Rogers Electronic Tubes & Components

SPECIAL QUALITY DOUBLE TRIODE

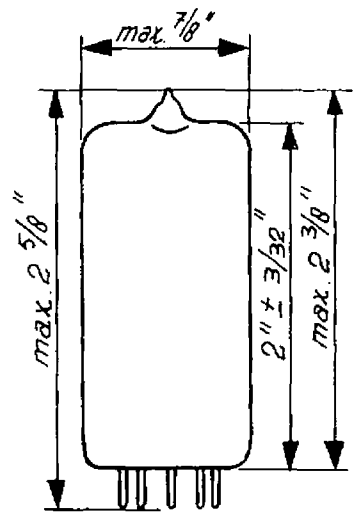
The 7062 is a special quality double triode with separate cathode connections especially designed for application in electronic computer circuits. The tube will maintain its emission capabilities after long periods of operation under cut-off conditions.

The 7062 is not intended to be used in circuits critical as to hum, microphony and noise.

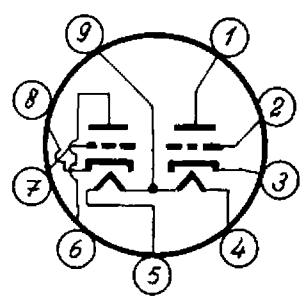
MECHANICAL DATA

Cathode	Coated, unipotential
Base	E9-1
Bulb	T6 1/2
Outline	6-3
Basing	9A
Mounting position	any

TUBE OUTLINE



BOTTOM VIEW OF BASE



BASE PIN No.	ELEMENT	
1	plate	triode No.2
2	grid	
3	cathode	
4	heater	
5	heater	
6	plate	triode No.1
7	grid	
8	cathode	
9	heater mid-tap	

HEATER DATA

Heater arrangement	series	parallel	
Heater voltage	12.6	6.3	volts
Heater current	200	400	mamps

from JEDEC release #2556, Aug. 3, 1959

DIRECT INTERELECTRODE CAPACITANCES

	triode No.1	triode No.2	
Plate to cathode and heater	0.5	0.45	µµF
Grid to cathode and heater	3.5	3.5	µµF
Plate to grid	2.2	2.3	µµF
Cathode to heater	3.5	3.5	µµF
	between the triode sections		
Plate to plate	max. 1.3		µµF
Grid to grid	max. 0.06		µµF

MAXIMUM RATINGS (absolute limits; each section)

Plate voltage	max.	275 volts
Plate voltage without current	max.	600 volts
Plate dissipation	max.	2 watts
Negative grid voltage	max.	100 volts
Peak negative grid voltage (pulse time max. 10 µsec at a duty cycle of 1%)	max.	200 volts
Positive grid voltage	max.	1 volt
Grid current	max.	2 mamps
Peak grid current (pulse time max. 10 µsec at a duty cycle of 1%)	max.	50 mamps
Cathode current	max.	20 mamps
Peak cathode current (pulse time max.10 µsec at a duty cycle of 1%)	max.	200 mamps
Grid circuit resistance with automatic bias	max.	1 megohm
Grid circuit resistance with fixed bias	max.	0.5 megohm
Heater to cathode voltage		
cathode pos. with respect tc heater	max.	200 volts
cathode neg. with respect to heater	max.	100 volts
Heater voltage x)	6.3 ± 5% or 12.6 ± 5%	
Bulb temperature //	max. 170 centigrades	

// Tube life and reliability of performance will be enhanced by operation at lower temperature.

x) In order to obtain a prolonged tube life the maximum variation should be less than ± 5%.

TYPICAL CHARACTERISTICS

Plate voltage	100	100	150	150	volts
Grid voltage	-0.8		-1.85	-7.5	volts
Grid supply voltage	-	100	-	-	volts
Grid circuit resistance	-	0.5	-	-	megohm
Plate current	8.5	17.8	8.5	max.0.15	mamps
Transconductance	7800	-	6400	-	micromhos
Amplification factor	50	-	46	-	
Internal resistance	6400	-	7200	-	ohms

CHARACTERISTIC RANGE VALUES FOR EQUIPMENT DESIGN

Heater voltage for all items = 6.3 volts

	Initial		End of life °)		
	min.	max.	min.	max.	
Heater current	380	420	380	480	mamps
Plate current at					
plate supply volt. = 150 volts					
cathode resistor = 220 ohms	6.3	10.7	5.0	-	mamps
Transconductance					
plate supply volt. = 150 volts					
cathode resistor = 220 ohms	5300	8100	4000	-	micromhos
Plate current at					
plate voltage = 150 volts					
grid voltage = -7.5 volts	-	150	-	150	micromamps
Plate current at					
plate voltage = 100 volts					
Grid supply volt. = 100 volts					
Grid circuit resistance = 0.5 megohm	13.6	22.0	9.5	-	mamps
Difference in grid voltage of both section at					
plate voltage = 150 volts					
Plate current = 0.15 mamps	-	2	-	2	volts

