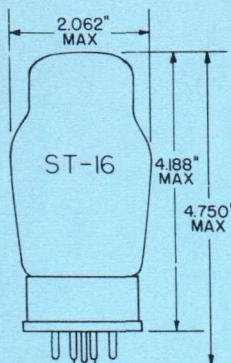


TUNG-SOL

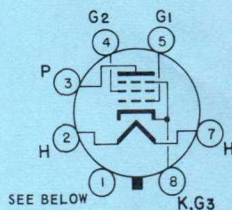
PENTODE



GLASS BULB
 LARGE WAFER OCTAL ←
 WITH BARRIERS
 7 PIN LOW LOSS B7-99

FOR
 AUDIO SERVICE APPLICATIONS

COATED UNIPOTENTIAL CATHODE
 ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
 JEDEC 7AC

PIN 1 - NO CONNECTION
 OR BASE SHELL

THE 6550 IS A BEAM PENTODE POWER AMPLIFIER PRIMARILY DESIGNED FOR AUDIO SERVICE. IT CARRIES A 42 WATT PLATE DISSIPATION RATING WHICH PROVIDES FOR PUSH-PULL AMPLIFIER DESIGNS UP TO 100 WATTS OUTPUT. CONSTRUCTION FEATURES PROVIDE FOR RELIABLE OPERATION AT FULL RATINGS.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT SHIELD

GRID 1 TO PLATE	0.8	pf
INPUT	15	pf
OUTPUT	10	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3	VOLTS	→ 1.6	AMP.
HEATER SUPPLY LIMITS:				
VOLTAGE OPERATION			6.3 ± 0.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:				
HEATER NEGATIVE WITH RESPECT TO CATHODE				
TOTAL DC AND PEAK			300	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE				
DC			100	VOLTS
TOTAL DC AND PEAK			200	VOLTS

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE.

TUNG-SOL

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MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE, DC	660	VOLTS
GRID 2 VOLTAGE, DC		
PENTODE CONNECTION	440	VOLTS
TRIODE AND ULTRA-LINEAR CONNECTION	500	VOLTS
GRID 1 VOLTAGE, DC	-300 TO 0	VOLTS
PLATE DISSIPATION	42	WATTS
GRID 2 DISSIPATION		
CONTINUOUS	6.0	WATTS
INTERMITTENT-MUSIC OR SPEECH PEAKS	10.0	WATTS
CATHODE CURRENT, DC	190	MA.
GRID 1 CIRCUIT RESISTANCE		
FIXED BIAS	50	KOHMS
SELF BIAS	250	KOHMS
BULB TEMPERATURE	250	°C

AVERAGE CHARACTERISTICS

PENTODE CONNECTION

PLATE VOLTAGE	250	VOLTS
GRID 2 VOLTAGE	250	VOLTS
GRID 1 VOLTAGE	-14	VOLTS
PLATE CURRENT	140	MA.
GRID 2 CURRENT	12	MA.
TRANSCONDUCTANCE	11,000	μMHOS
PLATE RESISTANCE, APPROX.	15,000	OHMS
TRIODE AMPLIFICATION FACTOR	8	
GRID 1 VOLTAGE FOR 1 MA PLATE CURRENT	-40	VOLTS

TYPICAL OPERATING CONDITIONS

CLASS A1 AUDIO AMPLIFIER - SINGLE TUBE

PLATE VOLTAGE, DC	250	400	VOLTS
GRID 2 VOLTAGE, DC	250	225	VOLTS
GRID 1 VOLTAGE, DC	-14	-16.5	VOLTS
PEAK SIGNAL VOLTAGE	14	16.5	VOLTS
ZERO-SIGNAL PLATE CURRENT, DC	140	87	MA.
MAX. - SIGNAL PLATE CURRENT, DC	150	105	MA.
ZERO-SIGNAL GRID 2 CURRENT, DC	12	4	MA.
MAX. - SIGNAL GRID 2 CURRENT, DC	22	14	MA.
LOAD RESISTANCE	1500	3000	OHMS
TOTAL HARMONIC DISTORTION, APPROX.	7	13.5	PERCENT
MAX. - SIGNAL POWER OUTPUT	12.5	20	WATTS

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TYPICAL OPERATING CONDITIONS - CONT'D.

PUSH-PULL CLASS AB1 AUDIO AMPLIFIER
PENTODE CONNECTIONAVERAGE VALUES FOR TWO MATCHED TUBES^A

	SELF BIAS		FIXED BIAS		
PLATE VOLTAGE, DC	400	400	450	600	VOLTS
GRID 2 VOLTAGE, DC	310	270	310	300	VOLTS
GRID 1 VOLTAGE, DC	----	-23	-29.5	-32.5	VOLTS
COMMON CATHODE RESISTOR BYPASSED	140	----	----	----	OHMS
PEAK GRID-TO-GRID SIGNAL VOLTAGE	43	46	58	65	VOLTS
ZERO-SIGNAL PLATE CURRENT, DC	170	170	150	100	MA.
MAX.-SIGNAL PLATE CURRENT, DC	185	275	295	270	MA.
ZERO-SIGNAL GRID 2 CURRENT, DC	10	9	9	5	MA.
MAX.-SIGNAL GRID 2 CURRENT, DC	25	35	38	33	MA.
EFFECTIVE LOAD, PLATE-TO-PLATE	5,000	3,500	3,500	5,000	OHMS
TOTAL HARMONIC DISTORTION, APPROX.	0.7	0.6	1.5	3.0	PERCENT
MAX.-SIGNAL POWER OUTPUT	40	60	77	100	WATTS

PUSH-PULL AUDIO AMPLIFIER, ULTRA-LINEAR OPERATION

GRID 2 TAPPED AT 40% OF PRIMARY TURNS

AVERAGE VALUES FOR TWO MATCHED TUBES^A

	SELF BIAS CLASS A1	FIXED BIAS CLASS AB1	
PLATE AND GRID 2 VOLTAGE, DC	395	450	VOLTS
GRID 1 VOLTAGE, DC	----	-48	VOLTS
COMMON CATHODE RESISTOR - BYPASSED	200	----	OHMS
PEAK GRID-TO-GRID SIGNAL VOLTAGE	70	96	VOLTS
ZERO-SIGNAL PLATE CURRENT, DC	170	150	MA.
MAX.-SIGNAL PLATE CURRENT, DC	174	265	MA.
ZERO-SIGNAL GRID 2 CURRENT, DC	12.5	12	MA.
MAX.-SIGNAL GRID 2 CURRENT, DC	23	38	MA.
EFFECTIVE LOAD, PLATE-TO-PLATE	5600	4000	OHMS
TOTAL HARMONIC DISTORTION (APPROX.)	1.5	2.4	PERCENT
MAX.-SIGNAL POWER OUTPUT	34	70	WATTS

A

A SMALL RESISTOR IN SERIES WITH EACH CATHODE IS RECOMMENDED FOR BETTER MAINTENANCE OF BALANCE BETWEEN TUBES.

