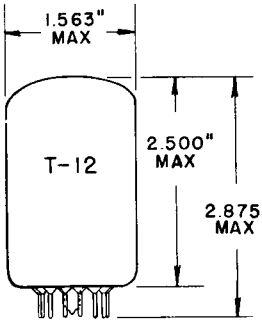
TUNG-SOL

PENTODE

COMPACTRON



GLASS BULB
12 PIN BASE E12-74
OUTLINE DRAWING
JEDEC 12-56

BEAM PENTODE

FOR

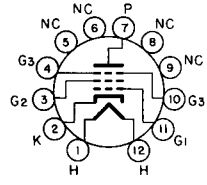
HORIZONTAL-DEFLECTION

AMPLIFIER APPLICATIONS

IN TV RECEIVERS

COATED UNIPOTENTIAL CATHODE

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 12FK

THE 6JN6 IS A BEAM-POWER PENTODE IN THE T-12 COMPACTRON CONSTRUCTION. IT IS DESIGNED PRIMARILY FOR USE AS THE HORIZONTAL-DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS. A SEPARATE CONNECTION IS PROVIDED FOR THE BEAM PLATES (GRID 3) TO MINIMZE "SNIVETS".
EXCEPT FOR HEATER CHARACTERISTICS AND RATINGS, THE 6JN6 IS IDENTICAL TO THE 12JN6.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID 1 TO PLATE: G1 TO P	0.34	pf
INPUT: G1 TO (H + K + G2 + G3)	16	pf
OUTPUT: P TO (H + K + G2 + G3)	7.0	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	1.2	AMPS.
LIMITS OF APPLIED VOLTAGE		6.3 ± 0.6	VOLTS
MAXIMUM HEATER - CATHODE VOLTAGE:			
HEATER NEG. W/ RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
HEATER POS. W/ RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

CONTINUED ON FOLLOWING PAGE

CONTINUED FROM PRECEDING PAGE

MAXIMUM RATINGS

DESIGN MAXIMUM RATINGS - SEE EIA STANDARD RS-239

HORIZONTAL-DEFLECTION AMPLIFIER SERVICE

DC PLATE - SUPPLY VOLTAGE (BOOST + DC POWER SUPPLY).	770	VOLTS
PEAK POSITIVE PULSE PLATE VOLTAGE	6,500	VOLTS
PEAK NEGATIVE PULSE PLATE VOLTAGE	1,500	VOLTS
POSITIVE DC GRID 3 VOLTAGE	70	VOLTS
GRID 2 VOLTAGE	220	VOLTS
NEGATIVE DC GRID 1 VOLTAGE	55	VOLTS
PEAK NEGATIVE GRID 1 VOLTAGE	330	VOLTS
PLATE DISSIPATION [A]	17.5	WATTS
GRID 2 DISSIPATION	3.5	WATTS
DC CATHODE CURRENT	175	MA.
PEAK CATHODE CURRENT	550	MA.
GRID 1 CIRCUIT RESISTANCE	1.0	MEGOHMS
BULB TEMPERATURE AT HOTTEST POINT	220	°C

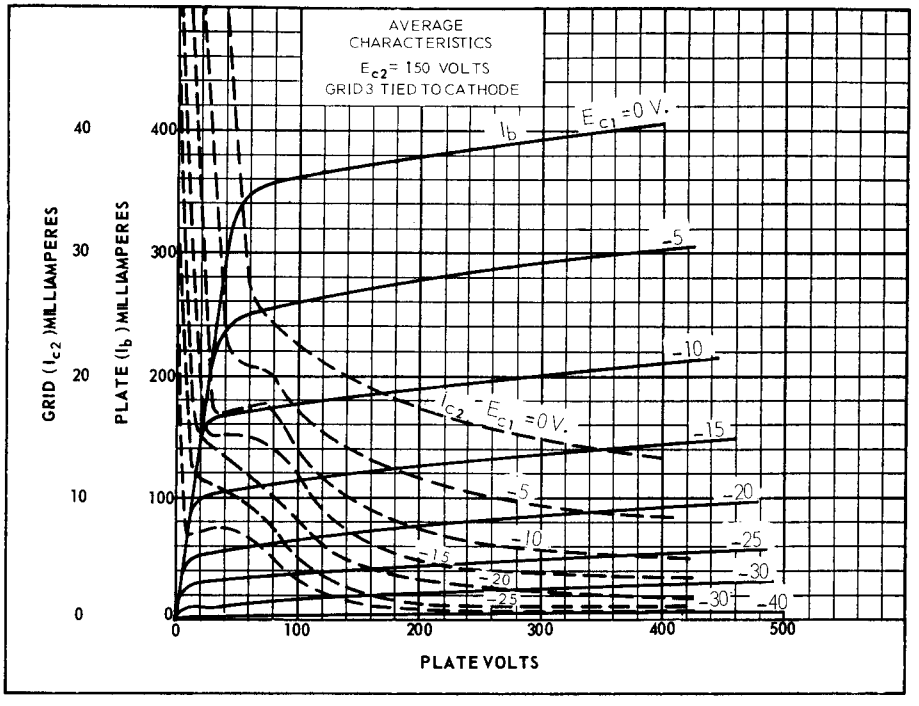
A - IN STAGES OPERATING WITH GRID-LEAK BIAS, AN ADEQUATE CATHODE-BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

