The 5959/E-41 is a unipotential cathode, three element hydrogen filled thyratron designed for network discharge service. In such service it is suitable for producing pulse outputs of more than 120 kW at an average power level of more than 150 watts. It is especially suitable for compact, airborne radar systems.

The special features of the 5959/E-41 include the high peak voltage and current rating and the very compact size.

The 5959/E-41 has a companion type, the 5958/E-40, which bears identical electrical characteristics but includes a conventional 4 prong base.

**ELECTRICAL DATA, GENERAL**

- **Heater voltage**: 6.3 ± 7.5%
- **Heater current**: 2.5 amps
- **Minimum heating**: 2 minutes

**MECHANICAL DATA, GENERAL**

- **Mounting position**: Any
- **Overall length**: 4" max
- **Greatest diameter**: 1 3/4" ± 1/16"
- **Base**: None, 4 pins .060" tungsten per drawing
- **Anode connector**: .080" tungsten wire per outline

**RATINGS**

- **Anode supply voltage**: 2.5 KV (min)
- **Peak anode voltage forward**: 8 KV (max)
- **Peak anode voltage inverse (Note 1)**: 8 KV (max)
- **Peak anode current**: 35 amperes (max)
- **Average anode current**: 45 ma (max)
- **Anode current rate of rise**: 1200 amp/microsecond
- **Grid drive voltage (Note 2)**: 175 volts (min)

**TYPICAL OPERATION AS PULSE MODULATOR, DC RESONANCE CHARGING**

- **Anode supply voltage**: 4 KV-DC
- **Pulse repetition rate**: 2800 pulses/sec
- **Pulse length**: .25 microsecond
- **Pulse forming network impedance, Zn**: 115 ohms
- **Trigger voltage**: 175 volts
- **Peak power output**: 130 KW
- **Average power output**: 90 watts
- **Anode current**: 25 ma. DC

from JETEC release #1631, April 16, 1956
NOTE 1
The peak inverse voltage should not exceed 2.5 KV during the first 25 microseconds after conduction.

NOTE 2
The voltage between grid and cathode terminals of the socket with the tube removed should have the following characteristics.

a. voltage 175 - 250 volts
b. duration 2 usec min. (at 70% points)
c. source impedance 500 ohms (max)
d. rate of rise 1000 volts/microsecond