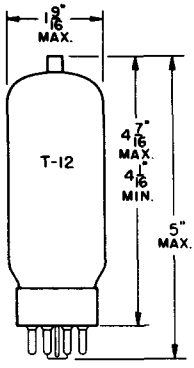
TUNG-SOL

PENTODE

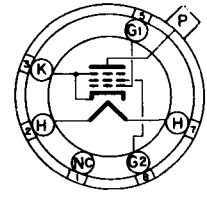


GLASS BULB
SMALL CAP

COATED UNIPOTENTIAL CATHODE

HEATER
25.0 VOLTS 0.6 AMP.
AC OR DC

VERTICAL MOUNTING POSITION
HORIZONTAL OPERATION PERMITTED IF PLANE OF PINS 1 AND 3 IS VERTICAL



BOTTOM VIEW
SHORT-MEDIUM SHELL
8 PIN OCTAL
58T

THE 25DN6 IS A BEAM POWER AMPLIFIER INTENDED FOR USE AS A HORIZONTAL DEFLECTION AMPLIFIER IN 600 MA. SERIES HEATER OPERATED TELEVISION RECEIVERS HAVING LOW B SUPPLY VOLTAGE. THERMAL CHARACTERISTICS OF THE HEATER HAVE BEEN 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 – APPROX.

GRID #1 TO PLATE	0.8	μμf
INPUT	22	μμf
OUTPUT	11.5	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER VALUES[A]

HORIZONTAL DEFLECTION AMPLIFIER[B]

HEATER VOLTAGE	25.0	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 DC PLATE SUPPLY VOLTAGE (BOOST + DC POWER SUPPLY)	700	VOLTS
MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE (ABS. MAX.)	6 600	VOLTS
MAXIMUM PEAK NEGATIVE PULSE PLATE VOLTAGE	1 500	VOLTS
MAXIMUM PLATE DISSIPATION[C]	15	WATTS
MAXIMUM PEAK NEGATIVE GRID #1 VOLTAGE	200	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	175	VOLTS
MAXIMUM GRID #2 DISSIPATION	3.0	WATTS
MAXIMUM AVERAGE CATHODE CURRENT	200	MA.
MAXIMUM PEAK CATHODE CURRENT	700	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	0.47	MEGOHM
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT)	225	°C
HEATER WARM-UP TIME (APPROX.)[D]	11.0	SECONDS

[A] UNLESS OTHERWISE INDICATED.

[B] FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCASTING STATIONS; FEDERAL COMMUNICATIONS COMMISSION". THE DUTY CYCLE OF THE VOLTAGE PULSE NOT TO EXCEED 15 PERCENT OF A 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.

