

VARIABLE-MU A.F. PENTODE

EF83

Variable-mu a.f. pentode for use as a controlled-gain audio amplifier.

HEATER

Suitable for series or parallel operation, a.c. or d.c.

V_h	6.3	V
I_h	200	mA

MOUNTING POSITION

Any

CAPACITANCES (measured without external shield)

C_{in}	4.0	pF
C_{out}	5.0	pF
C_{a-g1}	< 50	mpF
C_{g1-h}	< 2.5	mpF

CHARACTERISTICS

V_a	250	V
V_{g3}	0	V
V_{g2}	50	V
V_{g1}	-1.6	V
I_a	4.0	mA
I_{g2}	1.15	mA
g_m	1.6	mA/V
r_a	1.25	MΩ
μ_{g1-g2}	10	
$V_{g1} \text{ max. } (I_{g1} = +0.3\mu A)$	-1.3	V

OPERATING CONDITIONS

V_b	250	V
R_a	100	kΩ
V_{g3}	0	V
R_{g2}	390	kΩ
R_{g1}	3.0	MΩ
* R_{g1}	1.0	MΩ
R_{source}	≤ 200	kΩ
$V_{out(r.m.s.)}$	8.0	V
V_{g1}	-1.0	V
I_a	1.8	1.65 mA
I_{g2}	550	250 μA
V_{out}/V_{in}	105	16
D_{tot}	1.5	2.3 %

*Grid resistor of the following valve.

Under these operating conditions, the following total distortion figures apply.

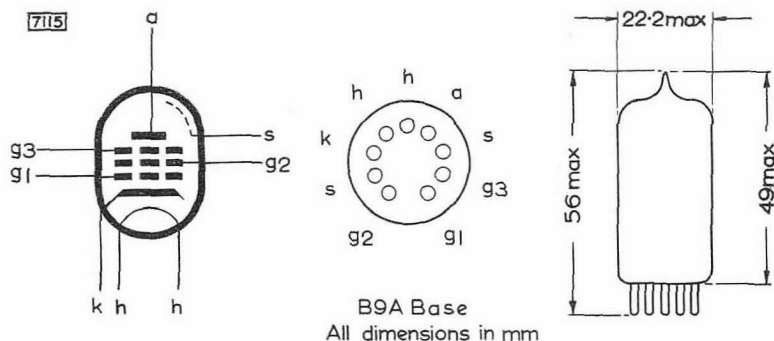
$V_{out(r.m.s.)}$	3.0	5.0	8.0	15	V
$D_{tot} (-V_{g1} = 1 \text{ to } 3V)$	0.8	1.0	1.5	2.5	%
$D_{tot} (-V_{g1} = 3 \text{ to } 20V)$	1.0	1.5	2.3	3.5	%

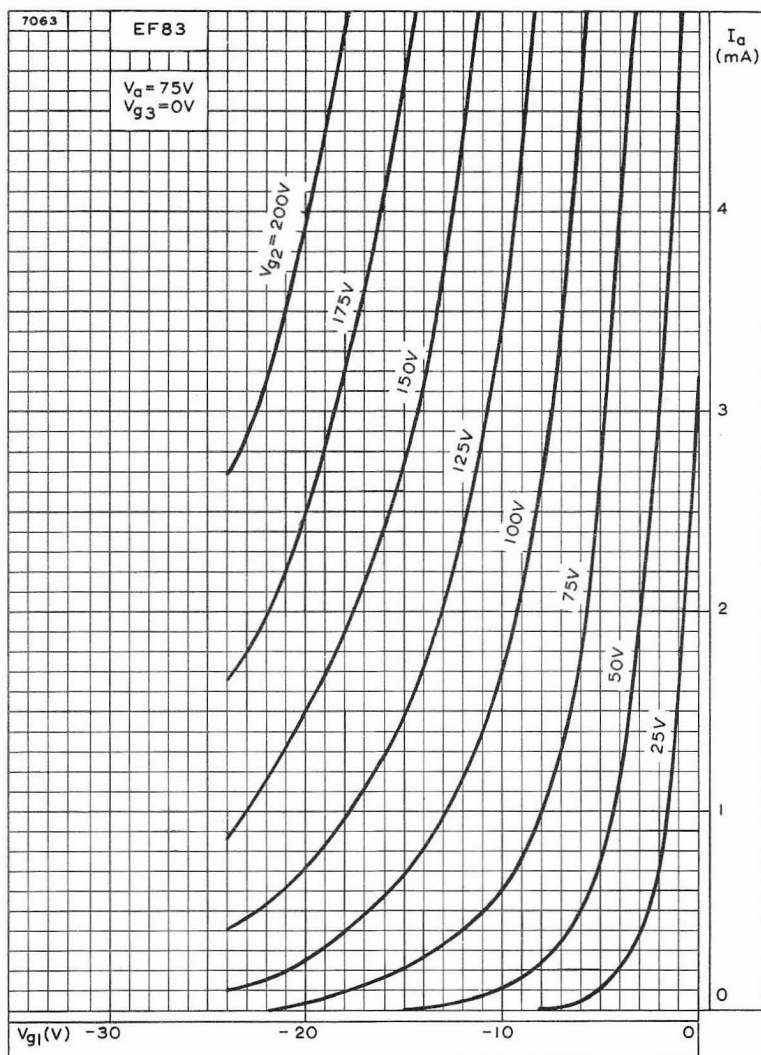
LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	1.0	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	300	V
p_{g2} max.	200	mW
I_k max.	6.0	mA
R_{g3-k} max.	10	k Ω
R_{g1-k} max.	3.0	M Ω
V_{h-k} max. (cathode positive)	100	V
V_{h-k} max. (cathode negative)	50	V
R_{h-k} max.	20	k Ω

