

TRIPLE DIODE-TRIODE

Triple diode-triode intended for F.M. and A.M. signal detection and A.F. signal amplification.

QUICK REFERENCE DATA			
<u>Triode section</u>			
Anode current	I_a	0.8	mA
Transconductance	S	1.45	mA/V
Amplification factor	μ	70	-

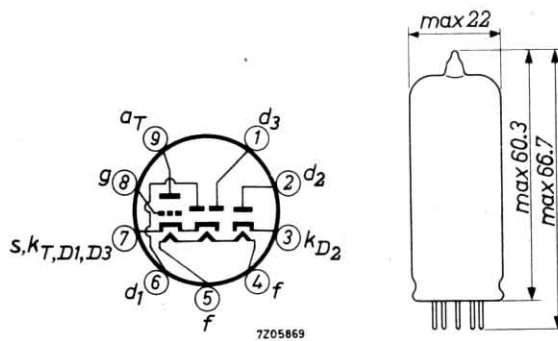
HEATING: Indirect by A.C. or D.C.; parallel supply

Heater voltage	V_f	6.3	V
Heater current	I_f	480	mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



7Z2 7133

EABC80

CAPACITANCES

Triode section

Grid to all except anode	$C_{g(a)}$	1.9 pF
Anode to all except grid	$C_{a(g)}$	1.4 pF
Anode to grid	C_{ag}	2.0 pF
Grid to heater	C_{gf}	max. 0.04 pF

Diode sections

Diode No.1 to all	C_{d1}	0.8 pF
Diode No.2 to all	C_{d2}	4.8 pF
Diode No.3 to all	C_{d3}	4.8 pF
Cathode (D ₂) to all	C_{kD_2}	4.9 pF
Diode No.1 to heater	C_{d1f}	max. 0.25 pF
Diode No.3 to heater	C_{d3f}	max. 0.2 pF
Cathode (D ₂) to heater	C_{kD_2f}	2.5 pF

Between triode and diode sections

Anode to diode No.1	C_{ad1}	max. 0.12 pF
Anode to diode No.3	C_{ad3}	max. 0.1 pF
Anode to cathode (D ₂)	C_{akD_2}	max. 0.01 pF
Grid to diode No.1	C_{gd1}	max. 0.07 pF
Grid to diode No.3	C_{gd3}	max. 0.02 pF
Grid to cathode (D ₂)	C_{gkD_2}	max. 0.005 pF

TYPICAL CHARACTERISTICS Triode section

Anode voltage	V_a	100	250	V
Grid voltage	V_g	-1	-3	V
Anode current	I_a	0.8	1.0	mA
Transconductance	S	1.45	1.4	mA/V
Amplification factor	μ	70	70	-
Internal resistance	R_i	48	50	k Ω

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OPERATING CHARACTERISTICS

Triode section as RC coupled A.F. amplifier

Grid resistor $R_g = 10 \text{ M}\Omega$

Supply voltage	V_b	250	250	250	200	200	200	V
Anode resistor	R_a	220	100	47	220	100	47	$\text{k}\Omega$
Grid resistor next stage	$R_{g'}$	0.68	0.33	0.15	0.68	0.33	0.15	$\text{M}\Omega$
Anode current	I_a	0.76	1.40	2.20	0.56	1.00	1.60	mA
Voltage gain	V_o/V_i	54	47	36	53	44	34	-

Distortion:

