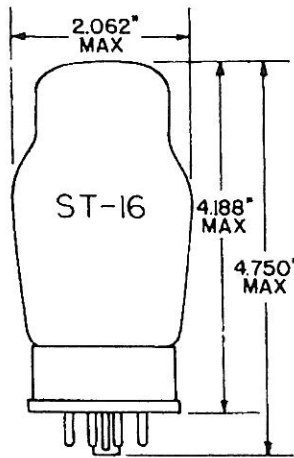


TUNG-SOL

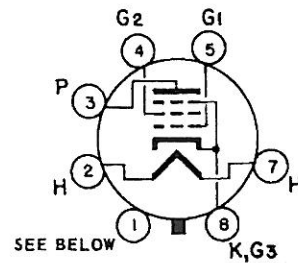
PENTODE



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

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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	FIXED BIAS	
	CLASS A1	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.

