

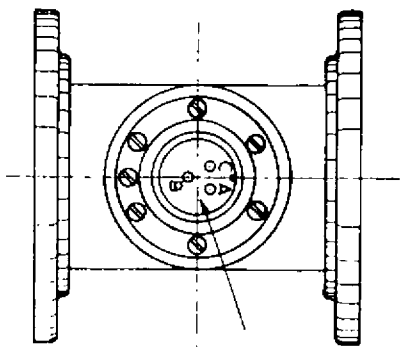
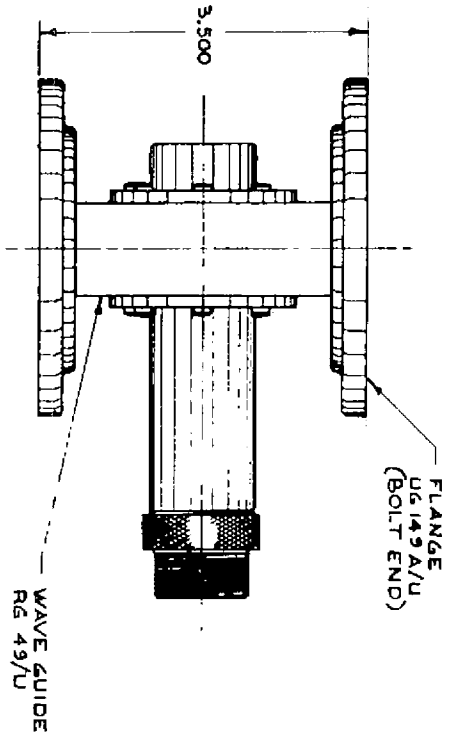
SPECIFICATIONS FOR ELECTRON TUBE TYPE USAF 7686/L-2001

1. Frequency Range: The Thermal Noise Generator must meet all requirements of this specification when operated at any frequency from 5,400 to 5,900 megacycles.
2. Voltage Standing Wave Ratio: The VSWR must not exceed 1.15 over the specified frequency range with the Thermal Noise Generator unfired.
3. Insertion Loss: The insertion loss must not exceed 0.2 DB over the specified frequency range with the Thermal Noise Generator unfired.
4. Power Capacity: The Thermal Source Generator shall be capable of continuous operation at "RF" power levels of 50 milliwatts average and 33 watts peak.
5. Noise Output: The noise output shall be 13 DB nominal. The output at 5650 megacycles shall be determined to within 0.25 DB and marked on each unit. The output shall not vary from the marked value by more than 0.5 DB over the specified frequency range.
6. Operating Voltages & Currents: The Thermal Noise Generator shall provide the specified noise output when operated as follows:
 - A. Starting voltage 700 volts D.C. maximum
 - B. Operating voltage 60 volts D.C. maximum
 - C. Operating current 150 milliamperes maximum
 - D. The filament shall be 6.3 volts A.C. @ 1.25 amps
7. Life: The assembly shall be capable of continuous operation for at least 5000 hours energized for 50 micro seconds every 3000 micro seconds.
8. Temperature: Must meet all requirements specified when subject to ambient temperatures from -54°C to + 71°C non-operating & -54°C to + 60°C when operating per Spec. Mil-E-4158.
9. Salt Spray: Must be mechanically & electrically operative after 50 hours min. Salt Spray per Spec. Mil-E-005272.
10. Humidity: Must suffer no damage or degradation in performance when subjected to relative humidities up to 100% at 100°F min. condensation due to temperature changes when operating or non-operating per Spec. Mil-E-4158 & Mil-Std-170.
11. Shock & Drop: Must be mechanically & electrically operative after shock test per Method 2A and drop test per Method 3A per Spec. Mil-T-4807.
12. Vibration: Must suffer no damage of degradation in performance after vibration per Spec. Mil-T-4807 Method 1A.
- 13 All metallic parts which are not corrosion resistant shall have a protective finish in accordance with Mil-F-14072.
14. Finish:
 - Step 1 - The flange faces and waveguide interior shall be silver plated M311 per Spec. Mil-F-14072
 - Step 2 - The flange faces and waveguide interior shall be rhodium flashed to a thickness of 5 to 10 millionths of an inch.
 - Step 3 - Mask all indicated areas.
 - Step 4 - Paint finish to be in accordance with Spec. Mil-E-15090, Class 2 Type III

15. The ionization time shall be under 1 micro second. The deionization time shall be 20 micro seconds max.
16. The anode of the gas tube shall be case grounded.
17. The tube holder and flanges shall be silver soldered to waveguide per Spec. QQ-S-561 Class 2.