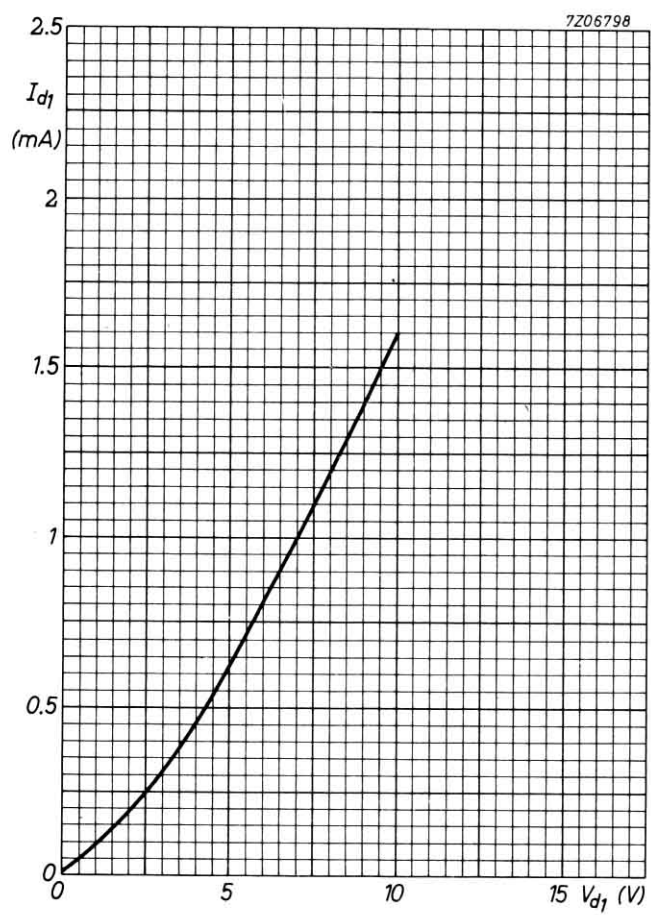
at output voltage $V_o = 3 \text{ VRMS}$	d_{tot}	0.2	0.25	0.3	0.3	0.4	0.5	%
at output voltage $V_o = 5 \text{ VRMS}$	d_{tot}	0.25	0.5	0.6	0.4	0.6	0.9	%
at output voltage $V_o = 8 \text{ VRMS}$	d_{tot}	0.6	0.8	1.0	0.9	1.0	1.5	%

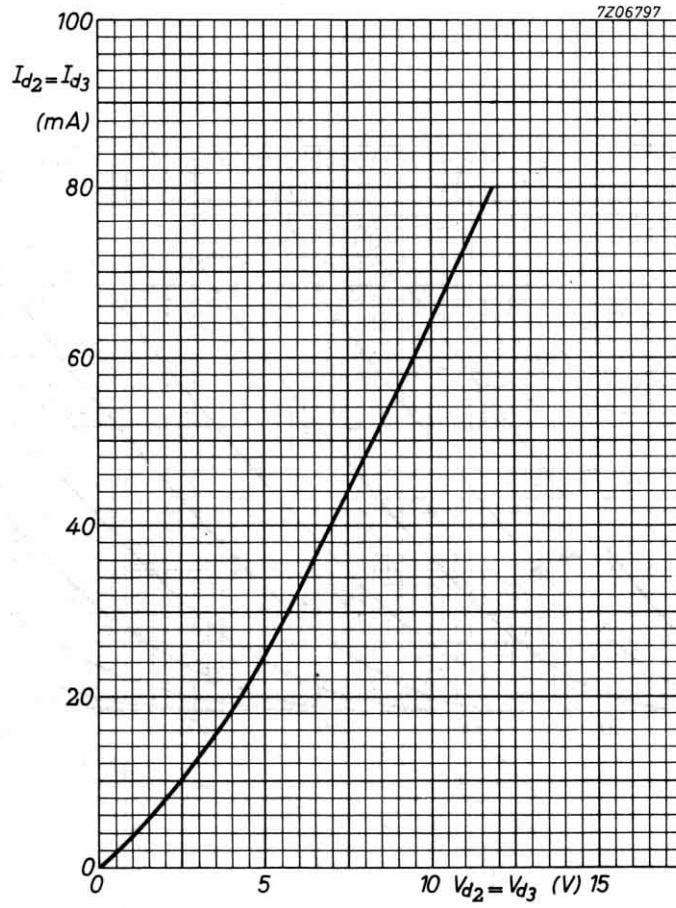
Supply voltage	V_b	170	170	170	100	100	100	V
Anode resistor	R_a	220	100	47	220	100	47	$\text{k}\Omega$
Grid No.1 resistor next stage	R_{g1}	0.68	0.33	0.15	0.68	0.33	0.15	$\text{M}\Omega$
Anode current	I_a	0.46	0.82	1.25	0.21	0.35	0.52	mA
Voltage gain	V_o/V_i	51	42	32	44	35	26	-

Distortion:

