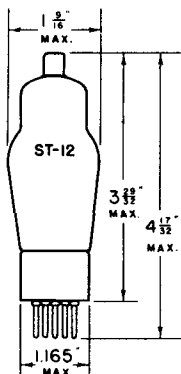


TUNG-SOL



TRIPLE GRID POWER AMPLIFIER

UNIPOTENTIAL CATHODE

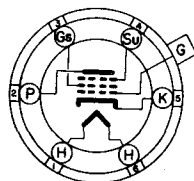
HEATER

6.3 VOLTS 0.4 AMPERE

AC OR DC

GLASS BULB

SMALL 6 PIN BASE



6F

THE TUNG-SOL 89 IS DESIGNED FOR SERVICE AS A PENTODE, CLASS A TRIODE, OR CLASS B TRIODE, IN THE OUTPUT STAGE OF AC OPERATED AND STORAGE BATTERY OPERATED RECEIVERS.

OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER—TRIODE CONNECTEDGRIDS G_s AND S_u CONNECTED TO PLATE

PLATE VOLTAGE	160	180	250 MAX.	VOLTS
CONTROL GRID VOLTAGE	-20	-22.5	-31	VOLTS
GRID CIRCUIT RESISTANCE MAX.	1	1	1	MEGOHM
PLATE CURRENT	17	20	32	MA.
PLATE RESISTANCE	3300	3000	2600	OHMS
TRANSCONDUCTANCE	1425	1550	1800	μMHOS
AMPLIFICATION FACTOR	4.7	4.7	4.7	
LOAD RESISTANCE ^P	7000	6500	5500	OHMS
TOTAL HARMONIC DISTORTION MAX.	5	5	5	PER CENT
POWER OUTPUT	300	400	900	MW.

^P WHEN USED AS A DRIVER FOR A CLASS B STAGE, APPROXIMATELY TWICE THIS VALUE OF LOAD RESISTANCE IS RECOMMENDED.

CLASS A₁ AMPLIFIER—PENTODE CONNECTED

PLATE VOLTAGE	100	135	180	250 MAX.	VOLTS
SCREEN GRID VOLTAGE	100	135	180	250 MAX.	VOLTS
CONTROL GRID VOLTAGE	-10	-13.5	-18	-25	VOLTS
GRID CIRCUIT RESISTANCE MAX.	1	1	1	1	MEGOHM
SUPPRESSOR	CONNECTED TO CATHODE AT SOCKET				
PLATE CURRENT	9.5	14	20	32	MA.
SCREEN CURRENT	1.6	2.2	3.0	5.5	MA.
TRANSCONDUCTANCE	1200	1350	1550	1800	μMHOS
AMPLIFICATION FACTOR	125	125	125	125	
LOAD RESISTANCE	10 700	9200	8000	6750	OHMS
TOTAL HARMONIC DISTORTION	9	9	9	9	PER CENT
POWER OUTPUT	0.33	0.75	1.5	3.4	WATTS

PLATE
212-1

CONTINUED NEXT PAGE

TUNG-SOL

CLASS B₂ AMPLIFIER - TRIODE CONNECTION(GRID S_u TIED TO PLATE; GRIDS G AND G_s CONNECTED TOGETHER)

PLATE VOLTAGE MAX.	250	VOLTS
PEAK PLATE CURRENT MAX.	90	MA.
AVERAGE GRID DISSIPATION (GRIDS G AND G _s) MAX.	0.35	WATTS

TWO TUBES PUSH-PULL

PLATE VOLTAGE	180	180	VOLTS
GRID VOLTAGE	0	0	VOLTS
ZERO-SIGNAL PLATE CURRENT PER TUBE	3	3	MA.
LOAD RESISTANCE PER TUBE	3400	2350	OHMS
EFFECTIVE LOAD RESISTANCE PLATE TO PLATE	13 600	9400	OHMS
POWER OUTPUT (TWO TUBES) APPROX.	2.5	3.5	WATTS

DIRECT INTERELECTRODE CAPACITANCES⁵

CONTROL GRID TO CATHODE	3.4	μf
PLATE TO CATHODE	7.5	μf
CONTROL GRID TO PLATE	0.5	μf

⁵ WITH SHIELD