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

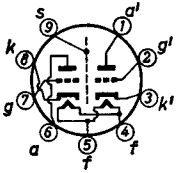
HEATING

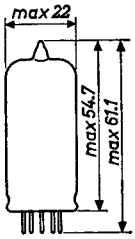
Indirect by A.C. or D.C.; parallel supply

Heater voltage	V_f = 6.3 V
Heater current	I_f = 475 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 pF
Anode to all other elements except grid	C_a	=	1.9 pF
	$C_{a'}$	=	1.8 pF
Anode to grid	$C_{ag} = C_{a'g'}$	=	1.8 pF
Cathode to all other elements except anode	$C_k = C_{k'}$	=	7.8 pF
Anode to all other elements except cathode	C_a	=	3.5 pF
	$C_{a'}$	=	3.4 pF
Anode to cathode	$C_{ak} = C_{a'k'}$	=	0.25 pF
Anode to anode of other section	$C_{aa'}$	<	0.05 pF
Grid to grid of other section	$C_{gg'}$	<	0.005 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	μ	=	25		
Internal resistance	R_i	=	1.4		kΩ
Equivalent noise resistance	R_{eq}	=	200		Ω
Noise figure	F	=	5.7		dB[1])
Negative grid current	$-I_g$	=		< 0.3	μA

			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	μ	=	25		
Internal resistance	R_i	=	1.85		kΩ
Noise figure	F	=	5		dB[1])

SHOCK RESISTANCE: acceleration 500 g[2])

VIBRATION RESISTANCE: vibrational acceleration of 2.5 g at a frequency of 50 c/s[2])

[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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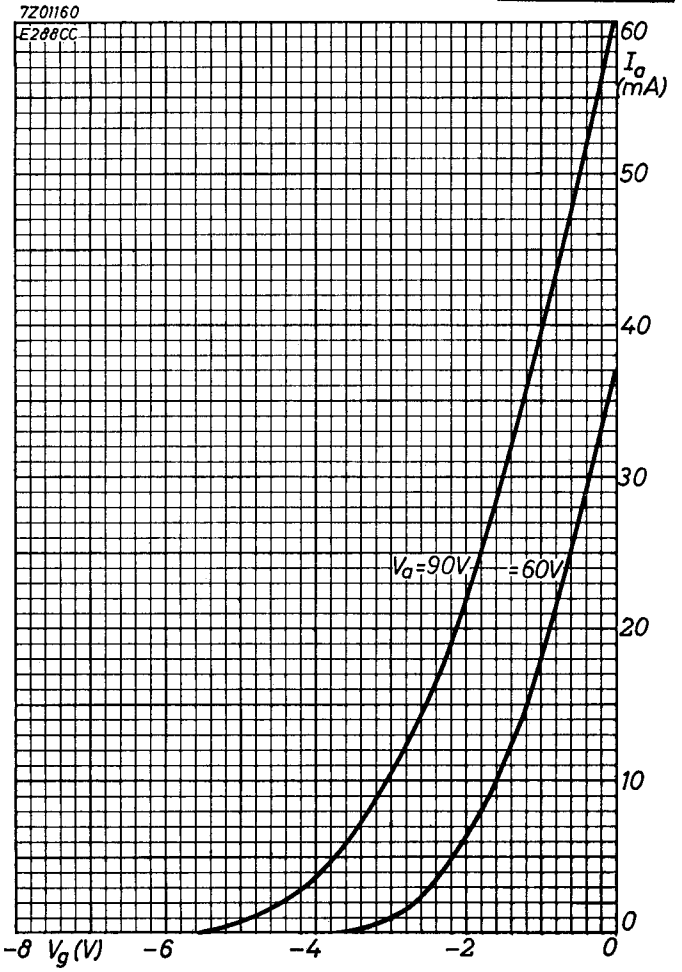

