



# SUBMINIATURE TUBES



| TYPE                                                 | CONSTRUCTION | TYPICAL APPLICATION | HTR or FILAMENT |     |      | TERM. CONN. | MAX. DIMENSIONS<br>Inches |             |            | PLATE VOLTS | GRID 1 VOLTS     | GRID 2 VOLTS | GRID 3 VOLTS | PLATE CURR. ma. | GRID 2 CURR. ma. | AMP. FACT. | PLATE RESIST. meg. | MUT. COND. $\mu$ mas | OUTPUT milliwatts                     | LOAD RESIST. meg. | TYPE                                                 |
|------------------------------------------------------|--------------|---------------------|-----------------|-----|------|-------------|---------------------------|-------------|------------|-------------|------------------|--------------|--------------|-----------------|------------------|------------|--------------------|----------------------|---------------------------------------|-------------------|------------------------------------------------------|
|                                                      |              |                     | Volts           | Ma. | Type |             | Length                    | Width       | Thick-ness |             |                  |              |              |                 |                  |            |                    |                      |                                       |                   |                                                      |
| <b>1AD4<sup>1</sup></b>                              | Pentode      | R-F Amplifier       | 1.25            | 100 | Fil  | 5A          | 1.5                       | .385        | .285       | 45          | Rg =<br>2 meg.   | 45           |              | 2.8             | 0.8              |            | 0.5                | 2000                 |                                       |                   | <b>1AD4<sup>1</sup></b>                              |
| <b>1AE5</b>                                          | Heptode      | Mixer               | 1.25            | 60  | Fil  | 6A          | 1.5                       | .400        | .300       | 45          | Rg =<br>0.2 meg. | 45           | 0            | 0.9             | 2                |            | 0.2                | 200 <sup>3</sup>     |                                       |                   | <b>1AE5</b>                                          |
| <b>1AG4</b>                                          | Pentode      | Power Amp.          | 1.25            | 40  | Fil  | 5J          | 1.5                       | .385        | .285       | 41.4        | —3.6             | 41.4         |              | 2.4             | 0.6              |            | 0.18               | 1000                 | 35                                    | 0.012             | <b>1AG4</b>                                          |
| <b>1AG5</b>                                          | Diode-Pent.  | Det.-Amplifier      | 1.25            | 30  | Fil  | 68          | 1.5                       | .385        | .285       | 45          | Rg =<br>5 meg.   | 45           |              | 0.8             | 0.25             |            | 0.26               | 350                  |                                       |                   | <b>1AG5</b>                                          |
| <b>1AH4<sup>1</sup></b>                              | Pentode      | R-F Amplifier       | 1.25            | 40  | Fil  | 5A          | 1.5                       | .385        | .285       | 45          | Rg =<br>5 meg.   | 45           |              | 0.75            | 0.2              |            | 1.5                | 750                  |                                       |                   | <b>1AH4<sup>1</sup></b>                              |
| <b>1V6</b>                                           | Triode-Pent. | Converter           | 1.25            | 40  | Fil  | 7BC         | 1.5                       | .410        | .285       | 45          | Rg =<br>5 meg.   | 45           |              | 0.40            | 0.15             |            | 1.0                | 200 <sup>3</sup>     | Eb Triode = 45<br>lb Triode = 0.4 ma. |                   | <b>1V6</b>                                           |
| <b>2E31<sup>1</sup></b><br><b>2E32<sup>1-2</sup></b> | Pentode      | R-F Amplifier       | 1.25            | 50  | Fil  | 5D          | 1.5                       | .385        | .285       | 22.5        | 0                | 22.5         |              | 0.4             | 0.3              |            | 0.35               | 500                  |                                       |                   | <b>2E31<sup>1</sup></b><br><b>2E32<sup>1-2</sup></b> |
| <b>2E35</b><br><b>2E36<sup>2</sup></b>               | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5B          | 1.5                       | .385        | .285       | 45          | —1.25            | 45           |              | 0.6             | 0.11             |            | 0.25               | 525                  | 6                                     | 0.1               | <b>2E35</b><br><b>2E36<sup>2</sup></b>               |
| <b>2G21</b><br><b>2G22<sup>2</sup></b>               | Triode-Hept. | Converter           | 1.25            | 50  | Fil  | 7B          | 1 1/16                    | .385        | .285       | 22.5        | Rg =<br>50,000   | 22.5         | 0            | 0.2             | 0.3              |            | 0.5                | 60 <sup>3</sup>      | Eb Triode = 22.5<br>lb Triode = 1 ma. |                   | <b>2G21</b><br><b>2G22<sup>2</sup></b>               |
| <b>CK501AX</b>                                       | Pentode      | Voltage Amp.        | 1.25            | 30  | Fil  | 5J          | 1.5                       | .385        | .285       | 45          | 0                | 45           |              | 0.65            | 0.25             |            | 1.0                | 750                  | 45 <sup>4</sup>                       |                   | <b>CK501AX</b>                                       |
| <b>CK502AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5J          | 1.5                       | .385        | .285       | 45          | —1.25            | 45           |              | 0.6             | 0.15             |            | 0.2                | 550                  | 6                                     | 0.1               | <b>CK502AX</b>                                       |
