

MECHANICAL DATA

Bulb	T-6½
Base	E9-1
Outline	6-3
Cathode	Coated Unipotential
Mounting Position	Any
Basing	9RF

Pin Connection

Pin 1 - Cathode	Pin 5 - Heater
Pin 2 - Grid 1	Pin 6 - Grid 3
Pin 3 - No connection	Pin 7 - Plate
Pin 4 - Heater	Pin 8 - No connection
	Pin 9 - Grid 2

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics

Heater Operation	Series
Heater Voltage	8.7 Volts
Heater Current	450 Ma
Heater Warm-up Time ²	11 Seconds

Ratings (Design Maximum Values)

	Min-Max
Heater Current ³	420-480 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts Max.
Heater Positive with Respect to Cathode	
DC	100 Volts Max.
Total DC and Peak	200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

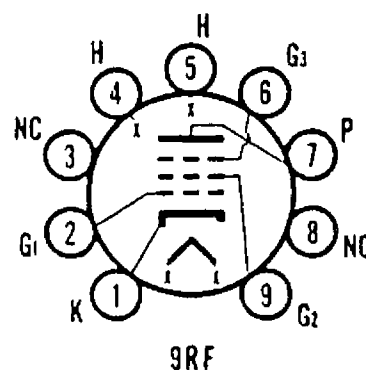
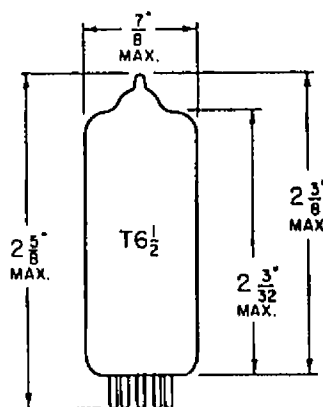
Grid 1 to plate: g1 to p	0.20 pf
Grid 3 to plate: g3 to p	2.2 pf
Grid 1 to all: g1 to h+k+g2+g3+p	16.5 pf
Grid 2 to all: g2 to h+k+g1+g3+p	9.5 pf
Grid 3 to all: g3 to h+k+g1+g2+p	7.5 pf
Plate to all: p to h+k+g1+g2+g3	3.0 pf
Grid 1 to grid 2: g1 to g2	4.7 pf

RATINGS (Design Maximum Values)

Plate Voltage	400 Volts
Grid #2 Supply Voltage	330 Volts

QUICK REFERENCE DATA

The Sylvania Type 9KC6 is a T6½ frame grid pentode intended for use as a Chroma Band-pass Amplifier, Color Demodulator, or Video Amplifier. It features a dual grid control characteristic.



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A Technical Publication

November 19, 1964
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Grid #2 Voltage	See Rating Chart	
Positive Grid #3 Voltage	0	Volt
Negative Grid #3 Voltage	100	Volts
Positive Grid #1 Voltage	0	Volt
Plate Dissipation	7.0	Watts
Grid #2 Dissipation	1.5	Watts
Grid #1 Circuit Resistance	Self Bias	.5 Megohm
	Fixed Bias	.25 Megohm
Grid #3 Circuit Resistance		1.0 Megohm

Control grid to cathode spacing of this type is of such low order of magnitude as to preclude the use of voltage between these elements of more than 50 volts dc or peak ac in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	250	250	Volts
Grid #2 Voltage	150	100	Volts
Grid #1 Voltage	0	-1.0	Volt
Grid #3 Voltage (referred to negative end of Rk)	0	-25	Volts
Cathode Resistor	56	0	Ohms
Plate Current	18	1.0	ma
Grid #2 Current	9	13.0	ma
Transconductance (grid #1 to plate)	24,000	--	umhos
Transconductance (grid #3 to plate)	500	--	umhos
Plate Resistance (approx.)	55,000	--	ohms
Grid #1 Voltage for Ib=100 μ A (Rk=0)	-4.1	--	Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS ⁴

Eb = 50 Volts, Ec2 = 100 Volts, and Ec1 = 0 Volt
Ib = 25 Ma, and Ic2 = 25 Ma

NOTES:

1. For series operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater current.
2. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.
3. Heater voltage supply variations shall be restricted to maintain heater current within the specified values.
4. Applied for short interval (2 Sec. Max.) so as not to damage tube.

RATING CHART

