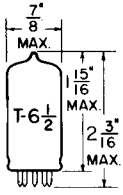
TUNG-SOL

TRIODE TETRODE

MINIATURE TYPE



GLASS BULB

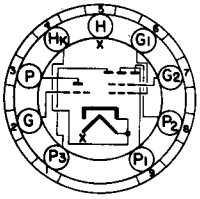
COATED UNIPOTENTIAL CATHODE

HEATER

6.3±10% VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SMALL-BUTTON
9 PIN NOVAL
9KP

THE 6FH8 IS A MEDIUM-MU TRIODE AND A SHARP CUTOFF TETRODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE IN HARMONIC-GENERATOR APPLICATIONS, WITH THE TETRODE UNIT EMPLOYING THREE PLATES.

DIRECT INTERELECTRODE CAPACITANCES[A]

TRIODE UNIT:		
GRID TO PLATE	1.4	μμf
GRID TO CATHODE AND HEATER	2.6	μμf
PLATE TO CATHODE AND HEATER	1	μμf
TETRODE UNIT:		
GRID #1 TO PLATE #1 (MAX.)	0.060	μμf
GRID #1 TO CATHODE, HEATER, GRID #2, PLATE #2 &#3	4.5	μμf
PLATE #1 TO CATHODE,HEATER,GRID #2,PLATE #2 & #3	1.4	μμf
TETRODE GRID #1 TO TRIODE PLATE (MAX.)	0.35	μμf
TETRODE PLATE #1 TO TRIODE PLATE (MAX.)	0.008	μμf

[A] WITH EXTERNAL SHIELD #315 CONNECTED TO CATHODE.

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HARMONIC-GENERATOR SERVICE

	TRIODE UNIT	TETRODE UNIT	
HEATER VOLTAGE	6.3±10%		VOLTS
MAXIMUM PLATE VOLTAGE (MAX.)	275	---	VOLTS
MAXIMUM PLATE #1 VOLTAGE	---	275	VOLTS
MAXIMUM PLATE #2 VOLTAGE	---	200	VOLTS
MAXIMUM PLATE #3 VOLTAGE	---	200	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	---	275	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

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RATINGS - cont'd.

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HARMONIC-GENERATOR SERVICE

	TRIODE UNIT	TETRODE UNIT	
MAXIMUM GRID #2 (SCREEN-GRID) VOLTAGE		SEE RATING CHART	
MAXIMUM GRID #1 (CONTROL-GRID) VOLTAGE:			
NEGATIVE-BIAS VALUE	40	40	VOLTS
POSITIVE-BIAS VALUE	0	0	VOLTS
MAXIMUM PLATE DISSIPATION	1.7	---	WATTS
MAXIMUM PLATE #1 DISSIPATION	---	2.3	WATTS
MAXIMUM PLATE #2 DISSIPATION	---	0.3	WATT
MAXIMUM PLATE #3 DISSIPATION	---	0.3	WATT
MAXIMUM GRID #2 INPUT:			
FOR GRID #2 VOLTAGES UP TO 137.5 VOLTS	---	0.45	WATT
FOR GRID #2 VOLTAGES BETWEEN 137.5 AND 275 VOLTS		SEE RATING CHART	
MAXIMUM CIRCUIT VALUES:			
GRID #1 CIRCUIT RESISTANCE:			
FOR FIXED-BIAS OPERATION	0.5	0.5	MEGOHM

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CHARACTERISTICS - CLASS A_1 AMPLIFIER

TRIODE UNIT

HEATER VOLTAGE	6.3±10%	VOLTS
HEATER CURRENT	0.45	AMP.
PLATE VOLTAGE	100	VOLTS
GRID VOLTAGE	-1	VOLT
AMPLIFICATION FACTOR	40	
PLATE RESISTANCE (APPROX.)	7400	OHMS
TRANSCONDUCTANCE	5400	μMHOS
PLATE CURRENT	7.9	MA.
GRID VOLTAGE (APPROX.) FOR PLATE CURRENT OF 100 μA	-7	VOLTS

