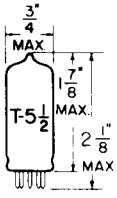
TUNG-SOL

PENTODE

MINIATURE TYPE



GLASS BULB

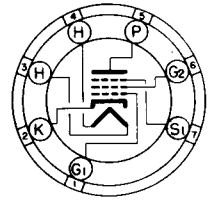
COATED UNIPOTENTIAL CATHODE

HEATER

3.15 VOLTS 0.6±10% AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

MINIATURE BUTTON
7 PIN BASE

7CM

THE 3DK6 IS A SHARP CUTOFF PENTODE IN THE 7-PIN MINIATURE CONSTRUCTION DESIGNED FOR SERVICE AS A WIDE-BAND HIGH-FREQUENCY AMPLIFIER. THE VERY HIGH TRANSCONDUCTANCE AT LOW PLATE AND SCREEN POTENTIALS COMBINED WITH THE LOW INTERELECTRODE CAPACITANCES MAKES IT PARTICULARLY SUITABLE FOR USE AS AN IF 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. EXCEPT FOR HEATER RATINGS, THE 3DK6 IS IDENTICAL TO THE 4DK6.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE (MAX.)*	0.025	μμf
INPUT	6.3	μμf
OUTPUT	1.9	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	3.15	VOLTS
MAXIMUM PLATE VOLTAGE	330	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE*	330	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE GRID #2 INPUT RATING CURVE	
MAXIMUM PLATE DISSIPATION	2.3	WATTS
MAXIMUM GRID #2 DISSIPATION	0.55	WATTS
MAXIMUM GRID #1 VOLTAGE:*		
POSITIVE VALUE	0	VOLTS
MAXIMUM HEATER CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	300	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		
DC COMPONENT	100	VOLTS
TOTAL DC AND PEAK	200	VOLTS
HEATER WARM-UP TIME (APPROX.)[A]		

