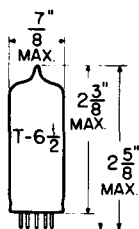


TUNG-SOL**BEAM-POWER PENTODE**

MINIATURE TYPE

**GLASS BULB**

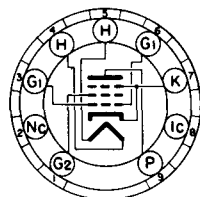
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.60±6% AMP.

AC OR DC

ANY MOUNTING POSITION

**BOTTOM VIEW**MINIATURE
SMALL-BUTTON
9 PIN BASE

9HM

THE 12DT5 IS A BEAM POWER PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE AS A VERTICAL DEFLECTION OUTPUT AMPLIFIER IN TELEVISION RECEIVERS UTILIZING A 110° DEFLECTION ANGLE PICTURE TUBE AND A B+ SUPPLY VOLTAGE OF 250 VOLTS. IT HAS HIGH ZERO BIAS PLATE CURRENT AND A HIGH PLATE CURRENT TO GRID #2 CURRENT RATIO. IN ADDITION, 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 WARM-UP TIME, THE 12DT5 IS IDENTICAL TO THE 6DT5.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE	0.57	μμf
INPUT	12.5	μμf
OUTPUT	4.9	μμf

RATINGS^A

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

VERTICAL DEFLECTION SERVICE^B

DEFLECTING 110° PICTURE TUBE

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM PLATE VOLTAGE	315	VOLTS
MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE (ABS. MAX.)	2 200	VOLTS
MAXIMUM GRID #2 VOLTAGE	285	VOLTS
MAXIMUM PEAK NEGATIVE PULSE GRID #1 VOLTAGE	-250	VOLTS
MAXIMUM PLATE DISSIPATION ^C	9.0	WATTS
MAXIMUM GRID #2 DISSIPATION	2.0	WATTS
MAXIMUM CATHODE CURRENT:		
AVERAGE	55	MA.
PEAK	190	MA.
MAXIMUM HEATER POSITIVE OR NEGATIVE WITH RESPECT TO [®]		
CATHODE (TOTAL DC AND PEAK)	200	VOLTS
MAXIMUM GRID #1 CIRCUIT VALUES		
FIXED BIAS	0.5	MEGOHM
CATHODE BIAS	1.0	MEGOHM
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

HEATER VOLTAGE	12.6	12.6	12.6	VOLTS
HEATER CURRENT	0.60±6%	0.60±6%	0.60±6%	AMP.
PLATE VOLTAGE	60	80	250	VOLTS
GRID #2 (SCREEN) VOLTAGE	150	250	250	VOLTS
GRID #1 VOLTAGE	0 ^E	0 ^E	-16.5	VOLTS
TRANSCONDUCTANCE	---	---	6 200	μMHOS
PLATE CURRENT	→ 95	195 ^F	44	MA.
GRID #2 CURRENT	→ 8.5	19 ^F	1.5	MA.
GRID #1 CUTOFF VOLTAGE ^G	---	---	-35	VOLTS

^A DESIGN-MAXIMUM RATINGS ARE THE LIMITING VALUES EXPRESSED WITH RESPECT TO BOGIE TUBES AT WHICH SATISFACTORY TUBE LIFE CAN BE EXPECTED TO OCCUR. TO OBTAIN SATISFACTORY CIRCUIT PERFORMANCE, THEREFORE, THE EQUIPMENT DESIGNER MUST ESTABLISH THE CIRCUIT DESIGN SO THAT NO DESIGN-MAXIMUM VALUE IS EXCEEDED WITH A BOGIE TUBE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, AND ENVIRONMENTAL CONDITIONS.

^B FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

^C IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

^E APPLIED FOR SHORT INTERVAL (MAXIMUM OF 2 SECONDS) SO AS NOT TO DAMAGE TUBE.

