6F21

VARIABLE MU H.F. PENTODE

Indirectly heated—for parallel operation

GENERAL

The 6F21 is a miniature based indirectly heated variable mu H.F. Pentode. It is intended for use in H.F. or L.F. Amplifiers having parallel connected heaters.

RATING

Heater Voltage (volts)	V_h	6·3
Heater Current (amps)	I_h	0·2
Maximum Anode Voltage (volts)	$V_{a(max)}$	300
Maximum Screen Voltage (volts)	$V_{g2(max)}$	300
Maximum Anode Voltage (volts)	$V_{a(max)}$	500*
Maximum Screen Voltage (volts)	$V_{g2(max)}$	300*
Mutual Conductance (mA/V)	g_m	2·5††
Inner μ	$\mu_{g1,g2}$	30††
Maximum Potential Heater/Cathode (volts DC)	$V_{h,k(max)}$	150
Maximum Anode Dissipation (watts)	$P_{a(max)}$	3·0
Maximum Screen Dissipation (watts)	$P_{g2(max)}$	0·7

* With 5,000 ohms in series with the anode, and 20,000 ohms in series with the screen, $I_a = 0$.

†† $V_a = 250$ v ; $V_{g2} = 200$ v ; $V_{g1} = -2{\cdot}5$ v.

INTER-ELECTRODE CAPACITANCES (pF)

		§	‡	‡‡
Anode/Earth	c_{out}	7·0	8·1	
Gride 1/Earth	c_{in}	4·7	5·8	
Anode/Grid 1	$c_{a\text{-}g1}$	0·0078	0·0098	0·0083

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§ Inter-electrode capacity with holder capacity balanced out.

‡ Total capacity with a Benjamin B7G holder type 75/787R.

‡‡ Total capacity with a Benjamin type 75/787R holder and a perpendicular shield between pins 2, 3 and 6, 7.

"Earth" denotes the remaining earthy potential electrodes, heater and shields connected to cathode.

DIMENSIONS

Maximum Overall Length	(mm)	54·5
Maximum Diameter	(mm)	19
Maximum Seated Height	(mm)	47·5
Approximate Nett Weight	(ozs)	¼
Approximate Packed Weight	(ozs)	½

MOUNTING POSITION

Unrestricted.

TYPICAL OPERATION

Anode Voltage (volts)	V_a	250	250
Screen Voltage (volts)	V_{g2}	100	200
Grid Bias (volts)	V_{g1}	−0·5	−2·5
Anode Current (mA)	I_a	4·9	7·8
Screen Current (mA)	I_{g2}	1·25	2·0
Mutual Conductance (mA/V)	g_m	2·5	2·5
Grid Bias for Mutual Conductance of 10 μA/V (volts)			−34
Equivalent Grid Noise Resistance (KΩ)	R_{eq}		7·5
Anode Impedance (MΩ)	r_a		1·2

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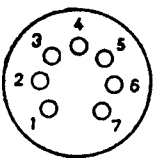
BULB—Clear.

BASE—B7G.



Viewed from free end of pins

CONNECTIONS

Pin 1	Control Grid	g1
Pin 2	Cathode	k
Pin 3	Heater	h
Pin 4	Heater	h
Pin 5	Anode	a
Pin 6	Suppressor Grid and Shield	g3,s
Pin 7	Screen Grid	g2

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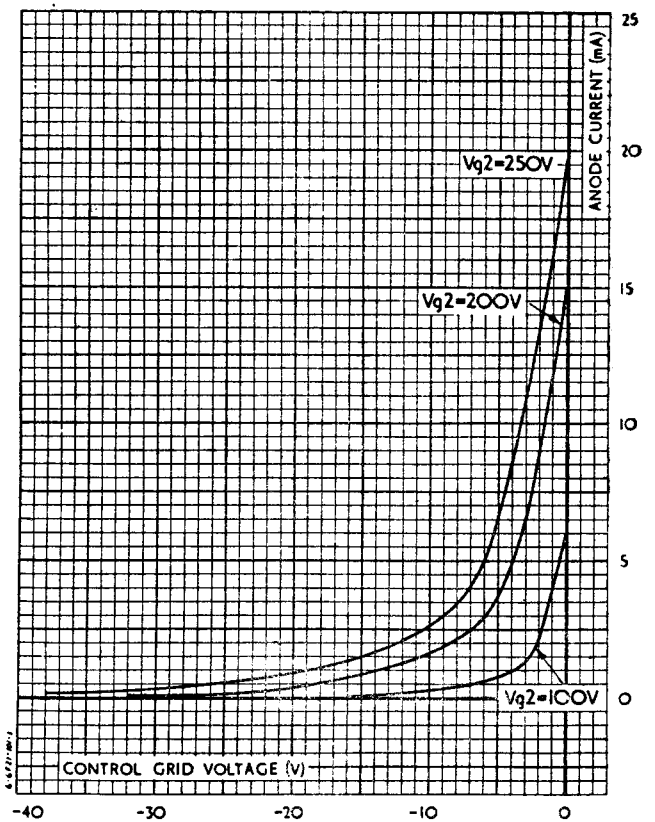
AVERAGE CHARACTERISTIC CURVES:
I_a/V_{g1} Curves taken at $V_a = 250V$



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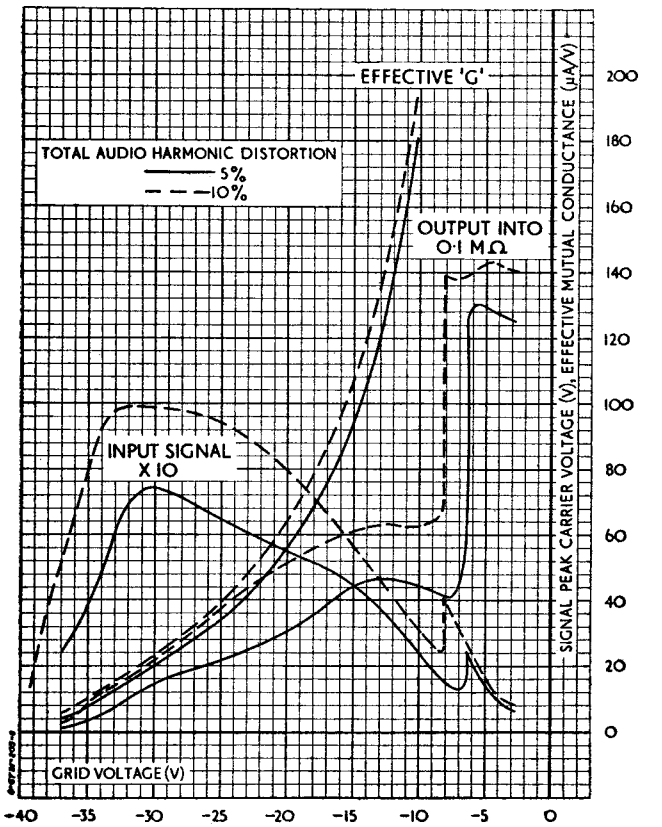
AVERAGE CHARACTERISTIC CURVES : $V_{sig(pk)}$, $gm(eff)/V_g$
$V_a = 250V$ $V_{g2} = 200V$ $V_{g3} = 0V$
$f_{sig} = 110kc/s$ Mod. $= 60\%$ $R_L = 0.1M\Omega$
Initially :
$V_{g1} = 2.5V$ $I_a = 7.8mA$ $I_{g2} = 2.0mA$



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