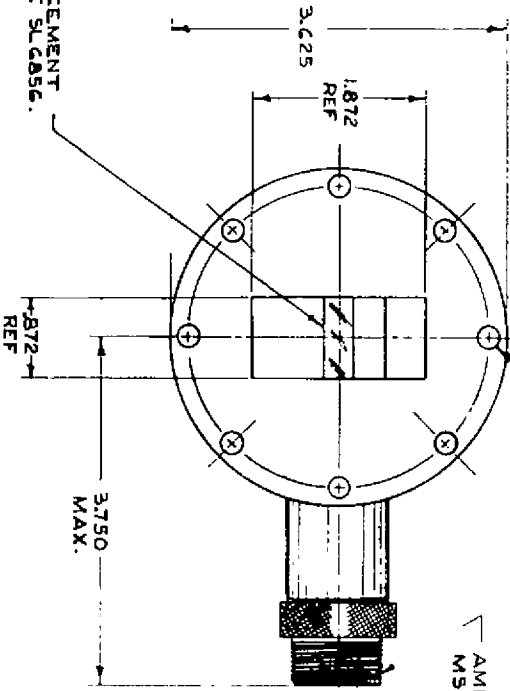
Footnotes: These additional specifications apply for the tubes ordered by the Avco Crosley Corp.

1. For Crosley the noise output will be marked on each unit per Crosley Spec. ES-701
2. Finish: Step 4 - Paint finish to be in accordance with Crosley Spec. ES-511.
3. Marking - Part to be marked "CSY 743002" per Crosley Spec. ES-701 approximately where shown.
4. Test per Crosley Spec. ES-108.402.



CONNECTIONS:
 A-HEATER
 B-GROUND
 C-HEATER CATHODE

8 HOLES $\frac{3}{16}$ DR SPACED EQUALLY ON 3.250 DIA. HOLE CIRCLE



AMPHENOL CONNECTOR
 MS-3102A-16-10P

PERFORMANCE CHARACTERISTICS

FREQUENCY RANGE-MEGACYCLES: 5400-5900
 EXCESS NOISE RATIO-DB: 13 ± 0.5
 APPLICATION: DOUBLE ENDED

ELECTRICAL SPECIFICATIONS

FILAMENT VOLTAGE-VOLTS AC: 6.3
 FILAMENT CURRENT-AMPERES AC: 1.25
 FIRING VOLTAGE-VOLTS: 700 MAX.
 OPERATING ANODE VOLTAGE-VOLTS POSITIVE: 60V. MAX.
 OPERATING CURRENT-DC MILLIAMPERES: 150 MAX.
 CAUTION: DC CURRENT LIMITING RESISTOR REQUIRED

MECHANICAL SPECIFICATIONS

VIBRATION: MIL-T-4807 METHOD 1A
 TEMPERATURE: MIL-E-4158-54 TO +T1°C.
 SHOCK AND DROP: MUST BE MECHANICALLY ACTIVE AFTER SHOCK TEST PER METHOD 2 A AND DROP TEST PER METHOD 3A PER SPEC. MIL-T-4807

REFERENCE ONLY

LR-200, REPLACEMENT NOISE DIODE. SEE SL 6856.

REVISED NOTES AND REVISIONS	DATE	BY	APP'D	DATE	BY	APP'D
1.131						
1.130						
1.129						
1.128						
1.127						
1.126						
1.125						
1.124						
1.123						
1.122						
1.121						
1.120						
1.119						
1.118						
1.117						
1.116						
1.115						
1.114						
1.113						
1.112						
1.111						
1.110						
1.109						
1.108						
1.107						
1.106						
1.105						
1.104						
1.103						
1.102						
1.101						
1.100						
1.099						
1.098						
1.097						
1.096						
1.095						
1.094						
1.093						
1.092						
1.091						
1.090						
1.089						
1.088						
1.087						
1.086						
1.085						
1.084						
1.083						
1.082						
1.081						
1.080						
1.079						
1.078						
1.077						
1.076						
1.075						
1.074						
1.073						
1.072						
1.071						
1.070						
1.069						
1.068						
1.067						
1.066						
1.065						
1.064						
1.063						
1.062						
1.061						
1.060						
1.059						
1.058						
1.057						
1.056						
1.055						
1.054						
1.053						
1.052						
1.051						
1.050						
1.049						
1.048						
1.047						
1.046						
1.045						
1.044						
1.043						
1.042						
1.041						
1.040						
1.039						
1.038						
1.037						
1.036						
1.035						
1.034						
1.033						
1.032						
1.031						
1.030						
1.029						
1.028						
1.027						
1.026						
1.025						
1.024						
1.023						
1.022						
1.021						
1.020						
1.019						
1.018						
1.017						
1.016						
1.015						
1.014						
1.013						
1.012						
1.011						
1.010						
1.009						
1.008						
1.007						
1.006						
1.005						
1.004						
1.003						
1.002						
1.001						
1.000						

TENTATIVE OUTLINE
 DRAWING 7686/L2001

LITTON INDUSTRIES
 ELECTRONIC TUBE DIVISION
 10000 WILSON BLVD
 VAN NUYS, CALIF. 91411

L-2001-1