**2 STAGE OTA**

**Circuit diagram:**

**A diagram of a computer

AI-generated content may be incorrect.**

**Closed loop gain:**

Gain = 2

= 20 log (2) = ~6dB

**A black screen with green lines

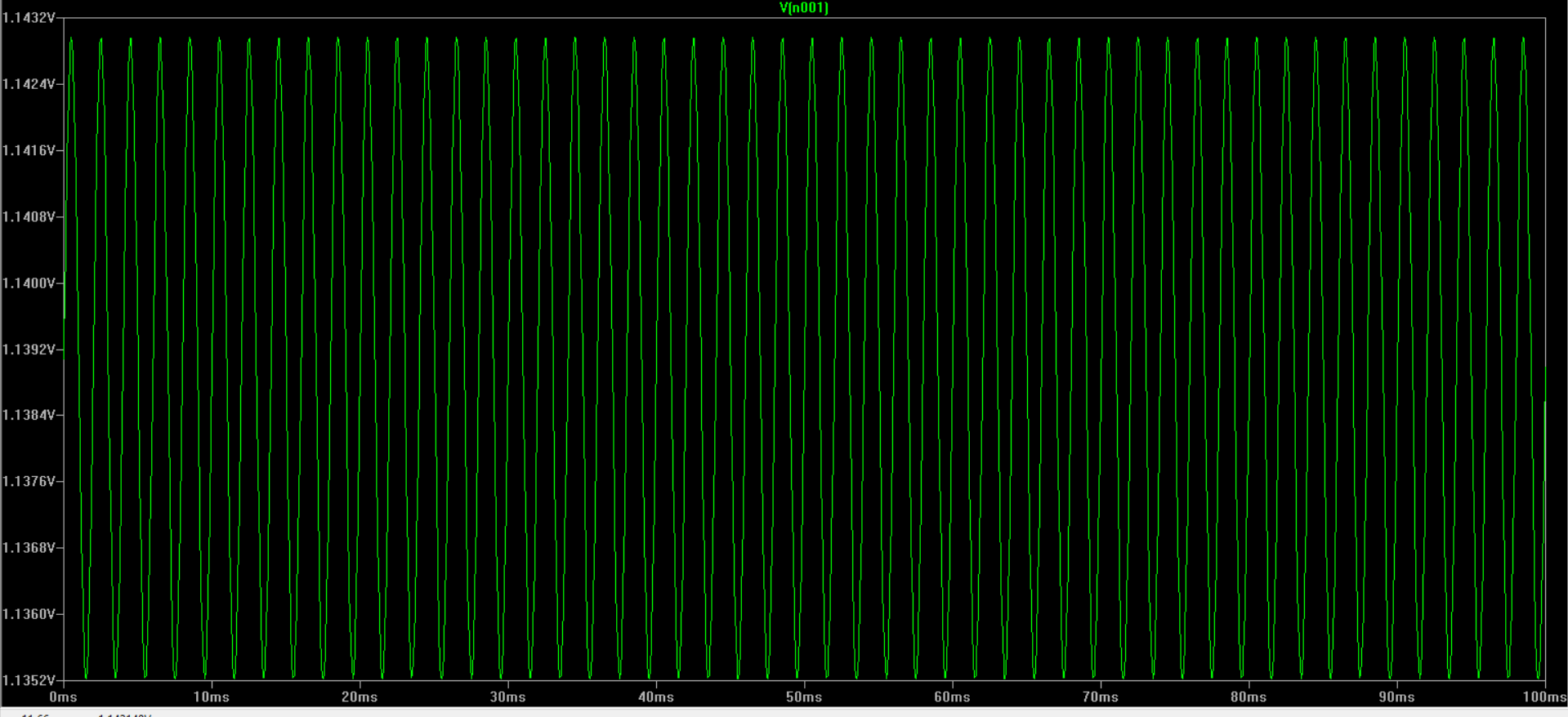
AI-generated content may be incorrect.**

Band width ~10MHz

**Open loop gain:**

**Stage-1:**

Gain = 192.25  
 = 45.677dB(lt spice amplitude)