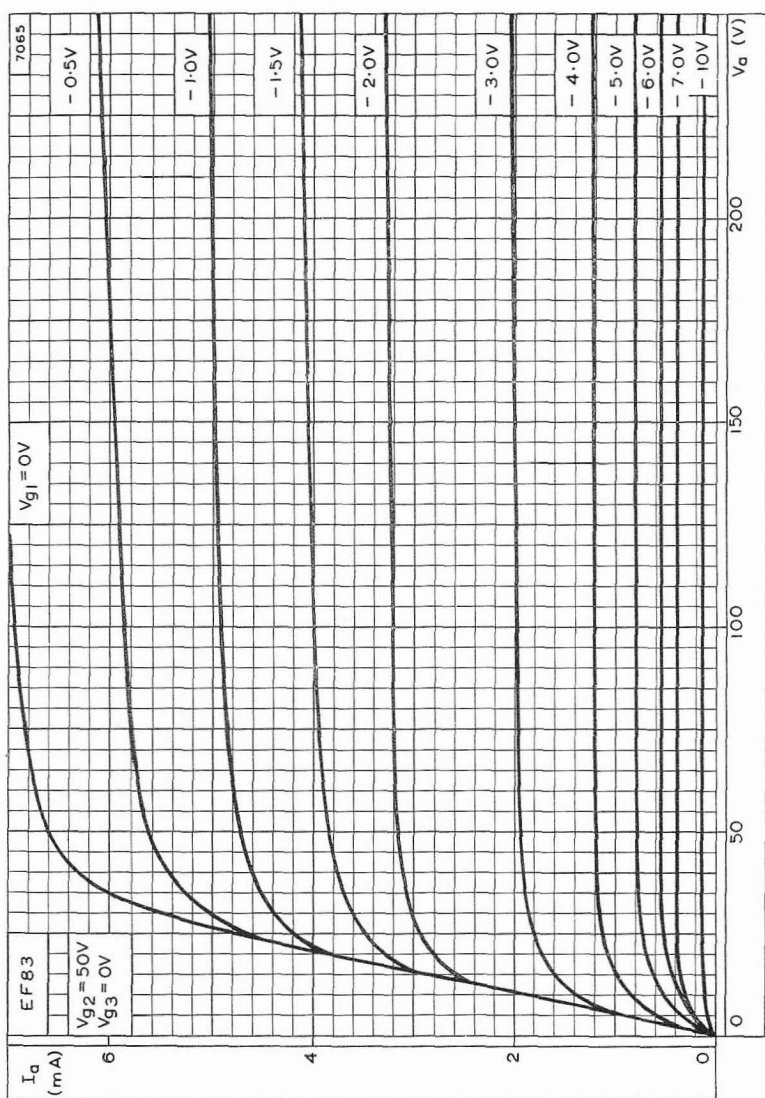
MICROPHONY AND HUM

This valve can be used without special precautions against microphony and hum in circuits in which the input voltage is $\geq 2\text{mV}$ at $f = 1\text{kc/s}$ and $-V_{g1} \leq 1\text{V}$ for an output of 50mW from the output stage.