| <b>CK503AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5J          | 1.5                       | .385        | .285       | 45          | —2               | 45           |              | 0.8             | 0.25             |            | 0.35               | 550                  | 9.5                                   | 0.05              | <b>CK503AX</b>                                       |
| <b>CK505AX</b>                                       | Pentode      | Voltage Amp.        | 0.625           | 30  | Fil  | 5J          | 1.25                      | .385        | .285       | 22.5        | —0.625           | 22.5         |              | 0.125           | 0.040            |            | 1.1                | 180                  | 38 <sup>4</sup>                       |                   | <b>CK505AX</b>                                       |
| <b>CK506AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 50  | Fil  | 5J          | 1.5                       | .385        | .285       | 45          | —4.5             | 45           |              | 1.25            | 0.4              |            | 0.12               | 500                  | 25                                    | 0.03              | <b>CK506AX</b>                                       |
| <b>CK507AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 45  | Fil  | 5J          | 1.5                       | .385        | .285       | 45          | —2               | 45           |              | 0.9             | 0.3              |            | 0.3                | 575                  | 11                                    | 0.05              | <b>CK507AX</b>                                       |
| <b>CK509AX</b>                                       | Triode       | Voltage Amp.        | 0.625           | 30  | Fil  | 4B          | 1.25                      | .385        | .285       | 45          | 0                |              |              | 0.15            |                  |            | 0.15               | 160                  | 16 <sup>4</sup>                       |                   | <b>CK509AX</b>                                       |
| <b>CK510AX</b>                                       | Dble-Tetr.   | Voltage Amp.        | 0.625           | 50  | Fil  | 7D          | 1.25                      | .400        | .285       | 45          | 0                |              |              | 0.06            |                  |            | 0.5                | 65                   | 150 <sup>5</sup>                      |                   | <b>CK510AX</b>                                       |
| <b>CK511X</b>                                        | Pentode      | Voltage Amp.        | 1.25            | 50  | Fil  | 6C          | 1.75                      | Dia. = .550 |            | 45          | 0                | 45           |              | 0.24            | 0.2              |            | 0.22               | 220                  | 30 <sup>4</sup>                       | 1.0               | <b>CK511X</b>                                        |
| <b>CK512AX</b>                                       | Pentode      | Voltage Amp.        | 0.625           | 20  | Fil  | 5J          | 1.25                      | .385        | .285       | 22.5        | —0.625           | 22.5         |              | 0.125           | 0.040            |            | 1.25               | 160                  | 37 <sup>4</sup>                       |                   | <b>CK512AX</b>                                       |
| <b>CK515BX</b>                                       | Triode       | Voltage Amp.        | 0.625           | 30  | Fil  | 4B          | 1.19                      | Dia. = .315 |            | 45          | 0                |              |              | 0.15            |                  | 24         |                    | 160                  | 16 <sup>4</sup>                       | 1.0               | <b>CK515BX</b>                                       |
| <b>CK516AX</b>                                       | Triode       | Voltage Amp.        | 0.625           | 20  | Fil  | 5M          | 1.25                      | .385        | .285       | 22.5        | —0.625           |              |              | 0.15            |                  |            | 0.05               | 200                  | 7.5 <sup>4</sup>                      | 1.0               | <b>CK516AX</b>                                       |
| <b>CK518AX<sup>1</sup></b>                           | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5E          | 1.515                     | .380        | .290       | 45          | —2               | 45           |              | 0.8             | 0.25             |            | 0.35               | 550                  | 9.5                                   | 0.5               | <b>CK518AX<sup>1</sup></b>                           |
| <b>CK520AX</b>                                       | Pentode      | Power Amp.          | 0.625           | 50  | Fil  | 5J          | 1.25                      | .385        | .285       | 45          | —2.5             | 45           |              | 0.24            | 0.075            |            | 1.0                | 150                  | 3.5                                   | 0.15              | <b>CK520AX</b>                                       |
| <b>CK521AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 50  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | —3               | 22.5         |              | 0.8             | 0.22             |            | 0.22               | 400                  | 6                                     | 0.02              | <b>CK521AX</b>                                       |
| <b>CK522AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | 0                | 22.5         |              | 0.3             | 0.08             |            | 0.6                | 450                  | 1.2                                   | 0.2               | <b>CK522AX</b>                                       |
