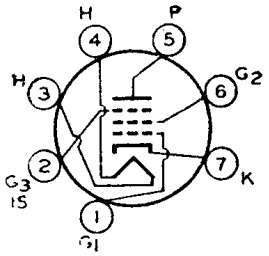


SHARP-CUTOFF PENTODE

6AU6

Miniature type used in compact radio equipment as an rf amplifier especially in high-frequency, wide-band applications. It is also used as a limiter tube in FM equipment. Outline 11, OUTLINES SECTION. Tube requires miniature seven-contact socket and may be mounted in any position. For a discussion of limiters, refer to ELECTRON TUBE APPLICATIONS SECTION. For typical operation as resistance-coupled amplifier, refer to Chart 8, RESISTANCE-COUPLED AMPLIFIER SECTION. For heater and cathode considerations, refer to type 6AV6.

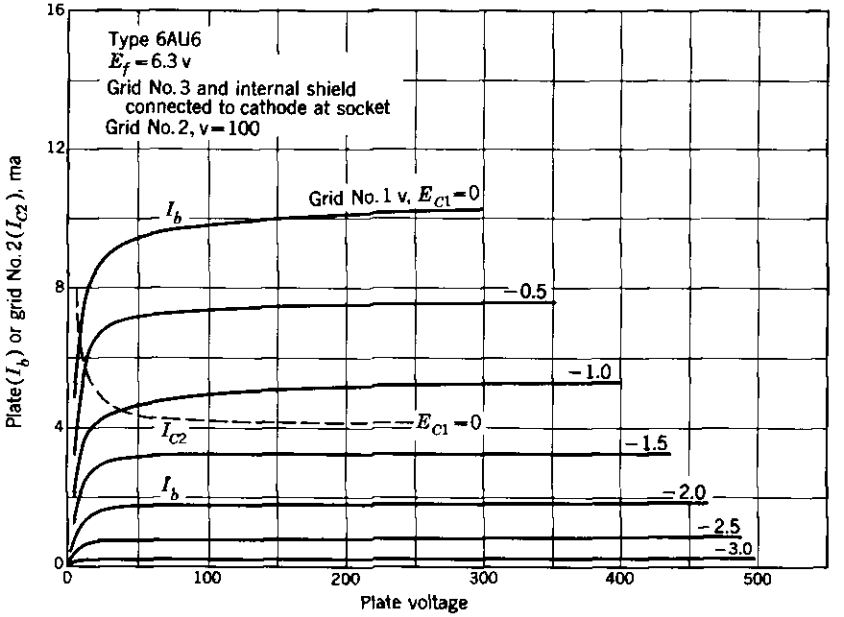
HEATER VOLTAGE (AC/DC)	6.3	volts
HEATER CURRENT	0.3	ampere
DIRECT INTERELECTRODE CAPACITANCES:		
Grid No.1 to Plate	0.0085 *max*	μμf
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	5.5	μμf
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	5.0	μμf

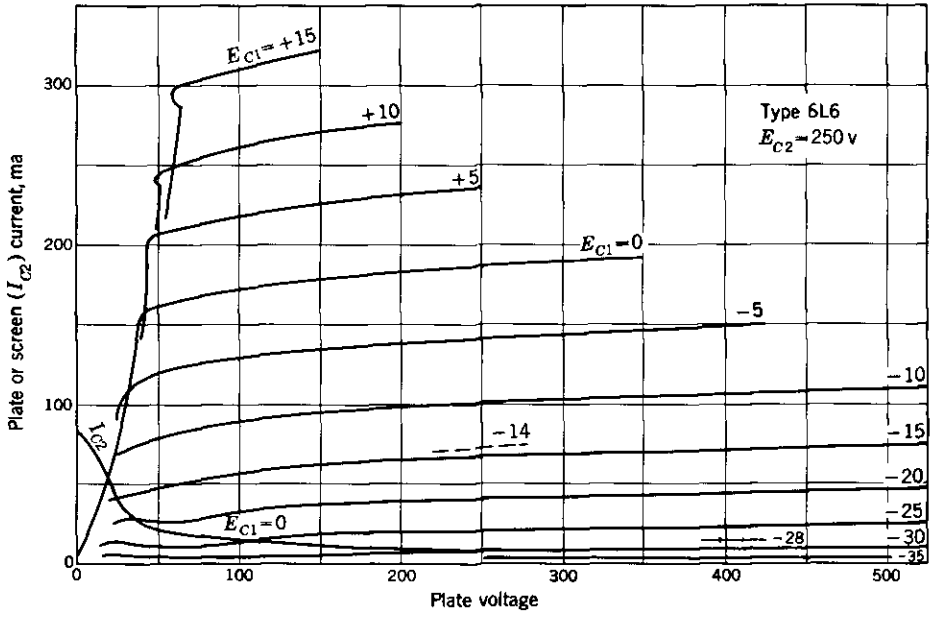
CLASS A_1 AMPLIFIER

Maximum Ratings:	*Triode†* *Connection*	*Pentode* *Connection*	
PLATE VOLTAGE	250 *max*	300 *max*	volts
GRID-NO.2 (SCREEN-GRID) VOLTAGE	–	See curve page 67	
GRID-NO.2 SUPPLY VOLTAGE	–	300 *max*	volts
PLATE DISSIPATION	3.2 *max*	3 *max*	watts
GRID-NO.2 INPUT:			
For grid-No.2 voltages up to 150 volts		0.65 *max*	watt
For grid-No.2 voltages between 150 and 300 volts		See curve page 67	
GRID-NO.1 (CONTROL-GRID) VOLTAGE:			
Negative bias value	50 *max*	50 *max*	volts
Positive bias value	0 *max*	0 *max*	volts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	90 *max*	90 *max*	volts
Heater positive with respect to cathode	90 *max*	90 *max*	volts