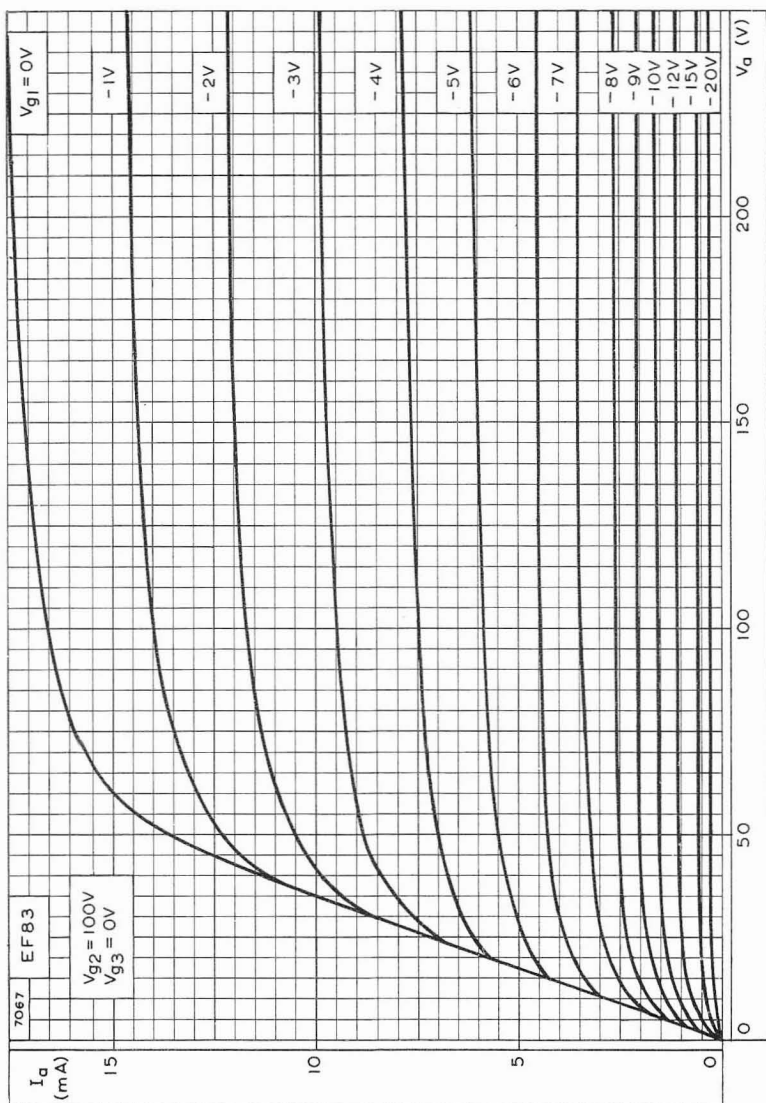




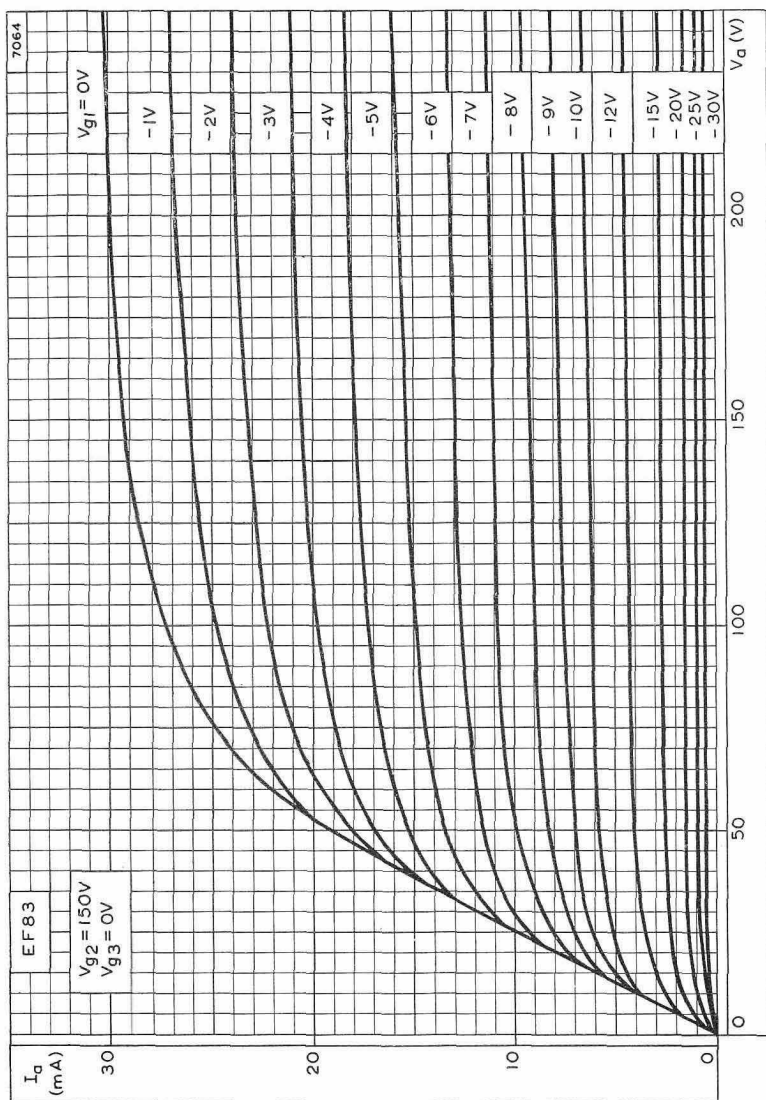
ANODE CURRENT PLOTTED AGAINST CONTROL-GRID VOLTAGE WITH SCREEN-GRID VOLTAGE AS PARAMETER



