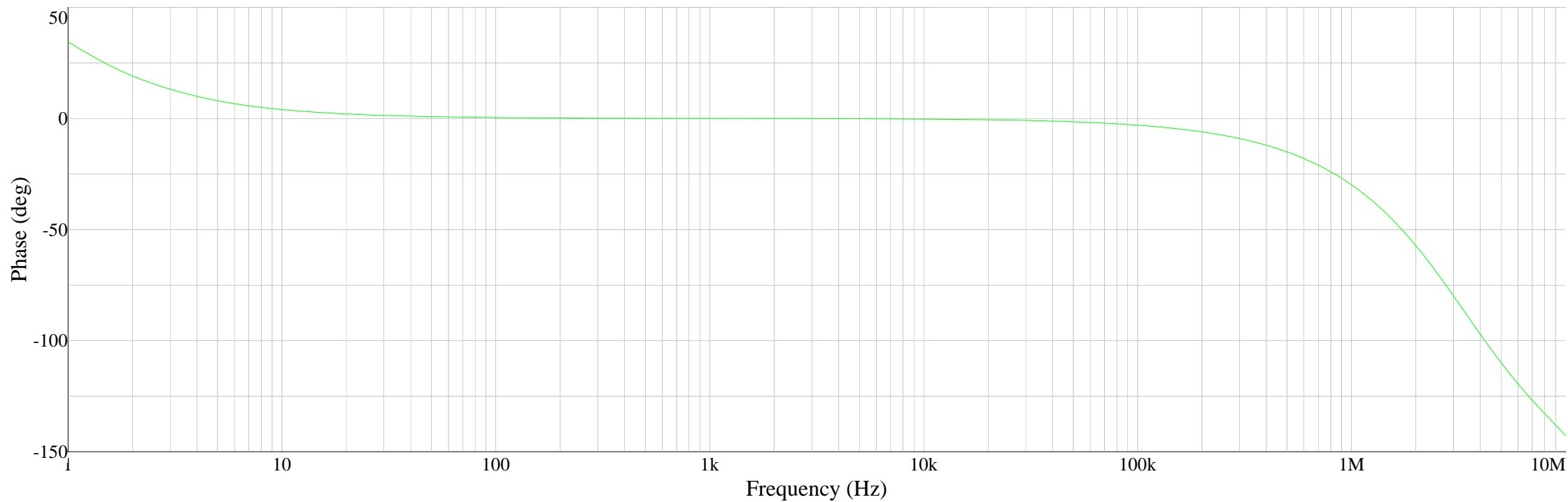
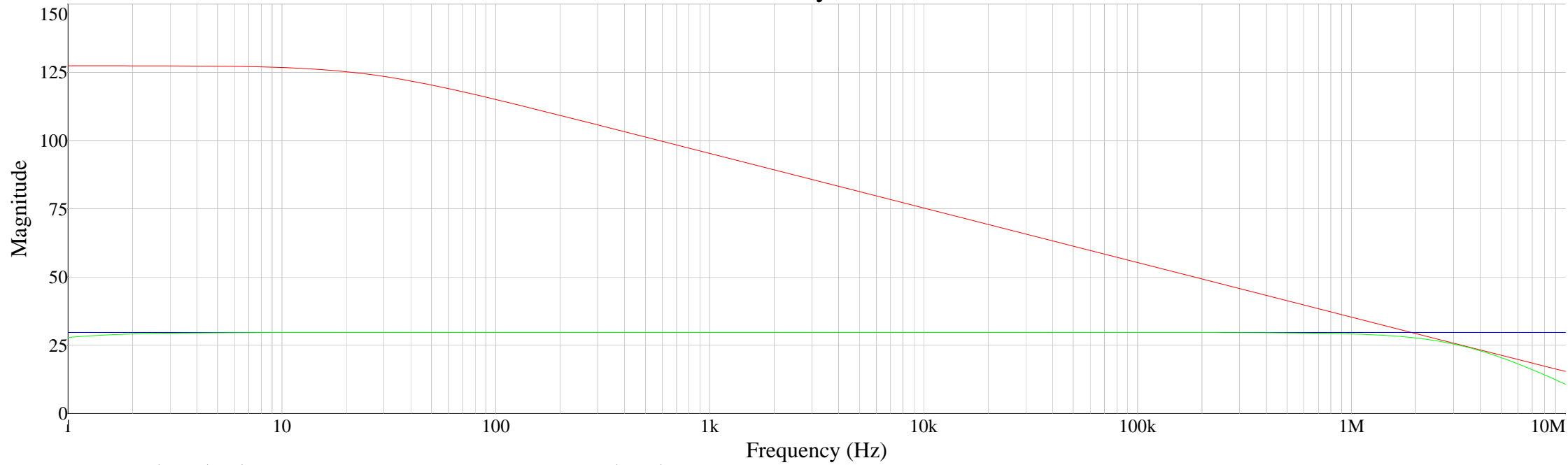


