



## ELECTRONIC TUBE REFERENCE

## 6DR8

Voltage - Pentode or Tetrode (with diode) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Double-diode pentode designed for IF amplification, detection, and automatic gain control in automobile radio receivers.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 6.3 V / 300 mA    | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Dissimilar    |

## SECTION RATINGS

## SECTION1 Diode

No fixed ratings recorded.

First of two physical diodes in Rogers 6DR8 indirectly heated double-diode pentode for storage-battery car radios; used for signal detection and automatic gain control. Both diode plate-to-cathode capacitances about 2.5 pF, mutual diode plate coupling maximum 0.25 pF. Diode plate 1 to pentode control grid maximum 0.0008 pF and to pentode plate maximum 0.15 pF. Manufacturer nine-pin E9-1 basing 9HE; first diode plate at pin 7, second at pin 8. No diode forward-current or peak-inverse maxima inferred from the pentode ratings.

## SECTION2 Diode

No fixed ratings recorded.

Second distinct physical diode in Rogers 6DR8 double-diode pentode for automotive detection and AVC. Diode plate 2 at pin 8, first diode plate at pin 7. Each diode plate-to-cathode capacitance 2.5 pF; mutual diode-plate coupling max 0.25 pF; second diode plate-to-pentode grid-1 max 0.001 pF and to pentode anode max 0.025 pF. Independent diode section retained; no unsupported diode current maxima promoted.

| SECTION3 Pentode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| PLATE RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 200000 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0021 S        |
| MAXIMUM PLATE VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50 V            |
| MAXIMUM SCREEN VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50 V            |
| <p><i>Rogers 6DR8 pentode IF amplifier section of a double-diode pentode for storage-battery automobile radios; 6.3 V 0.3 A heater, 9HE nine-pin basing. Manufacturer design-center plate and grid-2 maximum each 50 V, cathode current 6.3 mA maximum, with various circuit-level current conditions. Typical operating point at <math>V_a=V_{g2}=25</math> V, <math>g_3</math> at 0 V: anode current 1.7 mA, screen current 0.5 mA, transconductance 2100 <math>\mu</math>mhos (0.0021 S), plate resistance approximately 0.2 M<math>\Omega</math> (200 k<math>\Omega</math>). Alternate <math>V_a=V_{g2}=12.6</math> V: <math>I_a</math> about 0.45 mA, <math>I_{g2}</math> 0.14 mA, gm 1000 <math>\mu</math>mhos and <math>r_p</math> about 1 M<math>\Omega</math>. Grid-1 bias developed from grid current with 2.2 M<math>\Omega</math> return resistor. Published interelectrode and cross-diode coupling capacitances; do not confuse typical plate/screen voltages with 50 V maxima.</i></p> |                 |

Double-diode pentode for IF amplification, detection, and automatic gain control in car radios.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1959 Rogers

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1959 ROGERS

## Section 1 · Diode

| APPLICATION |                 |                  |
|-------------|-----------------|------------------|
| PARAMETER   | PUBLISHED VALUE | CONDITION / NOTE |
| Application | Detector / AGC  | —                |

## 1959 ROGERS

## Section 3 · Pentode

| APPLICATION |                 |                  |
|-------------|-----------------|------------------|
| PARAMETER   | PUBLISHED VALUE | CONDITION / NOTE |
| Application | IF amplifier    | —                |

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