

*Excellence in Electronics***TYPE****CK6121**

The CK6121 is a filament type triode of subminiature construction designed for use as a Class C amplifier or frequency multiplier in the VHF frequency band. The characteristics of this type are optimized for high grid drive conditions typical of frequency multiplier service. The CK6121 is suitable for battery operated, short life special applications at the typical Class C operation conditions indicated below. The filament of the CK6121 should not be operated continuously inasmuch as its 10 hour life rating is chiefly a function of the filament temperature and hours of filament operation. The flexible terminal leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard inline subminiature sockets may be used by cutting the leads to a suitable length.

**MECHANICAL DATA****ENVELOPE:** T-2 X 3 Glass**BASE:** None (0.016" tinned flexible leads. Length: 1.5" min.  
Spacing: 0.048" center-to-center)**TERMINAL CONNECTIONS:** (Red dot is adjacent to Lead 1)

- Lead 1 Plate
- Lead 2 Filament, negative
- Lead 3 Grid
- Lead 4 Filament, positive

**MOUNTING POSITION:** Any**ELECTRICAL DATA****DIRECT INTERELECTRODE CAPACITANCE:** ( $\mu\text{fds.}$ ) (unshielded)

|                   |     |
|-------------------|-----|
| Grid to Plate     | 1.4 |
| Grid to Filament  | 1.4 |
| Plate to Filament | 1.9 |

**RATINGS-ABSOLUTE MAXIMUM VALUES - CLASS C OPERATION:**

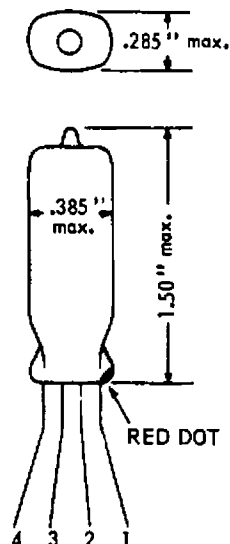
|                            |                      |
|----------------------------|----------------------|
| Filament Voltage (dc)      | 1.25 $\pm$ 20% volts |
| DC Plate Voltage           | 185 volts            |
| DC Negative Grid Bias      | 90 volts             |
| DC Plate Current           | 8 ma.                |
| DC Grid Current            | 0.45 ma.             |
| Peak RF Grid Drive Voltage | 100 volts            |
| Plate Dissipation          | 1.1 watts            |

**CHARACTERISTICS AND TYPICAL OPERATION - CLASS A1 AMPLIFIER:**

|                                          |                       |
|------------------------------------------|-----------------------|
| Filament Voltage (dc)                    | 1.25 volts            |
| Filament Current                         | 0.12 amp.             |
| Plate Voltage                            | 135 volts             |
| Grid Voltage                             | -5 volts              |
| Transconductance                         | 1600 $\mu\text{mhos}$ |
| Amplification Factor                     | 15                    |
| Plate Current                            | 4.0 ma.               |
| Grid Voltage for $I_b = 15 \mu\text{a.}$ | -10 volts             |

**CHARACTERISTICS AND TYPICAL OPERATION - CLASS C FREQUENCY DOUBLER:**

|                                       |            |
|---------------------------------------|------------|
| Filament Voltage (dc)                 | 1.5 volts  |
| Filament Current                      | 0.12 amp.  |
| DC Plate Voltage                      | 185 volts  |
| Grid Resistor                         | 0.24 meg.  |
| Peak RF Grid Drive Voltage (F= 80 Mc) | 95 volts   |
| DC Grid Current (approx.)             | 0.35 ma.   |
| DC Plate Current                      | 7.0 ma.    |
| Plate Input Power                     | 1.3 watts  |
| Useful RF Power Output (F= 160 Mc)    | 0.2 watts. |



Tentative Data

**RAYTHEON MANUFACTURING COMPANY**  
RECEIVING AND CATHODE RAY TUBE OPERATIONS