Unit   |
|---|----------------------------|--------|--|----------------------------|---|--------|-------------------|--|
|   |                            |        |  |                            |   | Min    | Max               |  |
| <u>Conformance inspection, part 3 - Continued</u> |                            |        |  |                            |   |        |                   |  |
| Life-test (4) end points:                         | ---                        |        |  |                            |   |        |                   |  |
| Heater current                                    | 1301                       | ---    |  | ---                        | If  | 2.6    | 3.1               | A ac   |
| Heater-cathode leakage                            | 1336                       | ---    | Ehk = +250 V dc<br>Ehk = -250 V dc   | ---                        | lhk<br>lhk  | ---    | 150<br>150        | $\mu$ A dc<br>$\mu$ A dc                     |
| Pressure drop                                     | 1155                       | 9/     | Airflow = 5.0 cfm (min)  | ---                        | ---   | ---    | 0.4               | Inch<br>H <sub>2</sub> O                     |
| Cooling   | ---                        | 9/ 12/ | Eb = 2,000 V dc;<br>Ec1 = 0;<br>Ec2/lb = 150 mA dc;<br>airflow = 5.0 cfm (max)   | ---                        | T(anode<br>core)<br>T(anode<br>seal)<br>T(base<br>seal) | ---    | 250<br>225<br>225 | $^{\circ}$ C<br>$^{\circ}$ C<br>$^{\circ}$ C |
| Humidity  | 1011                       | 9/     |  | ---                        | ---   | ---    | ---               | ---  |
| Humidity test end point:                          | ---                        |        |  |                            |   |        |                   |  |
| Total grid current                                | 1266                       | ---    |  | ---                        | lc1   | ---    | -20               | $\mu$ A dc                                   |
| Life-test (1)                                     | ---                        | 9/     | RF useful power output;<br>t = 500 hours   | ---                        | ---   | ---    | ---               | ---  |
| Life-test (1) end points:                         | ---                        |        |  |                            |   |        |                   |  |
| Pulse emission (2)                                | 2212                       | ---    |  | ---                        | $\Delta$ ik   | ---    | 100               | ma   |
| Primary grid emission (control)                   | 1266                       | ---    |  | ---                        | lsg1  | ---    | -25               | $\mu$ A dc                                   |
| Primary grid emission (screen)                    | 1266                       | ---    |  | ---                        | lsg2  | ---    | -250              | $\mu$ A dc                                   |
| Heater-cathode leakage                            | 1336                       | ---    | Ehk = +250 V dc<br>Ehk = -250 V dc   | ---                        | lhk<br>lhk  | ---    | 150<br>150        | $\mu$ A dc<br>$\mu$ A dc                     |
| RF useful power output                            | 2214                       | ---    |  | ---                        | Po  | 180    | ---               | W  |
| Life test (3)                                     | ---                        | 9/     | Ebb = 1,000 V dc;<br>Ec2 = 250 V dc;<br>Ec1/lb = 50 mA dc;<br>Eg1/lb = 100 mA dc;<br>Rp = 1,000 ohms;<br>TA = 200 $^{\circ}$ C (min);<br>F = 1 kHz (min);<br>t = 100 hours | ---                        | ---   | ---    | ---               | ---  |
| Life-test (3) end points:                         | ---                        |        |  |                            |   |        |                   |  |
| Pulse emission (2)                                | 2212                       | ---    |  | ---                        | $\Delta$ ik   | ---    | 100               | ma   |
| Total grid current                                | 1266                       | ---    |  | ---                        | lc1   | ---    | -20               | $\mu$ A dc                                   |

See footnotes at top of next page.

TABLE I. Testing and inspection - Continued.

- 1/ At frequencies above approximately 200 MHz, it may be necessary to reduce heater voltage to compensate for rf transit-time heating of the cathode after dynamic operation of the tube has started. This back heating is a function of frequency, grid current, grid bias, anode current, duty cycle, and circuit design and adjustment. Particular care should be used in the selection of stable circuit components and in final tuning of high-frequency circuits as off-resonance operation, even to a small degree, may result in marked and undesirable increase in cathode temperature. There is an optimum heater voltage which will maintain the cathode at the correct operating temperature for any particular set of operating conditions. A maximum variation of  $\pm 5$  percent from optimum is permitted. For straight-through, Class C CW amplifier operation, the following heater operation voltages are indicated:

| <u>Frequency (MHz)</u> | <u>Ef (V ac)</u> |
|------------------------|------------------|
| 201 to 300             | 5.75             |
| 301 to 400             | 5.50             |
| 401 to 500             | 5.00             |

