



Triode Type DET 3

(MF AMPLIFIER)

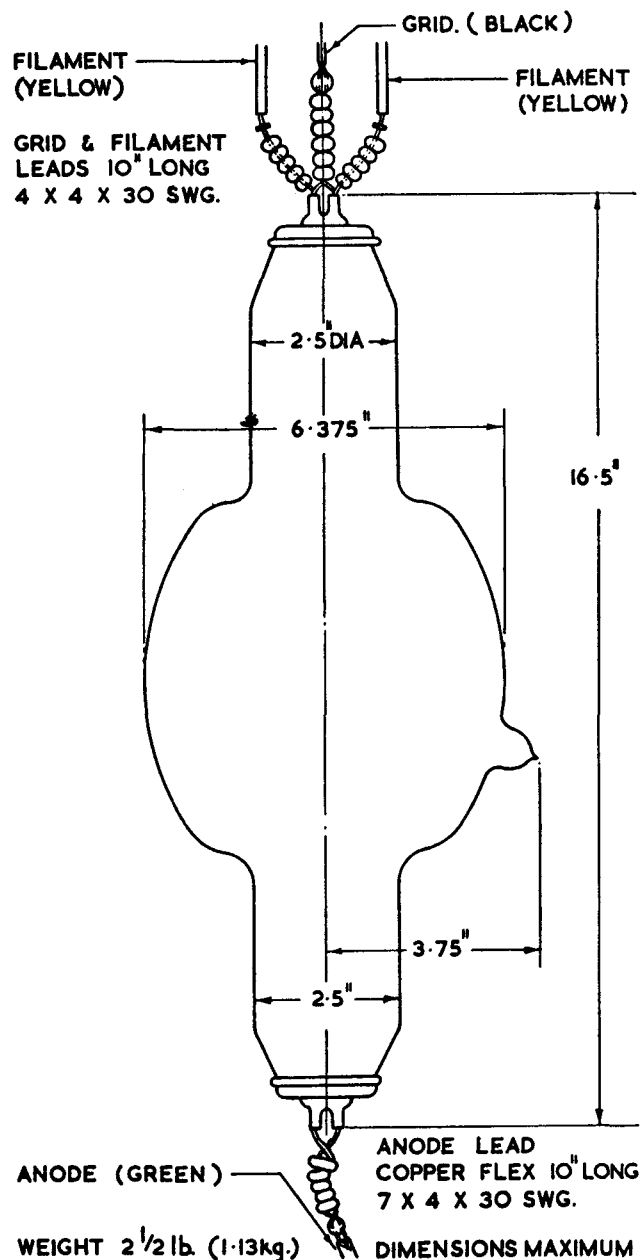
General. The DET 3 is a transmitting triode fitted with a thoriated tungsten filament, designed for use at frequencies up to 3 Mc/s.

Mounting. The valve must be mounted vertically with the anode seal either up or down.

APPROXIMATE DATA

V_f	15.0	V
I_f	4.0	A
$V_{a(max)}$	3.0	kV
$P_{a(max)}$	250	W
$I_k(pk)$	2.5	A
$I_{gl(max)}$	50	mA
μ	taken at V_a 1 kV	19
g_m		6 mA/V
g_m *taken at $\frac{1}{2} I_{k(pk)}$		9 mA/V
C_{a-gl}	17	pF
C_{a-k}	2	pF
C_{gl-k}	18	pF

*No attempt should be made to measure these figures statically.



