



POWER TUBES  
TRIODES, TETRODES & PENTODES

| TYPE NO.      | FILAMENT    |            | Mu    | Max.<br>Diss.<br>Watts | TYPICAL OPERATION |            |                 |             |            |             | MAX. FREQ.<br>mc/sec |
|---------------|-------------|------------|-------|------------------------|-------------------|------------|-----------------|-------------|------------|-------------|----------------------|
|               | Volts       | Amps       |       |                        | PLATE             |            |                 | GRID        |            | SCREEN      |                      |
|               |             |            |       |                        | Volts<br>DC       | Amps<br>DC | Output<br>Watts | Volts<br>DC | Amps<br>DC | Volts<br>DC | Full Input Watts     |
| 2C39A         | 6.3         | 1.0        | 100   | 100                    | 800               | 0.090      | 40              | -40         | 0.030      | -           | 2500                 |
| 4X150A        | 6.0         | 2.6        | 5**   | 150                    | 1,250             | 0.200      | 195             | -90         | 0.011      | 250         | 500                  |
| AX4-125A/4D21 |             |            |       |                        |                   |            |                 |             |            |             | (See Tube Type 6155) |
| AX4-250A/5D22 |             |            |       |                        |                   |            |                 |             |            |             | (See Tube Type 6156) |
| 4X250B        | 6.0         | 2.6        | 5**   | 250                    | 2,000             | 0.250      | 410             | -90         | 0.012      | 250         | 500                  |
| 4X500A        | 5.0         | 13.5       | 6.2** | 500                    | 4,000             | 0.315      | 835             | -150        | 0.016      | 500         | 120                  |
| HF-200        | 10.0        | 4          | 18    | 200                    | 2,500             | 0.200      | 380             | -300        | 0.020      | -           | 30                   |
| HF-201A       | 10.5        | 4          | 18    | 200                    | 2,500             | 0.200      | 380             | -300        | 0.018      | -           | 30                   |
| 250-TH        | 5.0         | 10.5       | 37    | 250                    | 3,000             | 0.333      | 750             | -220        | 0.100      | -           | 40                   |
| 250-TL        | 5.0         | 10.5       | 14    | 250                    | 3,000             | 0.350      | 750             | -500        | 0.050      | -           | 40                   |
| HF-300        | 11.0        | 4          | 23    | 200                    | 3,000             | 0.250      | 600             | -400        | 0.028      | -           | 20                   |
| 450-TH        | 7.5         | 12.0       | 38    | 450                    | 5,000             | 0.450      | 1,800           | -300        | 0.090      | -           | 40                   |
| 450-TL        | 7.5         | 12.0       | 18    | 450                    | 5,000             | 0.450      | 1,800           | -500        | 0.054      | -           | 40                   |
| 501-R/5759    | 7.5         | 24         | 24    | 1,000                  | 3,500             | 0.870      | 2,175           | -250        | 0.133      | -           | 150                  |
| 502/5760      | 7.5         | 24         | 17    | 1,500                  | 3,500             | 0.860      | 2,175           | -450        | 0.150      | -           | 150                  |
| 502-R/5761    | 7.5         | 24         | 17    | 1,500                  | 3,500             | 0.860      | 2,175           | -450        | 0.150      | -           | 150                  |
| 504R          | 7.5         | 24         | 17    | 1,000                  | 3,500             | 0.860      | 2,175           | -750        | 0.150      | -           | 150                  |
| 508/6246      | 30          | 80         | 28    | 25,000                 | 15,000            | 3.75       | 40,000          | -900        | 0.420      | -           | 40                   |
| 750TL         | 7.5         | 21         | 15    | 750                    | 6,000             | 0.625      | 3,000           | -700        | 105        | -           | 40                   |
| 805           | 10.0        | 3.25       | 50    | 125                    | 1,500             | 0.200      | 215             | -105        | 0.025      | -           | 30                   |
| 807           | 6.3         | 0.9        | 8**   | 25                     | 600               | 0.100      | 40              | -45         | 0.004      | 250         | 60                   |
| 810           | 10.0        | 4.5        | 36    | 125                    | 2,250             | 0.275      | 475             | -160        | 0.010      | -           | 30                   |
| 813           | 10.0        | 5.0        | 8.5** | 100                    | 1,500             | 0.180      | 190             | -70         | 0.006      | 300         | 30                   |
| 828           | 10.0        | 3.25       | -     | 80                     | 1,500             | 0.180      | 200             | -100        | -          | 400         | 30                   |
| 832-A         | 6.3<br>12.6 | 1.6<br>0.8 | 6.5** | 10                     | 600               | 0.036      | 35              | -65         | -          | 200         | 200                  |
| 833-A         | 10.0        | 10.0       | 35    | 400                    | 4,000             | 0.450      | 1,440           | -200        | 0.075      | -           | 30                   |
| 838           | 10.0        | 3.25       | 50    | 100                    | 1,250             | 0.160      | 150             | -150        | 0.026      | -           | 30                   |
| 845*          | 10.0        | 3.25       | 5.3   | 100                    | 1,250             | 0.220      | 105             | -105        | 0.030      | -           | 15                   |

\* Conditions given are for Audio Amplifier operation.

\*\* Grid No. 2 to Grid No. 1.