- 2/ When the tube is operated at 100 percent of maximum rated anode dissipation at an incoming air temperature of 25°C maximum, a minimum airflow of 5.0 cfm at sea level shall pass through the anode cooler. If the socket EIMAC SK-710 and chimney SK-606, or equivalents, are used, an incoming airflow of 5.0 cfm to the lower end of the socket is required. At this flow of 5.0 cfm, the static pressure drop directly across the tube and socket (with chimney installed) is approximately 0.4 inch of water. This pressure drop varies with the amount of escaping air and with the shape and construction of the air director (chimney). The airflow rating applies at bias voltages of less than 100 volts and frequencies less than 500 MHz. Air cooling of the tube should be increased with increased negative grid bias, increased incoming air temperature, increased frequency of operation, or a combination. In all cases of operation, a socket which provides forced-air cooling of the base shall be used, and maximum seal and anode core temperature ratings shall not be exceeded. Airflow must be applied before or simultaneously with electrode voltages, and may be removed simultaneously with them. In cases where long life and consistent performance are factors, cooling in excess of minimum requirements is normally beneficial.
- 3/ Unless otherwise specified herein, in all electrical tests involving application of heater voltage, forced-air cooling of the tube is allowed at the rate of 5.0 cfm for the base and anode. The tube should be operated in an air-system socket (EIMAC SK-710 socket, with EIMAC SK-606 chimney, or equivalents). Standard temperature and pressure conditions shall apply.
- 4/ This test is to be the first test performed at the conclusion of the holding period.
- 5/ Pulse emission (1) and (2) are taken at the voltage conditions specified. For the basic test circuit, see test method 1372, figure 1372-1.
- 6/ Testing shall be performed every three months, with sampling as follows:

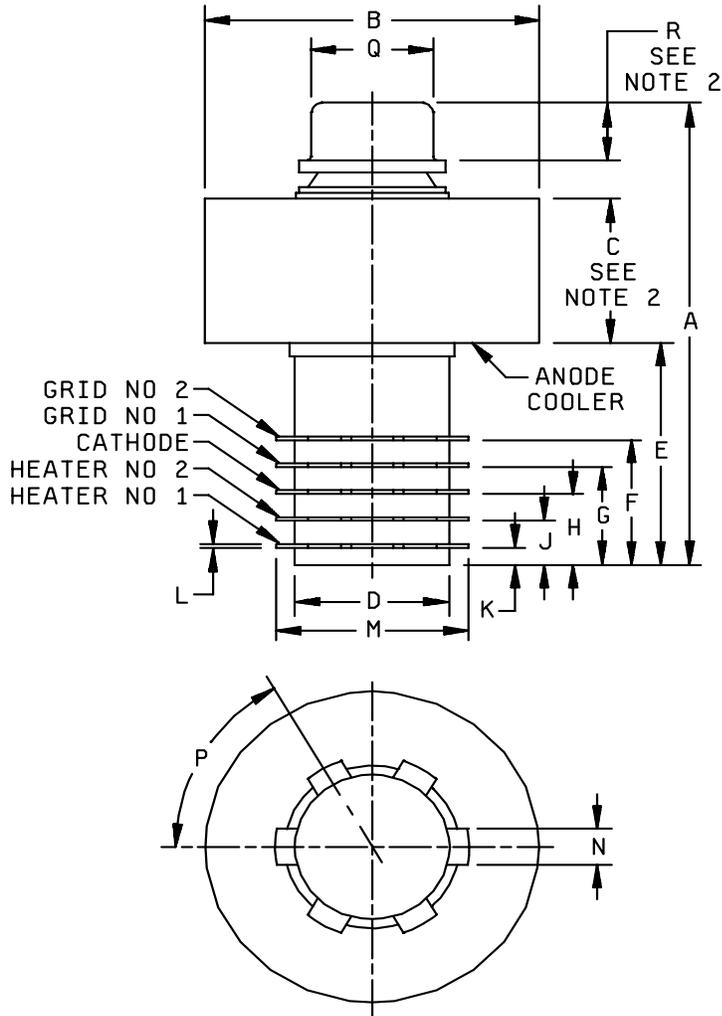
$$n1 = 4 \quad c1 = 0$$

The listed tests shall be considered as nondestructive except in case of failure. In case of a sample failure, that test shall become conformance inspection, part 2, acceptance level 6.5, for three consecutive successful submissions, at which time the test may revert to the quarterly basis (see 14/).

