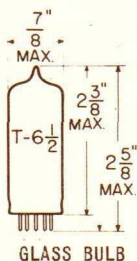


TUNG-SOL

PENTODE
MINIATURE TYPE

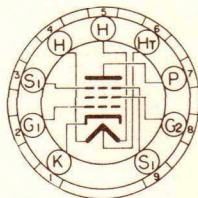
COATED UNIPOTENTIAL CATHODE

HEATER

SERIES	PARALLEL
12.6±10% VOLTS	6.3 VOLTS
0.3 AMP.	0.6±6% AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
SMALL BUTTON
9 PIN BASE
9BF

THE 12DQ7 IS A BEAM POWER PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION AND IS DESIGNED FOR USE AS THE VIDEO OUTPUT AMPLIFIER IN 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.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE (MAX.)	0.1	μf
INPUT	10.0	μf
OUTPUT	3.8	μf

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE	12.6±10%	6.3	VOLTS
MAXIMUM PLATE VOLTAGE		330	VOLTS
MAXIMUM SCREEN-SUPPLY VOLTAGE		330	VOLTS
MAXIMUM SCREEN VOLTAGE	SEE SCREEN RATING CHART		
MAXIMUM POSITIVE DC GRID #1 VOLTAGE		0	VOLTS
MAXIMUM PLATE DISSIPATION		6.5	WATTS
MAXIMUM SCREEN DISSIPATION		1.1	WATTS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC COMPONENT		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:			
WITH FIXED BIAS		0.25	MEGOHMS
WITH CATHODE BIAS		1.0	MEGOHMS
HEATER WARM-UP TIME (APPROX.)*		11.0	SECONDS

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TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

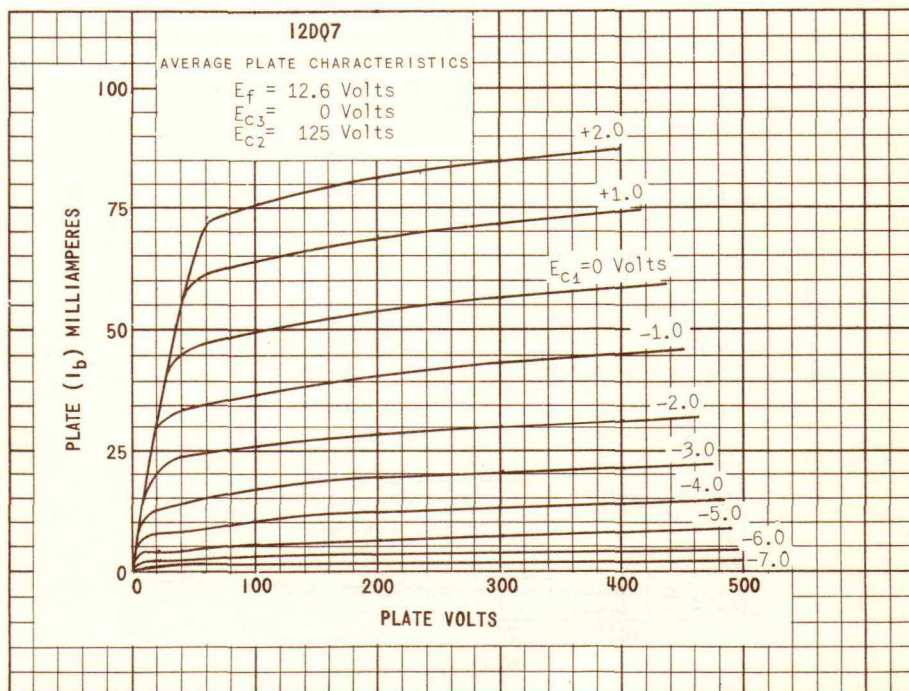
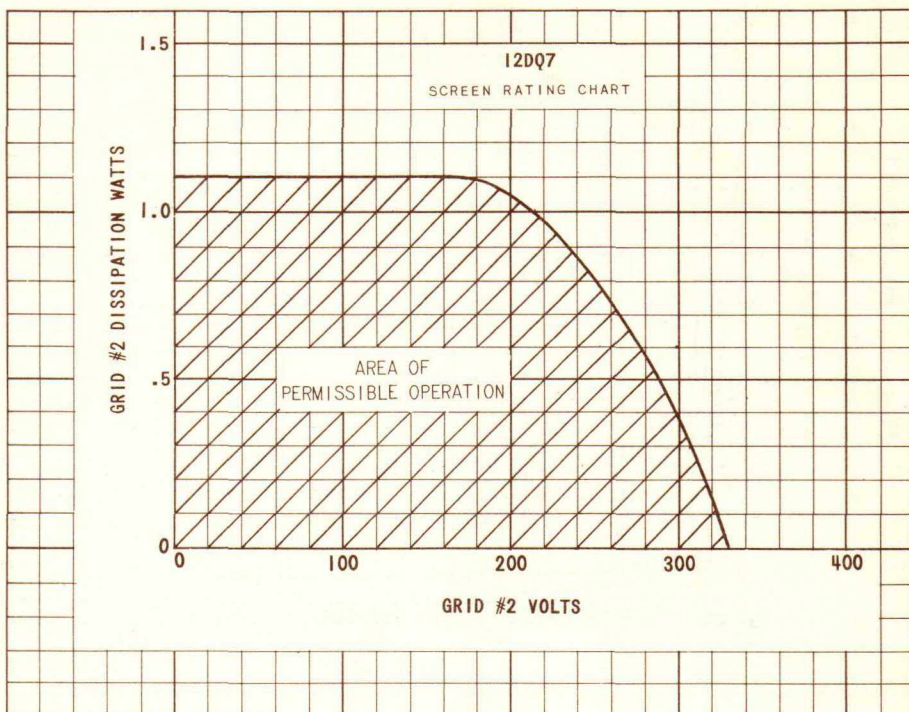
CLASS A₁ AMPLIFIER