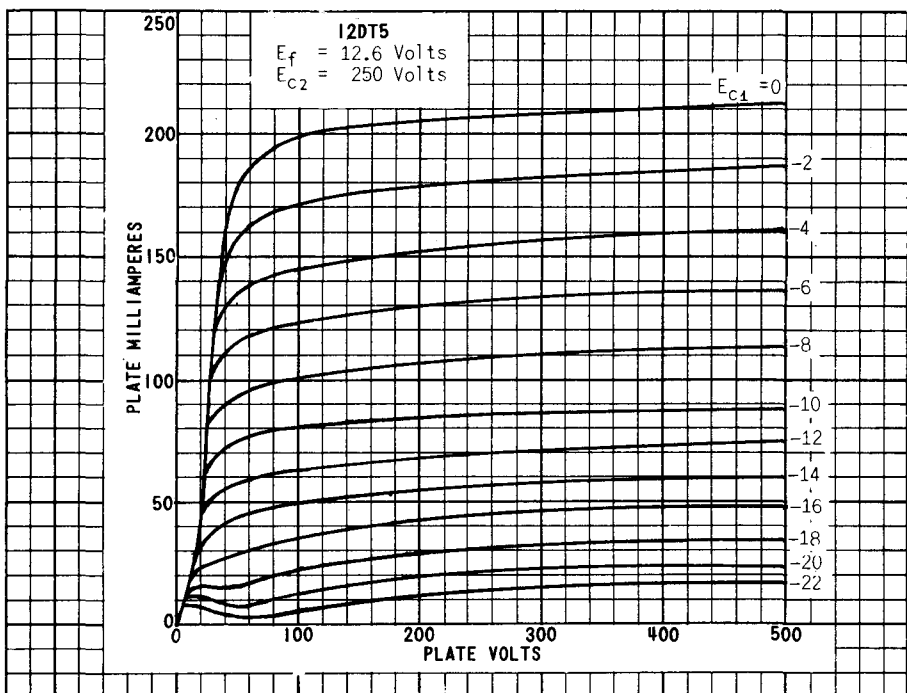
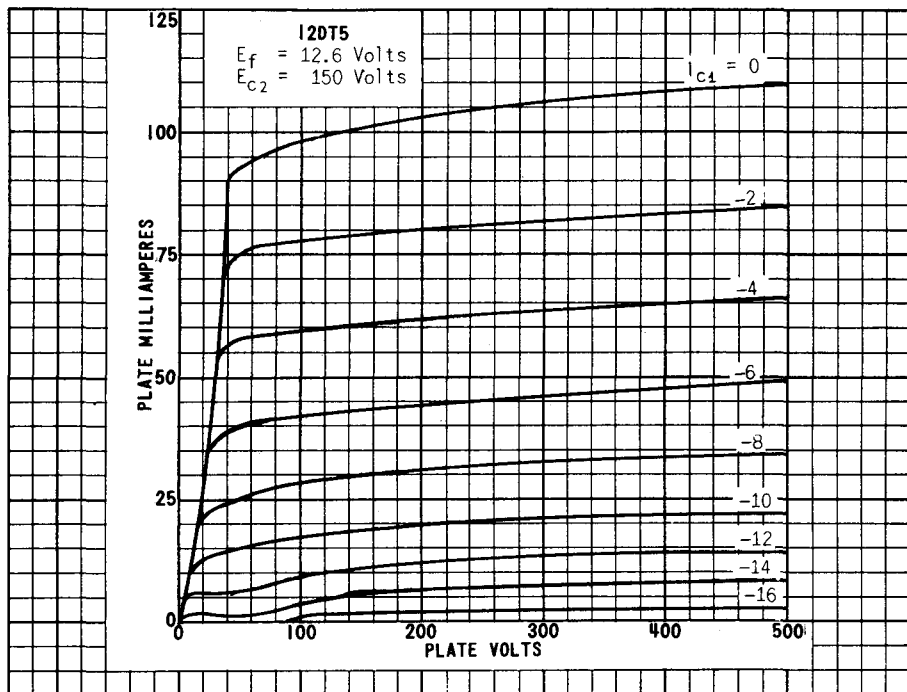
^F THESE VALUES CAN BE MEASURED BY A METHOD INVOLVING A RE-CURRENT WAVEFORM SUCH THAT THE PLATE DISSIPATION AND GRID #2 INPUT WILL BE KEPT WITHIN RATINGS IN ORDER TO PREVENT DAMAGE TO THE TUBE.

^G FOR PLATE CURRENT OF 100 μAMPERES.

* 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.

[Ⓢ] DC COMPONENT MUST NOT EXCEED 100 VOLTS.

→ INDICATES A CHANGE.



12DT5