- 7/ The fixture described in Drawing 284-JAN shall be used to hold the tube in the manner indicated. The test circuit shown on figure 3 shall be used, but tubes found to electrically oscillate for causes other than vibration shall not be tested nor rejected on this test. Each tube under test shall be subjected to one sweep cycle in each of the three axes X, Y, and Z. One sweep cycle (100 to 750 Hz, ascending only) shall be covered in 6 to 12 minutes. Each tube shall be vibrated for 60 seconds at the frequency which gives the maximum vibration output voltage in each of the three positions. If at the end of 60 seconds the vibration output is increasing, the vibration shall be continued until there is no further increase for 60 seconds. The tubes shall not show noise voltage output in excess of the maximum limit specified, except one intermittent short per tube shall be allowable during this test. The tube shall show no intermittent or tap shorts after the test. In addition to reading noise voltage output with a VTVM, such as an HP400D or equivalent, a permanent recording shall be made using a good quality recorder to produce a plot of noise voltage versus frequency. Noise voltage amplifiers used with the recorder shall have a  $\pm 1$  dB frequency response over the range to be measured (100 to 750 Hz) and the overall recording equipment shall be capable of fast response in order to show sharp noise voltage spikes resulting from internal tube resonances or other phenomenon. Prominent noise peaks indicated on the recording shall be individually investigated by fixed-frequency operation, and the 60-second operation shall be made at the frequency of highest noise as so selected. The frequency at the extremes of the sweep shall be read with an accuracy of  $\pm 1$  percent.

TABLE I. Testing and inspection - Continued.

- 8/ The fixture described in Drawing 284-JAN shall be used to hold the tube in the manner indicated. The tube shall be subjected to the specified acceleration in the X, Y, and Z axes, with six shocks in each axis. Tubes showing any permanent shorts, or more than one temporary short during the test, shall be rejected. The applied shock shall be an approximate half-sine wave motion with duration measured at the zero-axis level.
- 9/ This test shall be performed during the initial production and then annually thereafter. Sample shall consist of three tubes with an acceptance number of zero. In the event of a failure, the test will be made as a part of conformance inspection, part 2, acceptance level 6.5 (see 14/). The annual sampling plan shall be reinstated after three consecutive samples have been accepted.
- 10/ During the performance of life-test (5), the rf grid driving voltage and the bias voltage shall be monitored and held constant. The bias voltage shall be adjusted to produce the specified value of Ibo and the rf drive shall be adjusted to produce the specified anode current of 250 mA dc during an initial adjustment period not to exceed 4 hours. In no case shall the grid be driven positive with respect to the cathode as indicated by a grid current of 50  $\mu$ A dc maximum. At the conclusion of the life-test period, the change ( $\Delta$ Ib) in the anode current from the initial value of 250 mA dc, and the power output (Po), both being read in the life-test equipment itself, shall be read and the tube shall meet the listed requirements for these parameters. Prior to the performance of life-test (5), the tube shall have met the requirements of the linear amplifier power output and distortion test.
- 11/ Heater voltage shall be cycled approximately 2.0 minutes "on" and 4.0 minutes "off". No grid-cathode shorts are permitted during or after life test. For qualification, data on a sample of 10 tubes shall be submitted.
- 12/ The tube shall be mounted in an air-system socket (EIMAC SK-710, with SK-606 chimney, or equivalents) arranged so that the entire airflow passes through the anode cooler, with air flowing in a base-to-anode direction. Air under standard conditions of temperature and pressure shall be used, or appropriate correction applied. Temperatures shall be measured by means of thermocouples, located as follows:
- Anode core. The thermocouple shall be embedded in the top of the anode core, adjacent to the cooler, by means of drilling a small hole, shallow enough so that the tube vacuum shall not be lost, placing the welded thermocouple junction therein, and then peening the edges of the hole so as to hold the thermocouple firmly in place.
- Anode seal. The thermocouple shall be attached, by any suitable means, to the base of the anode in the immediate vicinity of the junction of the screen-grid/anode insulating dielectric material with the anode.
- Base seal. The thermocouple shall be attached, by any suitable means, to the screen-grid contact where it joins the insulating dielectric material.
- In all cases, good electrical continuity between the thermocouple and the metal area in close proximity shall be demonstrated before the cooling test is performed.
- 13/ Measurement with General Radio Megohmmeter Model 1862C, or equivalent. Unused elements are to be left floating.
- 14/ This specification sheet uses accept on zero defect sampling in accordance with MIL-PRF-1, table III.