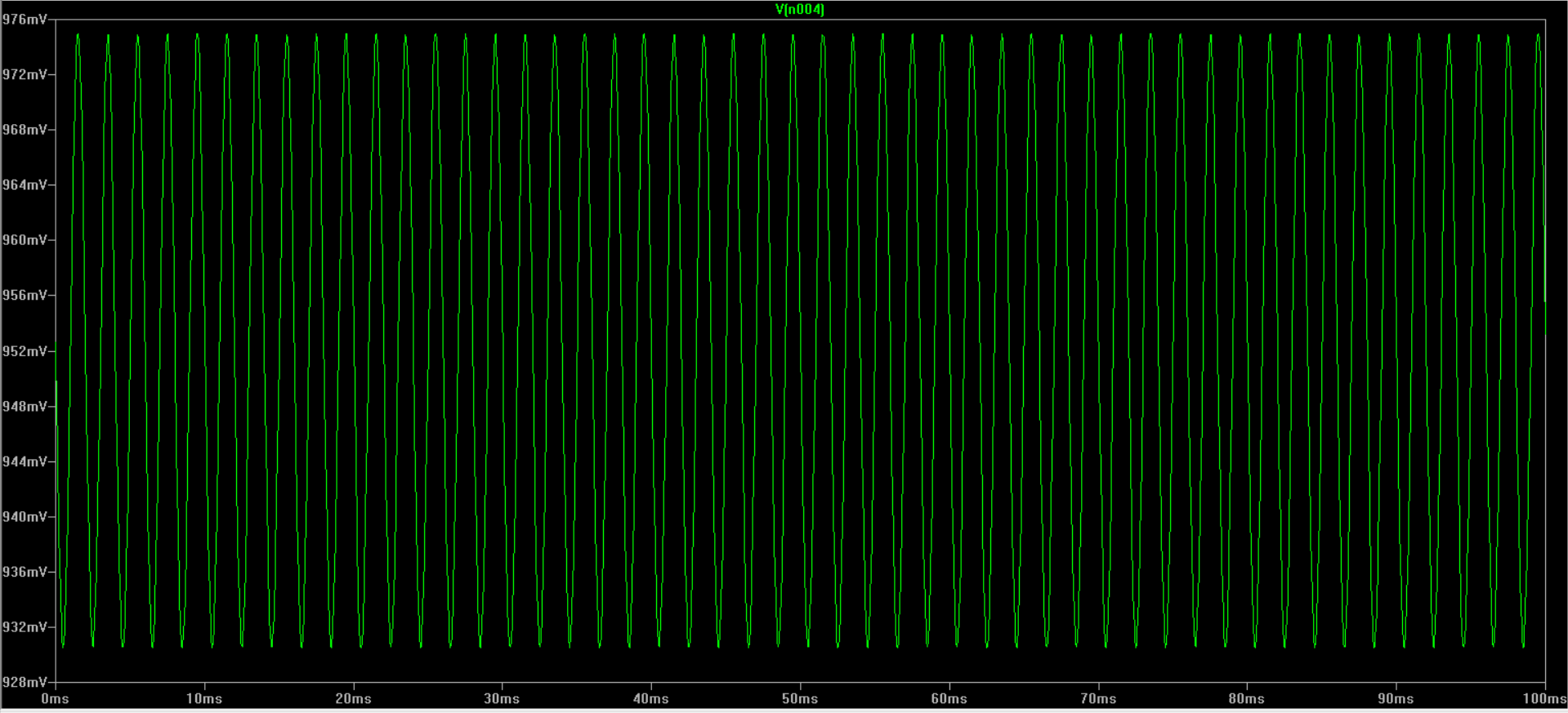
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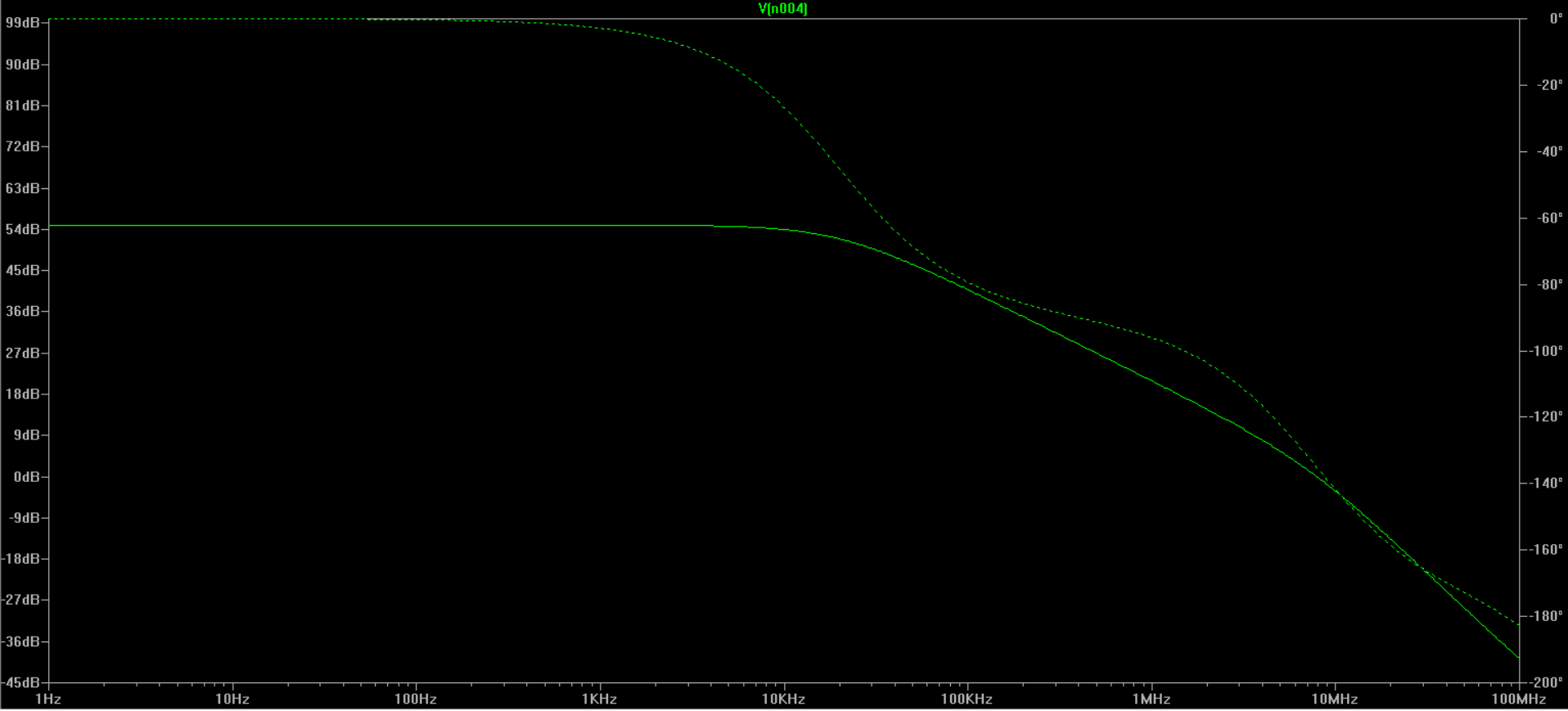
**A green dotted line on a black background

AI-generated content may be incorrect.**

**Overall gain:**

Gain = 1107.25(from amplitude)  
 = 60.885dB





Phase margin(from plot): 180-116.7 = 63.3 degrees  
Band width = ~20kHz

**Step response:**

**A black screen with green text

AI-generated content may be incorrect.**

**I added C = 0.22CL  
where CI took as 2pF so CL  = 9.09Pf**

**For the phase margin to be around 60 degrees I took the value of resistor as 300ohms**

**I have placed negative feedback loop with resistors 10k and 10k as shown in circuit to get non inverting gain as 2 = ~6dB .**