

# TRANSMITTING TUBES

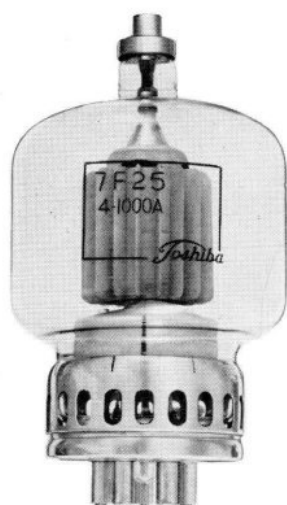
| Type   | Cathode        |             |             | Dimensions  |                | Base number or terminal | Mutual conductance (mU)<br>(Plate current (A)) | Grid-No. 2 amplification | Internal static capacity        |            |             | Use                                 | Max. frequency for full input (Mc) |
|--------|----------------|-------------|-------------|-------------|----------------|-------------------------|------------------------------------------------|--------------------------|---------------------------------|------------|-------------|-------------------------------------|------------------------------------|
|        | Classification | Voltage (V) | Current (A) | Length (mm) | Max. Dia. (mm) |                         |                                                |                          | Between grid-No. 1 & plate (pF) | Input (pF) | Output (pF) |                                     |                                    |
| 6F50R  | FT             | 5.0         | 13.5        | 115         | 65             | T8-1                    | 5.2 (0.2)                                      | 6.2                      | 0.05                            | 12.8       | 5.6         | CT                                  | 120                                |
| 6F62R  | FT             | 4.0         | 35.0        | 141         | 74             | —                       | 20.0 (0.7)                                     | 8.3                      | 0.25 Max                        | 43.5       | 10.0        | CT<br>▲ BTV                         | 250<br>250                         |
| 6F70R  | HO             | 6.3         | 7.5         | 59.4        | 52.3           | —                       | 25.0 (0.24)                                    | 13.0                     | 0.09 Max                        | 67.0       | 5.5         | ● CT<br>※ ● CP                      | 1215<br>1215                       |
| 7F25   | FT             | 7.5         | 21.0        | 235         | 127            | A14S<br>E38SA           | 10.0 (0.3)                                     | 7.0                      | 0.24                            | 27.2       | 7.6         | CT<br>CP<br>BSSB<br>AB <sub>2</sub> | 110<br>110<br>110<br>—             |
| 7F37R  | FT             | 4.0         | 35.0        | 125         | 74             | —                       | 15.0 (0.4)                                     | 8.3                      | 0.25 Max                        | 36         | 9.0         | × CT<br>□ AB <sub>1</sub> SSB       | 130<br>30                          |
| 7F60RA | FT             | 4.0         | 58.0        | 178         | 122            | —                       | 20.0 (0.6)                                     | 7.0                      | 0.65                            | 72         | 16.0        | × CT<br>CP<br>φ BTV                 | 250<br>250<br>250                  |
| 7F13R  | HO             | 5.5         | 17.5        | 82          | 94             | —                       | 45.0 (0.6)                                     | 17.0                     | 0.17                            | 97.0       | 16.0        | ■ CT<br>■ CP                        | 1215<br>1215                       |
| 7F31R  | FT             | 6.0         | 48.0        | 215         | 105            | —                       | 22.0 (2.0)                                     | 10.0                     | 0.3                             | 68         | 15.5        | CT<br>□ CP<br>▲ BTV                 | 220<br>220<br>220                  |
| 8F66RA | FT             | 5.0         | 177.0       | 285         | 152            | T11-1                   | 20.0 (1.0)                                     | 10.0                     | 0.6 Max                         | 104        | 23.0        | CT<br>□ CP<br>φ BTV                 | 220<br>220<br>220                  |

★ Inlet air temperature forced coolig should be below 40°C.

▲ Including circuit loss.

▲▲ Effective output.

△ Cooling socket is used.