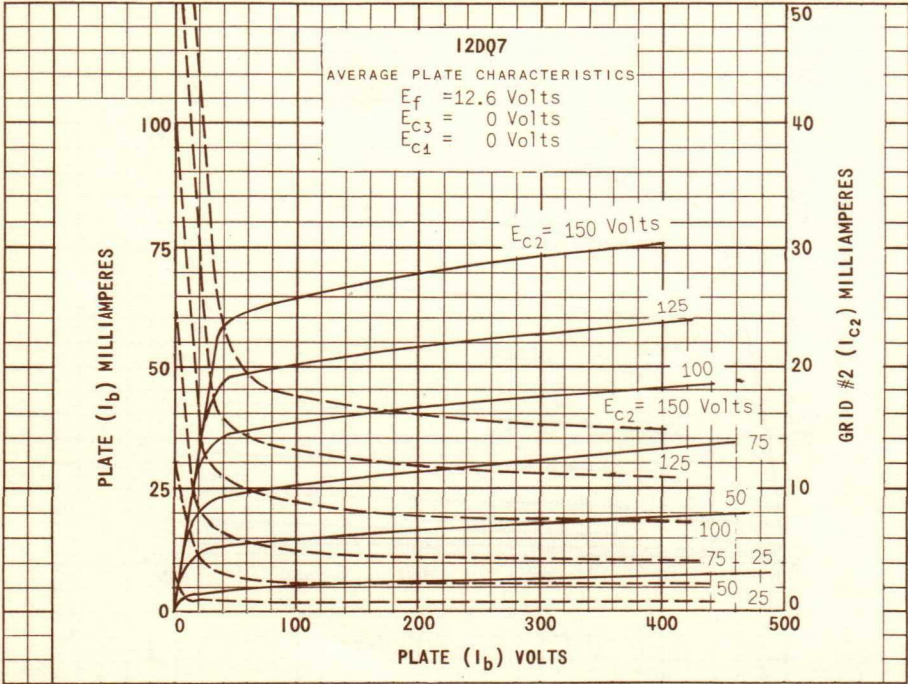
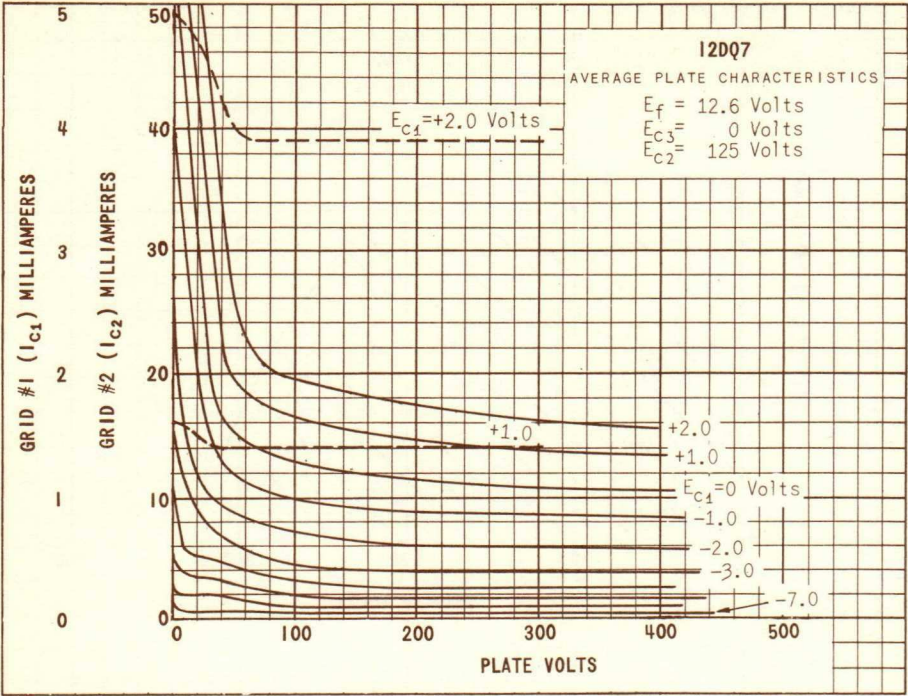
HEATER VOLTAGE	12.6±10%	6.3	VOLTS
HEATER CURRENT	0.3	0.6±6%	AMP.
PLATE VOLTAGE	40	200	VOLTS
SUPPRESSOR	CONNECTED TO CATHODE AT SOCKET		
SCREEN VOLTAGE	125	125	VOLTS
GRID #1 VOLTAGE	0 ^A	---	VOLTS
CATHODE BIAS RESISTOR	---	68	OHMS
PLATE RESISTANCE, (APPROX.)	---	53 000	OHMS
TRANSCONDUCTANCE	---	10 500	μMHOS
PLATE CURRENT	45	26	MA.
SCREEN CURRENT	16	5.6	MA.
GRID #1 VOLTAGE (APPROX.)	---	---	---
I _b = 100 μAMPS.	---	-9	VOLTS

