

TUNG-SOL

**TRIODE TETRODE
MINIATURE TYPE**

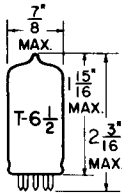
COATED UNIPOTENTIAL CATHODE

HEATER

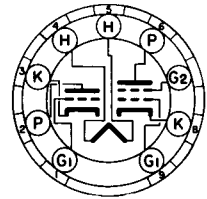
4.7 VOLTS 0.6 AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW
MINIATURE BUTTON
9 PIN BASE
9FX

THE 5CL8A IS A MINIATURE TRIODE TETRODE DESIGNED FOR USE AS A VHF OSCILLATOR-MIXER. 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 THE 5CL8A IS IDENTICAL TO THE 6CL8A.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD #315	WITHOUT SHIELD	
TRIODE:			
GRID TO PLATE (G TO P)	1.8	1.8	$\mu\mu f$
INPUT: G TO (H+K)	2.7	2.7	$\mu\mu f$
OUTPUT: P TO (H+K)	1.2	0.4	$\mu\mu f$
TETRODE:			
GRID TO PLATE (G ₁ TO P) (MAX.)	0.010	0.028	$\mu\mu f$
INPUT: G ₁ TO (H+K+G ₂)	5.0	5.0	$\mu\mu f$
OUTPUT: P TO (H+K+G ₂)	3.4	2.4	$\mu\mu f$
CATHODE TO HEATER (EITHER SECTION APPROX.)	2.5 ^c	2.5	$\mu\mu f$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

	TRIODE	TETRODE	
HEATER VOLTAGE	4.7	4.7	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC	100	100	VOLTS
TOTAL DC AND PEAK	200	200	VOLTS
MAXIMUM PLATE VOLTAGE	300	300	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE		300	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE RATING CHART		
MAXIMUM PLATE DISSIPATION	2.7	2.8	WATTS
MAXIMUM GRID #2 DISSIPATION	---	0.5	WATT
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	0	VOLTS

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CONTINUED FROM PRECEDING PAGE

RATINGS—CONT'D.

	TRIODE	TETRODE	
MAXIMUM GRID #1 CIRCUIT RESISTANCE:			
FIXED BIAS	0.5	0.25	MEGOHM
CATHODE BIAS	1.0	1.0	MEGOHM
HEATER WARM-UP TIME ^A		11.0	SECONDS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

		TETRODE SECTION	TRIODE SECTION	
HEATER VOLTAGE	4.7	4.7	4.7	VOLTS
HEATER CURRENT	0.6	0.6	0.6	AMP.
PLATE VOLTAGE	100	125	125	VOLTS
SCREEN VOLTAGE	100	125	---	VOLTS
GRID #1 VOLTAGE	0	-1.0	---	VOLTS
CATHODE-BIAS RESISTOR	---	---	56	OHMS
AMPLIFICATION FACTOR	---	---	40	
PLATE RESISTANCE (APPROX.)	---	100000	5000	OHMS
TRANSCONDUCTANCE	8200	6400	8000	μMHOS
PLATE CURRENT	---	12	15	MA.
SCREEN CURRENT	---	4.0	---	MA.
GRID #1 VOLTAGE (APPROX.)	---	-10	-9	VOLTS
I _b = 10 μAMPERES	---			

^A 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.

SIMILAR TYPE REFERENCE: Except for heater ratings, the 5CL8A is identical to the 6CL8A.

