

LP38851 control loop measurement / Schematic

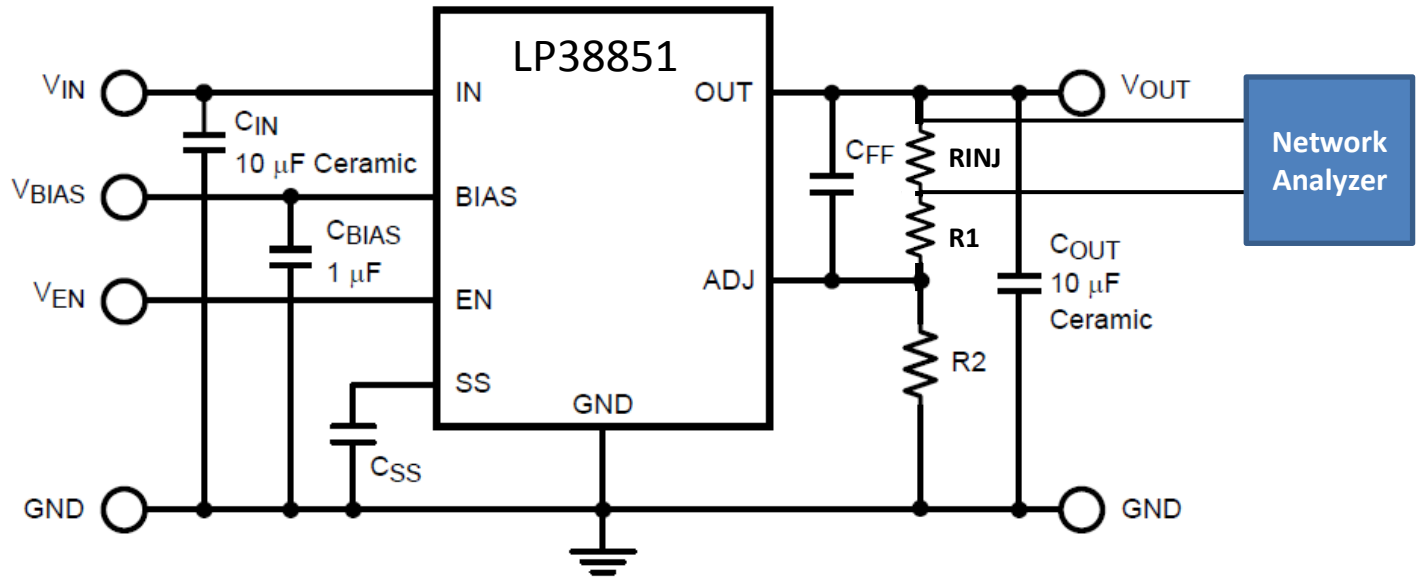


Table 1.

From LP38851 datasheet

V_{OUT}	R1	R2	C_{FF}	F_z
0.8V	1.07 k Ω	1.78 k Ω	220 pF	676 kHz
0.9V	1.50 k Ω	1.87 k Ω	180 pF	589 kHz
1.00V	1.00 k Ω	1.00 k Ω	270 pF	589 kHz
1.1V	1.65 k Ω	1.37 k Ω	150 pF	643 kHz
1.2V	1.40 k Ω	1.00 k Ω	180 pF	631 kHz

Device : LP38851 [Using LP38852MR-ADJ EVM and replaced from LP38852 to LP38851]

Cout : 1210ZC106KAT2A(AVX) [Default of LP38852MR-ADJ EVM]