NOTE: Typical operation as R-F amplifier and oscillator Class C telegraphy,  
key down conditions per tube, without modulation for frequencies indicated.

| INTERELECTRODE<br>CAPACITANCE - $\mu\mu\text{f}$ |                         |       | DESCRIPTION                                                                                                                                                                                                                                                               | TYPE NO.      |
|--------------------------------------------------|-------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| G-P                                              | G-F                     | P-F   |                                                                                                                                                                                                                                                                           |               |
| 2.0                                              | 6.6                     | 0.035 | Forced-air cooled triode. UHF oscillator, frequency multiplier or R-F amplifier. Suited to cavity type circuits. Features low interelectrode capacitance, high (closely controlled) transconductance and high plate dissipation. Indirectly heated, oxide coated cathode. | 2C39A         |
| 0.03                                             | 15.7                    | 4.3   | Forced-air cooled external anode tetrode. Suited for high power mobile applications. Makes an excellent wide-band amplifier for video application.                                                                                                                        | 4X150A        |
| Pg. 8)                                           |                         |       |                                                                                                                                                                                                                                                                           | AX4-125A/4D21 |
| Pg. 8)                                           |                         |       |                                                                                                                                                                                                                                                                           | AX4-250A/5D22 |
| 0.03                                             | 15.7                    | 4.5   | Forced-air cooled external anode tetrode. Brazed radiator. Interchangeable with 4X150A where higher plate dissipation is required.                                                                                                                                        | 4X250B        |
| 0.05                                             | 12.8                    | 5.6   | Forced-air cooled external anode tetrode. Useful as power amplifier in FM, TV and VHF communication transmitters.                                                                                                                                                         | 4X500A        |
| 6.9                                              | 6.2                     | 1.2   | Radiation-cooled triode. Original Amperex design and ruggedness make it ideally suited for R-F heating as well as for broadcasters and amateurs.                                                                                                                          | HF-200        |
| 7.0                                              | 8.8                     | 1.2   | Radiation-cooled triode, similar to HF-200, with different tube capacitance. Low voltage, high current characteristics.                                                                                                                                                   | HF-201A       |
| 2.9                                              | 5.0                     | 0.7   | Radiation-cooled high power triode. Used in low powered A-M broadcast stations. Also in electronic heating generators.                                                                                                                                                    | 250-TH        |
| 3.1                                              | 3.7                     | 0.7   | Radiation-cooled triode. Low mu version of 250-TH.                                                                                                                                                                                                                        | 250-TL        |
| 7.0                                              | 6.0                     | 1.0   | Radiation-cooled triode. Ideally suited for initial equipment and replacement for competitive types. Widely used in R-F heating applications, many commercial, police, and amateur transmitters.                                                                          | HF-300        |
| 5.0                                              | 8.8                     | 0.8   | Radiation-cooled triode. Very popular in A-M broadcast stations and Government transmitters. Also used in R-F heating applications.                                                                                                                                       | 450-TH        |
| 4.5                                              | 6.8                     | 0.8   | Radiation-cooled, medium mu version of 450-TH.                                                                                                                                                                                                                            | 450-TL        |
| 10.0                                             | 14.0                    | 1.3   | Forced-air cooled triode. Low voltage, high current characteristics. Ideal for R-F heating. Has a thoriated-tungsten filament.                                                                                                                                            | 501-R/5759    |
| 10.0                                             | 14.0                    | 1.3   | Water-cooled triode. Thoriated-tungsten filament. Compactness and low voltage, high current make it ideally suitable for R-F heating.                                                                                                                                     | 502/5760      |
| 10.0                                             | 14.0                    | 1.3   | Forced-air version of 502.                                                                                                                                                                                                                                                | 502-R/5761    |
| 10.0                                             | 14.0                    | 1.3   | Forced-air cooled triode similar to AMPEREX 501R minus flexible leads. Interchangeable with 7C26 with very minor circuit changes.                                                                                                                                         | 504R          |
| 17.0                                             | 26.0                    | 2.5   | Water-cooled triode. 40 kw output makes it ideally suited as high power R-F heating oscillator and R-F amplifier in A-M transmitters.                                                                                                                                     | 508/6246      |
| 5.8                                              | 8.5                     | 1.2   | Medium mu power triode. Amplifier, oscillator and modulator.                                                                                                                                                                                                              | 750TL         |
| 6.5                                              | 6.5                     | 6.8   | Radiation-cooled triode. Amperex rugged design makes it the popular choice in R-F and A-F stages of A-M broadcast stations.                                                                                                                                               | 805           |
| 0.2                                              | 11.0                    | 7.0   | Radiation-cooled tetrode. Popular replacement as well as for initial equipment.                                                                                                                                                                                           | 807           |
| 4.8                                              | 8.7                     | 12.0  | Radiation-cooled triode. Thousands of Amperex 810's are used yearly in initial equipment and as direct replacement.                                                                                                                                                       | 810           |
| 0.2                                              | 16.3                    | 14.0  | Radiation-cooled low drive beam tetrode. Widely used in A-M broadcasting stations, Government, and amateur service.                                                                                                                                                       | 813           |
| .07                                              | Input 12<br>Output 14   |       | Radiation-cooled beam pentode. Used in A-M broadcasting stations throughout world.                                                                                                                                                                                        | 828           |
| .05                                              | Input 7.5<br>Output 3.8 |       | Radiation-cooled twin tetrode. Used in mobile and shipboard transmitters, as well as other communications fields.                                                                                                                                                         | 832-A         |
| 6.3                                              | 12.3                    | 8.5   | Radiation and forced-air cooled triode used widely in A-M transmitters and also some R-F heating applications. (Refer to AX-9902 data)                                                                                                                                    | 833-A         |
| 8.0                                              | 6.5                     | 3.0   | Radiation-cooled zero bias triode. Still popular in amateur, commercial and Government transmitters.                                                                                                                                                                      | 838           |
| 11.5                                             | 5.0                     | 3.5   | Radiation-cooled triode. Still popular in amateur, commercial and Government transmitters.                                                                                                                                                                                | 845*          |