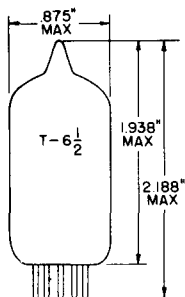


TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE

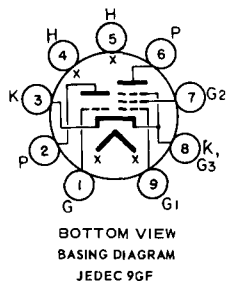


GLASS BULB
MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-2

COATED UNIPOTENTIAL CATHODE

FOR USE AS A COMBINED
OSCILLATOR AND MIXER
IN TELEVISION RECEIVERS

ANY MOUNTING POSITION



THE 5CG8 IS A MULTIUNIT TUBE OF THE 9 PIN MINIATURE CONSTRUCTION CONTAINING A MEDIUM-MU TRIODE AND SHARP CUTOFF PENTODE IN ONE ENVELOPE. IT IS DESIGNED PRIMARILY FOR USE AS A COMBINED OSCILLATOR AND MIXER IN 600 MA. SERIES HEATER OPERATED TELEVISION RECEIVERS UTILIZING AN INTERMEDIATE FREQUENCY IN THE ORDER OF 40 MC. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD ^A	WITHOUT SHIELD	
PENTODE GRID 1 TO PENTODE PLATE: (PG1 TO PP) MAX.	0.02	0.04	pf
PENTODE INPUT: PG1 TO (H+K+PG2+PG3)	4.8	4.6	pf
PENTODE OUTPUT: PP TO (H+K+PG2+PG3)	1.6	0.9	pf
CATHODE TO HEATER: (K TO H)	6.0 ^B	6.0	pf
TRIODE GRID 1 TO TRIODE PLATE: (TG TO TP)	1.5	1.5	pf
TRIODE INPUT: TG TO (H+K)	2.4	2.0	pf
TRIODE OUTPUT: TP TO (H+K)	1.0	0.5	pf
PENTODE GRID 1 TO TRIODE PLATE: (PG1 TO TP) MAX.	0.04	0.05	pf
PENTODE PLATE TO TRIODE PLATE: (PP TO TP) MAX.	0.008	0.05	pf

^A EXTERNAL SHIELD 315 CONNECTED TO PIN 3.

^B EXTERNAL SHIELD 315 CONNECTED TO PIN 6.

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	4.7 VOLTS	600	MA.
HEATER WARM-UP TIME ^C		11	SECONDS
HEATER SUPPLY LIMITS:			
VOLTAGE OPERATION		4.7	VOLTS
CURRENT OPERATION		600±40	MA.
MAXIMUM HEATER CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

PENTODE PLATE VOLTAGE	275	VOLTS
TRIODE PLATE VOLTAGE	275	VOLTS
GRID 2 SUPPLY VOLTAGE	275	VOLTS
GRID 2 VOLTAGE	SEE J5-C4-2	
PENTODE PLATE DISSIPATION	2.3	WATTS
GRID 2 DISSIPATION	0.45	WATTS
POSITIVE DC GRID 1 VOLTAGE	0	VOLTS
POSITIVE DC TRIODE GRID VOLTAGE	0	VOLTS
TRIODE PLATE DISSIPATION	1.7	WATTS

