

TUNG-SOL

UHF POWER TRIODE

PENCIL TYPE

FOR
RF POWER AMPLIFIER, OSCILLATOR
AND FREQUENCY MULTIPLIER APPLICATIONS
IN MOBILE AND AIRCRAFT EQUIPMENT

PHYSICAL
DIMENSIONSSEE
OUTLINE
DRAWINGCOATED UNIPOTENTIAL CATHODE
ANY MOUNTING POSITIONELECTRODE
TERMINATIONSSEE
OUTLINE
DRAWING

THE 6263A IS A COAXIAL METAL-GLASS PENCIL-TYPE MEDIUM MU TRIODE WITH AN EXTERNAL PLATE RADIATOR, ITS MAXIMUM PLATE DISSIPATION IS 13 WATTS ICAS. THE TUBE MAY BE OPERATED WITH FULL RATINGS UP TO A FREQUENCY OF 500 MC/S, AND WITH REDUCED RATINGS UP TO 1700 MC/S.

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

GRID TO PLATE		1.7	pf
GRID TO CATHODE		2.9	pf
PLATE TO CATHODE	MAX.	0.08	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES - SEE EIA STANDARD R5-239

AVERAGE CHARACTERISTICS	6.0	VOLTS	280	MA.
LIMITS OF APPLIED VOLTAGE				
UNDER TRANSMITTING CONDITIONS			6.0 ± 0.6	VOLTS
UNDER STANDBY CONDITIONS - MAXIMUM			6.3	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:				
HEATER NEGATIVE WITH RESPECT TO CATHODE			50	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			50	VOLTS

AVERAGE STATIC CHARACTERISTICS

PLATE VOLTAGE		200	VOLTS
PLATE CURRENT		27	MA.
TRANSCONDUCTANCE		7,000	μ MHOS
AMPLIFICATION FACTOR		27	

CLASS C TELEGRAPHY - RF POWER AMPLIFIER AND OSCILLATOR

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

	CCS	ICAS	
DC PLATE VOLTAGE	330	400	VOLTS
DC GRID VOLTAGE	-100	-100	VOLTS
DC PLATE CURRENT	40	55	MA.
DC GRID CURRENT	25	25	MA.
DC CATHODE CURRENT	55	70	MA.

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CLASS C TELEGRAPHY - RF POWER AMPLIFIER AND OSCILLATOR - cont'd.

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

	<u>CCS</u>	<u>ICAS</u>	
PLATE INPUT	13.2	22	WATTS
PLATE DISSIPATION	8	13	WATTS
PLATE SEAL TEMPERATURE	175	175	°C
FREQUENCY FOR OPERATION AT FULL RATINGS	500	500	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	60,000	FEET
GRID CIRCUIT RESISTANCE	0.1	0.1	MEG OHMS

TYPICAL OPERATION AS RF AMPLIFIER WITH CATHODE DRIVE AT 500 MC/S

DC PLATE-TO-GRID VOLTAGE	348	408	VOLTS
DC CATHODE-TO-GRID VOLTAGE	48	58	VOLTS
FROM GRID RESISTOR OR COMBINATION OF GRID RESISTOR WITH FIXED SUPPLY OR CATHODE RESISTOR			
DC PLATE CURRENT	35	40	MA.
DC GRID CURRENT	13	15	MA.
DRIVING POWER	2.2	3	WATTS
USEFUL POWER OUTPUT	7	10	WATTS

WITH APPROX. 75% OUTPUT CIRCUIT EFFICIENCY

CLASS C TELEPHONY - PLATE-MODULATED RF POWER AMPLIFIER

MAXIMUM RATINGS - ABSOLUTE MAXIMUM SYSTEM

	<u>CCS</u>	<u>ICAS</u>	
DC PLATE VOLTAGE	275	330	VOLTS
DC GRID VOLTAGE	-100	-100	VOLTS
DC PLATE CURRENT	33	46	MA.
DC GRID CURRENT	25	25	MA.
DC CATHODE CURRENT	50	60	MA.
PLATE INPUT	9	15	WATTS
PLATE DISSIPATION	5.5	9	WATTS
PLATE SEAL TEMPERATURE	175	175	°C
FREQUENCY FOR OPERATION AT FULL RATINGS	500	500	MC/S
ALTITUDE FOR OPERATION AT FULL RATINGS	60,000	60,000	FEET
GRID CIRCUIT RESISTANCE	0.1	0.1	MEG OHMS

TYPICAL OPERATION - CATHODE DRIVEN AT 500 MC/S

DC PLATE-TO-GRID VOLTAGE	317	372	VOLTS
DC CATHODE TO GRID VOLTAGE	42	52	VOLTS
FROM GRID RESISTOR OR COMBINATION OF GRID RESISTOR WITH FIXED SUPPLY OR CATHODE RESISTOR			
DC PLATE CURRENT	35	35	MA.
DC GRID CURRENT	13	12	MA.
DRIVING POWER	2	2.4	WATTS
USEFUL POWER OUTPUT	6.7	8	WATTS