[A] 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 AN ADDITION

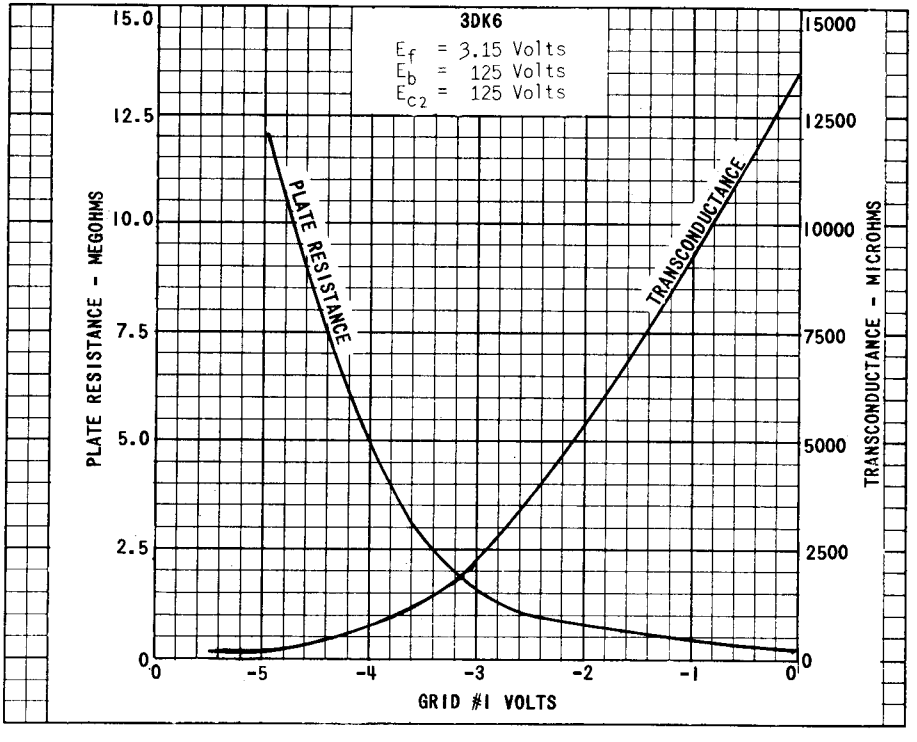
TUNG-SOL

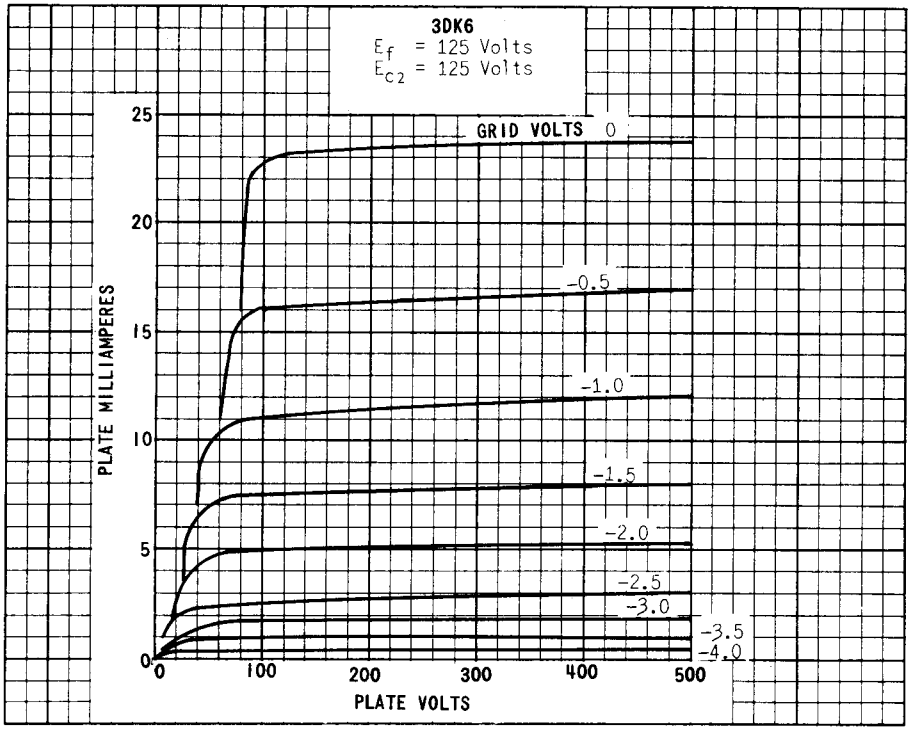
CONTINUED FROM PRECEDING PAGE

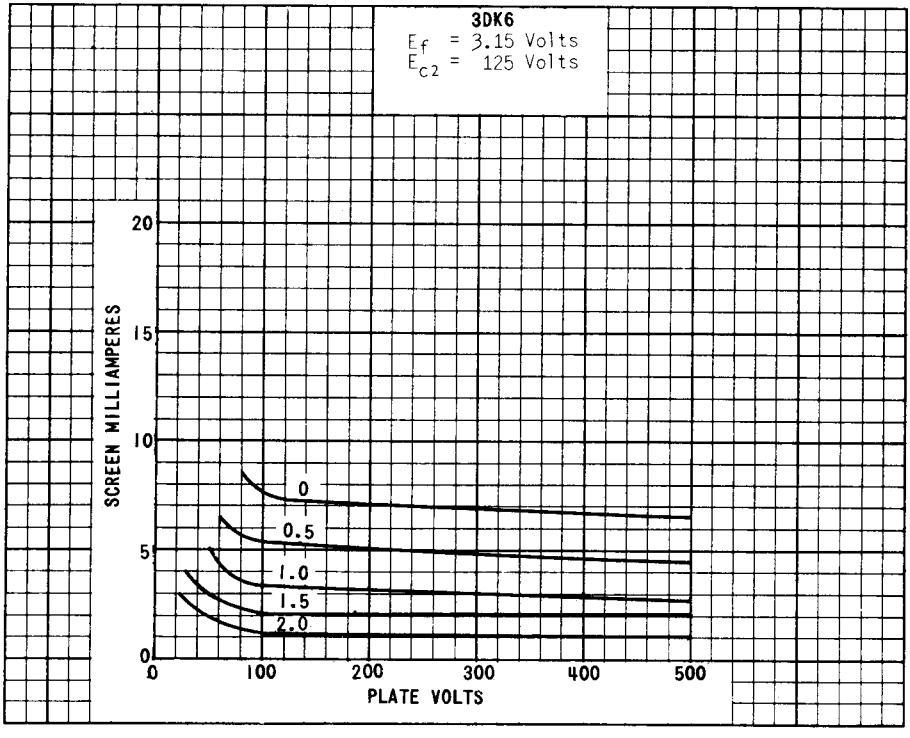
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

