TUNG-SOL

UHF POWER TRIODE

PENCIL TYPE

FOR

RF POWER AMPLIFIER, OSCILLATOR

AND FREQUENCY MULTIPLIER APPLICATIONS

IN MOBILE AND AIRCRAFT EQUIPMENT

PHYSICAL DIMENSIONS SEE OUTLINE DRAWING

ELECTRODE TERMINATIONS SEE OUTLINE DRAWING

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION

THE 5876A IS A COAXIAL METAL-GLASS PENCIL-TYPE MEDIUM MU TRIODE. ITS MAXIMUM PLATE DISSIPATION IS 6¼ WATTS CCS. THE TUBE MAY BE OPERATED WITH FULL RATINGS UP TO A FREQUENCY OF 1,700 MC/S, AND WITH REDUCED RATINGS UP TO 3,000 MC/S.

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID TO PLATE		1.4	pf
GRID TO CATHODE		2.4	pf
PLATE TO CATHODE	MAX.	0.035	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	135	mA
LIMITS OF APPLIED VOLTAGE - AC OR DC		6.3 ± 0.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE		90	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		90	VOLTS
MINIMUM PREHEAT TIME		60	SEC.

AVERAGE STATIC CHARACTERISTICS

PLATE VOLTAGE	250	VOLTS
CATHODE RESISTOR	75	OHMS
PLATE CURRENT	18	mA
TRANSCONDUCTANCE	6,500	μMHOS
AMPLIFICATION FACTOR	56	

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CLASS A_1 – RF AMPLIFIER

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

CONTINUOUS COMMERCIAL SERVICE

DC PLATE VOLTAGE	300	VOLTS
DC GRID VOLTAGE	-100	VOLTS
DC PLATE CURRENT	25	mA
PLATE DISSIPATION - SEE NOTE ON OUTLINE	6.25	WATTS
FREQUENCY FOR OPERATION AT FULL RATINGS	1,700	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	FEET
GRID CIRCUIT RESISTANCE	0.5	MEGOHMS

CLASS C TELEGRAPHY - RF POWER AMPLIFIER AND OSCILLATOR

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

CONTINUOUS COMMERCIAL SERVICE

DC PLATE VOLTAGE	360	VOLTS
DC GRID VOLTAGE	-100	VOLTS
DC PLATE CURRENT	25	mA
DC GRID CURRENT	8	mA
PLATE INPUT	9	WATTS
PLATE DISSIPATION - SEE NOTE ON OUTLINE	6.25	WATTS
FREQUENCY FOR OPERATION AT FULL RATINGS	1,700	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	FEET
GRID CIRCUIT RESISTANCE	0.1	MEGOHMS

TYPICAL OPERATION - OSCILLATOR IN CATHODE - DRIVE CIRCUIT

RF AMPLIFIER WITH CATHODE DRIVE

CONTINUOUS COMMERCIAL SERVICE

FREQUENCY	500	1,700	3,000	MC/S
DC PLATE -TO-GRID VOLTAGE	262	252	252	VOLTS
DC CATHODE-TO-GRID VOLTAGE OBTAINED FROM A GRID RESISTOR	12	2	2	VOLTS
DC PLATE CURRENT	23	23	25	mA
DC GRID CURRENT - APPROX.	6	3	4	mA
USEFUL POWER OUTPUT - APPROX.	3	0.75	0.1	mW

TYPICAL OPERATION - RF POWER AMPLIFIER IN CATHODE - DRIVE CIRCUIT

FREQUENCY	500	MC/S
DC PLATE - TO - GRID VOLTAGE	326	VOLTS
DC CATHODE - TO - GRID VOLTAGE OBTAINED FROM A GRID RESISTOR	51	VOLTS
DC PLATE CURRENT	23	mA
DC GRID CURRENT - APPROX.	7	mA
DRIVING POWER - APPROX.	2	WATTS
USEFUL POWER OUTPUT - APPROX.	5	WATTS

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CLASS C TELEPHONY - PLATE - MODULATED RF POWER AMPLIFIER

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

CONTINUOUS COMMERCIAL SERVICE		
DC PLATE VOLTAGE	275	VOLTS
DC GRID VOLTAGE	-100	VOLTS
DC PLATE CURRENT	22	mA
DC GRID CURRENT	8	mA
PLATE INPUT	6	WATTS
PLATE DISSIPATION - SEE NOTE ON OUTLINE	4.25	WATTS
FREQUENCY FOR OPERATION AT FULL RATINGS	1,700	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	FEET
GRID CIRCUIT RESISTANCE	0.1	MEGOHMS

FREQUENCY MULTIPLIER

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

CONTINUOUS COMMERCIAL SERVICE		
DC PLATE VOLTAGE	330	VOLTS
DC GRID VOLTAGE	-100	VOLTS
DC PLATE CURRENT	22	mA
DC GRID CURRENT	8	mA
PLATE INPUT	7.5	WATTS
PLATE DISSIPATION - SEE NOTE ON OUTLINE	6.25	WATTS
FREQUENCY FOR OPERATION AT FULL RATINGS	1,700	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	FEET

