11D12

LOW-MU DOUBLE TRIODE

Indirectly heated

TENTATIVE

GENERAL

The 11D12 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	$V_{a(b)max}$	550*	V
Maximum Anode Voltage	$V_{a(max)}$	250*	V
Maximum Peak Inverse Voltage (Booster)		3·0*†	kV
Maximum Negative Control Grid Pulse Voltage (booster)		2·3*†	kV
Maximum Cathode Current	$I_{k(max)}$	125*	mA
Maximum Anode Dissipation	$P_{a(max)}$	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	$V_{h\text{-}k(max)}$	300*§	V
Maximum Bulb Temperature	$T_{Bulb(max)}$	230	°C

* Each Section.

† Booster scanning service. Maximum pulse duration 15% of one cycle with a maximum duration of 15μs.

‡ 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	Ω
Mutual Conductance	g_m	7·0	mA/V
Amplification Factor	μ	2·0	
Valve Anode Resistance (approx)	r_a	280	Ω

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

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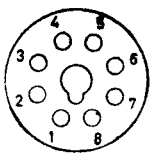
BASE—108



Viewed from free end of pins

CONNECTIONS

Pin 1	Grid 1	g′
Pin 2	Anode 1	a′
Pin 3	Cathode 1	k′
Pin 4	Grid 2	g″
Pin 5	Anode 2	a″
Pin 6	Cathode 2	k″
Pin 7	Heater	h
Pin 8	Heater	h

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