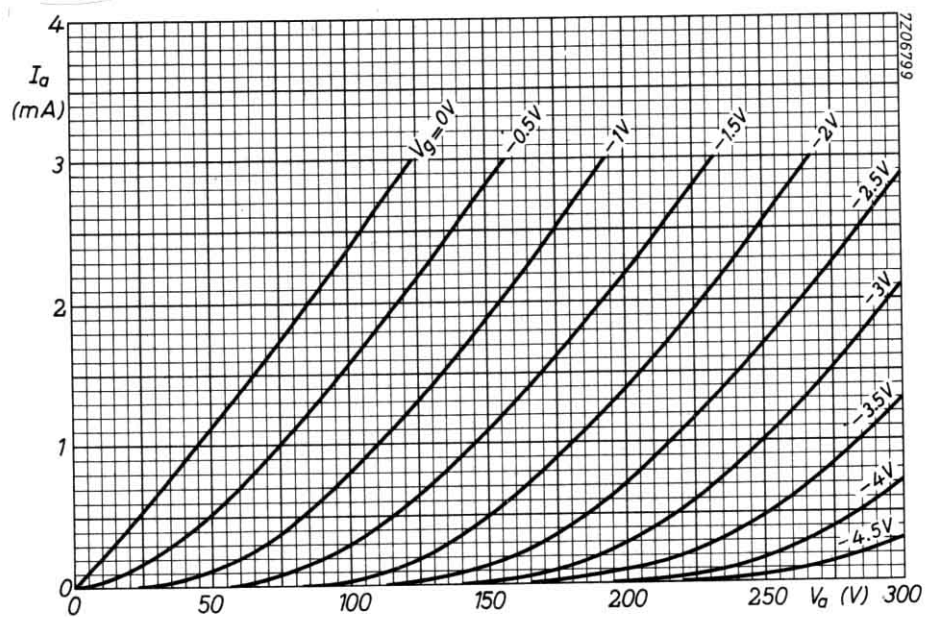
at output voltage $V_o = 3 \text{ VRMS}$	d_{tot}	0.4	0.5	0.6	1.0	1.3	2.0	%
at output voltage $V_o = 5 \text{ VRMS}$	d_{tot}	0.5	0.8	1.1	1.7	2.3	4.3	%
at output voltage $V_o = 8 \text{ VRMS}$	d_{tot}	1.1	1.3	2.0	-	-	-	%

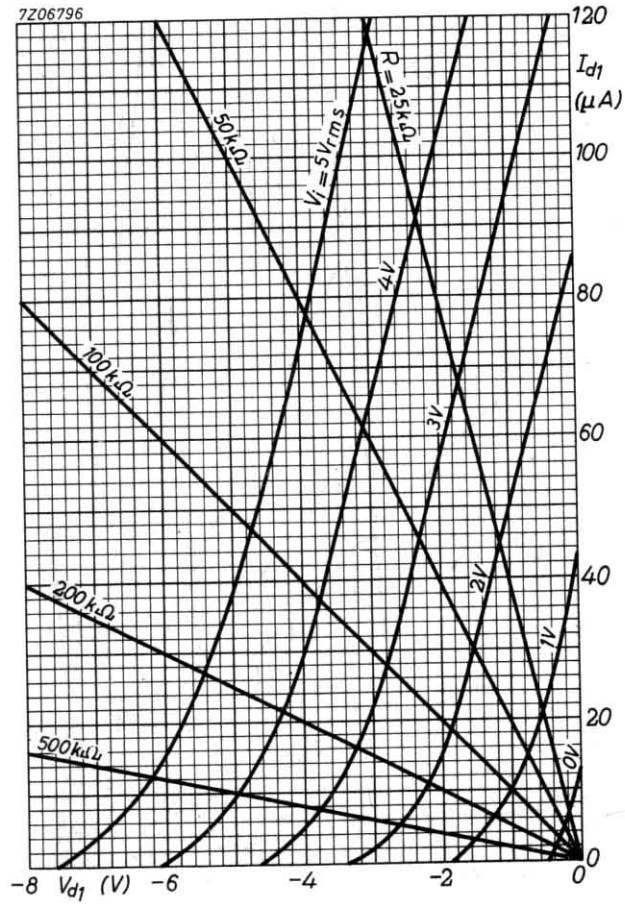
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