



## ELECTRONIC TUBE REFERENCE

## 3Z340G

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

## 1 SECTION

CONSTRUCTION

## TRIODE

High-power directly heated triode. Available source material does not establish a narrower functional application confidently.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 9.6 V / —         | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                     |          |
|---------------------------------------------------------------------------------------------------------------------|----------|
| SECTION 1 Triode                                                                                                    |          |
| MAXIMUM PLATE VOLTAGE                                                                                               | 14000 V  |
| MAXIMUM PLATE DISSIPATION                                                                                           | 125000 W |
| MAXIMUM GRID DISSIPATION                                                                                            | 2750 W   |
| <i>Published maximum ratings and characteristics audited; remaining values retained densely in parameter table.</i> |          |

The 3Z340G is a vapor-cooled RF power triode designed for use as a radio-frequency power amplifier or oscillator and suitable for cathode-drive operation.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1962 ITT

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

1962 ITT

## Section 1 · Triode

| OTHER                                           |                 |                                                                             |
|-------------------------------------------------|-----------------|-----------------------------------------------------------------------------|
| PARAMETER                                       | PUBLISHED VALUE | CONDITION / NOTE                                                            |
| R.F. POWER TRIODE [1]                           | 3 W             | R.F. POWER TRIODE .3Z/3ADG                                                  |
| R.F. POWER TRIODE [2]                           | 3 W             | R.F. POWER TRIODE .3Z/3ADG                                                  |
| Direct anode voltage (Note [1])                 | 1 kV            | Direct anode voltage (Note 1) 14 kV                                         |
| Direct anode voltage (Note [2])                 | 14 kV           | Direct anode voltage (Note 1) 14 kV                                         |
| Direct anode current                            | 18 A            | Direct anode current 18 A                                                   |
| Anode dissipation                               | 125 kW          | Anode dissipation 125 kW                                                    |
| Grid dissipation                                | 275 kW          | Grid dissipation 2,75 kW                                                    |
| Note [1]                                        | 1               | Note 1. For Class C anode modulated operation (100% carrier modulation) the |
| Note [2]                                        | 100             | Note 1. For Class C anode modulated operation (100% carrier modulation) the |
| maximum anode voltage is                        | 12 kV           | maximum anode voltage is 12kV,                                              |
| Filament voltage, per filament section          | 96 V            | Filament voltage, per filament section 9,6 v                                |
| Filament current, nominal, per filament section | 290 A           | Filament current, nominal, per filament section 290 A                       |
| Direct anode voltage                            | 14 kV           | Direct anode voltage 14 kV                                                  |
| Direct grid voltage                             | -765 V          | Direct grid voltage -765 V                                                  |
| Peak r.f. grid voltage [1]                      | 1 V             | Peak r.f. grid voltage 1 305 Vv                                             |
| Peak r.f. grid voltage [2]                      | 305 V           | Peak r.f. grid voltage 1 305 Vv                                             |
| Anode current                                   | 175 A           | Anode current 17,5 A                                                        |
| Grid current, approx                            | 31 A            | Grid current, approx. 3,1 A                                                 |
| Anode dissipation                               | 45 kW           | Anode dissipation 45 kW                                                     |

