

CENTRAL ELECTRONIC MANUFACTURERS  
2 RICHWOOD PLACE  
DENVER, NEW JERSEY

TECHNICAL SPECIFICATIONS FOR TYPE XD-64R HIGH VOLTAGE, HIGH VACUUM DIODE

The Nucor XD-64R is a forced-air cooled high vacuum tube diode specifically designed for rectifier, charging and shunt diode service up to 80KV peak inverse voltage. The tube design features a special thoriated tungsten filament capable of high peak currents and long life. The external anode allows for high anode dissipation ratings and efficient air cooling when used with the recommended Nucor air socket. This air socket permits maximum air flow at the anode. The XD-64R can dissipate 3KW continuously at an air flow of 190 cfm.

**SPECIFICATIONS:**

**PHYSICAL**

|                        |             |
|------------------------|-------------|
| Overall Length (max)   | 11 3/4 in.  |
| Overall Diameter (max) | 4 21/32 in. |
| Weight (approx)        | 8 1/2 lbs.  |
| Mounting Position      | Vertical    |
| Mounting Socket        |             |
| Type of Cooling        | Forced Air  |
| Air Flow               |             |

| Velocity<br>(cfm) | Anode<br>Dissipation | Pressure Drop<br>(in. of water) |
|-------------------|----------------------|---------------------------------|
| 50                | 1.0 KW               | 0.20                            |
| 75                | 1.8 KW               | 0.26                            |
| 125               | 2.4 KW               | 0.58                            |
| 190               | 3.0 KW               | 1.21                            |

