

Designed to Meet Military Specifications and Critical Industrial Applications

| RCA<br>Type       | Proto-<br>type | Name                              | Description and/or<br>Difference Between<br>Type and Prototype                                                |                                   |                                  | Special Tests and Controls |         |           |              |                        |           |              |               |                |            |                     |
|-------------------|----------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------|----------------------------|---------|-----------|--------------|------------------------|-----------|--------------|---------------|----------------|------------|---------------------|
|                   |                |                                   |                                                                                                               |                                   |                                  | Shock                      | Fatigue | Vibration | Glass Strain | AF Noise, Microphonics | Stability | Inoperatives | High-Altitude | Life Test      |            |                     |
|                   |                |                                   | Rating or<br>Characteristic                                                                                   | Premium<br>Type                   | Proto-<br>Type                   |                            |         |           |              |                        |           |              |               | Heater-Cycling | Room Temp. | Elevated Bulb Temp. |
| 6072              | 12AY7          | Medium-Mu<br>Twin Triode §        | Heater Current,<br>Amperes, for<br>Heater Volts = 6.3<br>For renewal use only.                                | 0.35                              | 0.3                              | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | ✓                   |
| 6073              | 0A2            | Voltage<br>Regulator*             | None<br>Like 0A2, but intended for volt-<br>age-regulator applications critical<br>as to shock and vibration. | —                                 | —                                | ✓                          | ✓       | ✓         | —            | ✓                      | —         | —            | —             | —              | —          | —                   |
| 6073/<br>0A2      | 0A2            | Voltage<br>Regulator*             | None<br>Like 0A2, but intended for volt-<br>age-regulator applications critical<br>as to shock and vibration. | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | —         | —            | —             | —              | —          | —                   |
| 6074              | 0B2            | Voltage<br>Regulator*             | None<br>Like 0B2 but intended for volt-<br>age-regulator applications critical<br>as to shock and vibration.  | —                                 | —                                | ✓                          | ✓       | ✓         | —            | ✓                      | —         | —            | —             | —              | —          | —                   |
| 6074/<br>0B2      | 0B2            | Voltage<br>Regulator*             | None<br>Like 0B2 but intended for volt-<br>age-regulator applications critical<br>as to shock and vibration.  | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | —         | —            | —             | —              | —          | —                   |
| 6080-WA           | 6AS7-G         | Low-Mu Twin<br>Power Triode §     | This type is designed to meet the<br>indicated military specification.                                        | —                                 | —                                | ✓                          | ✓       | ✓         | —            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6099              | 6J6            | Medium-Mu<br>Twin Triode*         | Special Air Force application only.<br>For other military uses, the 6101/<br>6J6-WA is recommended.           | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | —                      | ✓         | ✓            | ✓             | ✓              | ✓          | ✓                   |
| 6101              | 6J6            | Medium-Mu<br>Twin Triode*         | Plate Dissip., Watts<br>Plate Res., Ohms<br>Transcon., $\mu$ mbos<br>Peak H-K Volts                           | 0.85<br>6300<br>6000<br>$\pm 180$ | 1.5<br>7100<br>5300<br>$\pm 100$ | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6101/<br>6J6-WA   | 6J6            | Medium-Mu<br>Twin Triode*         | This type is designed to meet the<br>indicated military specification.                                        | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6111              | —              | Medium-Mu<br>Twin Triode*         | General-purpose amplifier. Also<br>used as a combined oscillator and<br>mixer tube in vhf applications.       | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6112              | —              | High-Mu<br>Twin Triode*           | Heater-Cathode Type. Low-level<br>audio amplifier. Designed to meet<br>indicated military specification.      | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6136              | 6AU6           | Sharp-Cutoff<br>Pentode*          | Input Capacitance<br>( $\mu$ mf)<br>For high-frequency broad-band<br>applications.                            | 6.0                               | 5.5                              | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6186              | 6AG5           | Sharp-Cutoff<br>Pentode*          | None<br>RF Amplifier.                                                                                         | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | ✓                   |
| 6186/<br>6AG5-WA  | 6AG5           | Sharp-Cutoff<br>Pentode*          | This type is designed to meet the<br>indicated military specification.                                        | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6189/<br>12AU7-WA | 12AU7          | Medium-Mu<br>Twin Triode §        | This type is designed to meet the<br>indicated military specification.                                        | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6201              | 12AT7          | High-Mu<br>Twin Triode §          | None<br>Mixer, oscillator and amplifier at<br>frequencies up to 300 Mc.                                       | —                                 | —                                | ✓                          | ✓       | ✓         | —            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6205              | 5840           | Sharp-Cutoff<br>Pentode*          | Grid-No. 3 brought<br>out to separate pin                                                                     | Yes                               | No                               | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6206              | 5899           | Semiremote-<br>Cutoff<br>Pentode* | Grid-No. 2 Ma.<br>Similar to 5899 but uses a sepa-<br>rate terminal for grid No. 3.                           | 2.2                               | 2.0                              | ✓                          | ✓       | ✓         | ✓            | ✓                      | ✓         | ✓            | ✓             | ✓              | ✓          | —                   |
| 6626/<br>0A2-WA   | 0A2            | Voltage<br>Regulator*             | This type is designed to meet the<br>indicated military specification.                                        | —                                 | —                                | ✓                          | ✓       | ✓         | ✓            | —                      | ✓         | ✓            | —             | —              | —          | —                   |

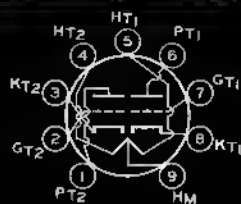
For key to terminal connections see page 30.

