Power dissipation:

It is equal to difference b/w output to dc power input

$P_H = P_{dc} - P_{ac}$

$= 2/\pi \, V_{cc} I_m - V_m I_m/2$

$= 2/\pi \, V_{cc} - V_m/R'_L - \frac{V_m^2}{2R'_L}$ — ①

by differentiating w.r.t to V_m

we get.

$V_m = 2/\pi \, V_{cc}$

Put V_m in ①

$P_{d(max)} = 2/\pi^2 \cdot \frac{V_{cc}^2}{R'_L}$

for maximum efficiency $V_m = V_{cc}$

If η $P_{d(max)}$ cannot be occured simultaneously.

Power dissipated per transistor:

$P_{ac} = V_m \times V_m/2R'_L = V_m^2/2R'_L$

$(P_{ac})_{max} = \frac{V_{cc}^2}{2R'_L}$

$\frac{P_{d(max)}}{T} = \frac{2(P_{ac})_{max}}{T^2}$

Now $P_{d\,max} = 2/\pi^2 \frac{V_{cc}^2}{R'_L}$

$= 4/\pi^2 \, (P_{ac})_{max}$