

ELECTRONIC TUBE REFERENCE

5F60R

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TETRODE

Forced-air-cooled coaxial UHF power tetrode for amplifiers, oscillators, and frequency multipliers.

### GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | — / —             | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

### SECTION RATINGS

|                                                                                                                    |         |
|--------------------------------------------------------------------------------------------------------------------|---------|
| SECTION1 Tetrode                                                                                                   |         |
| TRANSCONDUCTANCE                                                                                                   | 0.025 S |
| AMPLIFICATION FACTOR                                                                                               | 15      |
| MAXIMUM PLATE VOLTAGE                                                                                              | 2000 V  |
| MAXIMUM PLATE DISSIPATION                                                                                          | 450 W   |
| Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table. |         |

The 5F60R is a forced-air-cooled UHF power tetrode for power amplifiers, power oscillators, and frequency multipliers. Its rugged coaxial ceramic-insulated construction supports high-frequency operation.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

## 1971 NEC

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 NEC

## Section 1 · Tetrode

| OTHER                            |                 |                                                  |
|----------------------------------|-----------------|--------------------------------------------------|
| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE                                 |
| plate dissipation is             | 450 W           | plate dissipation is.450 W.                      |
| input is [1]                     | 1000            | input is 1000 W at 500 ¥Hz or less, and 750 W at |
| input is [2]                     | 500             | input is 1000 W at 500 ¥Hz or less, and 750 W at |
| input is [3]                     | 750             | input is 1000 W at 500 ¥Hz or less, and 750 W at |
| General Ratings : " G1 : Grid No | 1               | General Ratings : " G1 : Grid No. 1              |
| Go : Grid No                     | 2               | Go : Grid No. 2                                  |
| Grid No [1]                      | 2               | Grid No.2 Amplification Factor 11 15 19          |
| Grid No [2]                      | 11              | Grid No.2 Amplification Factor 11 15 19          |
| Grid No [3]                      | 15              | Grid No.2 Amplification Factor 11 15 19          |
| Grid No [4]                      | 19              | Grid No.2 Amplification Factor 11 15 19          |
| Grid Ko.1 - Cathode [1]          | 212             | Grid Ko.1 - Cathode 21,2 24,7 28.2 pF            |
| Grid Ko.1 - Cathode [2]          | 247             | Grid Ko.1 - Cathode 21,2 24,7 28.2 pF            |
| Grid Ko.1 - Cathode [3]          | 28.2            | Grid Ko.1 - Cathode 21,2 24,7 28.2 pF            |
| Grid No.1 - Grid No [1]          | 2               | Grid No.1 - Grid No.2 - 34.8 38.9 43.0 pF        |
| Grid No.1 - Grid No [2]          | 34.8            | Grid No.1 - Grid No.2 - 34.8 38.9 43.0 pF        |
| Grid No.1 - Grid No [3]          | 38.9            | Grid No.1 - Grid No.2 - 34.8 38.9 43.0 pF        |
| Grid No.1 - Grid No [4]          | 43              | Grid No.1 - Grid No.2 - 34.8 38.9 43.0 pF        |
| Grid No [1]                      | 2               | Grid No.2 - Plate 7.0 8.2 9.4 pF                 |
| Grid No [2]                      | 7               | Grid No.2 - Plate 7.0 8.2 9.4 pF                 |
| Grid No [3]                      | 8.2             | Grid No.2 - Plate 7.0 8.2 9.4 pF                 |