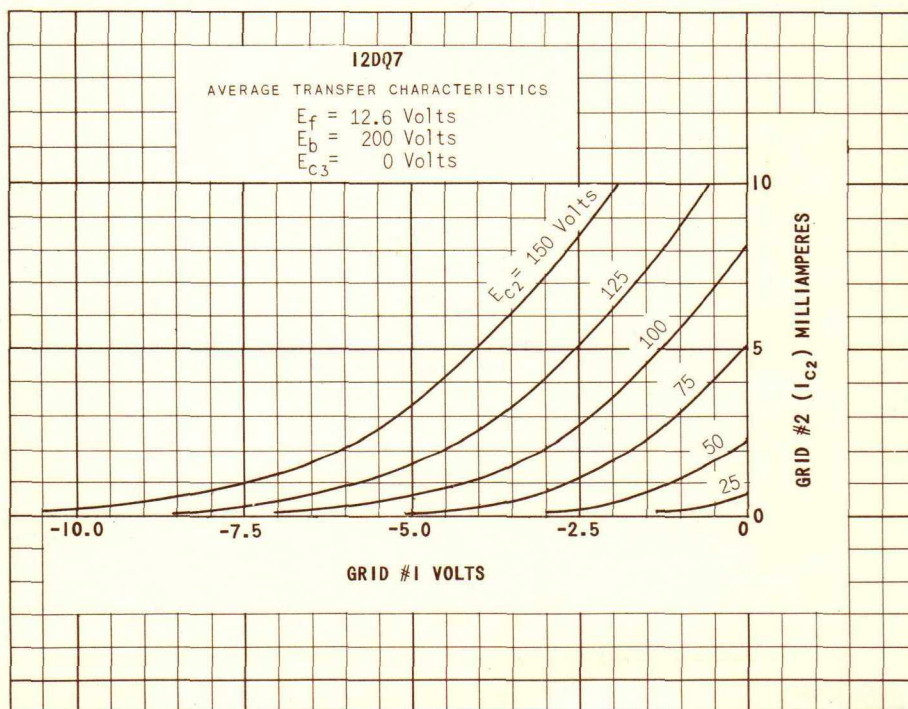
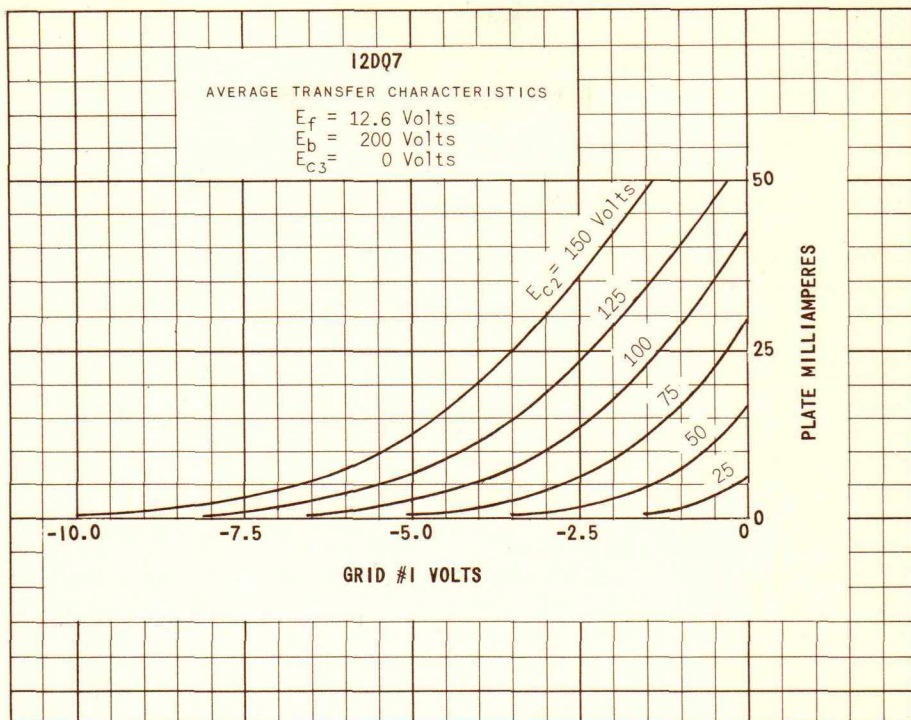
^A APPLIED FOR SHORT INTERVAL (TWO SECONDS MAXIMUM) SO AS NOT TO DAMAGE TUBE.

*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.

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.







12DQ7

AVERAGE TRANSFER CHARACTERISTICS

 $E_f = 12.6$ Volts $E_b = 200$ Volts $E_{c3} = 0$ Volts