Test Amplifier

Printing Time: May 20, 2008 21:29:29

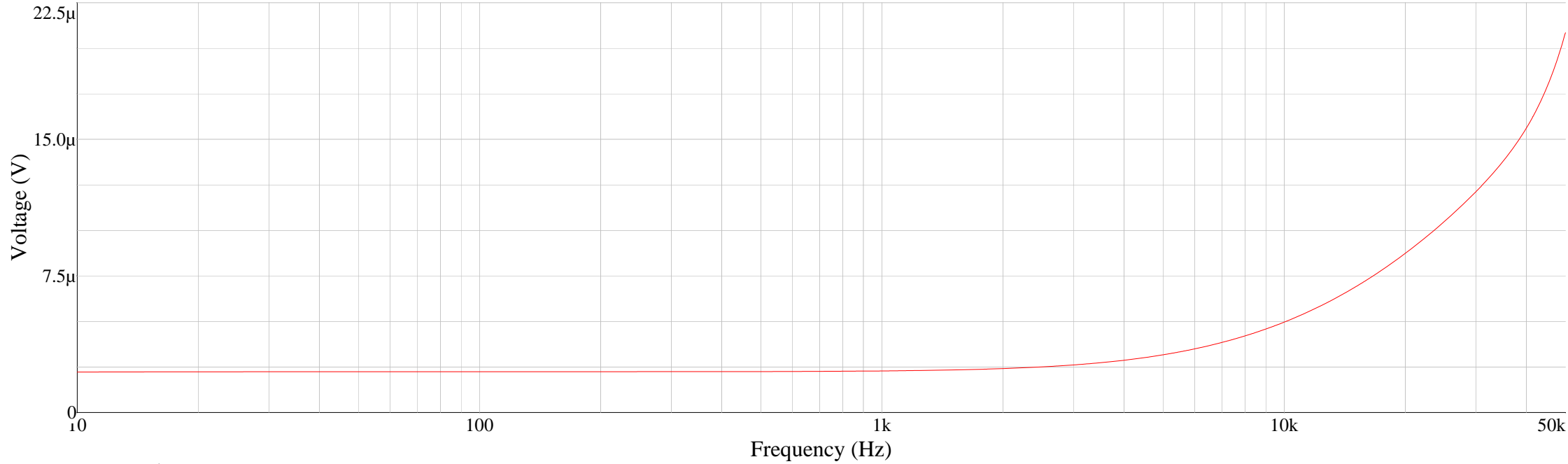
AC Analysis



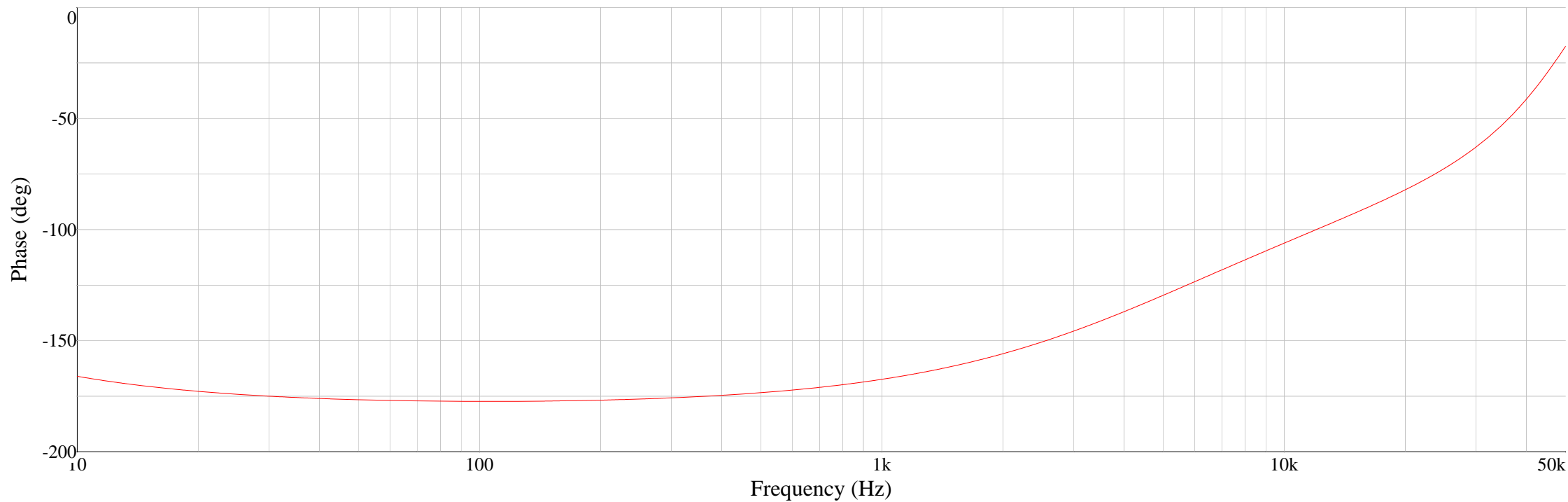
Test Amplifier

