

Rogers Electronic Tubes & Components

7119

SPECIAL QUALITY DOUBLE TRIODE

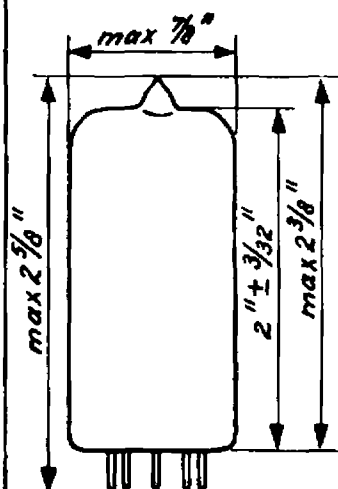
The 7119 is a special quality double triode with separate cathode connections especially designed for application in electronic computer circuits. The tube will maintain its emission capabilities after long periods of operation under cut-off conditions.

The 7119 is not intended to be used in circuits critical as to hum, microphony and noise.

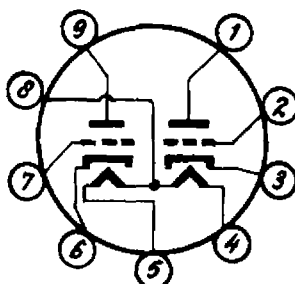
Mechanical data

Cathode	coated, unipotential
Base	E 9-1
Bulb	T6 1/2
Outline	6 - 3
Mounting position	any
Basing designation	9H

TUBE OUTLINE



BOTTOM VIEW OF BASE



BASE PIN No.

ELEMENT

1	Plate	} Triode no.2
2	Grid	
3	Cathode	
4	Heater	
5	Heater	
6	Cathode triode no.1	
7	Grid triode no. 1	
8	Heater mid tap	
9	Plate triode no.1	

Heater data

Heater arrangement	Series	Parallel	
Heater voltage	12.6	6.3	volts
Heater current	320	640±35	mamps

Direct interelectrode capacitances

	<u>Triode_no.1</u>	<u>Triode_no.2</u>
Plate to cathode and heater	1.1	1.0 μF
Grid to cathode and heater	5.8	5.8 μF
Plate to grid	3.9	4.0 μF
Cathode to heater	3.7	3.7 μF
	<u>Between the triode sections</u>	
Plate to plate		0.6 μF
Grid to grid		max. 0.15 μF

Maximum ratings (absolute limits; each section)

Plate voltage	300 volts max.
Plate voltage without current	600 volts max.
Plate dissipation	4.5 watts max.
Total plate dissipation of both sections	8 watts max.
Negative grid voltage	100 volts max.
Peak negative grid voltage (pulse time max. 10 μsec at a duty cycle of 1 %)	200 volts max.
Positive grid voltage	1 volt max.
Peak positive grid voltage (pulse time max. 10 μsec at a duty cycle of 1 %)	30 volts max.
Grid current	8 mamps max.
Peak grid current (pulse time max. 10 μsec at a duty cycle of 1 %)	200 mamps max.
Peak cathode current (pulse time max. 10 μsec at a duty cycle of 1 %)	400 mamps max.
Cathode current	60 mamps max.
Grid circuit resistance with automatic bias	1 megohm max.
Grid circuit resistance with fixed bias	0.5 megohm max.
Peak heater-to-cathode voltage (pulse time max. 10 μsec at a duty cycle of 1 %)	200 volts max.
D.C. component of heater-to-cathode voltage	120 volts max.
Bulb temperature #	160 centigrades max.

Typical characteristics

Plate voltage	120	150 volts
Grid voltage	-2	-14 volts
Plate current	36	max. 0.2 mamp
Transconductance	15000	micromhos
Amplification factor	24	

Characteristic range values for equipment design

	Initial		End of life	
	min.	max.	min.	max.
Plate current at				
Plate voltage 90 volts				
Grid current 250 μ amps	41	62	24	mamps
Plate current at				
Plate voltage 120 volts				
Neg.grid voltage -2 volts	26	45		mamps
Plate current at				
Plate voltage 150 volts				
Neg.grid voltage -14 volts		0.2		mamps
Transconductance at				
Plate voltage 120 volts				
Cathode resistor 55 Ω	11200	18800	5600	micromhos
Negative grid current at				
Plate voltage 120 volts				
Neg.grid voltage -2 volts				
Grid series resistor 0.1 megohm		0.2		1 μ amps
Cathode to heater leakage current at				
Cathode to heater voltage (cathode pos) 200 volts				
series resistor 1 megohm		15		30 μ amps
Insulation resistance between two electrodes	100		20	megohm

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