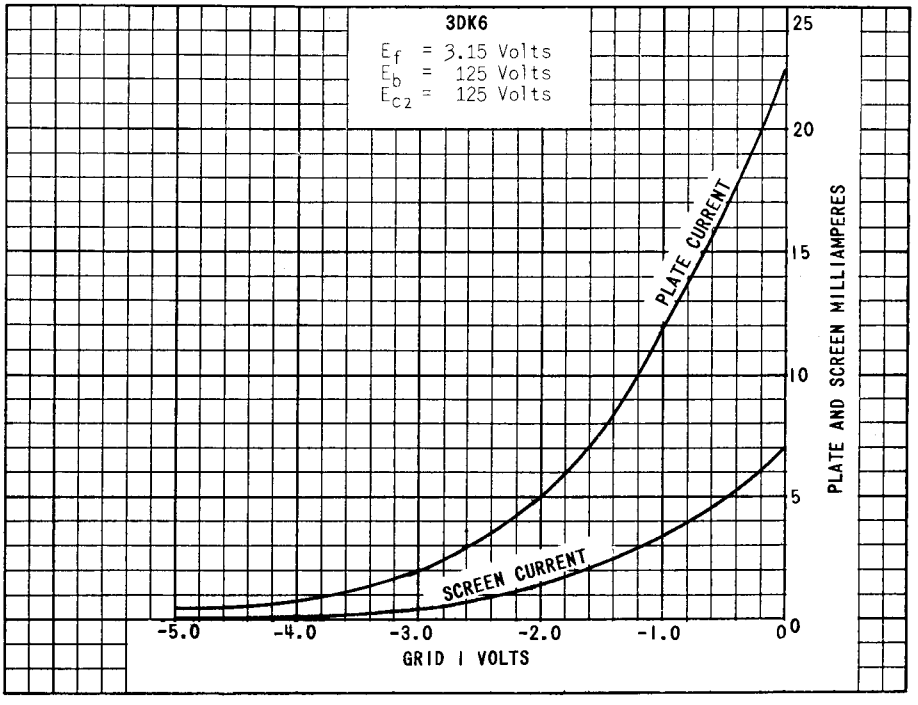
HEATER VOLTAGE	3.15	VOLTS
HEATER CURRENT	0.6±10%	AMP.
PLATE VOLTAGE	125	VOLTS
GRID #3 (SUPPRESSOR)	CONNECTED TO CATHODE AT SOCKET	
GRID #2 VOLTAGE	125	VOLTS
CATHODE BIAS RESISTOR	56	OHMS
PLATE RESISTANCE (APPROX.)*	0.35	MEGOHM
TRANSCONDUCTANCE	9800	μMHOS
PLATE CURRENT	12.0	MA.
GRID #2 CURRENT	3.8	MA.
GRID #1 CUTOFF BIAS[B]	-6.5	VOLTS

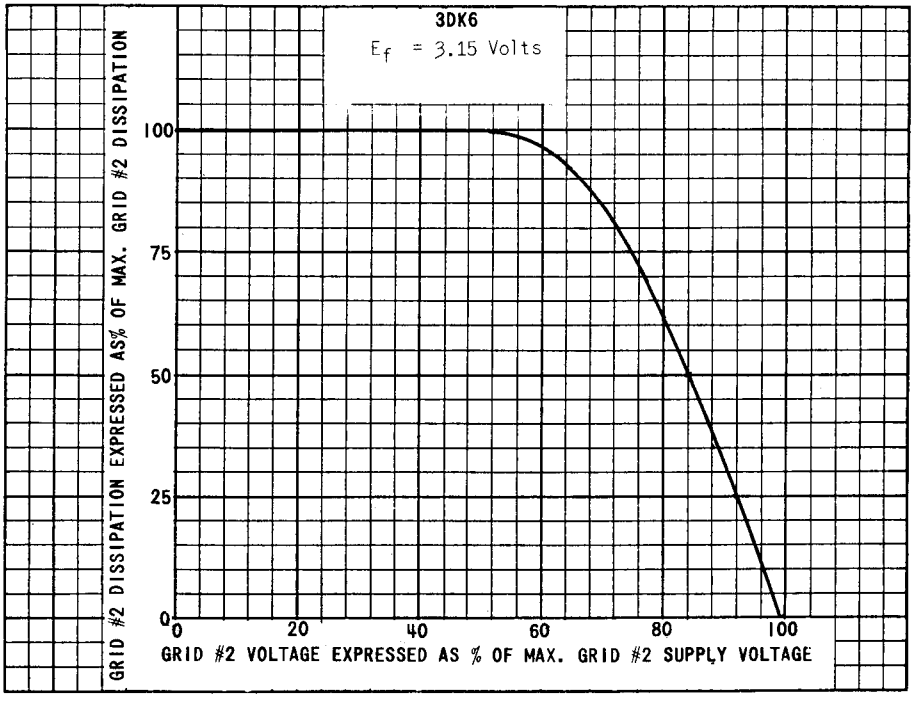
[B] FOR PLATE CURRENT OF 20 μA.




3DK6
E_f = 125 Volts
E_{c2} = 125 Volts
GRID VOLTS 0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
PLATE MILLIAMPERES
PLATE VOLTS
0
5
10
15
20
25
0
100
200
300
400
500


3DK6
E_f = 3.15 Volts
E_{c2} = 125 Volts
0
0.5
1.0
1.5
2.0
SCREEN MILLIAMPERES
PLATE VOLTS
0
5
10
15
20
0
100
200
300
400
500


3DK6
E_f = 3.15 Volts
E_b = 125 Volts
E_{c2} = 125 Volts
PLATE CURRENT
SCREEN CURRENT
25
20
15
10
5
0
-5.0
-4.0
-3.0
-2.0
-1.0
0
GRID 1 VOLTS
PLATE AND SCREEN MILLIAMPERES


3DK6
E_f = 3.15 Volts
100
75
50
25
0
0
20
40
60
80
100
GRID #2 VOLTAGE EXPRESSED AS % OF MAX. GRID #2 SUPPLY VOLTAGE
GRID #2 DISSIPATION EXPRESSED AS% OF MAX. GRID #2 DISSIPATION