WITH APPROX. 75% OUTPUT CIRCUIT EFFICIENCY

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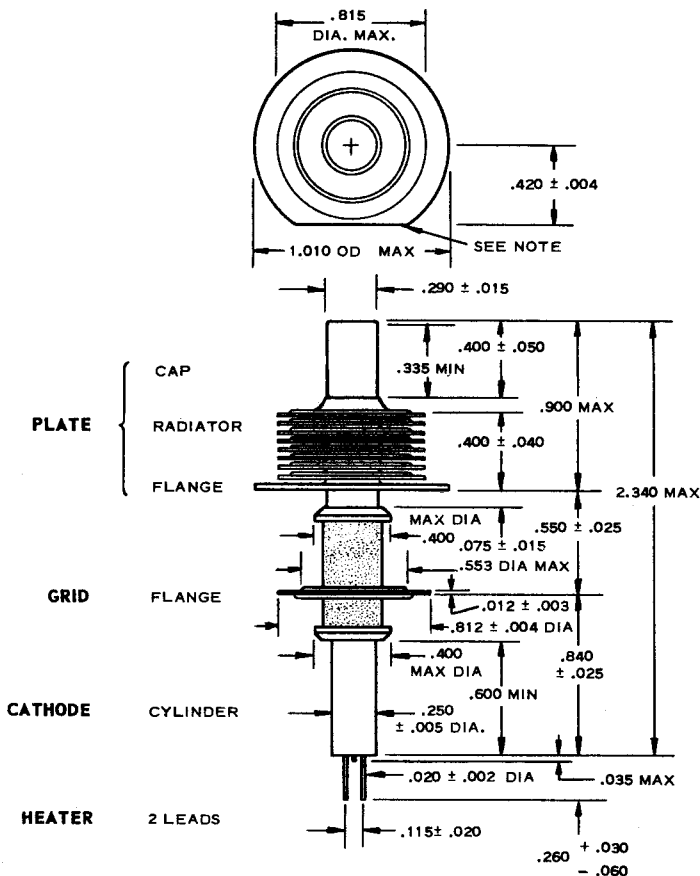
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SPECIAL TESTS AND PERFORMANCE DATA

CONTROLLED ON A SAMPLING BASIS

LOW-PRESSURE VOLTAGE BREAKDOWN TEST
 HIGH-FREQUENCY VIBRATION TEST
 SEAL FRACTURE
 HEATER CYCLING
 1 - HOUR STABILITY LIFE PERFORMANCE
 50 - HOUR SURVIVAL LIFE PERFORMANCE
 500 - HOUR INTERMITTENT LIFE PERFORMANCE

OUTLINE DRAWING

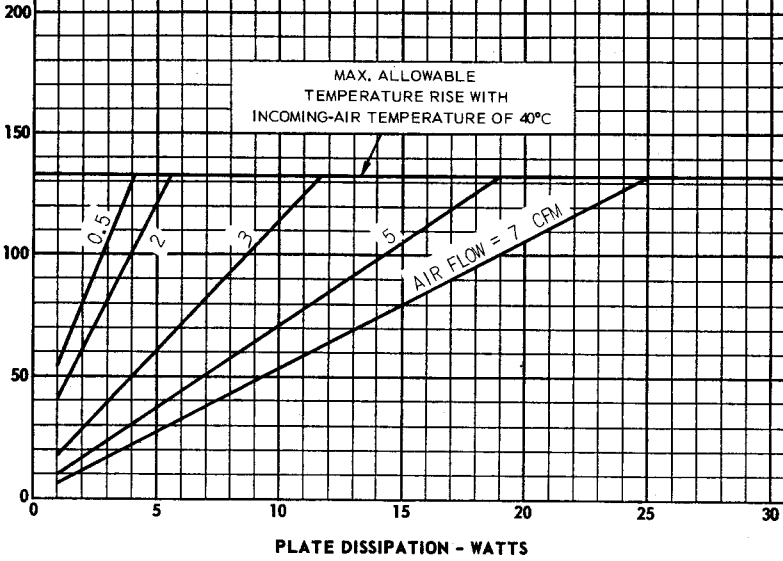


NOTE:

THE STRAIGHT EDGE ON THE PERIMETER OF THE LARGE FIN (PLATE TERMINAL) IS PARALLEL TO A PLANE THROUGH THE CENTERS OF THE HEATER PINS AT THEIR SEALS WITHIN 15° .

