TUNG-SOL

TWIN TRIODE

MINIATURE TYPE

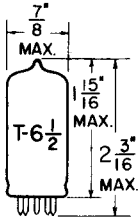
COATED UNIPOTENTIAL CATHODE

HEATER

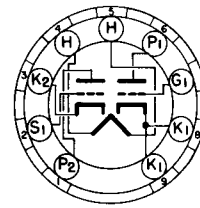
4.2 VOLTS 0.6 AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW

SMALL BUTTON
9 PIN BASE

9FC

THE 4CX7 IS A MEDIUM MU TWIN TRIODE IN THE 9 PIN MINIATURE CONSTRUCTION AND IS DESIGNED FOR OPERATION AS A CASCODE (VHF) AMPLIFIER. 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 CHARACTERISTICS AND HEATER WARM-UP TIME, IT IS IDENTICAL TO THE 6CX7.

DIRECT INTERELECTRODE CAPACITANCES

SHIELD #315 CONNECTED TO HEATER UNLESS SPECIFIED DIFFERENTLY

	SECTION #1		SECTION #2	
GRID TO PLATE: (G TO P)	1.2		---	μμf
INPUT: G TO (H+K+E.S.)	2.4		---	μμf
OUTPUT: P TO (H+K+E.S.)	1.3		---	μμf
HEATER TO CATHODE: (H TO K) [A]	2.4		2.2	μμf
PLATE TO CATHODE: (P TO K) (MAX)	0.17		0.17	μμf
#2 PLATE TO #1 PLATE AND #1 GRID:				
#2 P TO (#1P+#1G) (MAX.)		.027		μμf
PLATE TO PLATE: (#1 P TO #2 P) (MAX.)		.017		μμf
GROUNDED GRID OPERATION:				
INPUT: K TO (G+I.S.+H+E.S.)	---		4.2	μμf
OUTPUT: P TO (G+I.S.+H+E.S.)	---		1.7	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

EACH SECTION

HEATER VOLTAGE	4.2	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE		
HEATER POSITIVE WITH RESPECT TO CATHODE		
DC COMPONENT	100	VOLTS
TOTAL DC AND PEAK [C]	200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	200	VOLTS
MAXIMUM PLATE VOLTAGE [C]	250	VOLTS
MAXIMUM PLATE DISSIPATION	2	WATTS
HEATER WARM-UP TIME [B]	11	SECONDS

[A] SHIELD #315 CONNECTED TO GROUND.

[B] 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.

[C] UNDER CUTOFF CONDITIONS WHEN THE TUBE IS USED AS A CASCODE AMPLIFIER, THIS RATING MAY BE AS HIGH AS 300 VOLTS MAXIMUM.

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TUNG-SOL

CONTINUED FROM PRECEDING PAGE

RATINGS – CONT'D.

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

EACH SECTION

CATHODE CURRENT (MAX.)	20	MA.
GRID CIRCUIT RESISTANCE (MAX.)	0.5	MEGOHM

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER – EACH SECTION

HEATER VOLTAGE	4.2	VOLTS
HEATER CURRENT	0.6	AMP.
PLATE VOLTAGE	150	VOLTS
GRID VOLTAGE	0	VOLTS
CATHODE BIAS RESISTOR	220	OHMS
PLATE CURRENT	9.0	MA.
TRANSCONDUCTANCE	6 400	μMHOS
AMPLIFICATION FACTOR	39	
GRID VOLTAGE FOR I_b =10 μA (APPROX.)	−10	VOLTS