

SPECIAL QUALITY, LONG LIFE DOUBLE TRIODE with high mutual conductance and low noise for use in cascode circuits, in R.F. or I.F. amplifiers

HEATING

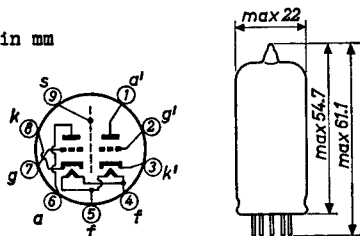
Indirect by A.C. or D.C.; parallel supply

Heater voltage $V_f = 6.3 \text{ V}$

Heater current $I_f = 475 \text{ mA}$

In order to obtain a prolonged tube life, the deviation of the heater voltage should not exceed 5 % of the nominal value

Dimensions in mm



Base: NOVAL

CAPACITANCES (without external shield)

Grid to all other elements except anode	$C_g = C_{g'} = 4.7 \text{ pF}$
Anode to all other elements except grid	$C_a = 1.9 \text{ pF}$
	$C_{a'} = 1.8 \text{ pF}$
Anode to grid	$C_{ag} = C_{a'g'} = 1.8 \text{ pF}$
Cathode to all other elements except anode	$C_k = C_{k'} = 7.8 \text{ pF}$
Anode to all other elements except cathode	$C_a = 3.5 \text{ pF}$
	$C_{a'} = 3.4 \text{ pF}$
Anode to cathode	$C_{ak} = C_{a'k'} = 0.25 \text{ pF}$
Anode to anode of other section	$C_{aa'} < 0.05 \text{ pF}$
Grid to grid of other section	$C_{gg'} < 0.005 \text{ pF}$

LIFE EXPECTANCY: 10 000 hours

CHARACTERISTICS

Column I: Setting of the tube and typical (average) measuring results of new tubes

Column II: Characteristics range values for equipment design

Typical characteristics

	I	II
Anode supply voltage	$V_{ba} = 100$	V
Grid supply voltage	$V_{bg} = +9$	V
Cathode resistor	$R_k = 350$	Ω
Anode current	$I_a = 30$	28-32 mA
Mutual conductance	$S = 18$	15-21.5 mA/V
Amplification factor	$\mu = 25$	
Internal resistance	$R_i = 1.4$	k Ω
Equivalent noise resistance	$R_{eq} = 200$	Ω
Noise figure	$F = 5.7$	dB ¹⁾
Negative grid current	$-I_g =$	< 0.3 μ A

	I	II
Anode supply voltage	$V_{ba} = 60$	V
Cathode resistor	$R_k = 80$	Ω
Anode current	$I_a = 15$	mA
Mutual conductance	$S = 14$	mA/V
Amplification factor	$\mu = 25$	
Internal resistance	$R_i = 1.85$	k Ω
Noise figure	$F = 5$	dB ¹⁾

SHOCK RESISTANCE: acceleration 500 g²⁾)

VIBRATION RESISTANCE: vibrational acceleration of 2.5 g at a frequency of 50 c/s²⁾)

¹⁾ Measured in a cascode circuit matched to minimum noise

²⁾ These test conditions are only given for evaluation of the ruggedness of the tube and should by no means be interpreted as suitable operating conditions

LIMITING VALUES (Absolute limits; each system)

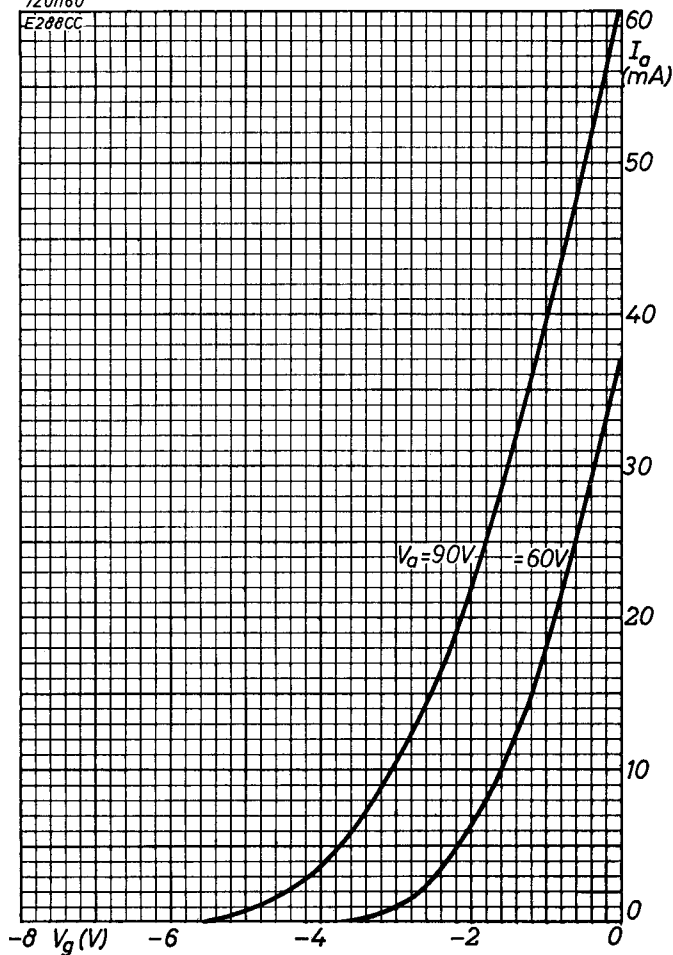
Anode voltage in cold condition	V_{ao}	= max. 450 V
Anode voltage	V_a	= max. 250 V
Anode dissipation	W_a	= max. 3 W
Negative grid voltage	$-V_g$	= max. 50 V
Peak negative grid voltage	$-V_{gp}$	= max. 150 V ¹⁾
Grid circuit resistance with automatic bias	R_g	= max. 1 MΩ
Cathode current	I_k	= max. 40 mA
Peak cathode current	I_{kp}	= max. 400 mA ¹⁾
Voltage between heater and cathode	V_{kf}	= max. 150 V
Bulb temperature	t_{bulb}	= max. 190 °C