| <b>CK523AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | —1.2             | 22.5         |              | 0.3             | 0.075            |            | 0.3                | 360                  | 2.5                                   | 0.075             | <b>CK523AX</b>                                       |
| <b>CK524AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 30  | Fil  | 5J          | 1.5                       | .385        | .285       | 15          | —1.75            | 15           |              | 0.45            | 0.125            |            | 0.2                | 300                  | 2.2                                   | 0.03              | <b>CK524AX</b>                                       |
| <b>CK525AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | —1.2             | 22.5         |              | 0.25            | 0.06             |            | 0.33               | 325                  | 2.2                                   | 0.06              | <b>CK525AX</b>                                       |
| <b>CK526AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | —1.5             | 22.5         |              | 0.45            | 0.12             |            | 0.22               | 400                  | 3.75                                  | 0.05              | <b>CK526AX</b>                                       |
| <b>CK527AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 15  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | 0                | 22.5         |              | 0.1             | 0.025            |            | 1.8                | 225                  | 0.75                                  | 0.3               | <b>CK527AX</b>                                       |
| <b>CK528AX<sup>1</sup></b>                           | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5E          | 1.515                     | .390        | .290       | 22.5        | 0                | 22.5         |              | 0.3             | 0.08             |            | 0.6                | 450                  | 1.2                                   | 0.2               | <b>CK528AX</b>                                       |
| <b>CK529AX<sup>1</sup></b>                           | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5E          | 1.515                     | .390        | .290       | 15          | —1.25            | 15           |              | 0.32            | 0.075            |            | 0.3                | 350                  | 1.6                                   | 0.05              | <b>CK529AX<sup>1</sup></b>                           |
| <b>CK531DX</b>                                       | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5J          | 1.25                      | .285        | .220       | 15          | —1.5             | 15           |              | 0.30            | 0.090            |            | 0.25               | 275                  | 1.6                                   | 0.06              | <b>CK531DX</b>                                       |
| <b>CK532DX</b>                                       | Pentode      | Power Amp.          | 1.25            | 15  | Fil  | 5J          | 1.25                      | .285        | .220       | 22.5        | 0                | 22.5         |              | 0.40            | 0.125            |            | 0.18               | 450                  | 1.8                                   | 0.1               | <b>CK532DX</b>                                       |
| <b>CK533AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 15  | Fil  | 5J          | 1.5                       | .385        | .285       | 22.5        | 0                | 22.5         |              | 0.36            | 0.09             |            | 0.5                | 400                  | 1.8                                   | 0.075             | <b>CK533AX</b>                                       |
| <b>CK534AX</b>                                       | Pentode      | Voltage Amp.        | 0.625           | 15  | Fil  | 5J          | 1.25                      | .385        | .285       | 15          | —0.625           | 15           |              | 0.0047          | 0.0014           |            | 12                 | 20                   | 30 <sup>4</sup>                       | 2.2               | <b>CK534AX</b>                                       |
| <b>CK535AX</b>                                       | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5J          | 1.5                       | .385        | .285       | 15          | —1.25            | 15           |              | 0.32            | 0.075            |            | 0.3                | 350                  | 1.6                                   | 0.05              | <b>CK535AX</b>                                       |
| <b>CK536AX<sup>1</sup></b>                           | Pentode      | Power Amp.          | 1.25            | 15  | Fil  | 5E          | 1.5                       | .385        | .285       | 22.5        | 0                | 22.5         |              | 0.36            | 0.09             |            | 0.5                | 400                  | 1.8                                   | 0.075             | <b>CK536AX<sup>1</sup></b>                           |
| <b>CK537AX<sup>1</sup></b>                           | Pentode      | Power Amp.          | 1.25            | 20  | Fil  | 5E          | 1.515                     | .390        | .290       | 22.5        | —1.5             | 22.5         |              | 0.45            | 0.12             |            | 0.22               | 400                  | 3.75                                  | 0.05              | <b>CK537AX<sup>1</sup></b>                           |
| <b>CK538DX</b>                                       | Pentode      | Voltage Amp.        | 0.625           | 15  | Fil  | 5J          | 1.0                       | .285        | .220       | 15          | —0.625           | 15           |              | 0.0046          | 0.002            |            | 10                 | 18                   | 28 <sup>4</sup>                       | 2.2               | <b>CK538DX</b>                                       |

See page 3 for reference notes — See pages 18 and 19 for basing diagrams and terminal connections.  
This data is compiled as a Raytheon service to the Field, it is not intended to indicate type availability.