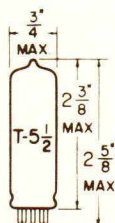


TUNG-SOL

PENTODE
MINIATURE TYPE

GLASS BULB

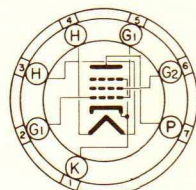
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.6 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

MINIATURE BUTTON
7 PIN BASE

7CV

THE 12CA5 IS A BEAM PENTODE USING THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE IN THE AUDIO-FREQUENCY POWER OUTPUT STAGE OF 600 MA. SERIES HEATER OPERATED TELEVISION AND RADIO RECEIVERS. 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. IT FEATURES HIGH SENSITIVITY AT RELATIVELY LOW PLATE AND SCREEN VOLTAGES. WITH EXCEPTION OF HEATER RATINGS, ITS CHARACTERISTICS ARE IDENTICAL TO THE 6CA5.

DIRECT INTERELECTRODE CAPACITANCES
WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE	0.5	μf
INPUT	15	μf
OUTPUT	9	μf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:		
HEATER POSITIVE WITH RESPECT TO CATHODE		
→ TOTAL DC AND PEAK	200	VOLTS
DC	100	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	300	VOLTS ←
MAXIMUM PLATE VOLTAGE	130	VOLTS
MAXIMUM GRID #2 VOLTAGE	130	VOLTS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM PLATE DISSIPATION	5.0	WATTS
MAXIMUM GRID #2 DISSIPATION	1.4	WATTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:		
FIXED BIAS	0.1	MEGOHM
CATHODE BIAS	0.5	MEGOHM
BULB TEMPERATURE AT HOTTEST POINT	180	°C
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

* 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.

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

HEATER VOLTAGE	12.6		VOLTS
HEATER CURRENT	0.6		AMP.
PLATE VOLTAGE	110	125	VOLTS
GRID #2 VOLTAGE	110	125	VOLTS
GRID #1 VOLTAGE	-4.0	-4.5	VOLTS
PEAK AF GRID #1 VOLTAGE	4.0	4.5	VOLTS
PLATE RESISTANCE (APPROX.)	16 000	15 000	OHMS
TRANSCONDUCTANCE	8 100	9 200	μMHOS
ZERO-SIGNAL PLATE CURRENT	32	37	MA.
MAXIMUM SIGNAL PLATE CURRENT (APPROX.)	31	36	MA.
ZERO-SIGNAL GRID #2 CURRENT	3.5	4.0	MA.
MAXIMUM SIGNAL GRID #2 CURRENT (APPROX.)	7.5	11	MA.
LOAD RESISTANCE	3 500	4 500	OHMS
TOTAL HARMONIC DISTORTION (APPROX.)	5	6	PERCENT
MAXIMUM SIGNAL POWER OUTPUT	1.1	1.5	WATTS