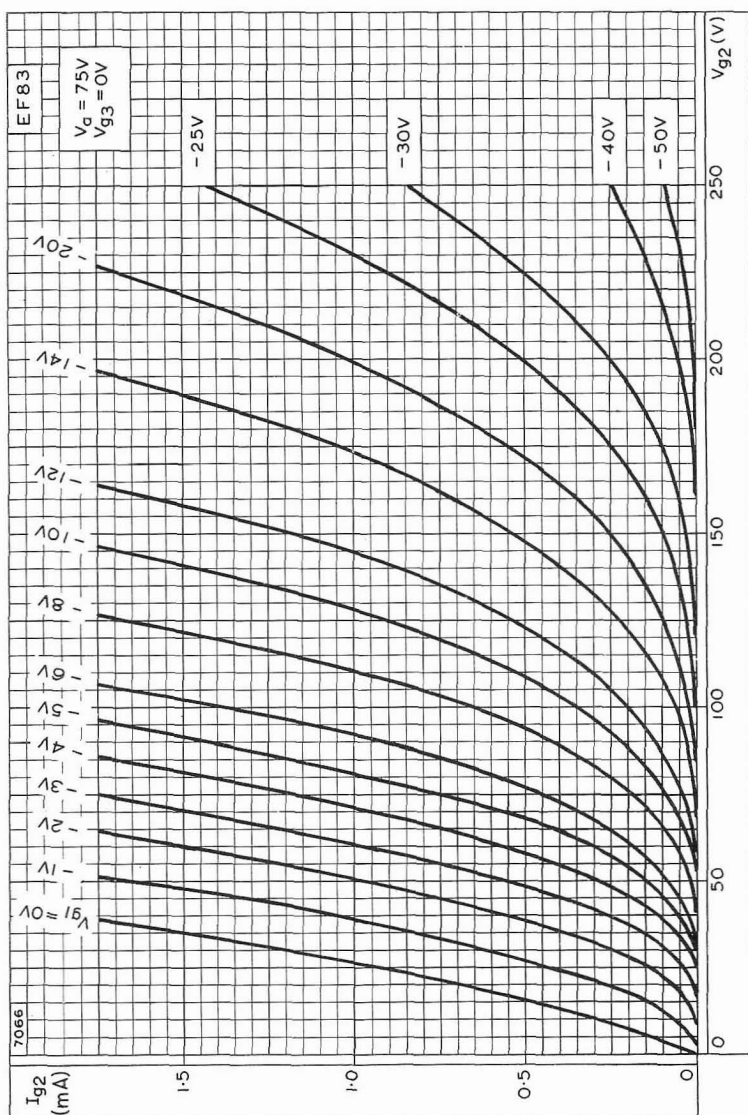
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. $V_{g2} = 50V$



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH
CONTROL-GRID VOLTAGE AS PARAMETER. $V_{g2} = 100V$



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH
CONTROL-GRID VOLTAGE AS PARAMETER. $V_{g2} = 150V$



SCREEN-GRID CURRENT PLOTTED AGAINST SCREEN-GRID VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER

