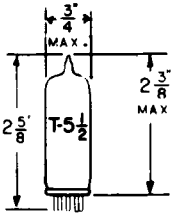
TUNG-SOL

BEAM PENTODE

MINIATURE TYPE

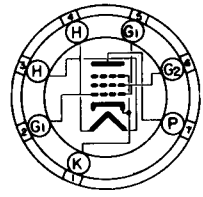


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 0.6±6% AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7CV

THE 12C5 IS A BEAM POWER AMPLIFIER USING THE 7 PIN MINIATURE CONSTRUCTION. BECAUSE OF ITS HIGH POWER SENSITIVITY AT LOW PLATE-SCREEN VOLTAGE IT IS PARTICULARLY ADAPTABLE TO AC/DC RECEIVER APPLICATIONS IN 600 MA. SERIES HEATER OPERATED TELEVISION 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. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME IT IS IDENTICAL TO THE 50C5.

DIRECT INTERELECTRODE CAPACITANCES – APPROX.

WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE	0.6←	μμf
INPUT	13.0←	μμf
OUTPUT	8.5←	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	12.6	VOLTS
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 PLATE VOLTAGE	135	VOLTS
MAXIMUM GRID #2 VOLTAGE	117	VOLTS
MAXIMUM PLATE DISSIPATION	6←	WATTS
MAXIMUM GRID #2 DISSIPATION	1.25	WATTS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0*	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:		
CATHODE BIAS	0.5	MEGOHM
FIXED BIAS	0.1	MEGOHM
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT ON BULB SURFACE)	220←	°C
HEATER WARM-UP TIME (APPROX.)[B]	11.0	SECONDS

[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.

* INDICATES AN ADDITION

→ INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

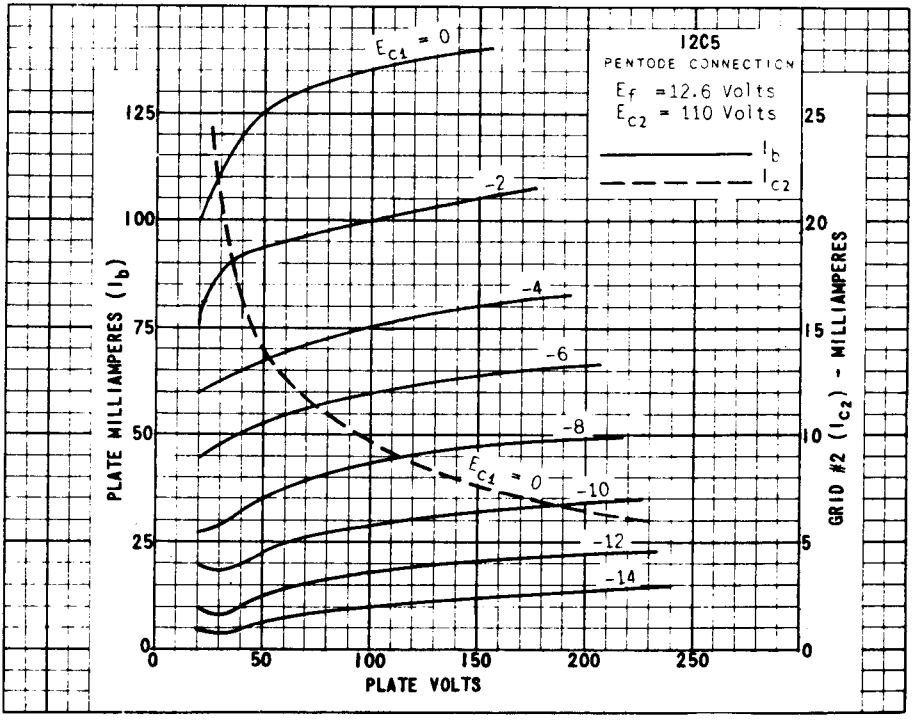
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER – AF POWER AMPLIFIER