¹⁾ Maximum pulse duration 10 μsec; maximum duty factor 1 %.

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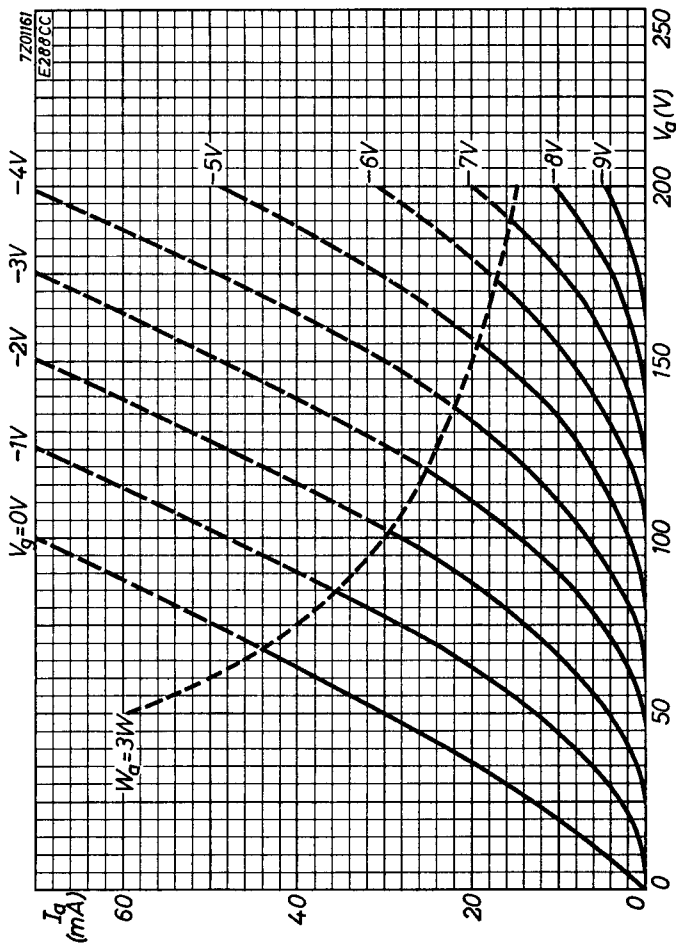
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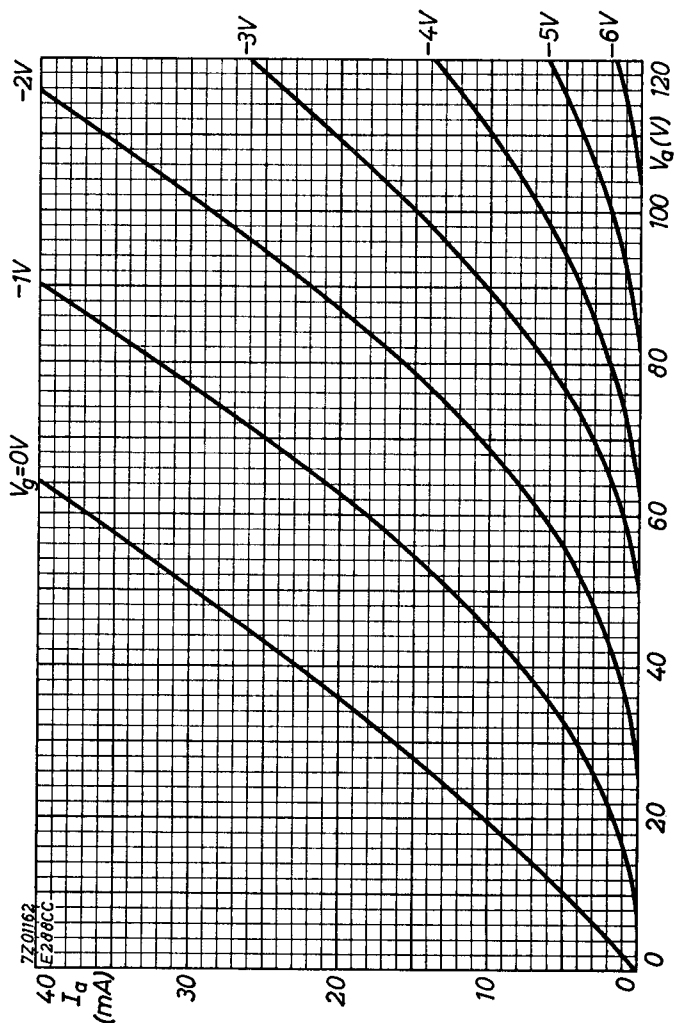
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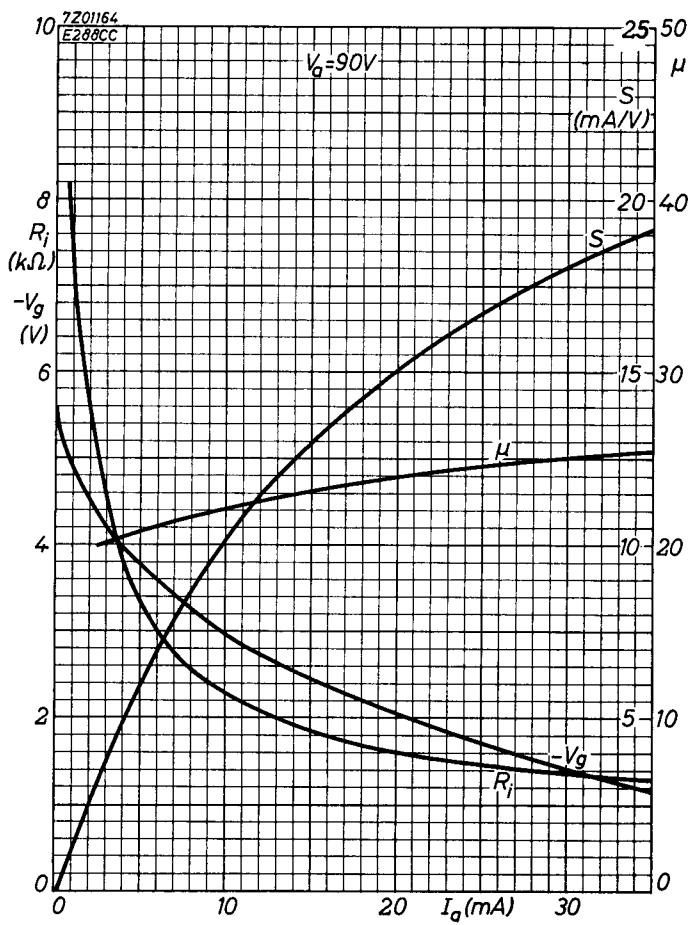