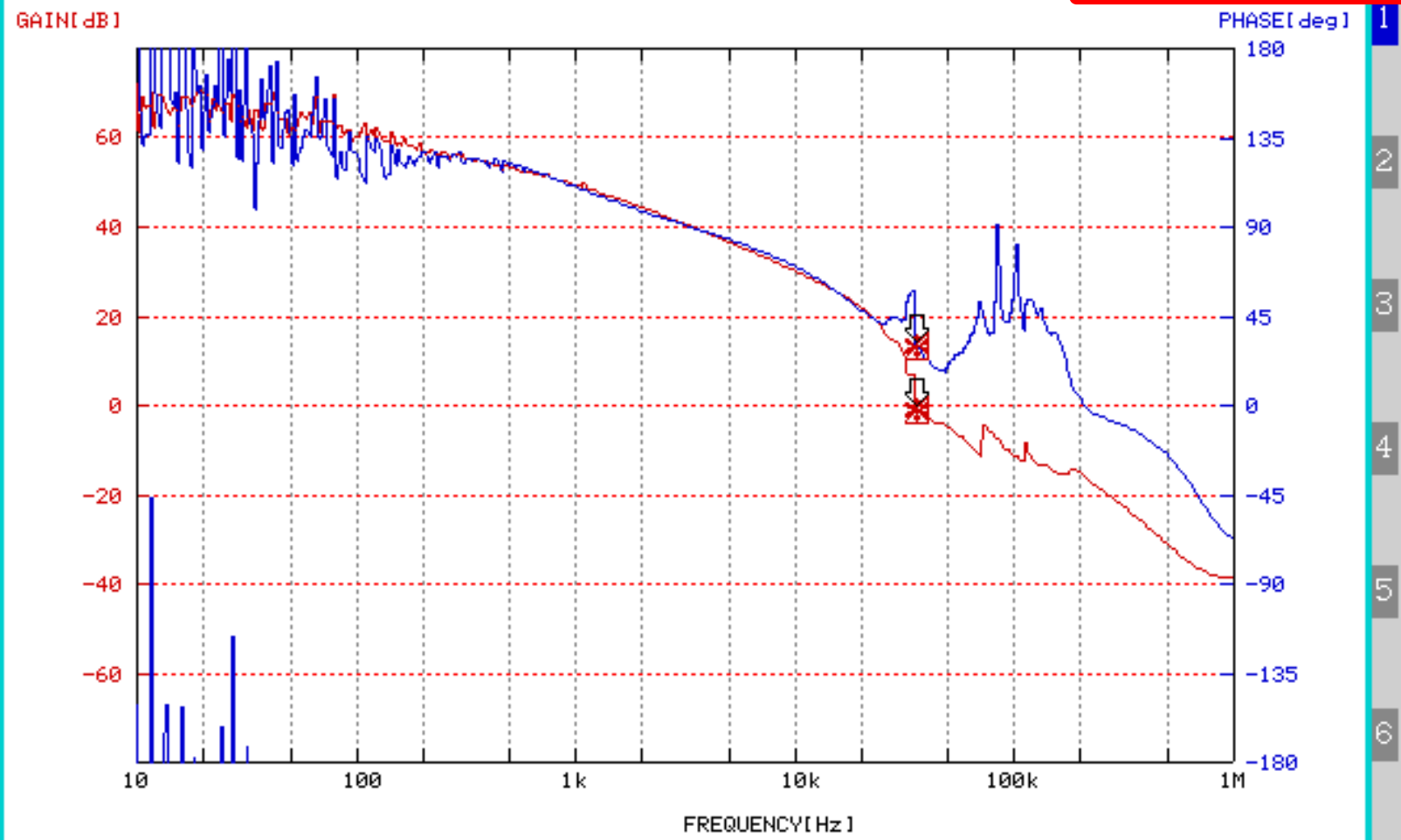
R1=R2 : 1kohm

RINJ : 100ohm

Cff : 270pF

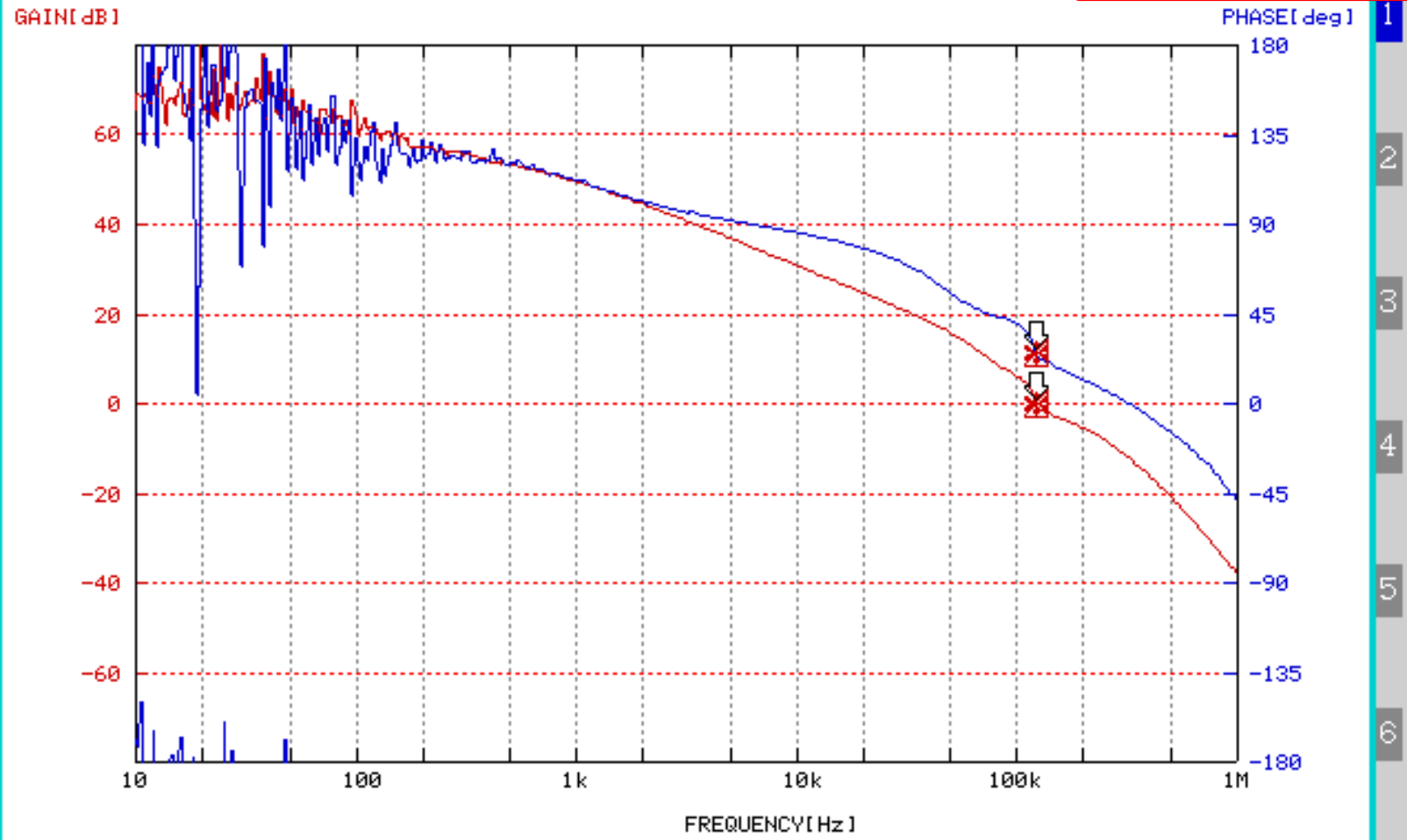
LP38851 control loop measurement / 10mA, 10uF

OSC: 10.0000 Hz ~ 20.0mVpeak DC 0.00 V INTEG: 10cycle HMNC: 1
SWP: 360steps/sweep CPRSN:OFF SLSWP:OFF ANAL:CH1/CH2 EQL:OFF SWEEP STOP
*f: 35.9381366kHz *R: -1.168 dB * θ : +29.99 deg



