

Mullard

DOUBLE-DIODE-TRIODE

TDD13C

The TDD13c is an indirectly heated double-diode-triode for use as combined detector and L.F. amplifier and for the application of automatic volume control in D.C./A.C. mains receivers.

HEATER CHARACTERISTICS

Heater Voltage	...	...	$V_f = 13.0$ volts.	Overall Length	...	$= 128$ mm.
Heater Current	...	...	$I_f = 0.2$ amp.	Overall Diameter	...	$= 45$ mm.
Heating Time	—60 seconds					
				Bulb Finish	—Metallised	

DIMENSIONS

OPERATING CHARACTERISTICS (Triode)

Normal Anode Voltage	...	...	...	V_{aw}	$= 200$ volts
Anode Current ($-V_{g1} = 5.0$)	...	...	...	I_{aw}	$= 4.0$ mA
Grid Volts ($I_a = 4.0$ mA)	...	...	...	$-V_{g1w}$	$= 5.0$ volts
Mutual Conductance	...	...	...	S_w	$= 2.0$ mA/V
Anode Impedance	...	...	...	R_{iw}	$= 13,500$ ohms
Amplification Factor	...	...	...	G_w	$= 27$
Cathode Bias Resistor	...	...	...	R_k	$= 1,250$ ohms

OPERATING DATA AS R.C. AMPLIFIER

Anode Voltage (Line)	...	...	...	V_a	$= 200$ volts
Anode Resistance	...	...	...	R_a	$= 160,000$ ohms
Bias Voltage	...	...	...	$-V_{g1}$	$= 3.6$ volts
Anode Current	...	...	...	I_a	$= 0.65$ mA
Bias Resistance	...	...	...	R_k	$= 5,500$ ohms
Amplification Factor	...	...	...	G	$= 19.5$
Maximum Output Volts ($D = 5\%$ 2nd H.)	...	...	...	V_o	$= 37$ v. R.M.S.

CAPACITIES

Grid-Cathode	...	...	...	C_{gk}	$= 3.5 \mu\mu F$
Anode-Cathode	...	...	...	C_{ak}	$= 2.9 \mu\mu F$
Cathode-Diode (1)	...	...	...	C_{kd1}	$= 2.5 \mu\mu F$
Cathode-Diode (2)	...	...	...	C_{kd2}	$= 3.25 \mu\mu F$
Diode (1)-Diode (2)	...	...	...	C_{d1d2}	$= 0.3 \mu\mu F$
Diode (1)-Control Grid	...	...	...	C_{d1g}	$= < 0.0015 \mu\mu F$
Diode (2)-Control Grid	...	...	...	C_{d2g}	$= < 0.0015 \mu\mu F$

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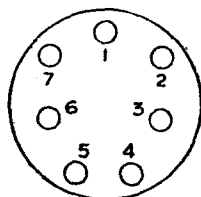
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LIMITS

Maximum Anode Voltage	...	...	$V_{a\max}$	= 200 volts
Maximum Anode Dissipation	...	...	$W_{a\max}$	= 1.5 watts
Maximum Diode Anode Voltage (Peak)	...	...	$V_{d\max}$	= 200 volts
Maximum Diode Anode Current	...	...	$I_{d\max}$	= 0.8 mA
Maximum Cathode Current	...	...	$I_{k\max}$	= 10.0 mA
Maximum Resistance in Grid Circuit	...	...	$R_{g1A\max}$	= 1.5 megohms
Maximum Voltage—Heater to Cathode	...	...	$V_{fk\max}$	= 125 volts
Maximum Resistance—Heater to Cathode	...	...	$R_{fk\max}$	= 20,000 ohms
Range of Grid Voltage for 1 microamp. grid current = -0.2 to -0.8 volt				

CONNECTIONS

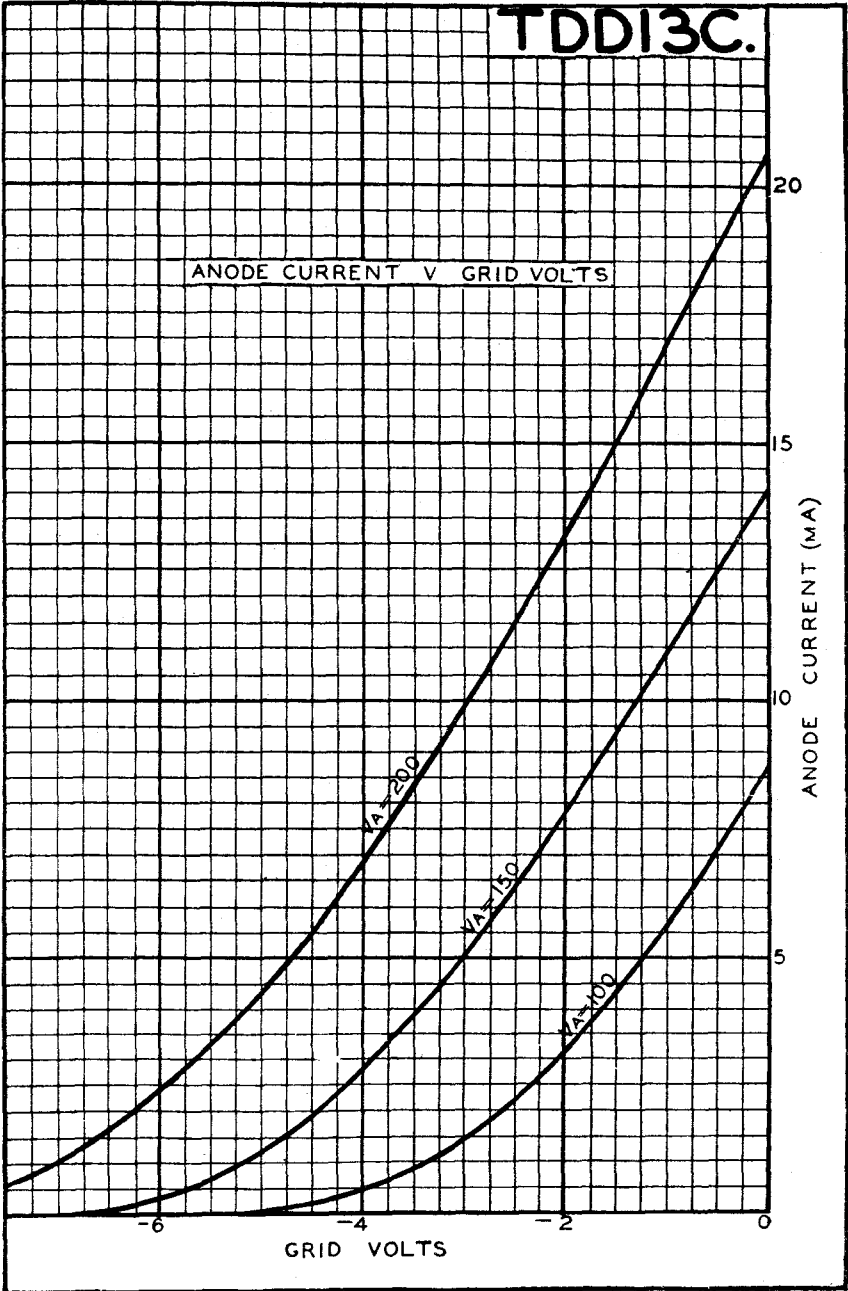


Viewed from free end of pins.

- Pin No. 1 Diode (1)
" 2 Metallisation
" 3 Diode (2)
" 4 Heater
" 5 Heater
" 6 Cathode
" 7 Anode
Top Cap—Control Grid (G_1)

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