| PARAMETER                                                 | PUBLISHED VALUE | CONDITION / NOTE                                                        |
|-----------------------------------------------------------|-----------------|-------------------------------------------------------------------------|
| Grid dissipation, approx                                  | <b>17</b>       | Grid dissipation, approx. 1,7 kW                                        |
| Drive power, approx                                       | <b>40 kW</b>    | Drive power, approx. 4,0 kW                                             |
| Output power ' '                                          | <b>200 kW</b>   | Output power ' 200 kW                                                   |
| Efficiency                                                | <b>81</b>       | Efficiency 81 %                                                         |
| Thariated tungsten filament (Note                         | <b>2</b>        | Thariated tungsten filament (Note 2)                                    |
| Filament voltage, per section [1]                         | <b>96 V</b>     | Filament voltage, per section 9,6V $\pm$ 5%                             |
| Filament voltage, per section [2]                         | <b>5 V</b>      | Filament voltage, per section 9,6V $\pm$ 5%                             |
| Filament current, per section, at [1]                     | <b>96 mA</b>    | Filament current, per section, at 9,6V min, 263 max. 311 A              |
| Filament current, per section, at [2]                     | <b>263 mA</b>   | Filament current, per section, at 9,6V min, 263 max. 311 A              |
| Filament current, per section, at [3]                     | <b>311 mA</b>   | Filament current, per section, at 9,6V min, 263 max. 311 A              |
| Maximum difference between current in each section        | <b>15 mA</b>    | Maximum difference between current in each section 15 A                 |
| Filament cold resistance, per section                     | <b>4 ohm</b>    | Filament cold resistance, per section 0,004 $\Omega$                    |
| Maximum filament starting current, per section (Note [1]) | <b>3 mA</b>     | Maximum filament starting current, per section (Note 3) 700 A           |
| Maximum filament starting current, per section (Note [2]) | <b>700 mA</b>   | Maximum filament starting current, per section (Note 3) 700 A           |
| Note                                                      | <b>3 A</b>      | Note 3. This starting current must not be exceeded even momentarily.    |
| Mutual conductance (at $V_4 =$ [1])                       | <b>90 mA/V</b>  | Mutual conductance (at $V_4 = 9,0kV : I = 5,0A$ ) min. 78 max. 102 mA/V |
| Mutual conductance (at $V_4 =$ [2])                       | <b>50 mA/V</b>  | Mutual conductance (at $V_4 = 9,0kV : I = 5,0A$ ) min. 78 max. 102 mA/V |
| Mutual conductance (at $V_4 =$ [3])                       | <b>78 mA/V</b>  | Mutual conductance (at $V_4 = 9,0kV : I = 5,0A$ ) min. 78 max. 102 mA/V |
| Mutual conductance (at $V_4 =$ [4])                       | <b>102 mA/V</b> | Mutual conductance (at $V_4 = 9,0kV : I = 5,0A$ ) min. 78 max. 102 mA/V |
| Grid to anode                                             | <b>108</b>      | Grid to anode 108 pF                                                    |
| Grid to filament [1]                                      | <b>259</b>      | Grid to filament 259 pF                                                 |
| Grid to filament [2]                                      | <b>13</b>       | Grid to filament 259 pF                                                 |

| PARAMETER                                                              | PUBLISHED VALUE | CONDITION / NOTE                                                               |
|------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------|
| Anode to filament                                                      | <b>35</b>       | Anode to filament 3,5 pf                                                       |
| The anode seal and bulb temperaturess must not exceed                  | <b>180</b>      | The anode seal and bulb temperaturess must not exceed 180°C.                   |
| To give protection against overheating of the anode,                   | <b>2</b>        | To give protection against overheating of the anode, 2 *hermal fuse is fitted  |
| device. A cord tension of ! [1]                                        | <b>1 V</b>      | device. A cord tension of ! 1lb (450 g) will ensure ithat if the anode         |
| device. A cord tension of ! [2]                                        | <b>450 V</b>    | device. A cord tension of ! 1lb (450 g) will ensure ithat if the anode         |
| of [1]                                                                 | <b>60</b>       | of 60 ft3/min (1,7 m3/min) directed into the filament.header from a 2 inch     |
| of [2]                                                                 | <b>17</b>       | of 60 ft3/min (1,7 m3/min) directed into the filament.header from a 2 inch     |
| of [3]                                                                 | <b>2</b>        | of 60 ft3/min (1,7 m3/min) directed into the filament.header from a 2 inch     |
| The maximum temperature of the filament and grid seals must not exceed | <b>140</b>      | The maximum temperature of the filament and grid seals must not exceed 140°C., |
| Published value                                                        | <b>4</b>        | 4-filament posts                                                               |

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