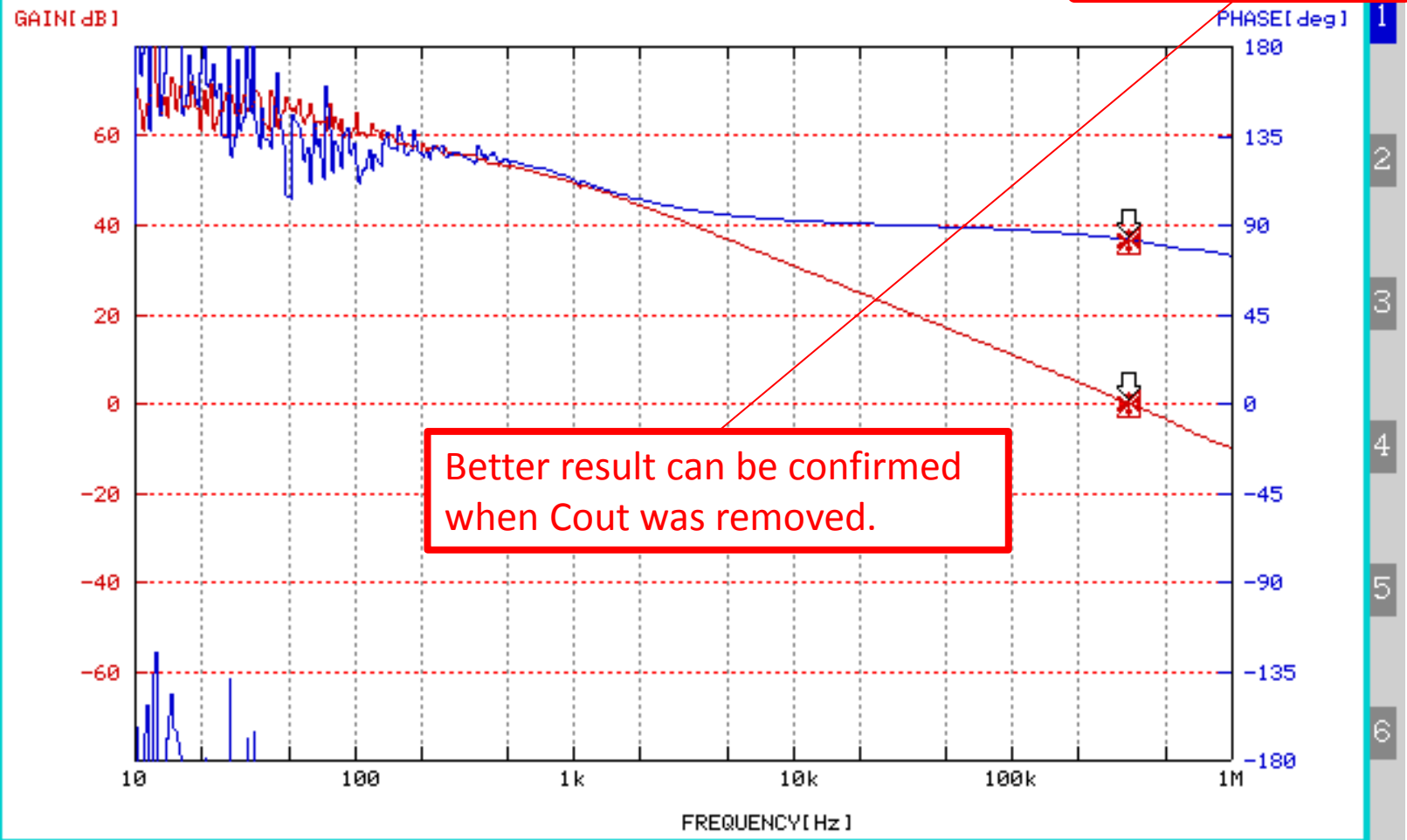
LP38851 control loop measurement / 100mA, 10uF

OSC: 10.0000 Hz ~ 20.0mVpeak DC 0.00 V INTEG: 10cycle HMNC: 1
SWP: 360steps/sweep CPRSN:OFF SLSWP:OFF ANAL:CH1/CH2 EQL:OFF SWEEP STOP
*f: 121.1527659kHz *R: -0.226 dB * θ : +26.00 deg



LP38851 control loop measurement / 100mA, 0uF (Cout removed)

OSC: 10.0000 Hz ~ 20.0mVpeak DC 0.00 V INTEG: 10cycle HMNC: 1
SWP: 360steps/sweep CPRSN:OFF SLSWP:OFF ANAL:CH1/CH2 EQL:OFF SWEEP STOP
*f: 337.1147678kHz *R: +0.072 dB * θ : +82.72 deg



LP38851 control loop measurement / 500mA, 10uF

OSC: 10.0000 Hz ~ 20.0mVpeak DC 0.00 V INTEG: 10cycle HMNC: 1
SWP: 360steps/sweep CPRSN:OFF SLSWP:OFF ANAL:CH1/CH2 EQL:OFF SWEEP STOP
*f: 229.6736176kHz *R: -0.108 dB * θ : +32.28 deg