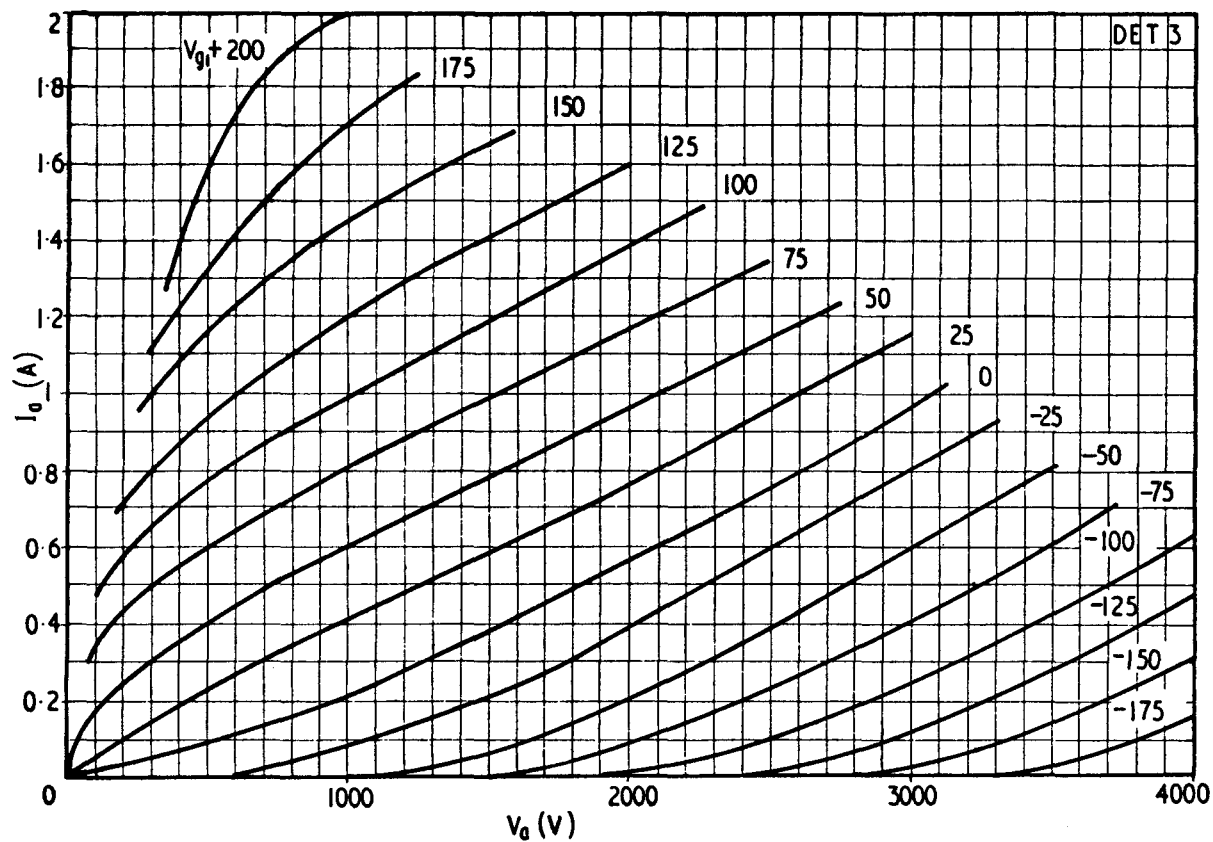
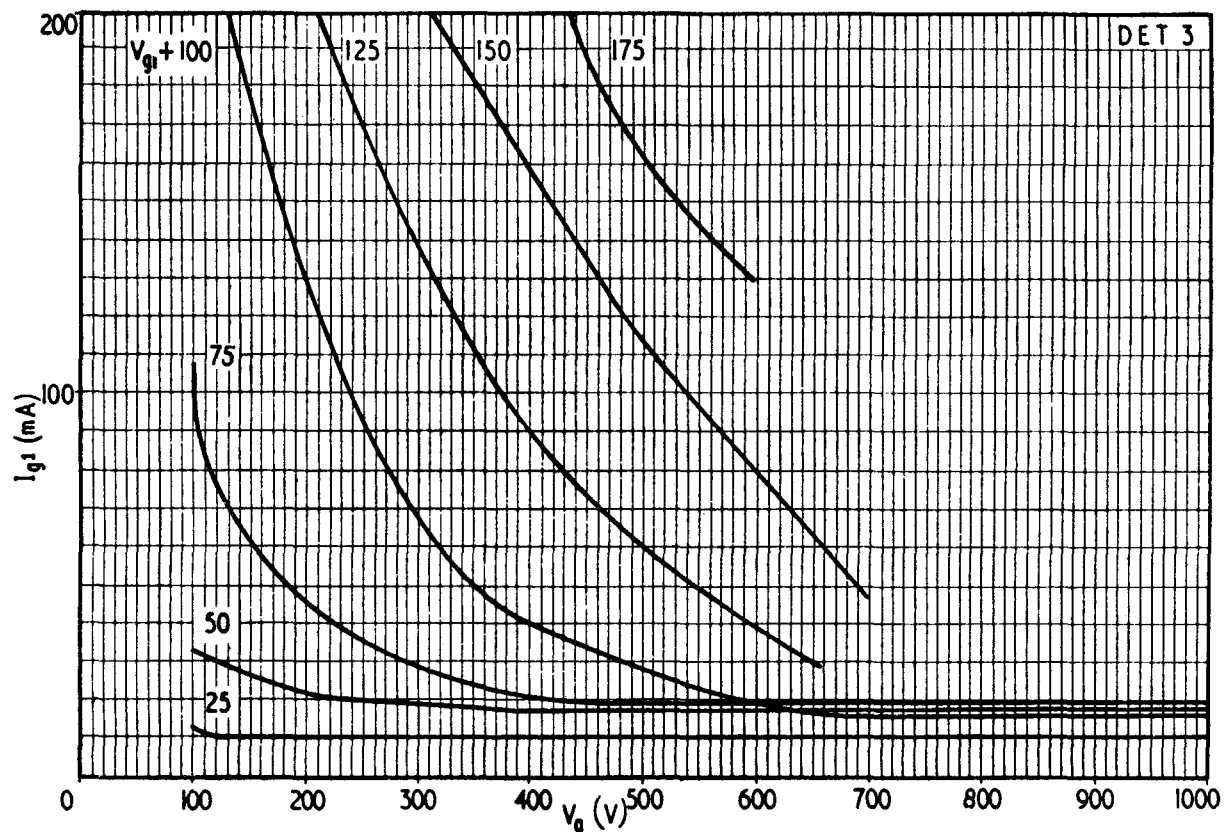
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Typical Operation									
(1) RF POWER AMPLIFIER AND OSCILLATOR. CLASS C TELEGRAPHY					(3) RF AMPLIFIER. CLASS C				
<i>(Unmodulated, one valve, key down conditions)</i>					<i>(Anode modulated, one valve, permissible modulation 100%)</i>				
V _a	2,000	2,500	3,000	V	V _a	2,000	2,400	V	
V _{g1}	-240	-270	-300	V	I _{g1}	-220	-250	V	
v _{g1} (pk)	430	450	480	V	v _{g1} (pk)	370	400	V	
I _a	320	320	300	A	I _a	230	230	mA	
I _{g1}	37	32	30	mA	I _{g1} (a)	28	28	mA	
Z _a	2,700	3,500	4,750	Ω	Z _a	4,200	5,200	Ω	
R _{g1}	6,500	8,500	10,000	Ω	Z _{to mod}	8,700	10,500	Ω	
P _{dr}	20	20	20	W	P _{dr} (a)	15	15	W	
p _a	220	240	240	W	p _a	135	152	W	
P _{out}	420	560	660	W	P _{mod} (c)	230	276	W	
					P _{out}	325	400	W	
(2) RF AMPLIFIER. CLASS C					(4) RF POWER AMPLIFIER. CLASS B TELEPHONY				
