

**TUNG-SOL**

DIODE  
MINIATURE TYPE

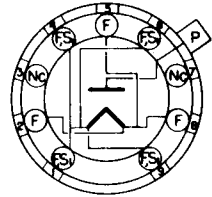


GLASS BULB

COATED FILAMENT

1.25 VOLTS 200 MA.  
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW  
MINIATURE BUTTON  
9 PIN BASE

9Y

THE 1X2A IS A FILAMENTARY DIODE USING THE MINIATURE CONSTRUCTION. IT IS ELECTRICALLY EQUIVALENT TO THE 1X2 BUT IT HAS HIGHER RATINGS THAN THE 1X2. IT IS DESIGNED FOR USE IN TELEVISION SETS AS A HIGH VOLTAGE RECTIFIER TO SUPPLY POWER TO THE ANODE OF THE PICTURE TUBE. IT CAN BE USED IN BOTH RF AND FLY-BACK TYPES OF POWER SUPPLIES AND AT POWER LINE FREQUENCY. IN NEW EQUIPMENT APPLICATIONS THE 1X2A, WHEN USED WITHIN ITS MAXIMUM RATINGS, IS A REPLACEMENT FOR TYPE 1B3GT AT DC OUTPUT POTENTIALS AS HIGH AS 14 TO 15 KILOVOLTS.

**RATINGS**

ABSOLUTE MAXIMUM VALUES<sup>A</sup>

|                                    |        |       |
|------------------------------------|--------|-------|
| FILAMENT VOLTAGE                   | 1.25   | VOLTS |
| MAXIMUM PEAK INVERSE PLATE VOLTAGE | 20 000 | VOLTS |
| MAXIMUM PEAK PLATE CURRENT         | 11     | MA.   |
| MAXIMUM DC LOAD CURRENT            | 1.1    | MA.   |

<sup>A</sup> ABSOLUTE MAXIMUM RATINGS ARE THE LIMITING VALUES ABOVE WHICH THE SERVICEABILITY OF THE TUBE MAY BE IMPAIRED FROM THE VIEWPOINT OF LIFE AND SATISFACTORY PERFORMANCE. THEREFORE, IN ORDER NOT TO EXCEED THESE ABSOLUTE RATINGS, THE EQUIPMENT DESIGNER HAS THE RESPONSIBILITY OF DETERMINING AN AVERAGE DESIGN VALUE FOR EACH RATING BELOW THE ABSOLUTE VALUE OF THAT RATING BY AN AMOUNT SUCH THAT THE ABSOLUTE VALUES WILL NEVER BE EXCEEDED UNDER ANY USUAL CONDITION OF LINE VOLTAGE, VARIATION MANUFACTURING VARIATIONS (INCLUDING COMPONENTS) IN THE EQUIPMENT ITSELF, OR ADJUSTMENTS OF CONTROLS.

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

FLY-BACK PULSE RECTIFIER<sup>B</sup>

|                               |      |       |
|-------------------------------|------|-------|
| FILAMENT VOLTAGE <sup>C</sup> | 1.25 | VOLTS |
| FILAMENT CURRENT              | 200  | MA.   |
| POSITIVE PULSE PLATE VOLTAGE  | 14   | KV.   |
| NEGATIVE PULSE PLATE VOLTAGE  | 3.5  | KV.   |
| PEAK INVERSE PLATE VOLTAGE    | 17.5 | KV.   |
| DC OUTPUT VOLTAGE (APPROX.)   | 14   | KV.   |
| DC OUTPUT CURRENT             | 175  | µA.   |

<sup>B</sup> SEE FOLLOWING PAGE FOR TYPICAL CIRCUIT.

<sup>C</sup> AT 117 VOLT LINE AND NORMAL PICTURE-VIEWING CONDITIONS. IN LABORATORY SET-UP, THE VALUE MAY BE CHECKED USING THERMAL WILLIAM METER WITH THE CIRCUIT SO ADJUSTED TO GIVE THE SAME CURRENT AS WITH 1.25 VOLTS AC OR DC ON THE FILAMENT OF THE TUBE. SUITABLE ACCOUNT SHOULD BE TAKEN OF INTERNAL RESISTANCE OF THE THERMAL METER.

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**TUNG-SOL**

**TYPICAL FLY-BACK POWER SUPPLY**