TETRODE UNIT

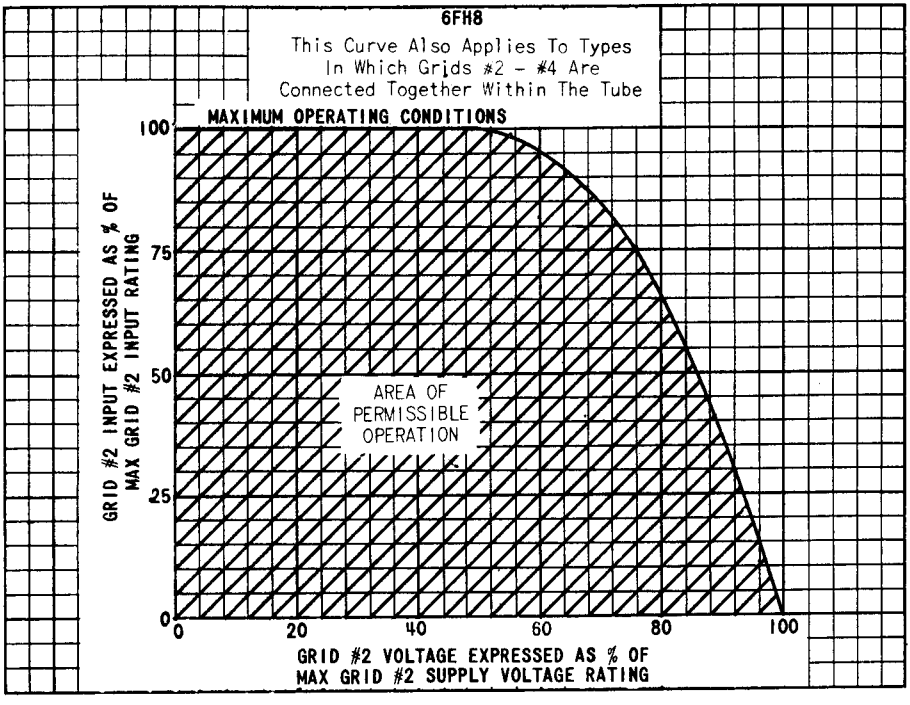
WITH PLATE #2 & #3 CONNECTED TO CATHODE

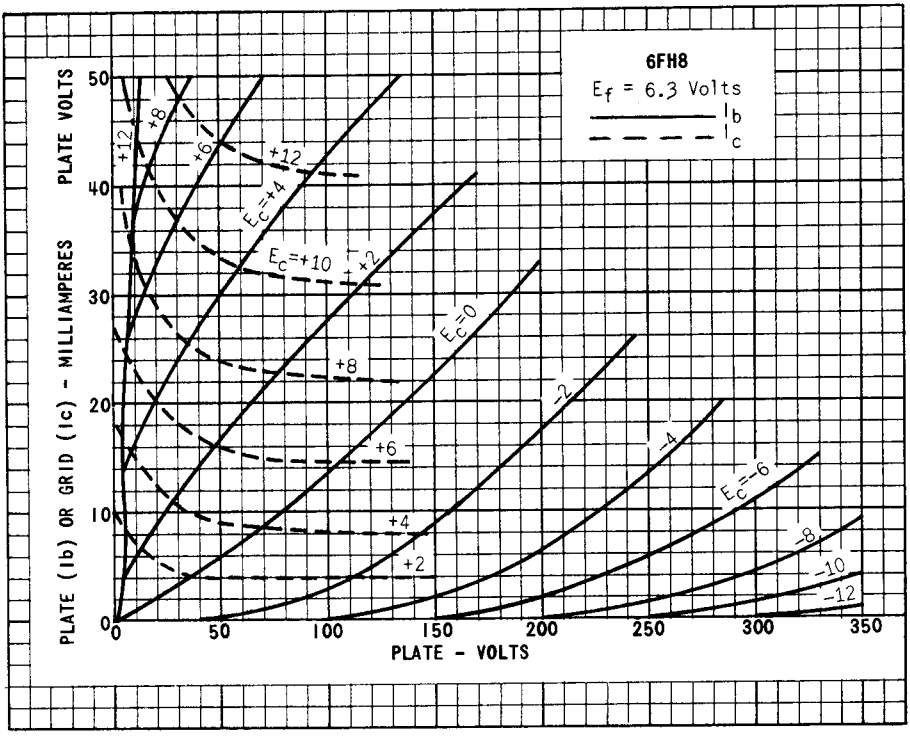
PLATE #1 VOLTAGE	250	VOLTS
GRID #2 VOLTAGE	250	VOLTS
GRID #1 VOLTAGE	-2	VOLTS
PLATE #1 RESISTANCE (APPROX.)	750 000	OHMS
TRANSCONDUCTANCE, GRID #1 TO PLATE #1	4400	μMHOS
PLATE #1 CURRENT	7.3	MA.
GRID #2 CURRENT	1.4	MA.
GRID #1 VOLTAGE (APPROX.) FOR PLATE #1 CURRENT OF 100μA	-7	VOLTS

HARMONIC-GENERATOR SERVICE

TYPICAL OPERATION WITH SEPARATE PLATE OPERATION

HEATER VOLTAGE	6.3±10%	VOLTS
HEATER CURRENT	0.45	AMP.
PLATES #1, #2 & #3 VOLTAGE	100	VOLTS
GRID #2 VOLTAGE	50	VOLTS
GRID #1 VOLTAGE	-1	VOLT
PLATE #1 CURRENT	1.6	MA.
PLATE #2 CURRENT	0.04	MA.
PLATE #3 CURRENT	0.04	MA.
GRID #2 CURRENT	0.3	MA.
TRANSCONDUCTANCE (APPROX.):		
GRID #1 TO PLATE #1	2500	μMHOS
GRID #1 TO PLATE #2	70	μMHOS
GRID #1 TO PLATE #3	70	μMHOS


6FH8
This Curve Also Applies To Types
In Which Grids #2 - #4 Are
Connected Together Within The Tube
MAXIMUM OPERATING CONDITIONS
AREA OF
PERMISSIBLE
OPERATION
GRID #2 INPUT EXPRESSED AS % OF
MAX GRID #2 INPUT RATING
GRID #2 VOLTAGE EXPRESSED AS % OF
MAX GRID #2 SUPPLY VOLTAGE RATING
0
25
50
75
100
0
20
40
60
80
100


6FH8
Ef = 6.3 Volts
Ib
Ic
PLATE (Ib) OR GRID (Ic) - MILLIAMPERES
PLATE VOLTS
PLATE - VOLTS
Ec=+10
Ec=+4
Ec=0
Ec=-6
+12
+8
+6
+4
+2
-2
-4
-8
-10
-12
0
10
20
30
40
50
0
50
100
150
200
250
300
350

TENTATIVE DATA