7F25



6F70R



7F13R



7F37R

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| Max. ratings       |                        |                 |                            |                            | Typical operation  |                        |                        |                   |                         |                    |                                | ★ Cooling system                                    | U.S.A. equivalent | Type      |
|--------------------|------------------------|-----------------|----------------------------|----------------------------|--------------------|------------------------|------------------------|-------------------|-------------------------|--------------------|--------------------------------|-----------------------------------------------------|-------------------|-----------|
| Plate voltage (kV) | Grid-No. 2 voltage (V) | Plate input (W) | Plate loss Dissipation (W) | Grid-No. 2 Dissipation (W) | Plate voltage (kV) | Grid-No. 2 voltage (V) | Grid-No. 1 voltage (V) | Plate current (A) | Grid-No. 2 current (mA) | Exciting power (W) | Plate output (W)               |                                                     |                   |           |
| 4.0                | 500                    | 1200            | 500                        | 30                         | 3.0                | 500                    | 150                    | 0.3               | 35                      | ▲ 15               | 600                            | R<br>QR=1 m <sup>3</sup> /min<br>S P=36 mm a.q.     | 4X500A            | 6 F 50 R  |
| 3.0                | 600                    | 1500            | 700                        | 50                         | 2.5                | 500                    | -157                   | 0.55              | 25                      | ▲ 80               | 900                            | R<br>QR=1 m <sup>3</sup> /min<br>S P=15 mm a.q.     | —                 | 6 F 62 R  |
| 3.0                | 600                    | 1500            | 460                        | 50                         | 1.9                | 500                    | - 70                   | 0.67              | ⊕10                     | ▲ 13               | 650                            |                                                     |                   |           |
| 2.5                | 1200                   | 1200            | 700                        | 25                         | 2.5                | 400                    | - 50                   | 0.5               | 6                       | ▲ 80               | ▲▲450                          | R<br>QR=1 m <sup>3</sup> /min<br>S P=17 mm a.q.     | 7650              | 6 F 70 R  |
| 2.0                | 1200                   | 1000            | 460                        | 17                         | 2.5                | 400                    | - 36                   | 0.5               | 8                       | ▲ 35               | ▲▲600                          |                                                     |                   |           |
| 6.0                | 1000                   | 4000            | 1000                       | 75                         | 5.5                | 500                    | -200                   | 0.6               | 90                      | 15                 | 2500                           | V<br>QR=1.25 m <sup>3</sup> /min<br>S P=70 mm a.q.  | 4-1000A           | 7 F 25    |
| 5.0                | 1000                   | 2700            | 670                        | 75                         | 4.5                | 500                    | -200                   | 0.55              | 120                     | 15                 | 1950                           |                                                     |                   |           |
| 6.0                | 1000                   | 3200            | 1000                       | 75                         | 5.0                | 500                    | - 65                   | 0.5               | 50                      | 3                  | 1500                           |                                                     |                   |           |
| 6.0                | 1000                   | 3200            | 1000                       | 75                         | 5.0                | 500                    | - 65                   | 0.18/1.0          | 100                     | 6                  | Z <sub>p</sub> =10400Ω<br>3100 |                                                     |                   |           |
| 4.0                | 600                    | 2500            | 1000                       | 50                         | 3.0                | 500                    | -150                   | 6.0               | 45                      | ▲ 15               | 1250                           | R<br>QR=1.7 m <sup>3</sup> /min<br>S P=35 mm a.q.   | —                 | 7 F 37 R  |
| 5.0                | 800                    | 3500            | 1000                       | 50                         | 5.0                | 800                    | -100                   | 0.06/0.56         | 35                      | —                  | 1800                           |                                                     |                   |           |
| 4.0                | 700                    |                 | 2000                       | 60                         | 4                  | 500                    | -180                   | 0.9               | 60                      | ▲ 180              | 2300                           | R<br>QR=3.5 m <sup>3</sup> /min<br>S P=50 mm a.q.   | —                 | 7 F 60 RA |
| 3.0                | 700                    |                 | 2000                       | 60                         | 2.5                | 500                    | - 90                   | 1.0               | 50                      | ▲ 80               | 1400                           |                                                     |                   |           |
| 2.5                | 1000                   | 2500            | 1500                       | 50                         | 2.5                | 500                    | - 30                   | 1.0               | 20                      | ▲ 175              | 1350                           | R<br>QR=1.2 m <sup>3</sup> /min<br>S P=15 mm a.q.   | 7213              | 7 F 13 R  |
| 2.0                | 1000                   | 1700            | 1000                       | 35                         | 2.0                | 500                    | - 30                   | 0.83              | 15                      | ▲ 55               | 800                            |                                                     |                   |           |
| 4.0                | 1000                   | 5000            | 2500                       | 120                        | 4.0                | 800                    | -200                   | 1.2               | 85                      | ▲ 150              | 3200                           | R<br>QR=4 m <sup>3</sup> /min<br>S P=60 mm a.q.     | —                 | 7 F 31 R  |
| 3.2                | 800                    | 3300            | 1650                       | 120                        | 3.0                | 500                    | -200                   | 1.0               | 110                     | ▲ 75               | 2050                           |                                                     |                   |           |
| 4.0                | 1000                   | 6000            | 2500                       | 120                        | 3.8                | 800                    | - 80                   | 1.47              | ⊕95                     | ▲ 250              | 3500                           |                                                     |                   |           |
| 7.5                | 2000                   | 20000           | 12000                      | 400                        | 7.0                | 1200                   | -310                   | 2.75              | 300                     | ▲ 750              | 12000                          | R<br>QR=15.6 m <sup>3</sup> /min<br>S P=168 mm a.q. | 6166A/7007        | 8 F 66 RA |
| 5.5                | 2000                   | 10000           | 8000                       | 270                        | 4.8                | 800                    | -300                   | 1.8               | 160                     | ▲ 125              | 6000                           |                                                     |                   |           |
| 7.5                | 2000                   | 24000           | 12000                      | 400                        | 5.8                | 1200                   | -130                   | 3.45              | ⊕200                    | ▲ 800              | 12000                          |                                                     |                   |           |

□ Example is for below 30 Mc.  
is of 8.5 Mc bandwidth.

⊕ Example shows values when synchronizing signal is of 6 Mc. bandwidth.  
● Typical operation with grid grounded.

⊕ Example shows values when synchronizing signal



6F62R



7F60RA



8F66RA