\* 7-pin miniature type.

§ 9-pin miniature type.

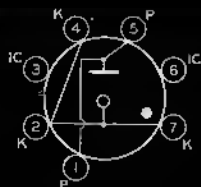
\* Large wafer octal 8-pin type with metal sleeve.

\* Subminiature type with flexible leads.



6072

6189/12AU7-WA 6201

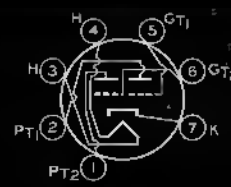


6073

6073/0A2 6074 6074/0B2



6080-WA



6099 6101

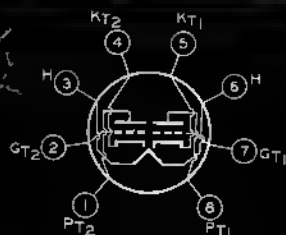
6101/6J6-WA

Designed to Meet Military Specifications and Critical Industrial Applications

| Cathode      |               | Maximum Dimensions<br>Inches    |                               | Class of Service                            | Maximum Ratings                                                                                  |                            |                           |                           | Operating Conditions and Characteristics |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | Type                      |
|--------------|---------------|---------------------------------|-------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------|---------------------------|---------------------------|------------------------------------------|---------------------------------------------------------|----------------------------|----------------------|-----------------------------------------------------------------------------------------|---------------------------------|------------------------------------------|-------------------------------|---------------------------|
|              |               |                                 |                               |                                             | Plate Volts                                                                                      | Plate Dissipation<br>Watts | Cathode Current<br>Ma.    | Grid-No. 2 Input<br>Watts | Plate Supply<br>Volts                    | Grid-No. 1 Volts(v)<br>or<br>Cathode Resistance<br>Ohms | Grid-No. 2 Supply<br>Volts | Plate Current<br>Ma. | AC Plate Resistance<br>Ohms                                                             | Trans-conductance<br>Micro-mhos | Amplification Factor                     | Power Output<br>Watts         |                           |
| 6.3<br>12.6  | 0.35<br>0.175 | 2 <sup>3</sup> / <sub>16</sub>  | 7 <sup>7</sup> / <sub>8</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | 300                                                                                              | 1.5                        | —                         | —                         | 250                                      | —4v                                                     | —                          | 3.0                  | 25000                                                                                   | 1750                            | 44                                       | Grid Volts for Cut-off, —8    | <b>6072</b>               |
| Cold Cathode |               | 2 <sup>5</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Voltage Regulator                           | Ambient Temp., —55 to +90°C<br>Approx. DC Starting Volts, 156<br>Min. DC Anode-Supply Volts, 185 |                            |                           |                           |                                          |                                                         |                            |                      | Approx. DC Operating Volts, 151<br>Regulation Range, 5 to 30 Ma.<br>Regulation Volts, 2 |                                 |                                          |                               | <b>6073</b>               |
| Cold Cathode |               | 2 <sup>5</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Voltage Regulator                           | Ambient Temp., —55 to +90°C<br>Approx. DC Starting Volts, 156<br>Min. DC Anode-Supply Volts, 185 |                            |                           |                           |                                          |                                                         |                            |                      | Approx. DC Operating Volts, 151<br>Regulation Range, 5 to 30 Ma.<br>Regulation Volts, 2 |                                 |                                          |                               | <b>6073/<br/>0A2</b>      |
| Cold Cathode |               | 2 <sup>5</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Voltage Regulator                           | Ambient Temp., —55 to +90°C<br>Approx. DC Starting Volts, 115<br>Min. DC Anode-Supply Volts, 133 |                            |                           |                           |                                          |                                                         |                            |                      | Approx. DC Operating Volts, 108<br>Regulation Range, 5 to 30 Ma.<br>Regulation Volts, 1 |                                 |                                          |                               | <b>6074</b>               |
| Cold Cathode |               | 2 <sup>5</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Voltage Regulator                           | Ambient Temp., —55 to +90°C<br>Approx. DC Starting Volts, 115<br>Min. DC Anode-Supply Volts, 133 |                            |                           |                           |                                          |                                                         |                            |                      | Approx. DC Operating Volts, 108<br>Regulation Range, 5 to 30 Ma.<br>Regulation Volts, 1 |                                 |                                          |                               | <b>6074/<br/>0B2</b>      |
| 6.3          | 2.5           | 4 <sup>1</sup> / <sub>4</sub>   | 1.72                          | DC Amplifier                                | For data refer to MIL-E-1/510B specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6080-WA</b>            |
| 6.3          | 0.45          | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | For government end use only                                                                      |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6099</b>               |
| 6.3          | 0.45          | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | 330                                                                                              | 0.85                       | —                         | —                         | 100                                      | Cath. Res.,<br>50 Ohms Common<br>to Both Units          | —                          | 3.5                  | 6300                                                                                    | 6000                            | 38                                       | —                             | <b>6101</b>               |
