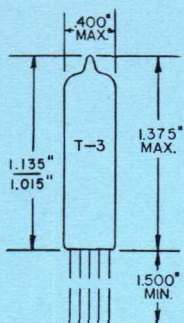


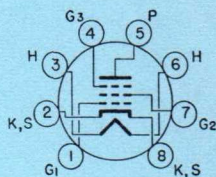
TUNG-SOL**DUAL-CONTROL PENTODE****SUBMINIATURE**

FOR
AMPLIFIER, MIXER
MODULATOR AND GATING SERVICE



GLASS BULB
SUBMINIATURE BUTTON
8 PIN BASE E8-10
OUTLINE DRAWING
JEDEC 3-1

COATED UNIPOTENTIAL CATHODE
ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 8DC

THE 8522 IS A PREMIUM SUBMINIATURE DUAL-CONTROL PENTODE USEFUL AS AN AMPLIFIER OR MIXER UP TO UHF, AND FOR MODULATOR AND GATING SERVICE. IT REPLACES TYPE 5636 WHEN BETTER CONTROL OF INSULATION RESISTANCE AND MICROPHONICS ARE REQUIRED, OR WHEN CONTROL OF GRID #1 TRANSCONDUCTANCE AT SEVERAL GRID #3 BIAS POINTS IS DESIRABLE.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD #318 CONNECTED TO CATHODE	WITHOUT SHIELD	
GRID 1 TO PLATE-MAX.	0.02	0.03	pf
GRID 3 TO PLATE-MAX.	1.1	1.1	pf
GRID 1 TO ALL OTHER ELECTRODES	4.0	4.0	pf
GRID 3 TO ALL OTHER ELECTRODES	4.0	3.8	pf
PLATE TO ALL OTHER ELECTRODES	3.4	1.9	pf
GRID 1 TO GRID 3-MAX.	0.15	0.17	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	150	MA.
LIMITS OF APPLIED VOLTAGE		6.3 ± 0.3	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE			
TOTAL DC AND PEAK-EITHER POLARITY		200	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS

ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

PLATE VOLTAGE	165	VOLTS
GRID 2 VOLTAGE	155	VOLTS
GRID 1 VOLTAGE	0,-55	VOLTS
GRID 3 VOLTAGE	+30	VOLTS
PLATE DISSIPATION	0.70	WATTS
GRID 2 DISSIPATION	0.55	WATTS
CATHODE CURRENT	16	MA.
GRID 1 CIRCUIT RESISTANCE	1.1	MEGOHMS
ENVELOPE TEMPERATURE	220	°C
ALTITUDE	60,000	FEET

AVERAGE CHARACTERISTICS

ALL VOLTAGES REFERRED TO NEGATIVE END OF CATHODE RESISTOR

DUAL CONTROL AMPLIFIER

PLATE VOLTAGE	100	100	VOLTS
GRID 2 VOLTAGE	100	100	VOLTS
GRID 1 SUPPLY VOLTAGE	0	0	VOLTS
GRID 3 VOLTAGE	CATHODE POTENTIAL	SEE BELOW	
CATHODE RESISTOR	150	330	OHMS
PLATE CURRENT	5.3	-	MA.
GRID 2 CURRENT	3.6	-	MA.
GRID 1 TRANSCONDUCTANCE	3,200	-	μMHOS
PLATE RESISTANCE	.11	-	MEGOHM
GRID 3 TRANSCONDUCTANCE			
AT GRID 3 SUPPLY VOLTAGE OF -1 VOLTS	1050	-	μMHOS
GRID 1 TRANSCONDUCTANCE			
AT GRID 3 SUPPLY VOLTAGE OF +0.5 VOLTS	-	2,250	μMHOS
AT GRID 3 SUPPLY VOLTAGE OF -1.65 VOLTS	-	1,300	μMHOS
AT GRID 3 SUPPLY VOLTAGE OF -3.0 VOLTS	-	700	μMHOS
AT GRID 3 SUPPLY VOLTAGE OF -4.0 VOLTS	-	275	μMHOS
GRID 1 VOLTAGE FOR PLATE CURRENT OF 10 μA	-7.5	-	VOLTS
GRID 3 VOLTAGE FOR PLATE CURRENT OF 10 μA	-8	-	VOLTS
LOW - FREQUENCY - VIBRATION OUTPUT			
ACROSS $R_L = 10,000$ OHMS AT 15 G 40 CPS	Max. 60	-	M VOLTS

MIXER

PLATE VOLTAGE	100	VOLTS
GRID 2 VOLTAGE	100	VOLTS
GRID 3 VOLTAGE - DC	0	VOLTS
AC	1.5	VOLTS RMS
GRID 1 VOLTAGE - DC	0	VOLTS
CATHODE RESISTOR	150	OHMS
PLATE CURRENT	3.5	MA.
GRID 2 CURRENT	5.7	MA.
CONVERSION TRANSCONDUCTANCE	1,400	μMHOS
PLATE RESISTANCE	0.32	MEGOHMS