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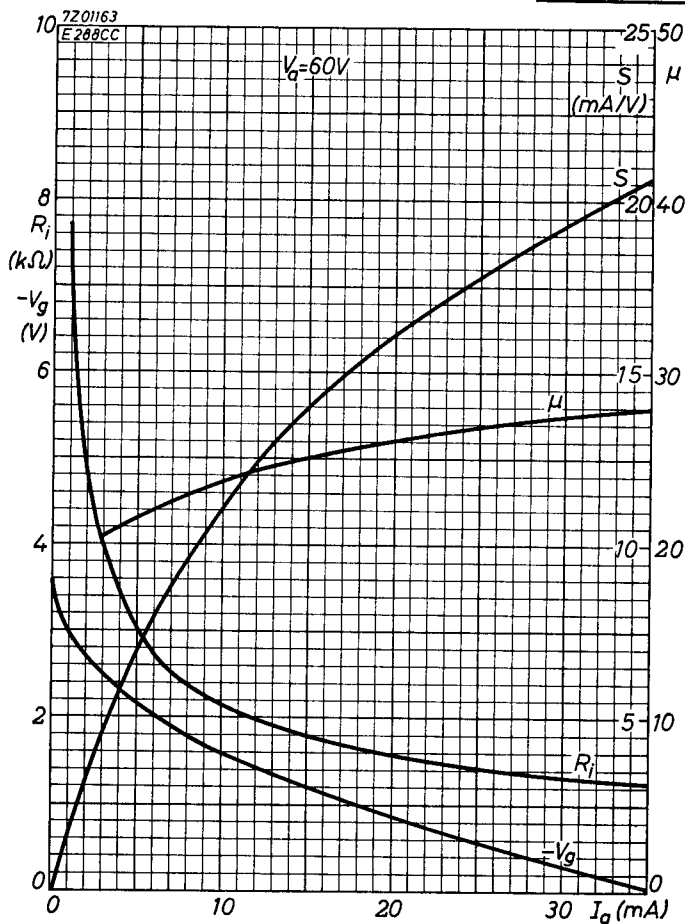
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page	sheet	date
1	1	1962.09.09
2	2	1962.09.09
3	3	1962.09.09
4	A	1962.09.09
5	B	1962.09.09
6	C	1962.09.09
7	D	1962.09.09
8	E	1962.09.09
9	FP	1999.06.09