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.6	AMP.
PLATE VOLTAGE	120 ←	VOLTS
GRID #2 VOLTAGE	110	VOLTS
GRID #1 VOLTAGE (CONTROL GRID)	−8 ←	VOLTS
PEAK AF GRID #1 VOLTAGE	8 ←	VOLTS
PLATE RESISTANCE (APPROX.)	10 000	OHMS
TRANSCONDUCTANCE	7 500	μMHOS
ZERO-SIGNAL PLATE CURRENT	49	MA.
MAXIMUM SIGNAL PLATE CURRENT	50	MA.
ZERO-SIGNAL GRID #2 CURRENT	4	MA.
MAXIMUM SIGNAL GRID #2 CURRENT	8.5	MA.
LOAD RESISTANCE	2 500	OHMS
TOTAL HARMONIC DISTORTION	10 ←	PERCENT
MAXIMUM SIGNAL POWER OUTPUT	2.3 ←	WATTS

ALL ELECTRICAL DATA FOR TYPE 12C5 ARE IDENTICAL WITH THOSE OF TYPE 12CU5.

ALL ELECTRICAL DATA EXCEPT HEATER CHARACTERISTICS ARE IDENTICAL WITH THOSE OF TYPES 12C5, 25C5, 50B5, AND 50C5.



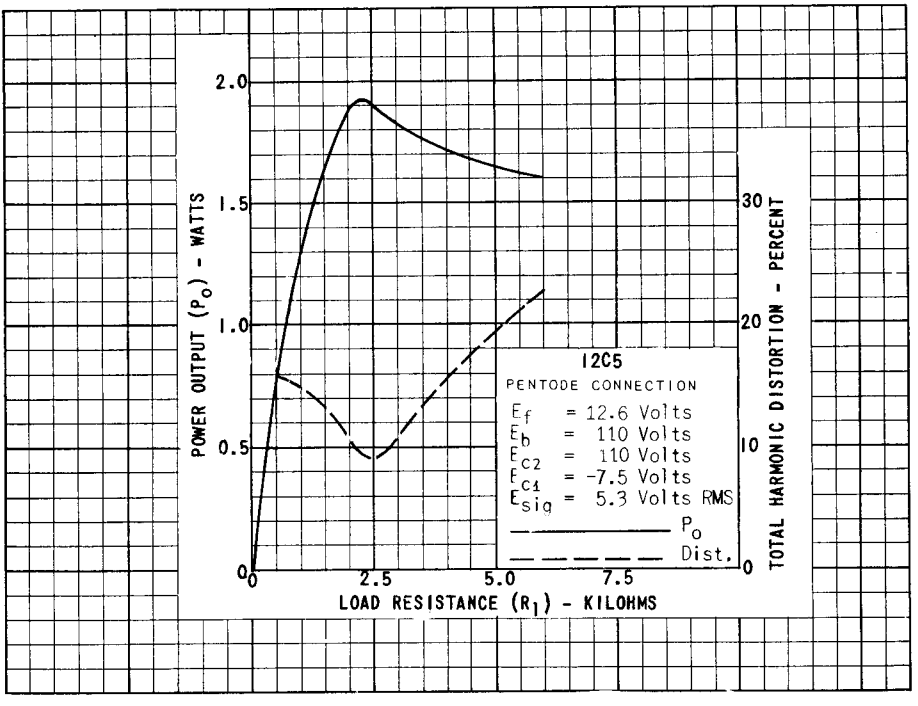

POWER OUTPUT (P_o) - WATTS
TOTAL HARMONIC DISTORTION - PERCENT
LOAD RESISTANCE (R_l) - KILOHMS
2.0
1.5
1.0
0.5
0
2.5
5.0
7.5
30
20
10
0
12C5
PENTODE CONNECTION
E_f = 12.6 Volts
E_b = 110 Volts
E_{c2} = 110 Volts
E_{c1} = -7.5 Volts
E_{sig} = 5.3 Volts RMS
P_o
Dist.

PLATE 559-3