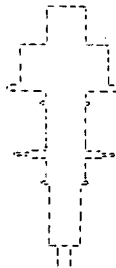
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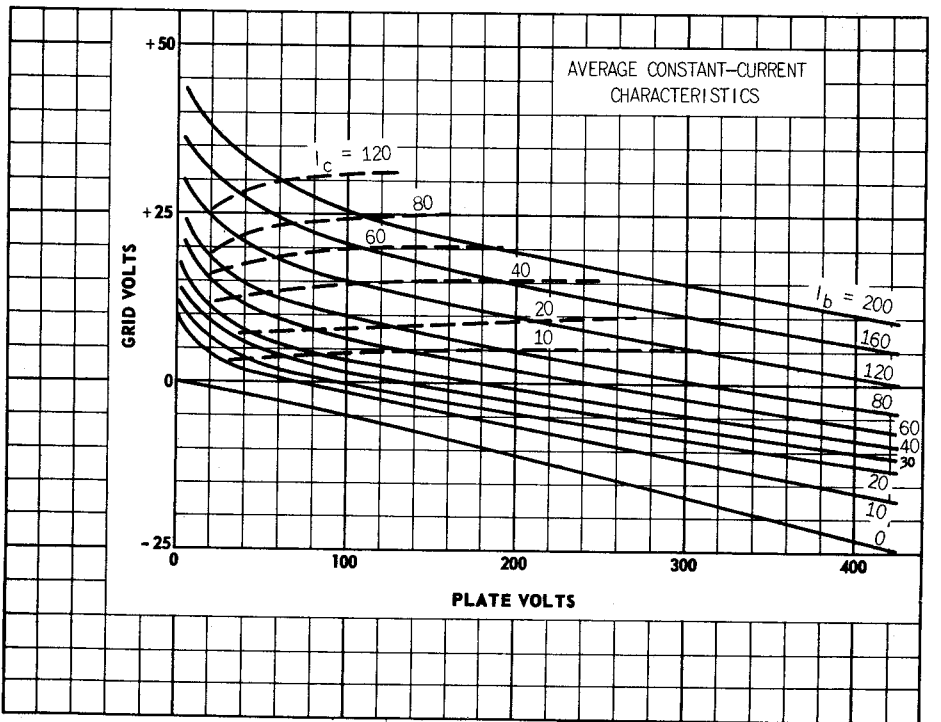
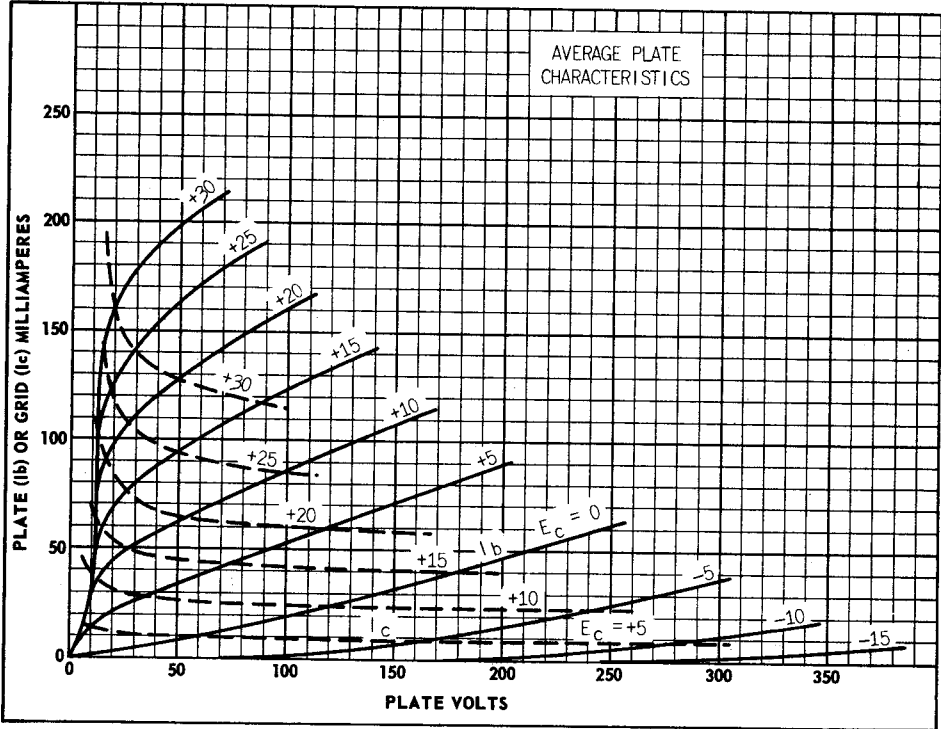
PLATE - SEAL TEMPERATURE RISE ABOVE
INCOMING - AIR TEMPERATURE - °C



COOLING REQUIREMENTS

MAXIMUM PLATE - SEAL TEMPERATURE = 175° C
 AIR-DUCT OPENING = 1 5/32" X 1 5/32"
 WITH AIR-DUCT LOCATED AS SHOWN ON SKETCH





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