Printing Time: May 20, 2008 21:32:10

DISTORTION - 3rd harmonic



Traces: — \$output,

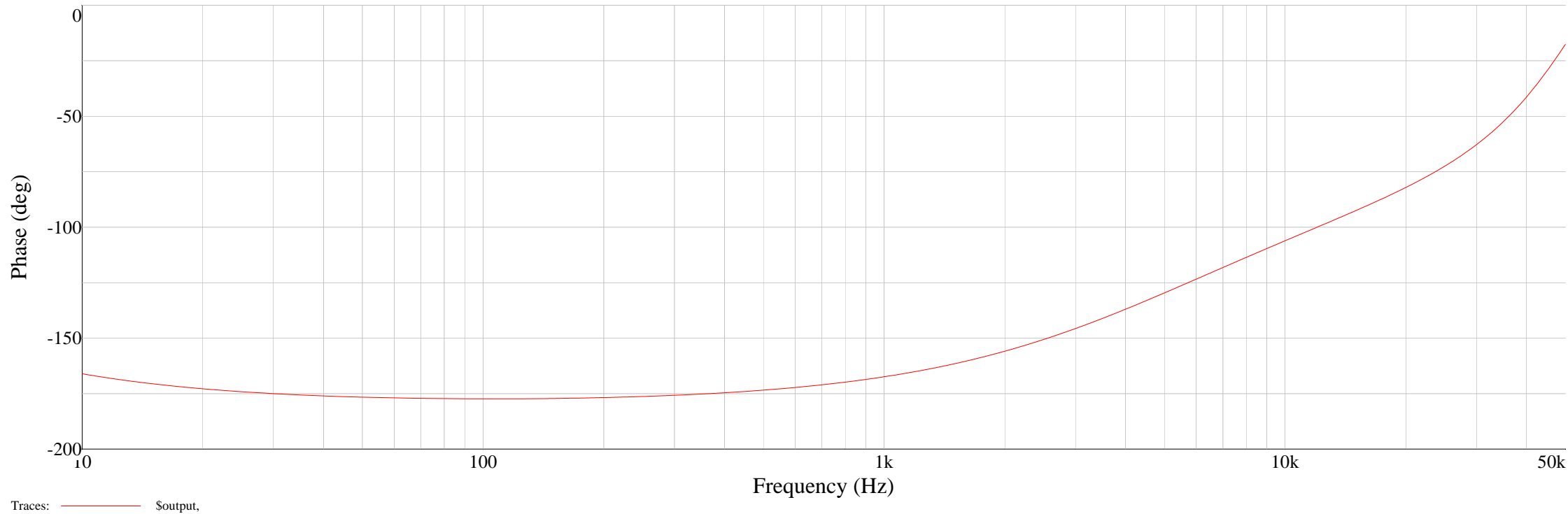
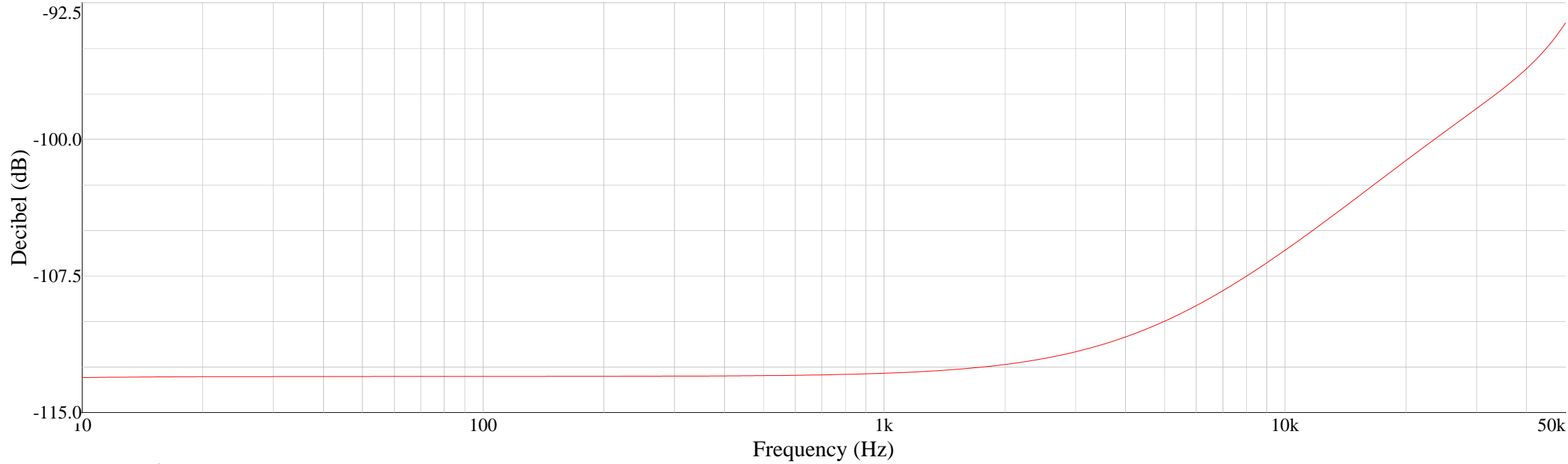