[D] 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

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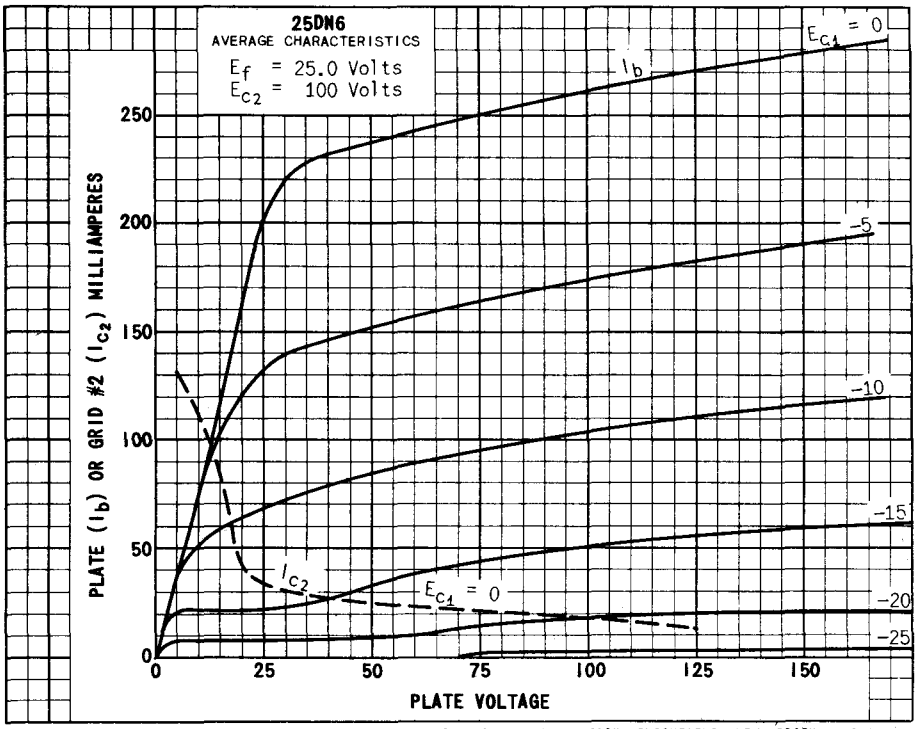
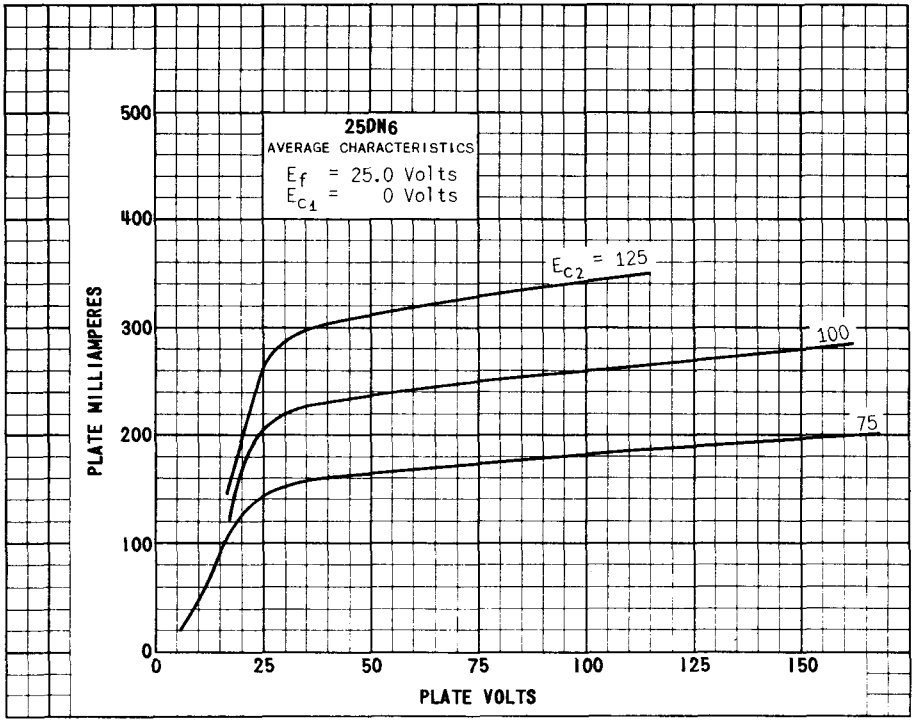
TUNG-SOL

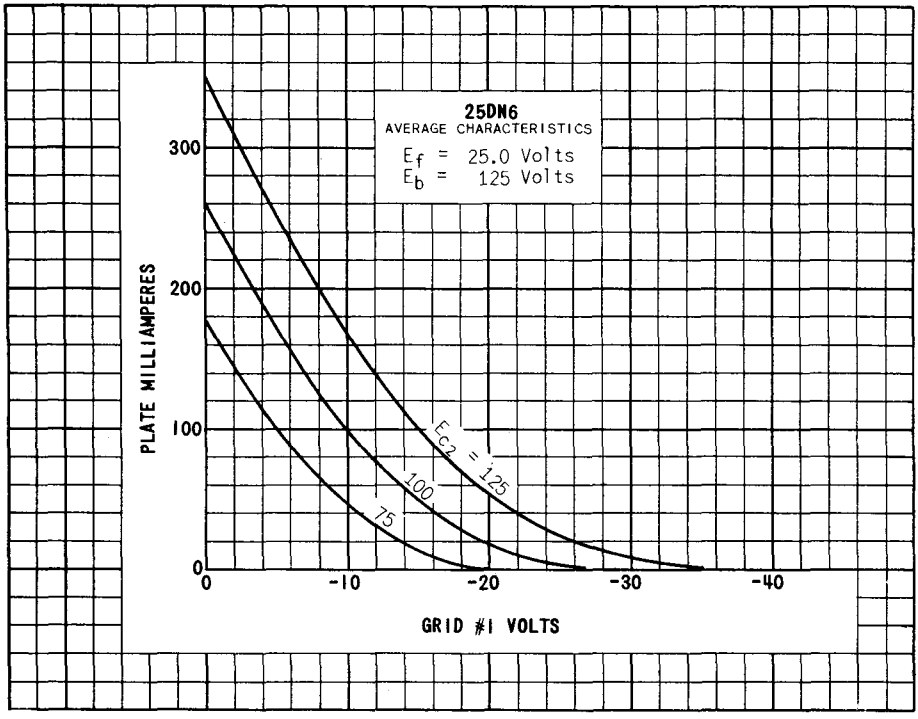
CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