Characteristics: (*Pentode Connection*):

Plate Supply Voltage	100	250	250	volts
Grid No.3 (Suppressor Grid)	Connected to cathode at socket			
Grid-No.2 Supply Voltage	100	125	150	volts
Cathode-Bias Resistor	150	100	68	ohms
Plate Resistance (Approx.)	0.5	1.5	1.0	megohms
Transconductance	3900	4500	5200	μmhos
Grid-No.1 Voltage for plate current of 10 μa	−4.2	−5.5	−6.5	volts
Plate Current	5.0	7.6	10.6	ma
Grid-No. 2 Current	2.1	3.0	4.3	ma

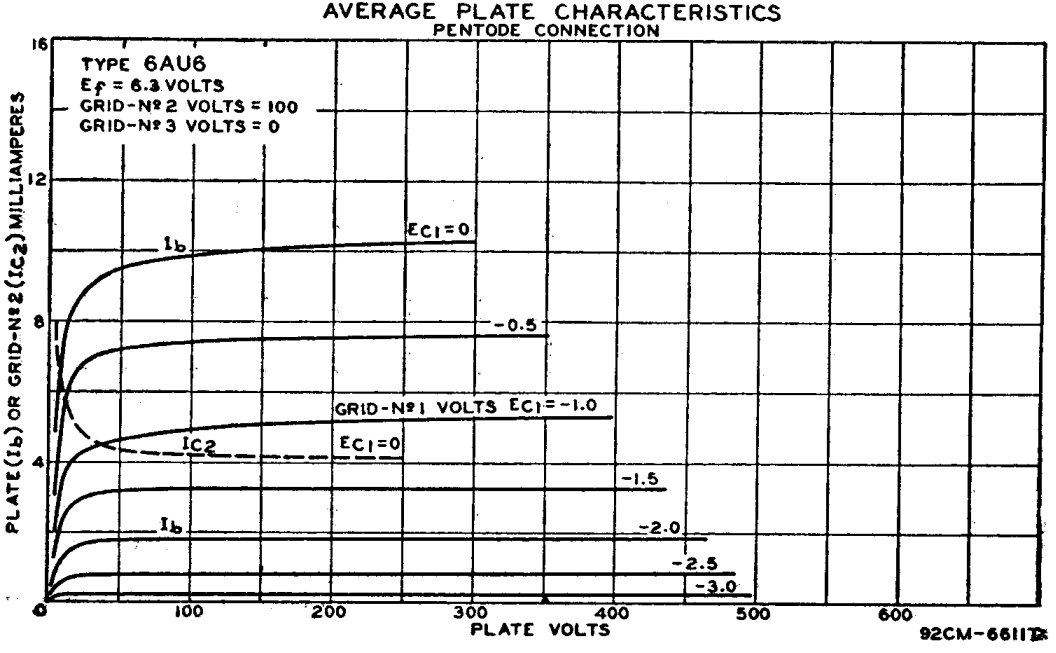

Type 6AU6
E_f = 6.3 v
Grid No. 3 and internal shield connected to cathode at socket
Grid No. 2, v = 100
Grid No. 1 v, E_{C1} = 0
I_b
−0.5
−1.0
I_{C2}
E_{C1} = 0
−1.5
I_b
−2.0
−2.5
−3.0
Plate (I_b) or grid No. 2 (I_{C2}), ma
Plate voltage
0
4
8
12
16
100
200
300
400
500


Type 6L6
E_{C2} = 250 v
E_{C1} = +15
+10
+5
E_{C1} = 0
−5
−10
−14
−15
−20
−25
−28
−30
−35
I_{C2}
E_{C1} = 0
Plate or screen (I_{C2}) current, ma
Plate voltage
0
100
200
300
400
500

Characteristics: (*Triode Connection*):†

Plate Supply Voltage	250	volts
Cathode-Bias Resistor	330	ohms
Amplification Factor	36	
Plate Resistance	7500	ohms
Transconductance	4800	μmhos
Plate Current	12.2	ma

† Grid No. 2 and grid No. 3 tied to plate.



