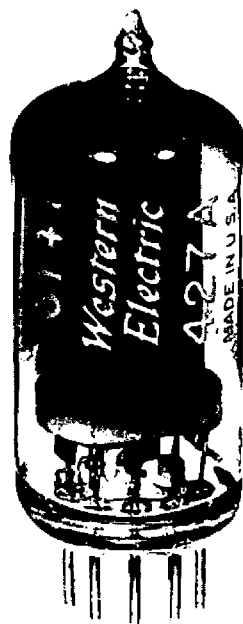


# ELECTRON TUBE DATA SHEET

## WESTERN ELECTRIC 6141\* ELECTRON TUBE



### DESCRIPTION

The 6141/427A\* is a three-electrode inert-gas-filled cold cathode tube designed for use as a voltage regulator and has characteristics which are exceptionally stable with life and with variation in ambient temperature. The third electrode is primarily a starting element.

### CHARACTERISTICS

|                                                         |                      |
|---------------------------------------------------------|----------------------|
| Cathode Current . . . . .                               | 5 to 40 milliamperes |
| Anode Voltage Drop . . . . .                            | 100 volts            |
| Regulation (Max.) at 5 to 40 milliamperes d-c . . . . . | 1.5 volts            |

RATINGS, Absolute Values

## Cathode Current, Forward

Maximum . . . . . 40 milliamperes

Minimum . . . . . 5 milliamperes

## Starter Current, Forward

Maximum . . . . . 5 milliamperes

Minimum<sup>1</sup>. . . . . 0.5 milliampere

Maximum Inverse Starter or Anode Current . . . . . 0.0 milliampere

Ambient Temperature Limits . . . . . -55 to + 85 centigrade

ELECTRICAL DATA

|                                                           | <u>Min.</u> | <u>Bogey</u> | <u>Max.</u> |        |
|-----------------------------------------------------------|-------------|--------------|-------------|--------|
| Anode Breakdown Voltage . . . . .                         | ---         | 165          | ---         | volts  |
| Anode Voltage Drop at 40 Milliamperes, D-C <sup>2</sup> . | 99          | 100          | 103         | volts  |
| Regulation (5 to 40 Milliamperes, D-C) <sup>3</sup> . . . | ---         | 0.3          | 1.5         | volts  |
| Starter Breakdown Voltage . . . . .                       | 115         | 125          | 135         | volts  |
| Starter Voltage Drop at 5 Milliamperes, D-C .             | 100         | 110          | 120         | volts  |
| Required Transfer Current . . . . .                       | See Curve   |              |             |        |
| Stability <sup>4</sup> . . . . .                          | ---         | 0.1          | 1.0         | volt   |
| Temperature Sensitivity, Anode Voltage Drop               |             |              |             |        |
| Anode Current, 5 milliamperes D-C . . . . .               | ---         | -0.007       | ---         | volt/c |
| Anode Current, 40 milliamperes D-C . . . . .              | ---         | -0.004       | ---         | volt/c |

MECHANICAL DATA

|                                   |                    |
|-----------------------------------|--------------------|
| Mounting Position . . . . .       | Any                |
| Net Weight, Approximate . . . . . | 0.4 ounce          |
| Base . . . . .                    | Small Button 9-pin |
| Bulb . . . . .                    | T6-1/2             |