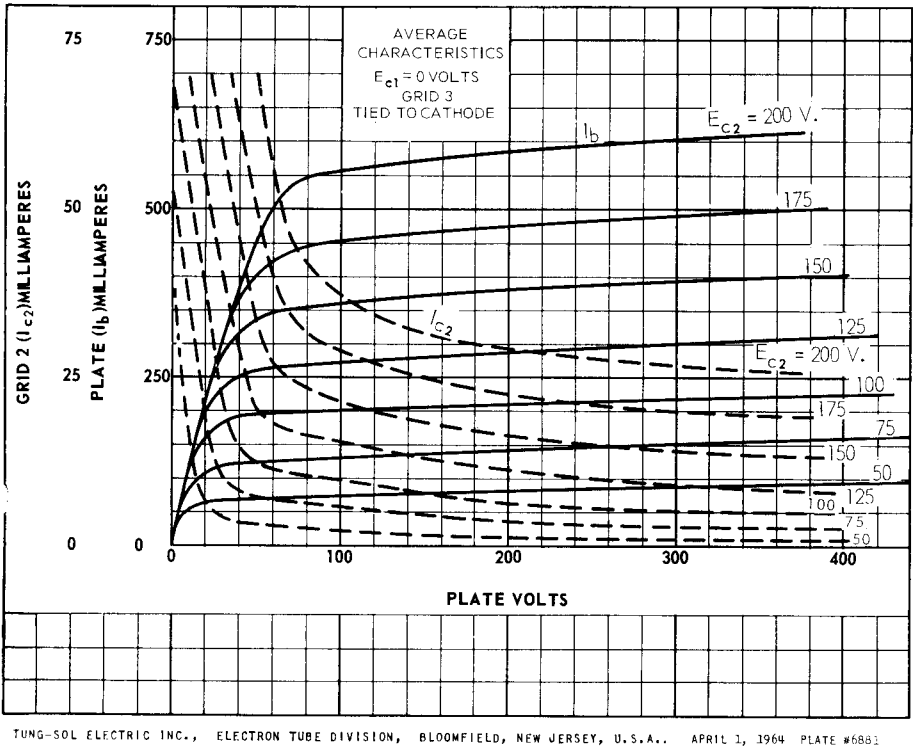
CHARACTERISTICS AND TYPICAL OPERATION

PLATE VOLTAGE	5,000	60	250	VOLTS
GRID 3 - CONNECTED TO CATHODE AT SOCKET				
GRID 2 VOLTAGE	150	150	150	VOLTS
GRID 1 VOLTAGE	–	0 [B]	−22.5	VOLTS
PLATE CURRENT	–	345	65	MA.
GRID 2 CURRENT	–	27	1.8	MA.
TRANSCONDUCTANCE	–	–	7,300	μMHOS
PLATE RESISTANCE - APPROX.	–	–	18,000	OHMS
GRID 1 VOLTAGE AT I_b = 1.0 MA. - APPROX.	−100	–	−42	VOLTS
TRIODE AMPLIFICATION FACTOR [C]	–	–	4.4	

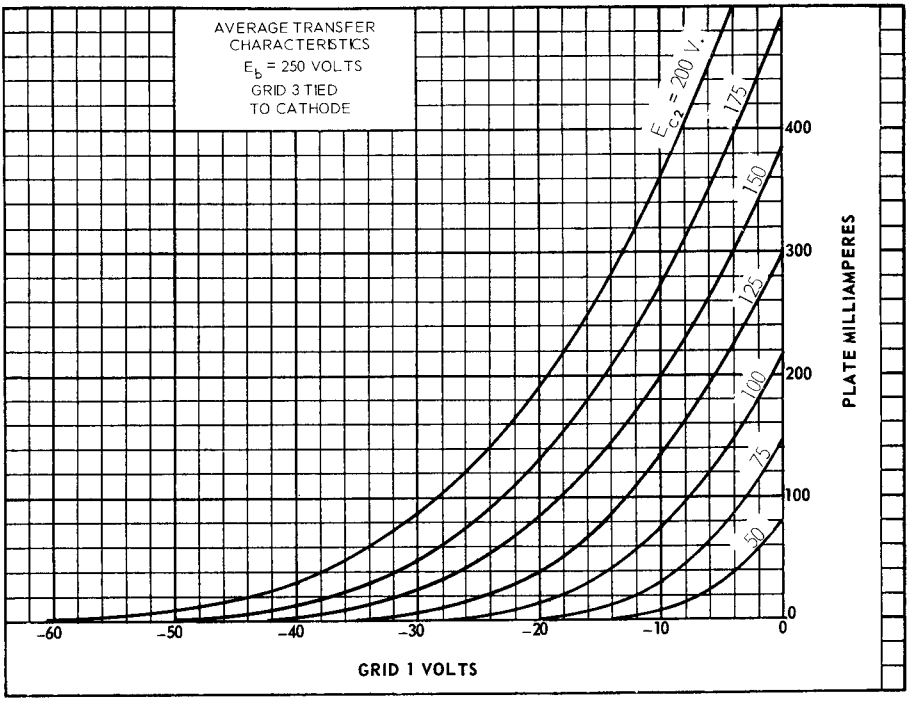
B - APPLIED FOR SHORT INTERVAL (2 SECONDS) SO AS NOT TO DAMAGE TUBE.

