

ELECTRONIC TUBE REFERENCE

UH50

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Eimac radiation-cooled ultra-high-frequency power triode with directly heated thoriated-tungsten filament. Approximately 50 W plate dissipation and kilovolt-class capability suit compact UHF transmitting applications.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 7.5 V / 3.25 A    | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

SECTION RATINGS

|                                                                                                                                      |        |
|--------------------------------------------------------------------------------------------------------------------------------------|--------|
| SECTION1 Triode                                                                                                                      |        |
| AMPLIFICATION FACTOR                                                                                                                 | 10.6   |
| MAXIMUM PLATE VOLTAGE                                                                                                                | 1250 V |
| MAXIMUM PLATE DISSIPATION                                                                                                            | 50 W   |
| Promoted fields populated only where the published value maps directly to the schema; device-specific values retained as parameters. |        |

Radiation cooled; ultra high frequency triode embodying all of the superior constructional features common to Eimac tubes but specially designed to be directly interchangeable with certain conventional Tantalum elements specially treated by the exclusive Eimac process, the new Eimac thoriated tungsten filament, elimination of the need for a “getter,” and the long, severe exhaust give this tube vastly superior performance capabilities, yet in physical appearance it is

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1962 Eimac

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

1962 EIMAC

## Section 1 · Triode

| OTHER                            |                 |                                                                                             |
|----------------------------------|-----------------|---------------------------------------------------------------------------------------------|
| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE                                                                            |
| UH5                              | 0               | UH50 is unconditionally guaranteed against tube failures resulting                          |
| Filament Voltage                 | 75              | Filament Voltage - - - - - 75Vols                                                           |
| Amplification Factor --          | 106             | Amplification Factor -- - - - - - 106                                                       |
| Grid-Plate Capacity              | 2.6 pF          | Grid-Plate Capacity - - - - - 2.6 mmfds.                                                    |
| Grid-Filament Capacity           | 2.2 pF          | Grid-Filament Capacity - - - - - 2.2 mmfds.                                                 |
| Maximum Plate Voltage            | 1250 V          | Maximum Plate Voltage - - - - - 1250 Volts                                                  |
| Plate Dissipation                | 50 W            | Plate Dissipation - - - - - 50 Watts                                                        |
| Grid Current (milliamperes) [1]  | 25 mA           | Grid Current (milliamperes) - 25 25                                                         |
| Grid Current (milliamperes) [2]  | 25 mA           | Grid Current (milliamperes) - 25 25                                                         |
| Plate Current (milliamperes) [1] | 125 mA          | Plate Current (milliamperes) - 125 125 . . i .                                              |
| Plate Current (milliamperes) [2] | 125 mA          | Plate Current (milliamperes) - 125 125 . . i .                                              |
| Plate Dissipation (watts) [1]    | 50 W            | Plate Dissipation (watts) - - - 50 50 Typical Operating Conditions for Class "C" Telegraphy |
| Plate Dissipation (watts) [2]    | 50 W            | Plate Dissipation (watts) - - - 50 50 Typical Operating Conditions for Class "C" Telegraphy |
| Plate Voltage Plate Volts [1]    | 1000 V          | Plate Voltage Plate Volts - - - - - 1000 1250                                               |
| Plate Voltage Plate Volts [2]    | 1250 V          | Plate Voltage Plate Volts - - - - - 1000 1250                                               |
|                                  |                 |                                                                                             |

| PARAMETER                                                                                               | PUBLISHED VALUE | CONDITION / NOTE                                                                                                           |
|---------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------|
| As frequency is increased circuit inefficiencies may necessitate a re- Plate Current (milliamperes) [1] | <b>125 mA</b>   | As frequency is increased circuit inefficiencies may necessitate a re- Plate Current (milliamperes) - - - - 125 125        |
| As frequency is increased circuit inefficiencies may necessitate a re- Plate Current (milliamperes) [2] | <b>125 mA</b>   | As frequency is increased circuit inefficiencies may necessitate a re- Plate Current (milliamperes) - - - - 125 125        |
| duction of plate voltage or plate current so that maximum dissipation Grid Current (milliamperes) [1]   | <b>20 mA</b>    | duction of plate voltage or plate current so that maximum dissipation Grid Current (milliamperes) - - - - - 20 20          |
| duction of plate voltage or plate current so that maximum dissipation Grid Current (milliamperes) [2]   | <b>20 mA</b>    | duction of plate voltage or plate current so that maximum dissipation Grid Current (milliamperes) - - - - - 20 20          |
| Power Output (watts) [1]                                                                                | <b>94 W</b>     | Power Output (watts) - - - - - - 94 115                                                                                    |
| Power Output (watts) [2]                                                                                | <b>115 W</b>    | Power Output (watts) - - - - - - 94 115                                                                                    |
| Plate Current (milliamperes) [1]                                                                        | <b>115 mA</b>   | Plate Current (milliamperes) - - - 115 125 125 ] ) :                                                                       |
| Plate Current (milliamperes) [2]                                                                        | <b>125 mA</b>   | Plate Current (milliamperes) - - - 115 125 125 ] ) :                                                                       |
| Plate Current (milliamperes) [3]                                                                        | <b>125 mA</b>   | Plate Current (milliamperes) - - - 115 125 125 ] ) :                                                                       |
| Grid Current (fnilliampzres)) [1]                                                                       | <b>20</b>       | Grid Current (fnilliampzres))- - - - 20 20 20 Plate is designed to operate at a cherry-red color on its normal dissipation |
| Grid Current (fnilliampzres)) [2]                                                                       | <b>20</b>       | Grid Current (fnilliampzres))- - - - 20 20 20 Plate is designed to operate at a cherry-red color on its normal dissipation |
| Grid Current (fnilliampzres)) [3]                                                                       | <b>20</b>       | Grid Current (fnilliampzres))- - - - 20 20 20 Plate is designed to operate at a cherry-red color on its normal dissipation |
| Power Output (watts) [1]                                                                                | <b>60 W</b>     | Power Output (watts) - - - - - 60 95 115 temperatures are perfectly permissible and no damage will result from             |
| Power Output (watts) [2]                                                                                | <b>95 W</b>     | Power Output (watts) - - - - - 60 95 115 temperatures are perfectly permissible and no damage will result from             |
| Power Output (watts) [3]                                                                                | <b>115 W</b>    | Power Output (watts) - - - - - 60 95 115 temperatures are perfectly permissible and no damage will result from             |
|                                                                                                         |                 |                                                                                                                            |

| PARAMETER                    | PUBLISHED VALUE | CONDITION / NOTE                                                                                                        |
|------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------|
| Excitation power roughly [1] | <b>1</b>        | Excitation power roughly 1/10 the input power, cator will be readily appreciated as you become familiar with the UHS50. |
| Excitation power roughly [2] | <b>10</b>       | Excitation power roughly 1/10 the input power, cator will be readily appreciated as you become familiar with the UHS50. |
| Excitation power roughly [3] | <b>0</b>        | Excitation power roughly 1/10 the input power, cator will be readily appreciated as you become familiar with the UHS50. |

## TUBE TINKER

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