IID12
LOW-MU DOUBLE TRIODE
Indirectly heated

TENTATIVE

GENERAL
The IID12 is an indirectly heated, low-mu, Power Double Triode with separate cathodes. It is suitable for use in booster scanning circuits, and as a series regulator in DC Power Supply Units.

RATING—Absolute values

- **Heater Voltage** $V_h$ 6.3 V
- **Heater Current** $I_h$ 2.5 A
- **Maximum Anode Supply Voltage** $V_{a(b)\text{max}}$ 550* V
- **Maximum Anode Voltage** $V_a(\text{max})$ 250* V
- **Maximum Peak Inverse Voltage (Booster)** 3.0† kV
- **Maximum Negative Control Grid Pulse Voltage (booster)** 2.3† kV
- **Maximum Cathode Current** $I_{k(\text{max})}$ 125* mA
- **Maximum Anode Dissipation** $P_a(\text{max})$ 13* W
- **Maximum Resistance between Grid and Cathode (cathode bias)** 1.0* MΩ
- **Maximum Resistance between Grid and Cathode (fixed bias)** 0.1‡ MΩ
- **Maximum Heater/Cathode Voltage** $V_{h-k(\text{max})}$ 300*§ V
- **Maximum Bulb Temperature** $T_{\text{Bulb}(\text{max})}$ 230 °C

* Each Section.
† Booster scanning service. Maximum pulse duration 15% of one cycle with a maximum duration of 15 μs.
‡ With fixed bias the anode circuit should contain a protective resistance to provide a minimum drop of 15V D.C. at the normal operating conditions. When two or more sections are used in parallel at dissipations approaching the rated maximum, separate anode and cathode resistors must be used to assist load sharing. When combined fixed and cathode bias is used, the cathode bias portion should have a minimum value of 7.5V D.C. at the normal operating conditions and with grid to cathode resistance of 100kΩ. It is not recommended that fixed bias be used when the valve is used in a booster scanning circuit.
§ Operation is not recommended with a damper pulse between heater and cathode.
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INTER-ELECTRODE CAPACITANCES (pF)*—Each Section
Anode/Grid $c_{a-g}$ 7.3
Heater/Cathode $c_{h-k}$ 9.6
Anode 2/Anode 1 $c_{a''-a'}$ 2.7
Grid 2/Grid 1 $c_{g''-g'}$ 0.25
Grid 1 or Grid 2/Earth $c_{in}$ 6.9
Anode 1 or Anode 2/Earth $c_{out}$ 2.5
* Measured in fully shielded socket without can.

DIMENSIONS
Maximum Overall Length 103 mm
Maximum Base Diameter 43.5 mm
Maximum Seated Height 88.5 mm

MOUNTING POSITION—Unrestricted

CHARACTERISTICS*—Each Section
Anode Supply Voltage $V_{a(b)}$ 135 V
Anode Current $I_a$ 125 mA
Cathode Bias Resistance $R_k$ 250 $\Omega$
Mutual Conductance $g_m$ 7.0 mA/V
Amplification Factor $\mu$ 2.0
Valve Anode Resistance (approx) $r_a$ 280 $\Omega$

* Values quoted correspond to operation at the absolute limit of anode current and dissipation.
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BASE—108

Viewed from free end of pins

CONNECTIONS

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g'    a'   k'   g''  a''  k''   h    h