

Operating Conditions for the 6DQ6A as a Class AB1 AF Power Amplifier

We have been frequently asked for the operating conditions for the 6DQ6A as an af amplifier, particularly by "Hams". These conditions were established with a no-load plate dissipation of 20 watts, maximum plate dissipation of

25 watts, all supplies regulated, fixed bias with matched valves. All readings are "per valve", except power output, which is the total for the two valves.

E_{bb}	300			460			560		V
E_{C2}	150	175	200	150	175	200	150	175	V
E_{C1}	-22	-31	-35	-29	-36	-40	-31	-38	V
$I_b(O)$	67	67	67	44	44	44	38	38	MA
$I_{C2}(O)$	1.6	2.1	2.5	1.5	2.0	2.3	1.0	1.3	MA
$I_b(MAX)$	108	130	145	100	120	140	100	118	MA
$I_{C2}(MAX)$	6	8	10	5	7	9	5	7	MA
P_{PLATE}	15	18	19	18	20	25	20	23	W
P_{SCREEN}	0.8	1.4	2.0	0.8	1.2	1.8	0.8	1.1	W
R_L P-P	3300	2600	2200	5500	4500	3600	6800	5600	Ω
P.O.	34	43	50	57	71	79	72	86	W
DIST.	2.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	%
EFF.	53	57	57	62	65	62	64	65	%
I_b PEAK	300	360	440	300	360	440	300	360	MA
$E_b(MIN)$	50	55	60	50	55	60	50	55	V
e_{g1} P-P	44	62	70	58	72	80	62	76	V

I_b = approx. knee current
 $E_{b, min}$ = approx. knee voltage

e_{g1} P-P = peak-peak grid drive
P.O. = total average power output