Traces: — \$output,

Test Amplifier

Printing Time: May 20, 2008 21:35:58

DISTORTION - 3rd harmonic



Speaker Impedance (ohm)	6
Output Power per Channel (watts RMS)	75.00
Number of Channels	2
Amplifier Bandwidth (kHz)	100
Input Sensitivity (volts RMS)	0.707
Open-Loop Gain Required at 20kHz (dB)	50
Miller Capacitor "Cdom" (pF)	47

Powersupply Requirements

Current Required (amps RMS)	3.536
Voltage Required (volts RMS)	21.216
Actual Output Power (watts RMS)	75.020
Rail Voltage Required (volts DC)	29.999
with PSU Droop (volts DC)	35.999
with Output Device Losses (volts DC)	37.439
with Rectifier Diodes Loss (volts DC)	38.639
Secondary Rail Voltage Required (volts RMS)	27.318
Secondary Rail Current Required per channel (amps RMS)	1.768
Secondary Rail Current Required in Total (amps RMS)	3.536
Secondary Rail Current Required with Compensation (amps RMS)	4.243
VA Rating Required at Specified Load (VA)	231.831

Input Stage Requirements - Highly Stable Configuration

Closed-Loop Gain Required (dB)	29.5
Per Differential Pair Transistor gm Based on Tail Current to Maintain Open-Loop Gain at 20kHz (mA/V)	1.87
Minimum Tail Current Required to Maintain Open-Loop Gain at 20kHz (mA)	0.09
Open-Loop Gain at 20kHz based on gm to Maintain "Cdom" (dB)	50
Negative Feedback Factor at 20kHz (dB)	20.5
Unity Gain Frequency Open-Loop & Close=Loop Match Point (kHz)	210.8
Input Stage Constant Current Source Resistance (ohm)	5525.5
Input Stage Current Mirror Resistance (ohm)	1070.8

Input Stage Requirements - Linear & Stable Configuration

Peak Tail Current Required to Maintain "Cdom" at Amplifier Bandwidth at Output Power (mA)	0.886
Required Tail Current Including Standing Current (mA)	8.42
Per Differential Pair Transistor gm Based on Tail Current to Maintain "Cdom" (mA/V)	17.72
Per Differential Pair Transistor re Based on Tail Current to Maintain "Cdom" (ohm)	56.4
Per Differential Pair Transistor gm Based on Tail Current to Maintain "Cdom" and Standing Current (mA/V)	168.32
Per Differential Pair Transistor re Based on Tail Current to Maintain "Cdom" and Standing Current (ohm)	5.94
Differential Pair Degeneration Resistors to Reduce Gain Back to Tail Current to Maintain "Cdom" (ohm)	50.50
Open-Loop Gain at 20kHz based on gm to Maintain "Cdom" (dB)	61.6
Negative Feedback Factor at 20kHz (dB)	32.0
Unity Gain Frequency Open-Loop & Close=Loop Match Point (kHz)	1999.4
Input Stage Constant Current Source Resistance (ohm)	61.3
Input Stage Current Mirror Resistance (ohm)	35.6
Closed-Loop Gain Resistor Ratio (x:1)	29.0