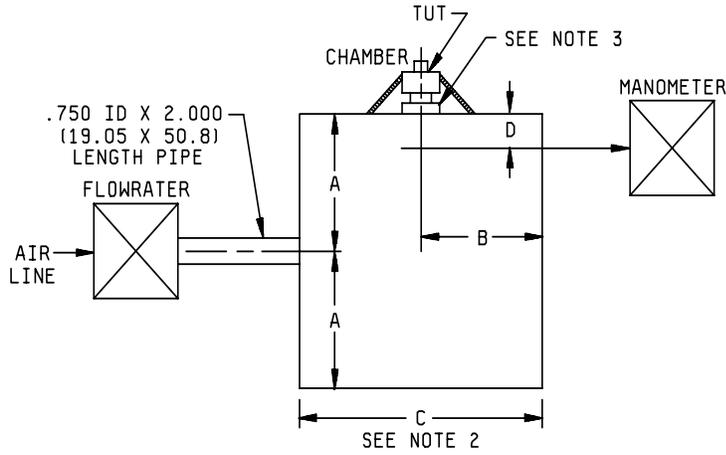
| Ltr  | Dimensions |       |             |       |
|--|------------|-------|-------------|-------|
|  | Inches     |       | Millimeters |       |
|  | Min        | Max   | Min         | Max   |
| Conformance inspection, part 2                 |            |       |             |       |
| A  | 2.300      | 2.500 | 58.42       | 63.50 |
| D  | .740       | .770  | 18.80       | 19.56 |
| F  | .602       | .642  | 15.29       | 16.31 |
| G  | .470       | .500  | 11.94       | 12.70 |
| H  | .329       | .359  | 8.36        | 9.12  |
| J  | .193       | .213  | 4.90        | 5.41  |
| K  | .050       | .072  | 1.27        | 1.83  |
| L  | .010       | .020  | 0.25        | 0.51  |
| M  | .936       | .956  | 23.77       | 24.28 |
| Conformance inspection, part 3<br>(see note 1) |            |       |             |       |
| B  | 1.610      | 1.640 | 40.89       | 41.66 |
| C  | .710       | .790  | 18.03       | 20.07 |
| E  | 1.133      | 1.195 | 28.78       | 30.35 |
| N  | .170       | .185  | 4.32        | 4.70  |
| Q  | .559       | .573  | 14.20       | 14.55 |
| R  | .240       | ---   | 6.10        | ---   |
| Reference dimension                            |            |       |             |       |
| P  | 60°        |       |             |       |

NOTES:

1. Dimensions shall be checked during the initial production and annually thereafter. A sampling plan shall be used, with sample of three tubes with an acceptance number of zero. In the event of failure, the test will be made as a part of conformance inspection, part 2, acceptance level 6.5 (see 14/). Annual sampling plan may be reinstated after three consecutive samples have been accepted.

2. Available anode contact surfaces.

FIGURE 1. Outline drawing of electron tube type 8167.

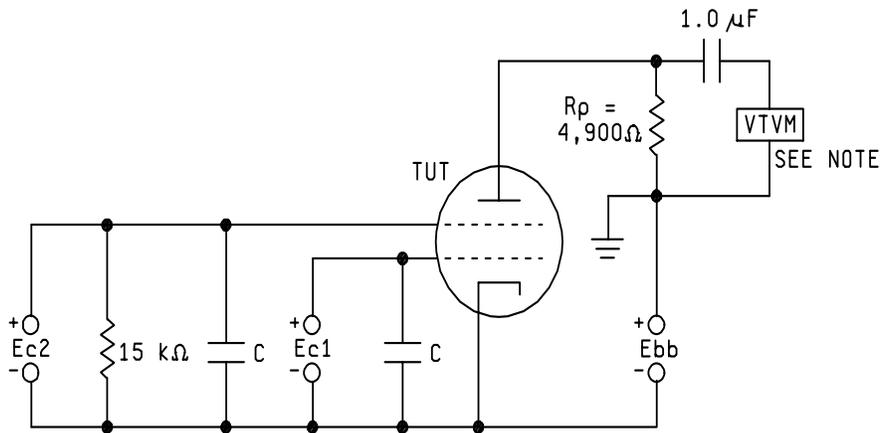


| Ltr | Dimension |       |             |       |
|-----|-----------|-------|-------------|-------|
|     | Inches    |       | Millimeters |       |
|     | Min       | Max   | Min         | Max   |
| A   | 5.95      | 6.05  | 151.1       | 153.7 |
| B   | 5.95      | 6.05  | 151.1       | 153.7 |
| C   | 11.95     | 12.05 | 303.5       | 306.1 |
| D   | 1.95      | 2.05  | 49.5        | 52.1  |

NOTES:

1. Tabulated dimensions are in inches with metric equivalents based upon 1.00 inch = 25.4 mm.
2. 12.00 inch (304.8 mm) cube inside dimension shall be free of air leaks.
3. Socket shall be EIMAC SK-710, or equivalent.

FIGURE 2. Baffle system.



NOTE: Hewlett-Packard Type 400-D, or equivalent.

FIGURE 3. Vibration noise test circuit.

NOTES

Referenced documents. In addition to MIL-PRF-1, this specification sheet references MIL-STD-1311, Drawing 285-JAN, DESC Drawing 67001, and Drawing 284-JAN.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Custodian:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC  
  
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Review activities:

Army - CR4  
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Air Force - 99

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