TYPICAL OPERATION - CATHODE DRIVE CIRCUITS

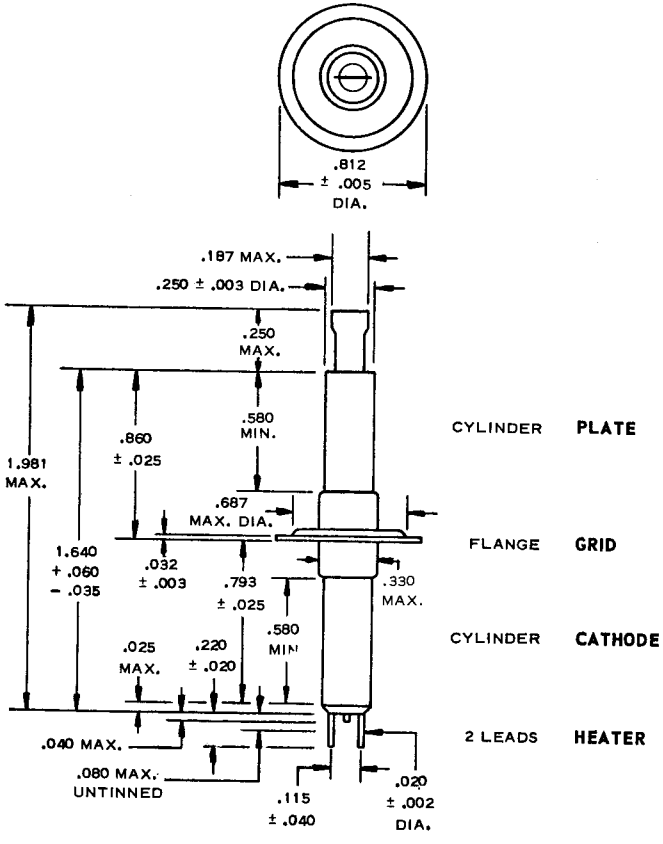
CONTINUOUS COMMERCIAL SERVICE	TRIPLER TO 480 MC/S	DOUBLER TO 960 MC/S	
DC PLATE - TO - GRID VOLTAGE	390	370	VOLTS
DC CATHODE - TO - GRID VOLTAGE OBTAINED FROM A GRID RESISTOR	90	70	VOLTS
DC PLATE CURRENT	18	17.3	mA
DC GRID CURRENT - APPROX.	6	7	mA
DRIVING POWER - APPROX.	2.1	2	WATTS
USEFUL POWER OUTPUT - APPROX.	2.1	2	WATTS

SPECIAL TESTS AND PERFORMANCE DATA

CONTROLLED ON A SAMPLING BASIS

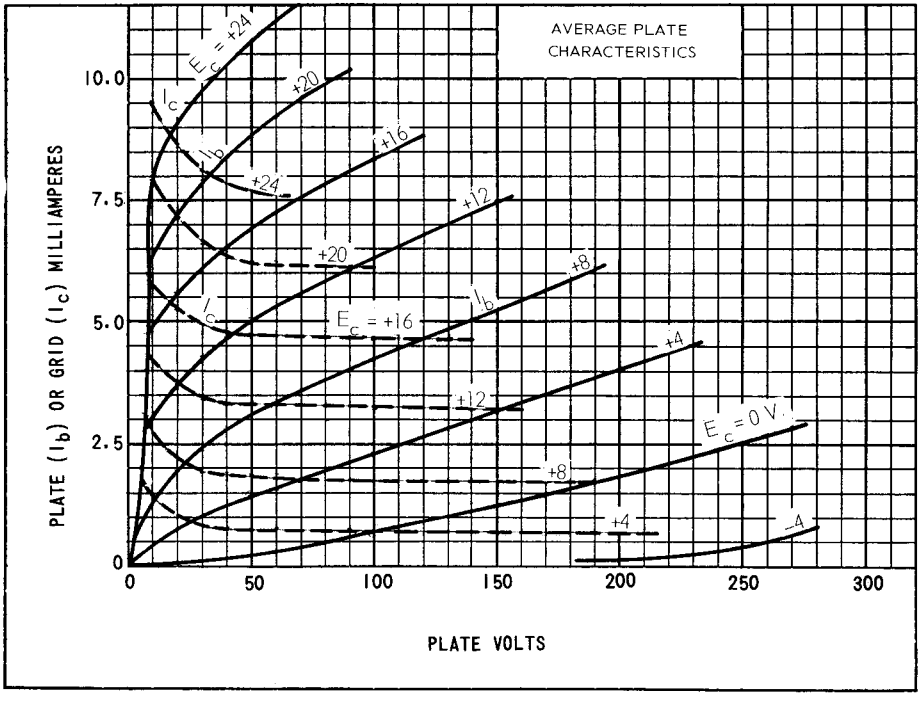
VIBRATION TEST
GLASS SEAL FRACTURE TESTS
HEATER CYCLING LIFE TEST
500 HOUR LIFE TEST IN OSCILLATOR

OUTLINE DRAWING



ALL DIMENSIONS IN INCHES

NOTE: COOLING MUST BE ADEQUATE SO AS TO ASSURE THAT TEMPERATURE OF THE PLATE SEAL WILL NOT EXCEED 175 °C.



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