| PARAMETER                           | PUBLISHED VALUE | CONDITION / NOTE                                                          |
|-------------------------------------|-----------------|---------------------------------------------------------------------------|
| Grid No [4]                         | <b>9.4</b>      | Grid No.2 - Plate 7.0 8.2 9.4 pF                                          |
| Published value [1]                 | <b>6</b>        | Grid No.1 - Plate - 0.07 0.12 pF                                          |
| Published value [2]                 | <b>0.07</b>     | Grid No.1 - Plate - 0.07 0.12 pF                                          |
| Published value [3]                 | <b>0.12</b>     | Grid No.1 - Plate - 0.07 0.12 pF                                          |
| Grid No [1]                         | <b>2</b>        | Grid No.2 - Cathode - 0.52 0.9 pF                                         |
| Grid No [2]                         | <b>0.52</b>     | Grid No.2 - Cathode - 0.52 0.9 pF                                         |
| Grid No [3]                         | <b>0.9</b>      | Grid No.2 - Cathode - 0.52 0.9 pF                                         |
| Plate - Cathode [1]                 | <b>0.008</b>    | Plate - Cathode . - 0.008 0.02. pF                                        |
| Plate - Cathode [2]                 | <b>0.02</b>     | Plate - Cathode . - 0.008 0.02. pF                                        |
| Max. Radiator Temperature           | <b>250</b>      | Max. Radiator Temperature 250 ºC                                          |
| Max. Electrode Seal Temperature     | <b>250</b>      | Max. Electrode Seal Temperature 250 C                                     |
| MAXIMUM RATINGS : Frequency,        | <b>1215 MHz</b> | MAXIMUM RATINGS : Frequency, 1215 MHz or less                             |
| Frequency                           | <b>1215 MHz</b> | Frequency 1215 MHz or less                                                |
| DC Plate Voltage )                  | <b>1500 V</b>   | DC Plate Voltage ) 1500 Vdc                                               |
| DC Plate Current                    | <b>500 A</b>    | DC Plate Current 500 mAdc                                                 |
| DC Grid No [1]                      | <b>2 V</b>      | DC Grid No.2 Voltage 600 Vde                                              |
| DC Grid No [2]                      | <b>600 V</b>    | DC Grid No.2 Voltage 600 Vde                                              |
| DC Grid Yo.l Voltage ' ~            | <b>250 V</b>    | DC Grid Yo.l Voltage ' ~250 Vde                                           |
| DC Grid No.l Current                | <b>100 A</b>    | DC Grid No.l Current 100 mAdc                                             |
| Plate Input                         | <b>750</b>      | Plate Input 750 W                                                         |
| Grid No [1]                         | <b>2</b>        | Grid No.2 Input 12 W                                                      |
| Grid No [2]                         | <b>12</b>       | Grid No.2 Input 12 W                                                      |
| Plate Dissipation                   | <b>450 W</b>    | Plate Dissipation   : 450 W                                               |
| TYPICAL OPERATION : (Values at [1]) | <b>200 MHz</b>  | TYPICAL OPERATION : (Values at 200 MHz grounded grid circuit with a 6 NHz |
| TYPICAL OPERATION : (Values at [2]) | <b>6 MHz</b>    | TYPICAL OPERATION : (Values at 200 MHz grounded grid circuit with a 6 NHz |
| DC Plate Voltage   [1]              | <b>1300 V</b>   | DC Plate Voltage   1300 1400 Vdc                                          |
| DC Plate Voltage   [2]              | <b>1400 V</b>   | DC Plate Voltage   1300 1400 Vdc                                          |
| DC Crid No [1]                      | <b>2 V</b>      | DC Crid No.2 Voltage 400 400 Vde                                          |
| DC Crid No [2]                      | <b>400 V</b>    | DC Crid No.2 Voltage 400 400 Vde                                          |
|                                     |                 |                                                                           |

| PARAMETER                                      | PUBLISHED VALUE | CONDITION / NOTE                                      |
|------------------------------------------------|-----------------|-------------------------------------------------------|
| DC Crid No [3]                                 | <b>400 V</b>    | DC Crid No.2 Voltage 400 400 Vde                      |
| DC Grid No.l'Voltage [1]                       | <b>-17 V</b>    | DC Grid No.l'Voltage -17 -18 Vdc                      |
| DC Grid No.l'Voltage [2]                       | <b>-18 V</b>    | DC Grid No.l'Voltage -17 -18 Vdc                      |
| Max. Signal Current [1]                        | <b>350 A</b>    | Max. Signal Current 350- 420 mAde                     |
| Max. Signal Current [2]                        | <b>420 A</b>    | Max. Signal Current 350- 420 mAde                     |
| Zero~Signal Current [1]                        | <b>100 A</b>    | Zero~Signal Current 100 95 mAde                       |
| Zero~Signal Current [2]                        | <b>95 A</b>     | Zero~Signal Current 100 95 mAde                       |
| DC Grid No                                     | <b>2 A</b>      | DC Grid No.2 Current                                  |
| Max. Signal Current [1]                        | <b>30 A</b>     | Max. Signal Current 30 35 - mAdc                      |
| Max. Signal Current [2]                        | <b>35 A</b>     | Max. Signal Current 30 35 - mAdc                      |
| Zero-Signal Current [1]                        | <b>0 mA</b>     | Zero-Signal Current 0 0 'mAdc                         |
| Zero-Signal Current [2]                        | <b>0 mA</b>     | Zero-Signal Current 0 0 'mAdc                         |
| DC Grid No.l Current (max. signal current) [1] | <b>25 A</b>     | DC Grid No.l Current (max. signal current) 25 30 mAde |
| DC Grid No.l Current (max. signal current) [2] | <b>30 A</b>     | DC Grid No.l Current (max. signal current) 25 30 mAde |
| Max. Signal Driving Power (approx.) [1]        | <b>15 W</b>     | Max. Signal Driving Power (approx.) 15. 20 W          |
| Max. Signal Driving Power (approx.) [2]        | <b>20 W</b>     | Max. Signal Driving Power (approx.) 15. 20 W          |
| Max. Signal Plate Qutput (approx.) [1]         | <b>120</b>      | Max. Signal Plate Output (approx.) 120 170 W          |
| Max. Signal Plate Qutput (approx.) [2]         | <b>170</b>      | Max. Signal Plate Output (approx.) 120 170 W          |
| Frequency [1]                                  | <b>500 MHz</b>  | Frequency 500 MHz or less _ 1215 MHz or less          |
| Frequency [2]                                  | <b>1215 MHz</b> | Frequency 500 MHz or less _ 1215 MHz or less          |
| DC Plate Voltage [1]                           | <b>2000 V</b>   | DC Plate Voltage 2000 1500 Vde                        |
| DC Plate Voltage [2]                           | <b>1500 V</b>   | DC Plate Voltage 2000 1500 Vde                        |
| DC Plate Current [1]                           | <b>500 A</b>    | DC Plate Current 500 500 mAde                         |
| DC Plate Current [2]                           | <b>500 A</b>    | DC Plate Current 500 500 mAde                         |
| DC Grid No [1]                                 | <b>2 V</b>      | DC Grid No.2 Voltage 600 600 Vde                      |
| DC Grid No [2]                                 | <b>600 V</b>    | DC Grid No.2 Voltage 600 600 Vde                      |
| DC Grid No [3]                                 | <b>600 V</b>    | DC Grid No.2 Voltage 600 600 Vde                      |
| DC Grid No.l Voltage = [1]                     | <b>250 V</b>    | DC Grid No.l Voltage =250 -250 Vde                    |
|                                                |                 |                                                       |

| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE                        |
|----------------------------|-----------------|-----------------------------------------|
| DC Grid No.1 Voltage = [2] | <b>-250 V</b>   | DC Grid No.1 Voltage =250 -250 Vde      |
| DC Grid No.1 Current [1]   | <b>100 A</b>    | DC Grid No.1 Current 100 100 mAde       |
| DC Grid No.1 Current [2]   | <b>100 A</b>    | DC Grid No.1 Current 100 100 mAde       |
| Plate Input [1]            | <b>1000</b>     | Plate Input 1000 750                    |
| Plate Input [2]            | <b>750</b>      | Plate Input 1000 750                    |
| Grid No [1]                | <b>2</b>        | Grid No.2 Input 12 12                   |
| Grid No [2]                | <b>12</b>       | Grid No.2 Input 12 12                   |
| Grid No [3]                | <b>12</b>       | Grid No.2 Input 12 12                   |
| Plate Dissipation [1]      | <b>450 W</b>    | Plate Dissipation 450 450 )             |
| Plate Dissipation [2]      | <b>450 W</b>    | Plate Dissipation 450 450 )             |
| Frequency ' [1]            | <b>500</b>      | .Frequency ' 500 500 500 KHz            |
| Frequency ' [2]            | <b>500</b>      | .Frequency ' 500 500 500 KHz            |
| Frequency ' [3]            | <b>500</b>      | .Frequency ' 500 500 500 KHz            |
| DC Plate Qoltage   ' [1]   | <b>1200</b>     | DC Plate Qoltage   ' 1200 1500 2000 Vdc |
| DC Plate Qoltage   ' [2]   | <b>1500</b>     | DC Plate Qoltage   ' 1200 1500 2000 Vdc |
| DC Plate Qoltage   ' [3]   | <b>2000</b>     | DC Plate Qoltage   ' 1200 1500 2000 Vdc |
| DC Grid No [1]             | <b>2 V</b>      | DC Grid No.2 Voltage 400 400 .400 Vde   |
| DC Grid No [2]             | <b>400 V</b>    | DC Grid No.2 Voltage 400 400 .400 Vde   |
| DC Grid No [3]             | <b>400 V</b>    | DC Grid No.2 Voltage 400 400 .400 Vde   |
| DC Grid No [4]             | <b>400 V</b>    | DC Grid No.2 Voltage 400 400 .400 Vde   |
| DC Grid No.1 Voltage [1]   | <b>-48 V</b>    | DC Grid No.1 Voltage -48 =50 -50 .IVdc  |
| DC Grid No.1 Voltage [2]   | <b>50 V</b>     | DC Grid No.1 Voltage -48 =50 -50 .IVdc  |
| DC Grid No.1 Voltage [3]   | <b>-50 V</b>    | DC Grid No.1 Voltage -48 =50 -50 .IVdc  |

## TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,  
and their source documents.

[Catalog](#)   [Tube types](#)   [Full books](#)   [Blog](#)   [Feedback & corrections](#)

© 2026 Tube Tinker