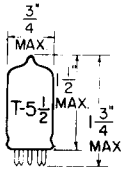
TUNG-SOL

PENTODE

MINIATURE TYPE

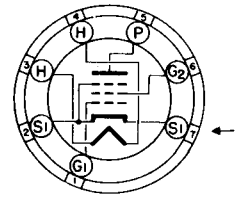


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 175 MA.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7BD

THE 6AK5 IS A SHARP CUT-OFF VOLTAGE AMPLIFIER USING THE MINIATURE CONSTRUCTION. IT IS CHARACTERIZED BY LOW HEATER POWER REQUIREMENTS, HIGH TRANSCONDUCTANCE AND INPUT IMPEDANCE, AND LOW INTERELECTRODE CAPACITANCES AND LEAD INDUCTANCES. THESE RESULT IN A HIGHLY FAVORABLE MERIT FACTOR FOR HIGH FREQUENCY WIDE-BAND APPLICATIONS.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD[A]	WITHOUT SHIELD	
GRID TO PLATE: (G_1 TO P) MAX.	0.02	0.03	μμf
INPUT: G_1 TO ($H+K+G_2+G_3$&IS)	4	4	μμf
OUTPUT: P TO ($H+K+G_2+G_3$&IS)	2.8	2.1	μμf

[A]EXTERNAL SHIELD #316 CONNECTED TO PINS #2 AND #7.

RATINGS

INTERPRETED ACCORDING TO DESIGN-MAXIMUM SYSTEM

HEATER VOLTAGE	6.3	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	120 ←	VOLTS
MAXIMUM PLATE VOLTAGE	180	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	180	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE J5-C4 ←	VOLTS
MAXIMUM PLATE DISSIPATION	1.7	WATTS
MAXIMUM GRID #2 DISSIPATION	0.5	WATT
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM CATHODE CURRENT	18	MA.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

HEATER VOLTAGE	6.3	6.3	VOLTS
HEATER CURRENT	175	175	MA.
PLATE VOLTAGE	120	180	VOLTS
GRID #2 VOLTAGE	120	120	VOLTS
CATHODE RESISTOR	180	180	OHMS
PLATE RESISTANCE (APPROX.)	0.3	0.5	MEGOHM
TRANSCONDUCTANCE	5000	5100	μMHOS
PLATE CURRENT	7.5	7.7	MA.
GRID #2 CURRENT	2.5	2.4	MA.
GRID #2 VOLTAGE (APPROX.) FOR I_b = 10 μA.	-8.5	-8.5	VOLTS

→ INDICATES A CHANGE.