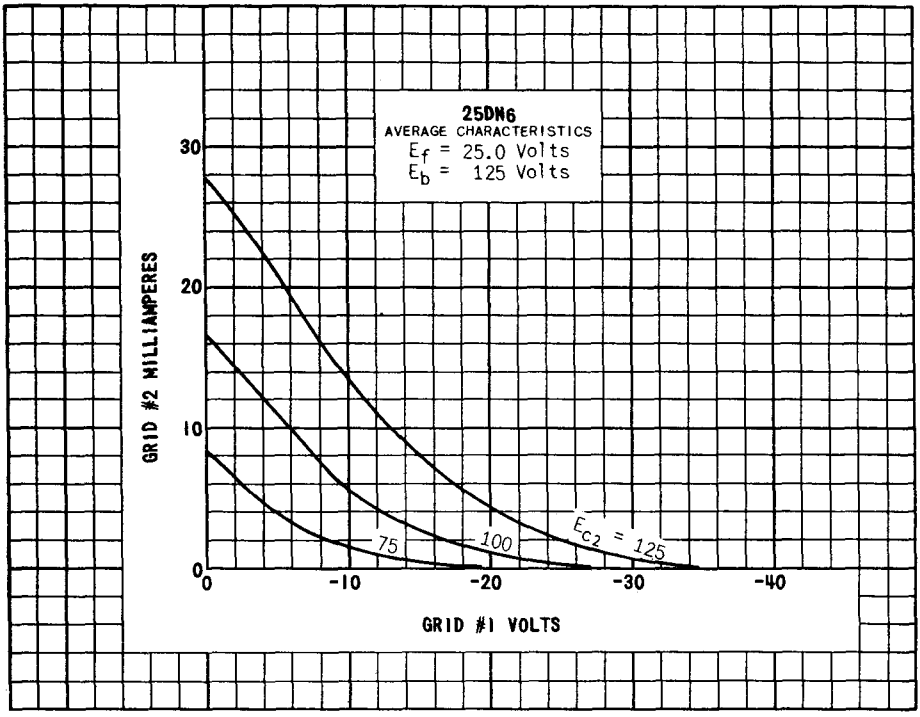
HEATER VOLTAGE	25.0	VOLTS
HEATER CURRENT	0.6	AMP.
PENTODE OPERATION: WITH E_b = 125 VOLTS, E_{c2} = 125 VOLTS AND E_{c1} = -18 VOLTS.		
PLATE CURRENT	70	MA.
GRID #2 CURRENT	6.3	MA.
TRANSCONDUCTANCE	9 000	µMHOS
PLATE RESISTANCE (APPROX.)	4 000	OHMS
ZERO-BIAS: WITH E_b = 50 VOLTS, E_{c2} = 100 VOLTS & E_{c1} = 0 VOLTS (INSTANTANEOUS VALUES)		
PLATE CURRENT	240	MA.
GRID #2 CURRENT	30	MA.
CUT-OFF: FOR I_b = 0.5 MA. WITH E_b = 125 VOLTS AND E_{c2} = 125 VOLTS		
GRID #1 VOLTAGE (APPROX.)	-36	VOLTS
TRIODE AMPLIFICATION FACTOR; WITH E_b = E_{c2} = 125 V. & E_{c1} = -18 V.	4.35	




25DN6
AVERAGE CHARACTERISTICS
E_f = 25.0 Volts
E_{c1} = 0 Volts
E_{c2} = 125
100
75
PLATE MILLIAMPERES
PLATE VOLTS
0
100
200
300
400
500
0
25
50
75
100
125
150


25DN6
AVERAGE CHARACTERISTICS
E_f = 25.0 Volts
E_b = 125 Volts
E_{c2} = 125
100
75
PLATE MILLIAMPERES
GRID #1 VOLTS
0
100
200
300
0
-10
-20
-30
-40

25DN6


25DN6
AVERAGE CHARACTERISTICS
E_f = 25.0 Volts
E_b = 125 Volts
GRID #2 MILLIAMPERES
30
20
10
0
0
-10
-20
-30
-40
GRID #1 VOLTS
75
100
E_{c2} = 125