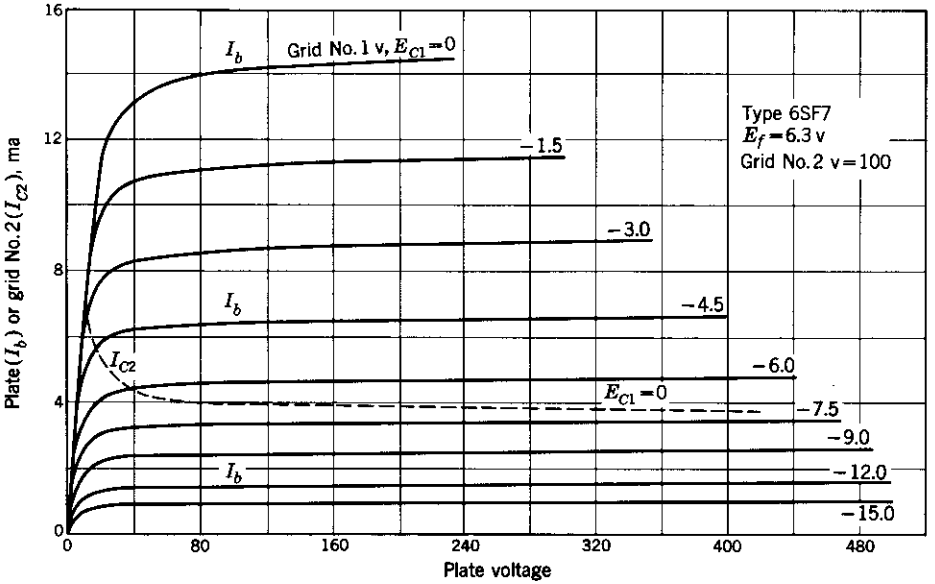


Plate (I_b) or grid No.2 (I_{C2}), ma
Plate voltage
Grid No.1 v, E_{C1}=0
I_b
I_{C2}
E_{C1}=0
-1.5
-3.0
-4.5
-6.0
-7.5
-9.0
-12.0
-15.0
Type 6SF7
E_f=6.3 v
Grid No.2 v=100
0
4
8
12
16
80
160
240
320
400
480

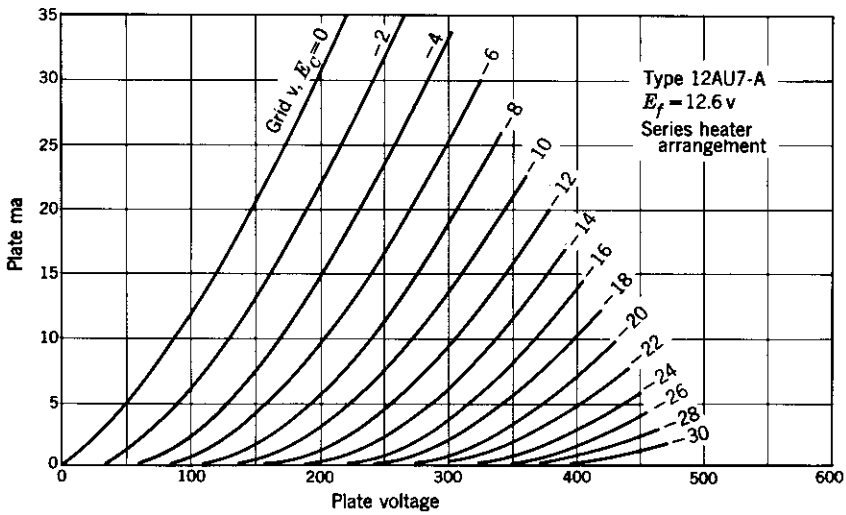
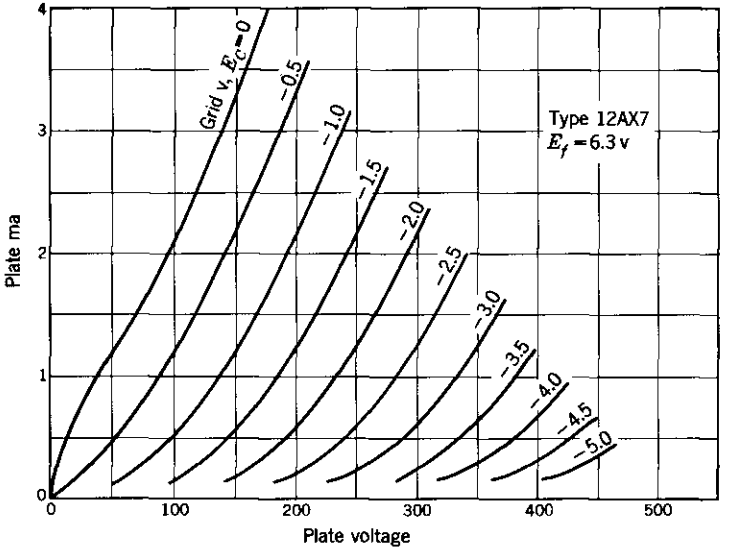


Plate ma
Plate voltage
Grid v, E_c=0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
Type 12AU7-A
E_f=12.6 v
Series heater
arrangement
0
5
10
15
20
25
30
35
100
200
300
400
500
600


Grid v, E_c=0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
Type 12AX7
E_f = 6.3 v
Plate ma
Plate voltage
0
1
2
3
4
0
100
200
300
400
500