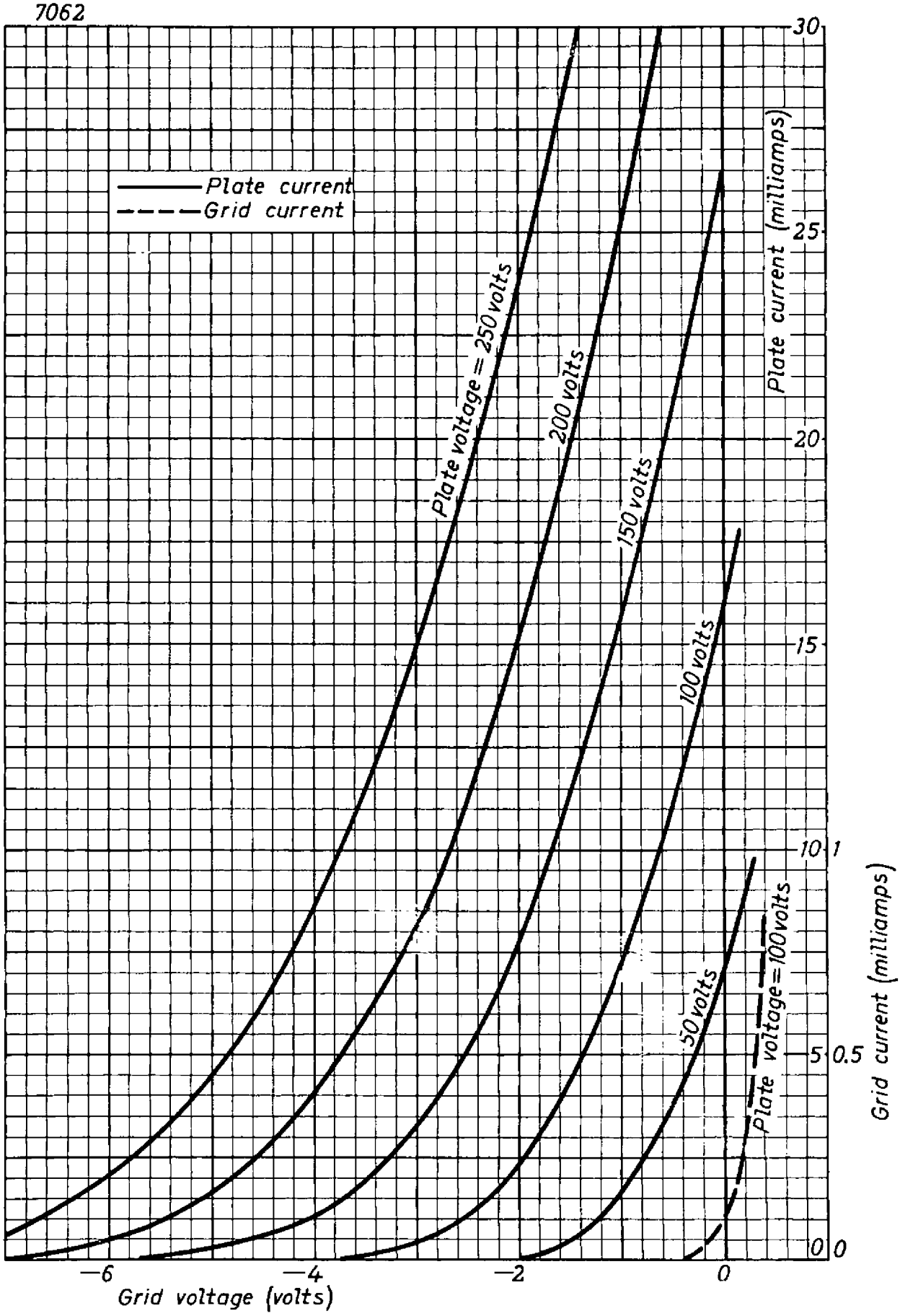
°)life test conditions are :

