

TUNG-SOL

DOUBLE TRIODE

MINIATURE TYPE

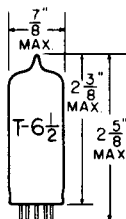
COATED UNIPOTENTIAL CATHODE

HEATER

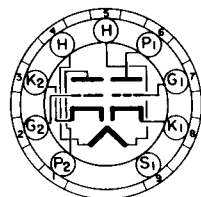
8.4 VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW

SMALL BUTTON NOVAL
9 PIN BASE

9AJ

THE 8CG7 IS A GENERAL PURPOSE, MEDIUM-MU TWIN TRIODE USING THE 9-PIN MINIATURE CONSTRUCTION. IT IS INTENDED PARTICULARLY FOR USE AS A VERTICAL DEFLECTION OSCILLATOR AND HORIZONTAL DEFLECTION OSCILLATOR IN TELEVISION RECEIVERS. IT MAY ALSO BE USED AS A PHASE INVERTER, MULTIVIBRATOR, SYNCHRONIZING SEPARATOR AND AMPLIFIER, AND RESISTANCE COUPLED AMPLIFIER IN ELECTRONIC EQUIPMENT. 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. EXCEPT FOR HEATER RATINGS IT IS IDENTICAL TO THE 6CG7.

DIRECT INTERELECTRODE CAPACITANCES — APPROX.

WITH NO EXTERNAL SHIELD

	UNIT 1	UNIT 2	
GRID TO PLATE: G TO P	4.0	4.0	μf
INPUT: G TO (K+H&IS)	2.3	2.3	μf
OUTPUT: P TO (K+H&IS)	2.2	2.2	μf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

EACH UNIT

	CLASS A ₁ AMPLIFIER	
HEATER VOLTAGE	8.4	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE ^A	200	VOLTS
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM GRID VOLTAGE:		
POSITIVE BIAS VALUE	0	VOLTS
MAXIMUM PLATE DISSIPATION:		
EACH PLATE	3.5	WATTS
BOTH PLATES (BOTH UNITS OPERATING)	5	WATTS
MAXIMUM CATHODE CURRENT	20	MA.
MAXIMUM GRID CIRCUIT RESISTANCE:		
FIXED BIAS OPERATION	1.0	MEG OHMS
HEATER WARM-UP TIME (APPROX.) ^B	11.0	SECONDS

^ATHE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

^BHEATER 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.

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RATINGS^C— CONT'D

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

EACH UNIT

	VERTICAL DEFLECTION OSCILLATOR	HORIZONTAL DEFLECTION OSCILLATOR	
HEATER VOLTAGE		8.4	VOLTS
MAXIMUM PEAK HEATER CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE		200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		200 ^D	VOLTS
MAXIMUM DC PLATE VOLTAGE	300	300	VOLTS
MAXIMUM NEGATIVE PULSE GRID VOLTAGE	400 ^E	600 ^F	VOLTS
MAXIMUM CATHODE CURRENT:			
PEAK	70	300	MA.
DC	20	20	MA.
MAXIMUM PLATE DISSIPATION:			
EACH PLATE	3.5	3.5	WATTS
BOTH PLATES (BOTH UNITS OPERATING)	5	5	WATTS
MAXIMUM GRID CIRCUIT RESISTANCE:			
FIXED BIAS, GRID-RESISTOR BIAS OR CATHODE-BIAS OPERATION	2.2	2.2	MEG OHMS
HEATER WARM-UP TIME (APPROX.) ^G		11.0	SECONDS

^C FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE CONCERNING TELEVISION BROADCAST STATIONS", FEDERAL COMMUNICATIONS COMMISSION.

^D THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

^E THIS RATING IS APPLICABLE WHERE THE DURATION OF THE VOLTAGE PULSE DOES NOT EXCEED 15 PERCENT OF ONE VERTICAL SCANNING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM; 15 PERCENT OF ONE VERTICAL SCANNING CYCLE IS 2.5 MILLISECONDS.

^F THIS RATING IS APPLICABLE WHERE THE DURATION OF THE VOLTAGE PULSE DOES NOT EXCEED 15 PERCENT OF ONE HORIZONTAL SCANNING CYCLE IN A 525-LINE, 30-FRAME SYSTEM; 15 PERCENT OF ONE HORIZONTAL SCANNING CYCLE IS 10 MICROSECONDS.

^G 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.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

EACH UNIT

	CLASS A ₁ AMPLIFIER		
HEATER VOLTAGE		8.4	VOLTS
HEATER CURRENT		0.45	AMP.
PLATE VOLTAGE	90	250	VOLTS
GRID VOLTAGE	0	-8	VOLTS
AMPLIFICATION FACTOR	20	20	
PLATE RESISTANCE (APPROX.)	6700	7700	OHMS
TRANSCONDUCTANCE	3000	2600	μMHOS
GRID VOLTAGE (APPROX.)			
FOR $I_b = 10 \mu\text{AMP.}$	-7	-18	VOLTS
PLATE CURRENT OR GRID VOLTAGE OF -12.5 VOLTS	---	1.3	MA.
PLATE CURRENT	10	9	MA.