Maximum Incoming Air Temp. 45°C

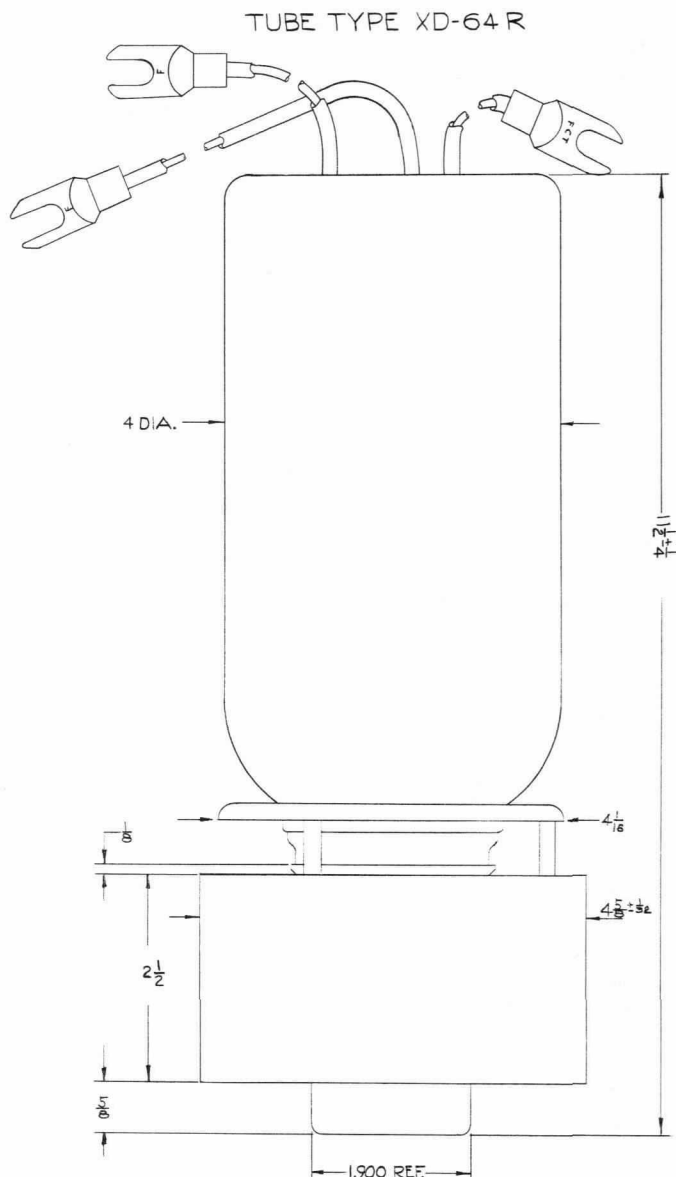
Maximum Glass Seal Temp. 180°C

**ELECTRICAL (Rectifier):**

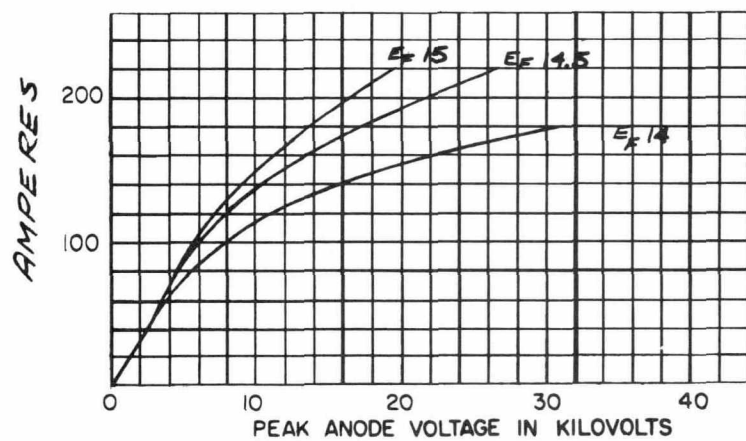
|                              |              |
|------------------------------|--------------|
| Filament Voltage             | 13 volts AC  |
| Filament Current             | 36 amperes   |
| Filament Surge Current (max) | 80 amperes   |
| Peak Inverse Voltage (max)   | 80 kilovolts |
| Anode Current                | 3 amperes    |
| Peak Anode Current           | 15 amperes   |

**CLIPPER, SHUNT OR CHARGING DIODE**

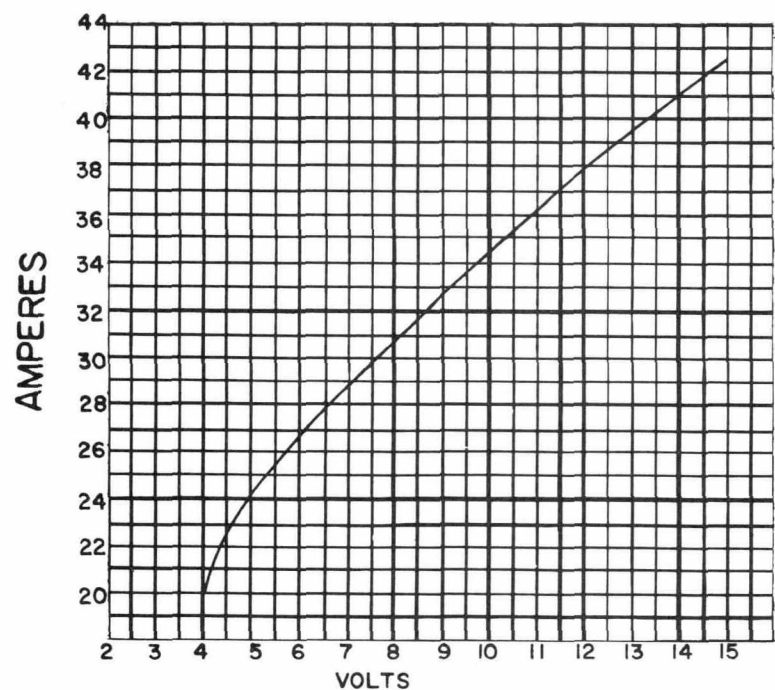
|                              |               |
|------------------------------|---------------|
| Filament Voltage (clipper)   | 14.5 volts AC |
| Filament Voltage (charging)  | 13 volts AC   |
| Filament Current (clipper)   | 40 amperes    |
| Filament Current (charging)  | 30 amperes    |
| Filament Surge Current (max) | 80 amperes    |
| Peak Inverse Voltage (max)   | 80 kilovolts  |
| Anode Current (RMS)          | 6 amperes     |
| Peak Anode Current (clipper) | 150 amperes   |



# PULSE CHARACTERISTICS



# FILAMENT CHARACTERISTICS



# AVERAGE ANODE CHARACTERISTICS