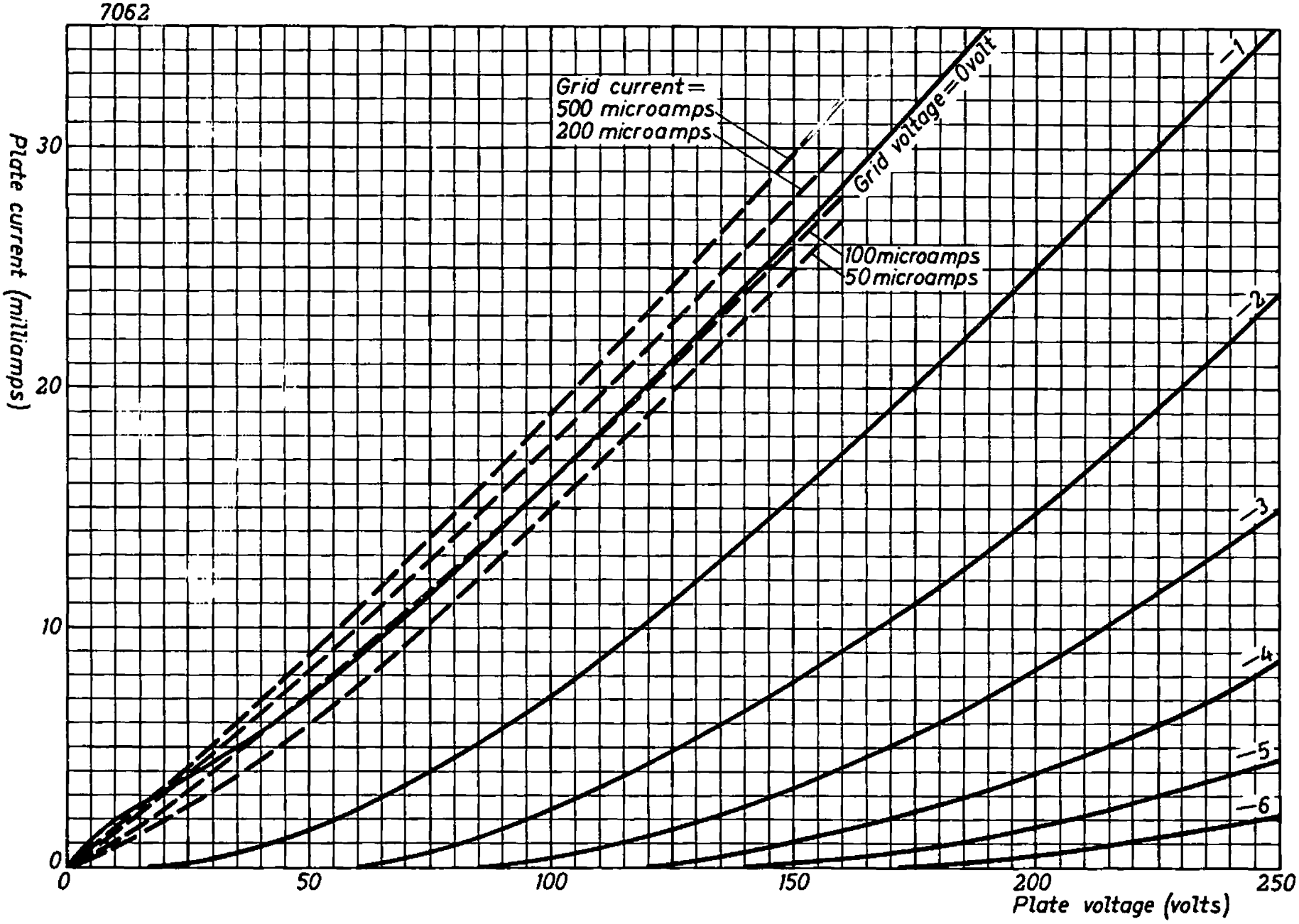
Heater voltage	6.3 volts
Plate supply voltage	150 volts
Grid supply voltage	150 volts
Plate series resistance	2600 ohms
Grid circuit resistance	1.5 megohms
Cathode to heater voltage(cathode pos.)	200 volts

CHARACTERISTIC RANGE VALUES FOR EQUIPMENT DESIGN (continued)

Heater voltage for all items = 6.3 volts

	Inital min.	Inital max.	End of life min.	End of life max.	
Negative grid current					
plate supply volt. = 150 volts					
cathode resistor = 220 ohms					
grid leak = 0.1 megohm	-	0.2	-	1	microamp
Cathode to heater leakage current at					
cathode to heater voltage					
(cathode pos.) = 200 volts					
series resistor = 1 megohm	-	15	-	30	microamps
Insulation resistance between two electrodes at 275 volts	100	-	20	-	megohms
Direct interelectrode capacitances of triode No.1					
plate to cathode and heater	0.30	0.70	-	-	µµF
grid to cathode and heater	3.0	4.0	-	-	µµF
plate to grid	1.8	2.6	-	-	µµF
Direct interelectrode capacitances of triode No.2					
plate to cathode and heater	0.25	0.65	-	-	µµF
grid to cathode and heater	3.0	4.0	-	-	µµF
plate to grid	1.9	2.7	-	-	µµF


7062
Plate current
Grid current
Plate voltage = 250 volts
200 volts
150 volts
100 volts
50 volts
Plate voltage = 100 volts
Plate current (milliamps)
Grid current (milliamps)
Grid voltage (volts)
30
25
20
15
10
5
0
1
0.5
0
−6
−4
−2
0


7062
Grid current =
500 microamps
200 microamps
100 microamps
50 microamps
Grid voltage = 0 volt
−1
−2
−3
−4
−5
−6
Plate current (milliamps)
0
10
20
30
0
50
100
150
200
250
Plate voltage (volts)