| 6.3          | 0.45          | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | For data refer to MIL-E-1/243A specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6101/<br/>6J6-WA</b>   |
| 6.3          | 0.3           | 1 <sup>3</sup> / <sub>8</sub> † | 0.4                           | Class A <sub>1</sub> Amplifier<br>Each Unit | 165                                                                                              | 1.1                        | Neg. DC<br>Grid Volts, 55 | —                         | 100                                      | 220                                                     | —                          | 8.5                  | 4000                                                                                    | 5000                            | 20                                       | Grid Volts<br>for Cut-off, —9 | <b>6111</b>               |
| 6.3          | 0.3           | 1 <sup>3</sup> / <sub>8</sub> † | 0.4                           | Class A <sub>1</sub> Amplifier<br>Each Unit | For data refer to MIL-E-1/190C specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6112</b>               |
| 6.3          | 0.3           | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier              | 300                                                                                              | 3.0                        | —                         | 0.65                      | 100<br>250                               | 150<br>68                                               | 100<br>150                 | 5<br>10.6            | 500000<br>1000000                                                                       | 3900<br>5200                    | Cutoff Volts, —4.2<br>Cutoff Volts, —6.5 |                               | <b>6136</b>               |
| 6.3          | 0.3           | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier              | 330                                                                                              | 2.5                        | —                         | 0.55                      | 250                                      | 200                                                     | 150                        | 7.0                  | —                                                                                       | 5000                            | —                                        | —                             | <b>6186</b>               |
| 6.3          | 0.3           | 2 <sup>1</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Class A <sub>1</sub> Amplifier              | For data refer to MIL-E-1/244A specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6186/<br/>6AG5-WA</b>  |
| 6.3<br>12.6  | 0.3<br>0.15   | 2 <sup>3</sup> / <sub>16</sub>  | 7 <sup>7</sup> / <sub>8</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | For data refer to MIL-E-1/246A specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6189/<br/>12AU7-WA</b> |
| 6.3<br>12.6  | 0.3<br>0.15   | 2 <sup>3</sup> / <sub>16</sub>  | 7 <sup>7</sup> / <sub>8</sub> | Class A <sub>1</sub> Amplifier<br>Each Unit | 300                                                                                              | 2.5                        | Neg. DC<br>Grid Volts, 50 | —                         | 100<br>250                               | 270<br>200                                              | —                          | 3.3<br>10            | 14300<br>10900                                                                          | 4000<br>5500                    | 57<br>60                                 | —                             | <b>6201</b>               |
| 6.3          | 0.15          | 1 <sup>3</sup> / <sub>8</sub> † | 0.4                           | Class A <sub>1</sub> Amplifier              | 165                                                                                              | 1.1                        | 16.5                      | 0.55                      | 100                                      | 150                                                     | 100                        | 7.5                  | 260000                                                                                  | 5000                            | Cutoff Volts, —9                         |                               | <b>6205</b>               |
| 6.3          | 0.15          | 1 <sup>3</sup> / <sub>8</sub> † | 0.4                           | Class A <sub>1</sub> Amplifier              | 165                                                                                              | 1.1                        | 16.5                      | 0.55                      | 100                                      | 120                                                     | 100                        | 7.2                  | 260000                                                                                  | 4500                            | —                                        | —                             | <b>6206</b>               |
| Cold Cathode |               | 2 <sup>5</sup> / <sub>8</sub>   | 3 <sup>3</sup> / <sub>4</sub> | Voltage Regulator                           | For data refer to MIL-E-1/939B specification <sup>A</sup>                                        |                            |                           |                           |                                          |                                                         |                            |                      |                                                                                         |                                 |                                          |                               | <b>6626/<br/>0A2-WA</b>   |

<sup>A</sup> A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.  
<sup>A</sup> A copy of this specification may be obtained from the Bureau of Ships, Department of the Navy, Washington 25, D. C.

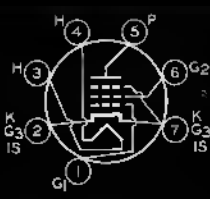
† Excluding flexible leads.



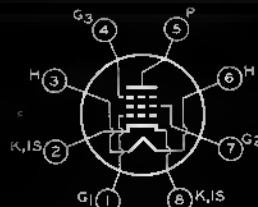
6111 6112



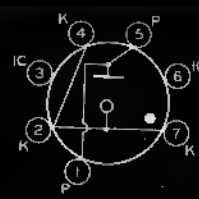
6136



6186  
6186/6AG5-WA



6205 6206



6626/0A2-WA