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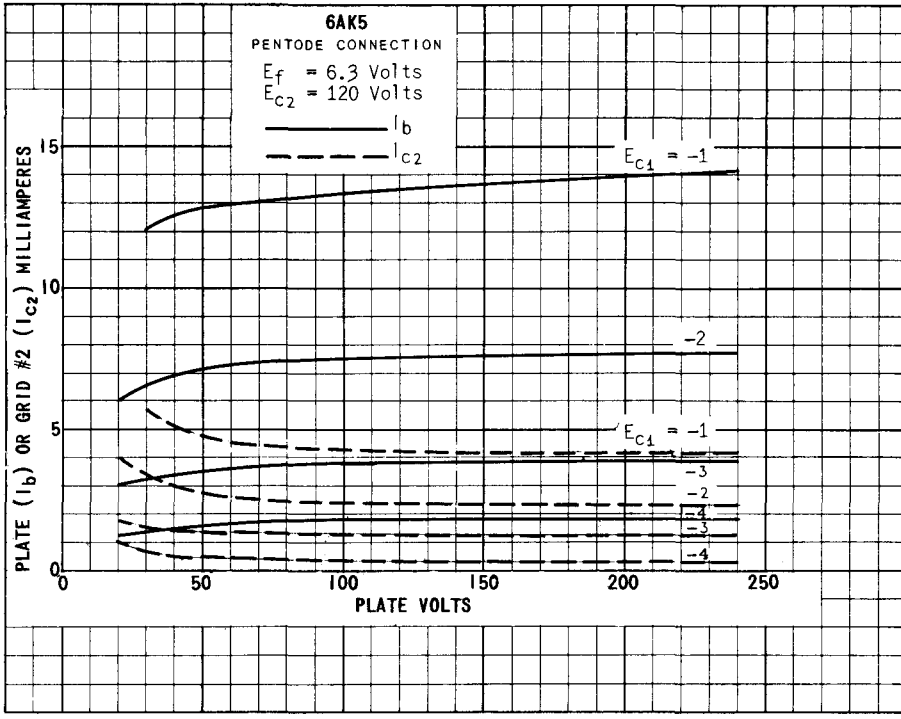
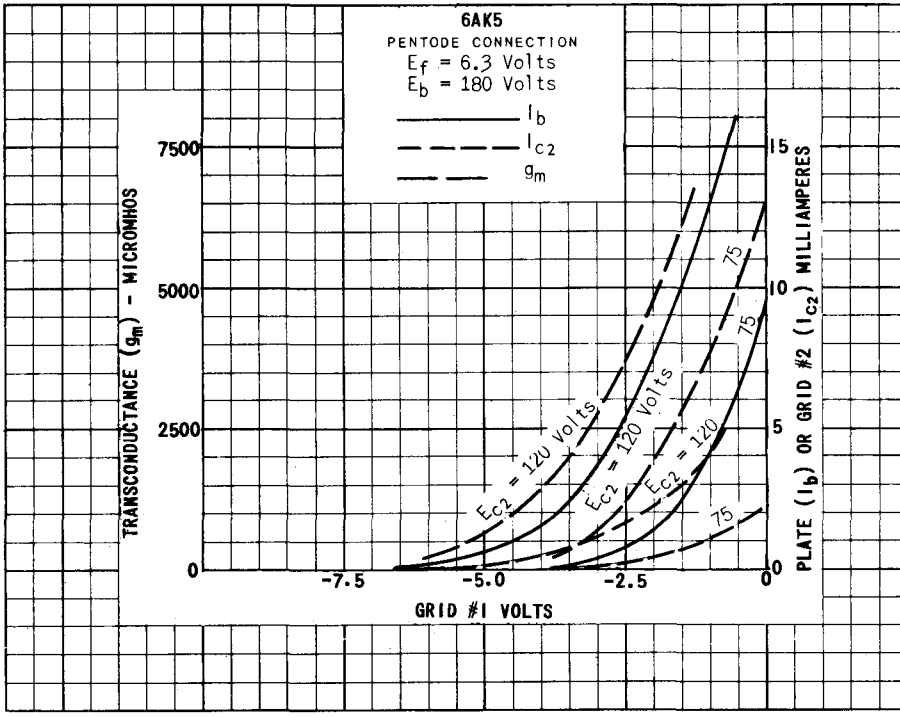
6AK5


6AK5
PENTODE CONNECTION
Ef = 6.3 Volts
Ec2 = 120 Volts
Ib
Ic2
Ec1 = -1
-2
Ec1 = -1
-3
-2
-4
-3
-4
PLATE (Ib) OR GRID #2 (Ic2) MILLIAMPERES
PLATE VOLTS
0
5
10
15
0
50
100
150
200
250


6AK5
PENTODE CONNECTION
Ef = 6.3 Volts
Eb = 180 Volts
Ib
Ic2
gm
Ec2 = 120 Volts
Ec2 = 120 Volts
Ec2 = 120
75
75
75
TRANSCONDUCTANCE (gm) - MICROMHOS
PLATE (Ib) OR GRID #2 (Ic2) MILLIAMPERES
GRID #1 VOLTS
0
2500
5000
7500
0
5
10
15
-7.5
-5.0
-2.5
0