<i>(Grid modulated, one valve, carrier conditions, permissible modulation 100%)</i>					<i>(One valve, carrier conditions, permissible modulation 100%)</i>				
V _a	2,000	2,500	3,000	V	V _a	2,000	2,500	3,000	V
V _{g1}	-185	-220	-250	V	V _{g1}	-90	-120	-150	V
v _{g1} (pk)	250	260	270	V	v _{g1} (pk)	127	132	135	V
v _{mod} (pk)	100	100	105	V	I _a	175	145	120	mA
I _a	170	150	130	mA	I _{g1} (a)	3	1	0	mA
I _{g1} (a)	3.5	2.5	1.8	mA	Z _a	3,000	5,000	7,000	Ω
Z _a	2,750	3,850	5,500	Ω	P _{dr} (a) (b)	10	7.5	7.5	W
Z _{to mod}	2,500	3,000	3,500	Ω	p _a	245	247	244	W
P _{dr} (a) (b)	12	10	10	W	P _{out}	105	115	116	W
p _a	225	245	245	W					
P _{mod} (c)	2	1.7	1.5	W					
P _{out}	115	130	145	W					

NOTES

- (a) Subject to wide variation. The figures are approximate only.
- (b) At crest of audio cycle with 100% modulation.
- (c) 100% modulation.





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