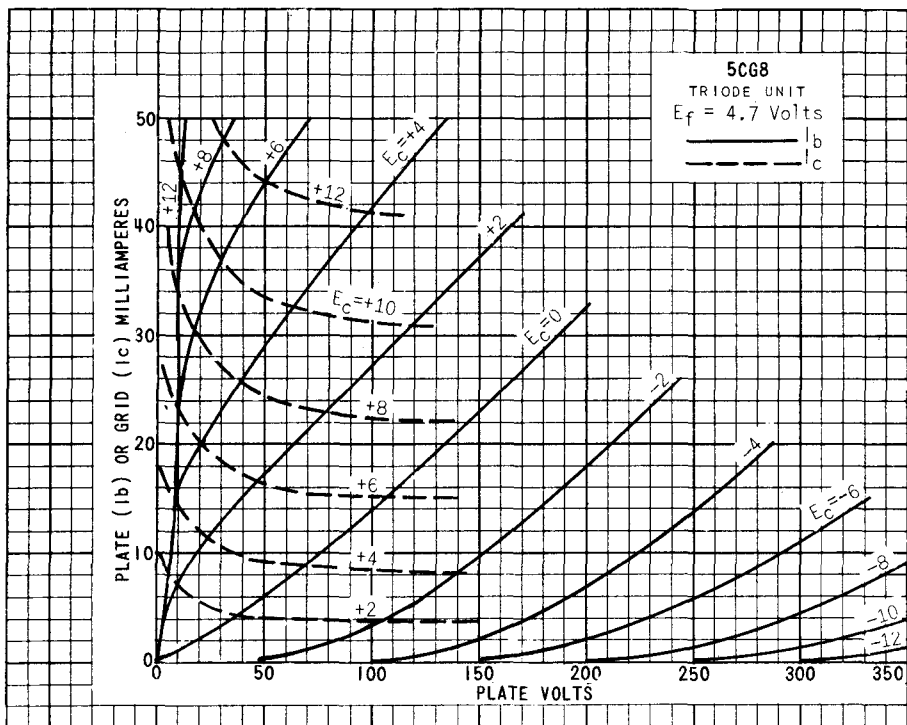
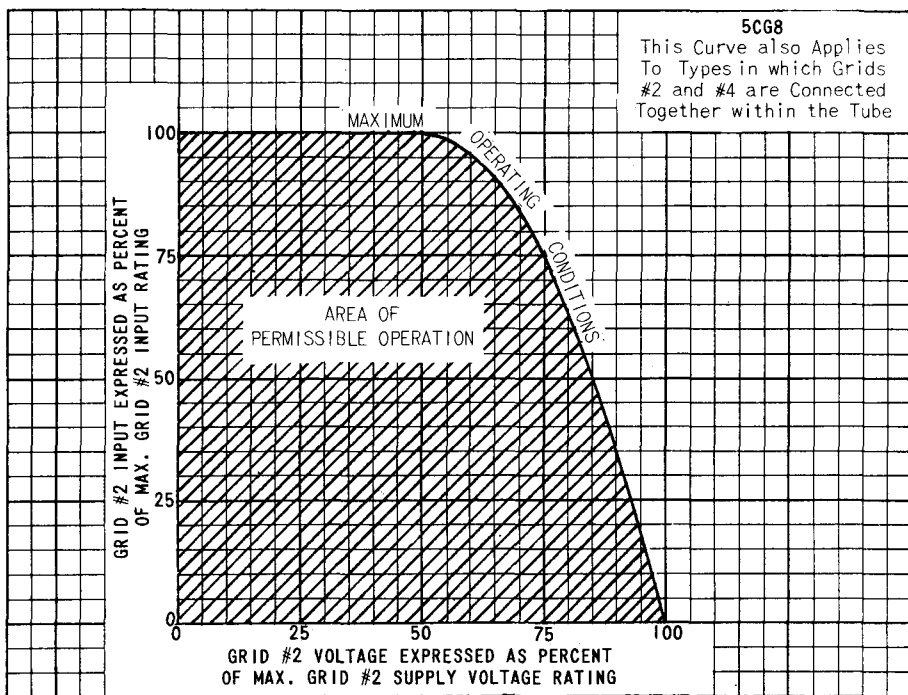
TYPICAL OPERATING CHARACTERISTICS

CLASS A1 AMPLIFIER

	TRIODE	PENTODE	
PLATE VOLTAGE	125	125	VOLTS
GRID 3 VOLTAGE	CONNECTED TO PIN 3 AT SOCKET		
GRID 2 VOLTAGE	----	125	VOLTS
GRID 1 VOLTAGE	-1.0	-1.0	VOLTS
TRANSCONDUCTANCE	6,500	5,500	μMHOS
PLATE CURRENT	12.0	9.0	MA.
GRID 2 CURRENT	----	2.2	MA.
PLATE RESISTANCE (APPROX.)	6,000	300,000	OHMS
AMPLIFICATION FACTOR	40	----	
GRID 1 VOLTAGE (APPROX.) FOR $I_b=20\mu A$	-7	-6.5	VOLTS
ZERO BIAS TRANSCONDUCTANCE			
(WITH $E_b = 100 V$; $E_{c2} = 70 V$)	----	5,700	μMHOS

^C

HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.



5CG8

