



DOUBLE TRIODE

DESCRIPTION

The 2C52 is a heater-cathode type high-mu double triode amplifier, designed for use as a voltage amplifier in critical electronic equipment requiring extreme stability and long life.

MECHANICAL DATA

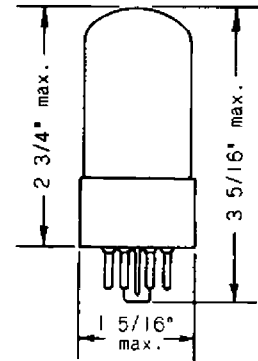
ENVELOPE: T-9 Glass

BASE: Intermediate Shell Octal 8-Pin

TERMINAL CONNECTIONS: (JEDEC Designation B3D)

Pin 1 Grid, Unit 2	Pin 5 Plate, Unit 1
Pin 2 Plate, Unit 2	Pin 6 Cathode, Unit 1
Pin 3 Cathode, Unit 2	Pin 7 Heater
Pin 4 Grid, Unit 1	Pin 8 Heater

MOUNTING POSITION: Any



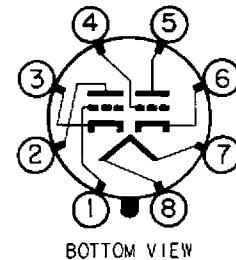
ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: ($\mu\mu\text{fs.}$)*

Grid to Plate	2.7
Grid to Cathode	2.3
Plate to Cathode	0.75
Grid (Unit 1) to Grid (Unit 2)	0.02
Plate (Unit 1) to Plate (Unit 2)	0.65

DESIGN CENTER MAXIMUM RATINGS - EACH UNIT:

Heater Voltage (ac or dc)**	12.6 volts
Plate Voltage	300 volts
Grid Voltage	-100 volts
DC Grid Current	2 ma.
DC Plate Current	5 ma.
Plate Dissipation	1 watt
Heater-Cathode Voltage	90 volts
Maximum Grid Circuit Resistance #	2 megohms



CHARACTERISTICS AND LIMITS - EACH UNIT:

$E_f = 12.6\text{V}; E_b = 250\text{Vdc}; E_c = -2.0\text{Vdc}; E_{hk} = \pm 100\text{Vdc}$

	Min.	Rating	Max.
Heater Current	275	300	325 ma.
Heater-Cathode Current	0	—	20 $\mu\text{a.}$
Plate Current	0.9	1.3	1.7 ma.
Plate Current at $E_c = -5.0\text{Vdc}$	0	—	25 $\mu\text{a.}$
Plate Current Difference between Triode Units	—	—	0.6 ma.
Grid Current	0	—	-0.5 $\mu\text{a.}$
Amplification Factor	85	100	115
Transconductance	1400	1900	2400 μmhos
Voltage Gain ##	50	60	70

TYPICAL OPERATION - RESISTANCE COUPLED AMPLIFIER - EACH UNIT:

$E_f = 12.6\text{V};$ Grid Resistor of following stage = 0.5 meg.; Adequate coupling and Cathode By-pass Condensers:

DC Plate Supply Voltage	100	100	250 volts
Plate Resistor	0.5	0.25	0.25 megohms
Grid Resistor	10	1.0	1.0 megohms
Cathode Resistor	0	15,000	6,000 ohms
Peak Output Voltage	16	13	53 volts
Voltage Gain	45	30	50

(See reverse side for notes)



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- * Without shield. Approximate values for each triode unit.
- ** To achieve long life, the heater voltage variation should not exceed $\pm 5\%$; variations of $\pm 10\%$ are allowable providing they occur no more than 2% of the operating time.
- # For Grid Current bias operation, with a minimum plate resistor of 0.25 megohm, a grid resistor of 10 megohms may be used.
- ## Measured with a 10 megohm grid resistor, zero external bias, 0.5 megohm plate resistor, 10 megohm impedance in following stage and a 100 volt dc plate supply.

