# Valve Type 9EN7

## Dimensions
- **Overall Length**: Max. 56
- **Diameter**: Max. 22.2
- **Seated Height**: Max. 49

## Rating
- **Heater Volts**: 9.0
- **Heater Current**: 0.3
- **Maximum Anode Volts**: 250
- **Maximum Screen Volts**: 1.75
- **Mutual Conductance**: 8.5
- **Amplification Factor**: 20
- **Maximum Anode Dissipation**: 1.7
- **Maximum Screen Dissipation**: 0.5
- **Maximum Cathode Current**: 14
- **Maximum Heater to Cathode Volts**: 200

## Capacitances

### Electrodes
- **g1 TO all**: 6.7
- **ap TO all**: 6
- **g1 TO ap**: 0.014
- **gt TO pt**: 3.2
- **at TO pt**: 1.6

### Pin Electrodes
- **pin 1**: kpa
- **pin 2**: g2
- **pin 3**: ap
- **pin 4**: h
- **pin 5**: h
- **pin 6**: at
- **pin 7**: gt

### Mounting Position: Unrestricted

## Typical Operation

**Pentode**
- **Supply Voltage**: 200
- **Anode Volts** (Decoupling Resistance = 7kΩ): 164
- **Screen Volts** (Rg2 = 27 kΩ): 138
- **g1 Resistance for Grid Current Bias**: (ohms) 100,000
- **g1 Current**: (mA) 33
- **Conversion Conductance**: (mAV) 3,300
- **Heterodyne Volts Peak**: 5.7
- **Anode Current Peak**: (approx) (mA) 7.6
- **Screen Current**: (approx) (mA) 2.3

**Triode**
- **Anode Volts**: 120
- **Anode Current**: (average) 6

### Notes
- A. **Va = 100V, Ia = 14mA**
- B. **Va = 170V, Vg2 = 170V, Ia = 10mA**
- C. **Basing arranged to minimize pentode cathode lead inductance effects**
- **Inter-electrode Capacity with holder capacity balanced out but with cylindrical screen case**
- **Total capacity including ceramic B9A holder with cylindrical screen**
  (Plessey holder type CP18002l/3).
  The casing of the tubes is particularly suitable for printed circuit use. The triode is identical to that in the JCP.

---

*from JEDEC release #2553, Aug. 3, 1959*
CHARACTERISTIC CURVES OF AVERAGE MAZDA VALVE TYPE
CHARACTERISTIC CURVES
OF AVERAGE
MAZDA VALVE TYPE 9EN7