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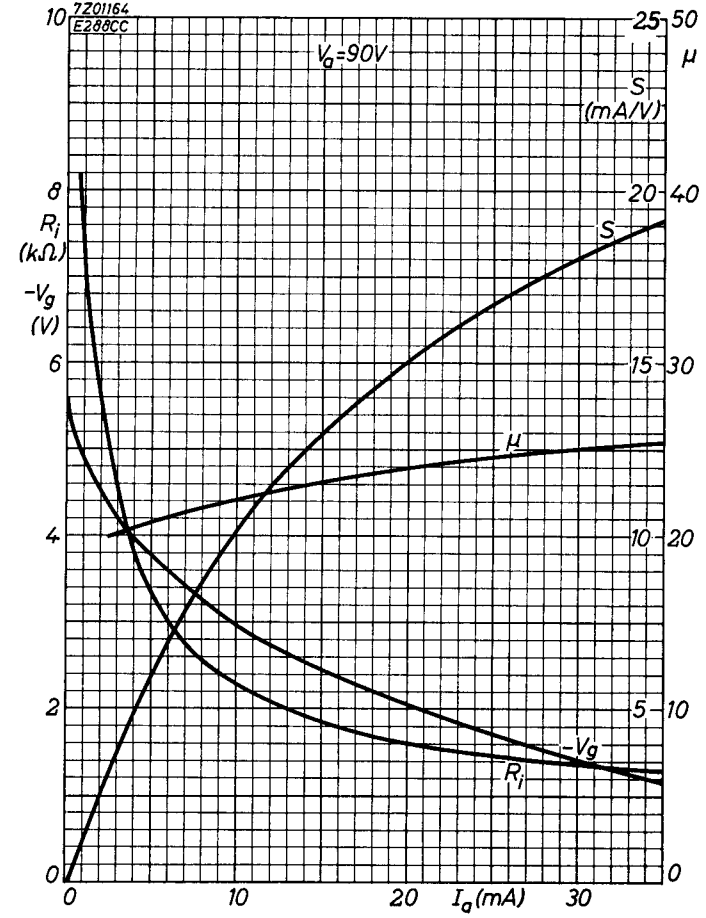

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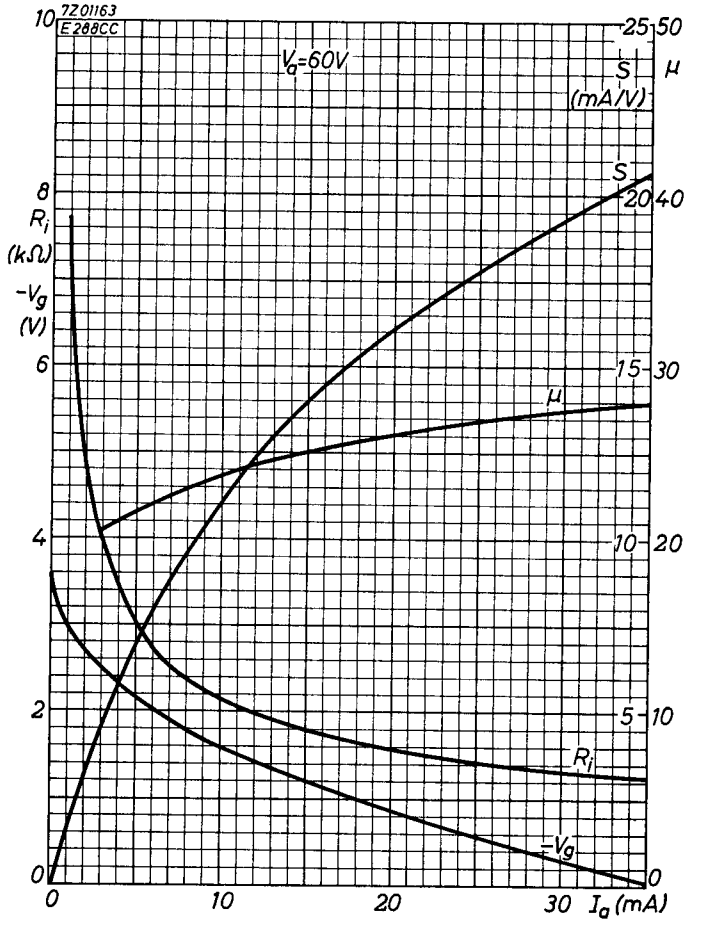

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PHILIPS

Electronic Tube

HANDBOOK

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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