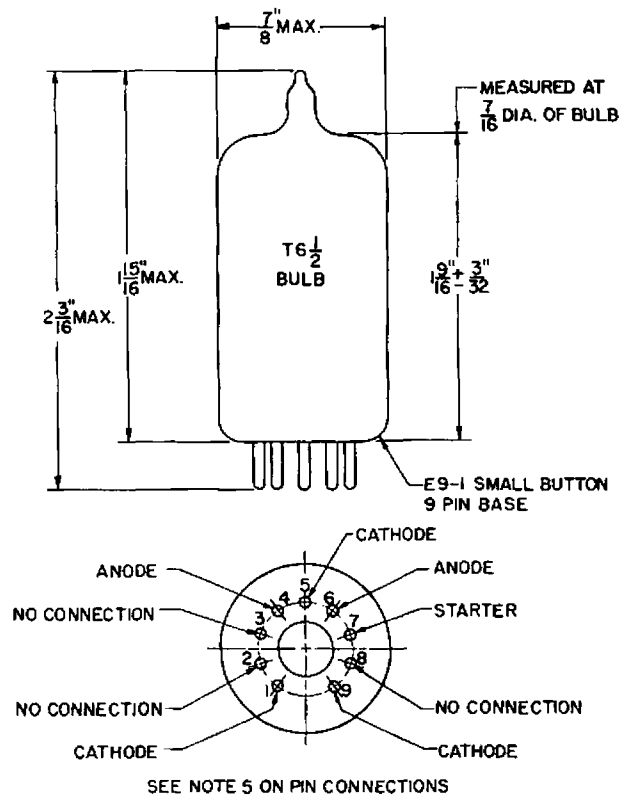
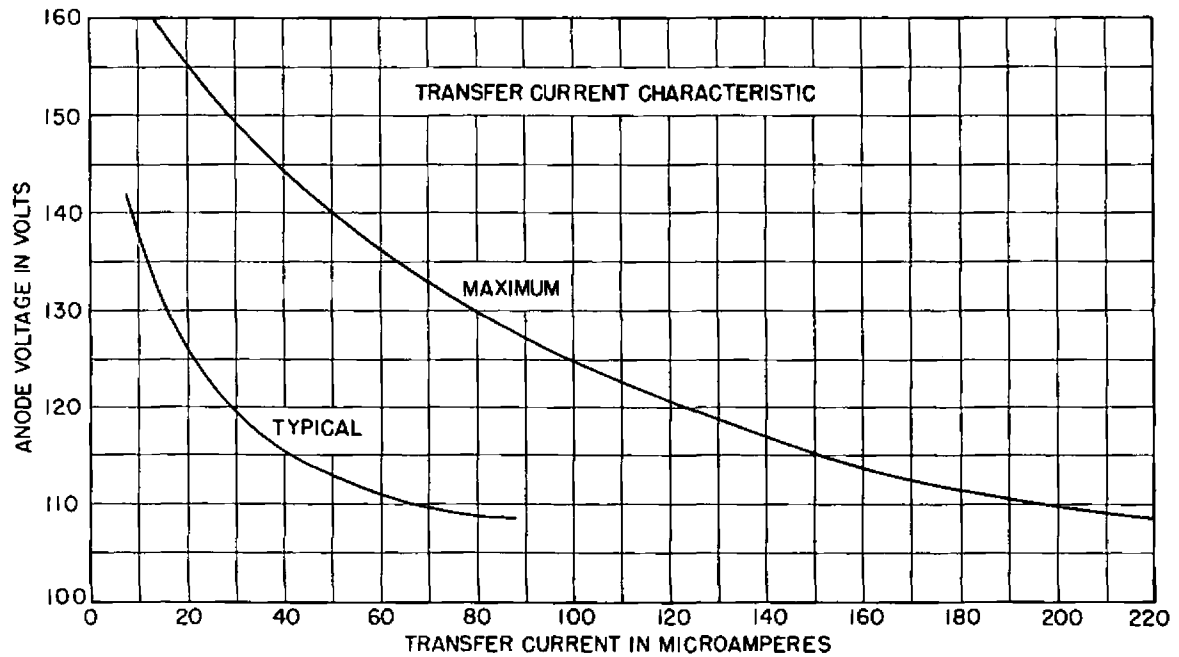
Note 1: The minimum starter current requirement applies only when the tube is operated for extended periods (hundreds of hours) between starting operations to assure maintaining starter breakdown and transfer current characteristics.

Note 2: These values are for new tubes. Anode voltage drop will stabilize within 3 minutes after starting. The stability characteristic should be considered during life.

Note 3: Continuous operation at a current value in the low portion of the operating range for an extended period (hundreds of hours) may result temporarily in regulation exceeding the above stated values.

Note 4: The drift of anode voltage drop over a period of 1000 hours, with the tube operating at one value of current and temperature within its ratings, will not exceed the above stated maximum value. Stability improves with operating life. After 1000-2000 hours operation the drift of anode voltage drop per 1000 hours will not exceed 0.3 volt.

Note 5: Pins marked "NO CONNECTION" should not be connected to any portion of an external circuit. Failure to observe this precaution may result in improper operation of the tube.



*Western Electric*