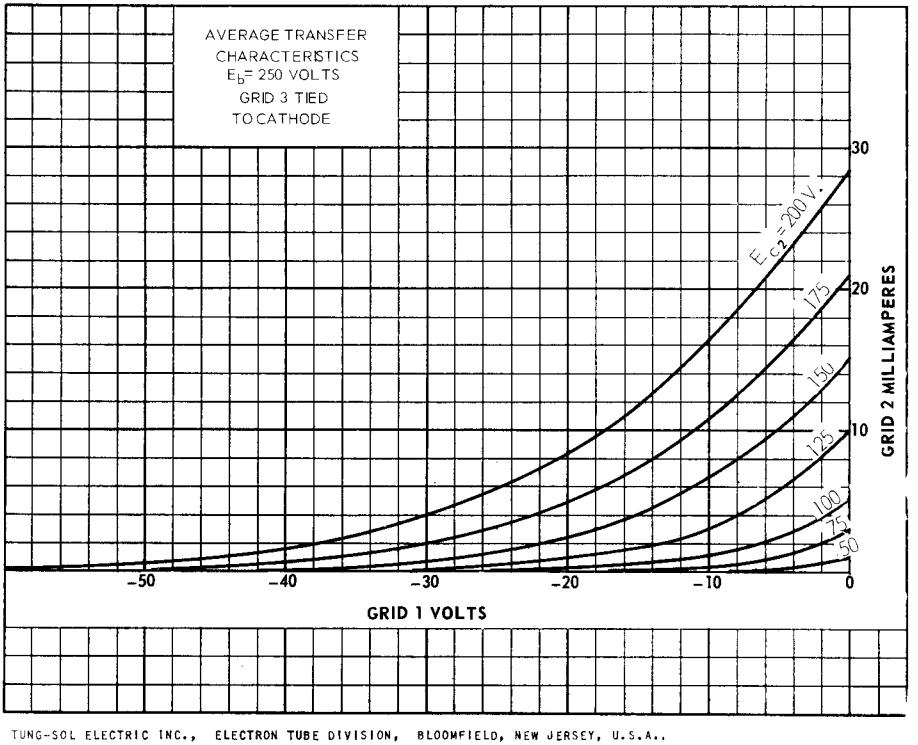
C - TRIODE CONNECTION (GRID 2 TIED TO PLATE) WITH $E_b = E_{c2} =$ 150 VOLTS AND $E_{c1} =$ -22.5 VOLTS


AVERAGE
CHARACTERISTICS
E_{c2} = 150 VOLTS
GRID 3 TIED TO CATHODE
GRID (I_{c2}) MILLIAMPERES
PLATE (I_b) MILLIAMPERES
PLATE VOLTS
I_b
E_{c1} = 0 V.
-5
-10
-15
I_{c2}
E_{c1} = 0 V.
-5
-10
-15
-20
-25
-30
-40
0
10
20
30
40
100
200
300
400
500


AVERAGE
CHARACTERISTICS
E_{c1} = 0 VOLTS
GRID 3
TIED TO CATHODE
GRID 2 (I_{c2}) MILLIAMPERES
PLATE (I_b) MILLIAMPERES
PLATE VOLTS
I_b
E_{c2} = 200 V.
175
150
125
100
75
50
I_{c2}
E_{c2} = 200 V.
175
150
125
100
75
50
0
25
50
75
250
500
750
100
200
300
400

6JN6


AVERAGE TRANSFER
CHARACTERISTICS
E_b = 250 VOLTS
GRID 3 TIED
TO CATHODE
E_{c2} = 200 V.
175
150
125
100
75
50
400
300
200
100
0
PLATE MILLIAMPERES
-60
-50
-40
-30
-20
-10
0
GRID 1 VOLTS


AVERAGE TRANSFER
CHARACTERISTICS
E_b= 250 VOLTS
GRID 3 TIED
TO CATHODE
E_{c2} = 200 V.
175
150
125
100
75
50
30
20
10
GRID 2 MILLIAMPERES
-50
-40
-30
-20
-10
0
GRID 1 VOLTS