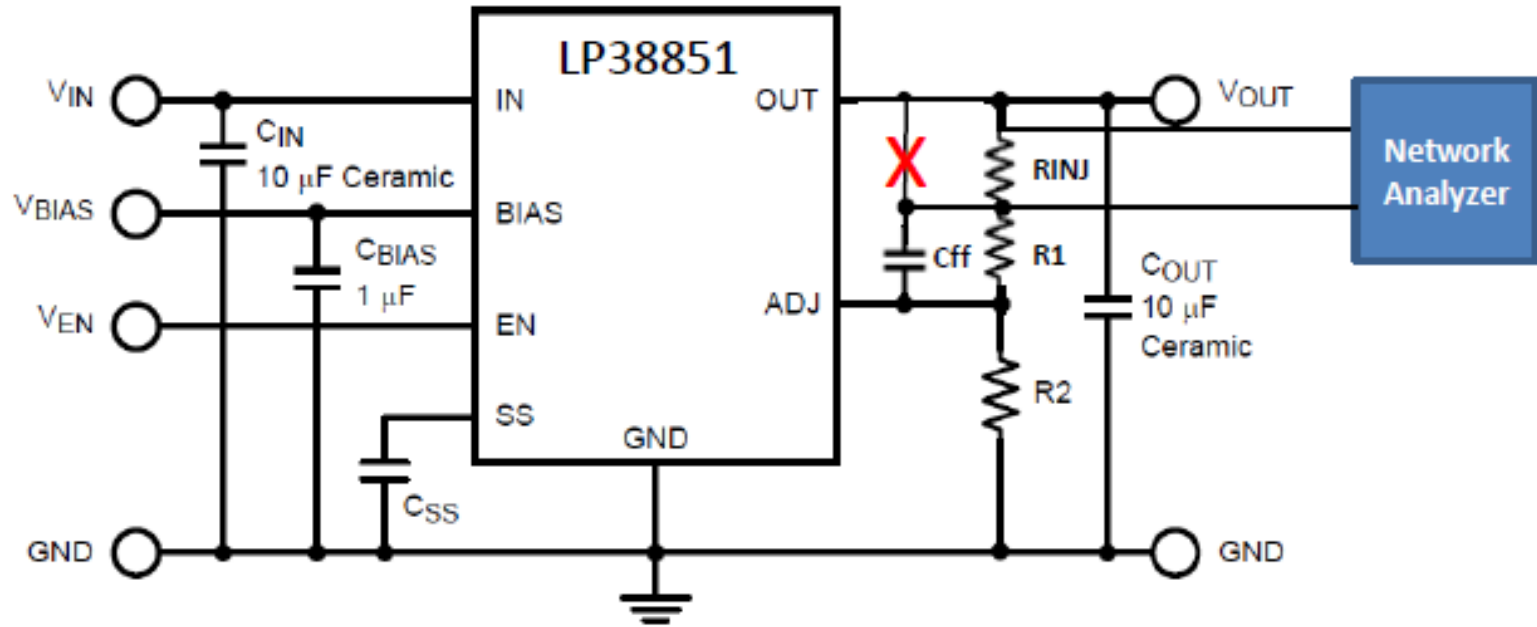


Schematics & Conditions



LP38852EVM is used.

*Conditions of LP38851

Vin=Ven=1.8V

Vbias=3.3V

Vout=1V

Iout=10mA, 100mA, 500mA

R1=1kΩ

R2=1kΩ

RINJ=100Ω

Cff=270pF

*Conditions of LP38852

Vin=Ven=1.8V

Vbias=3.3V

Vout=1.2V

Iout=10mA, 100mA, 500mA

R1=1.2kΩ

R2=1kΩ

RINJ=100Ω

Cff=10nF

Cff table

LP38851

LP38851 recommend higher Fz than LP38852

V _{OUT}	R1	R2	C _{FF}	F _Z
0.8V	1.07 kΩ	1.78 kΩ	220 pF	676 kHz
0.9V	1.50 kΩ	1.87 kΩ	180 pF	589 kHz
1.00V	1.00 kΩ	1.00 kΩ	270 pF	589 kHz
1.1V	1.65 kΩ	1.37 kΩ	150 pF	643 kHz
1.2V	1.40 kΩ	1.00 kΩ	180 pF	631 kHz
1.3V	1.15 kΩ	715 Ω	220 pF	629 kHz
1.4V	1.07 kΩ	590 Ω	220 pF	676 kHz
1.5V	2.00 kΩ	1.00 kΩ	120pF	663 kHz
1.6V	1.65 kΩ	750 Ω	150 pF	643 kHz
1.7V	2.55 kΩ	1.07 kΩ	100 pF	624 kHz
1.8V	2.94 kΩ	1.13 kΩ	82 pF	660 kHz

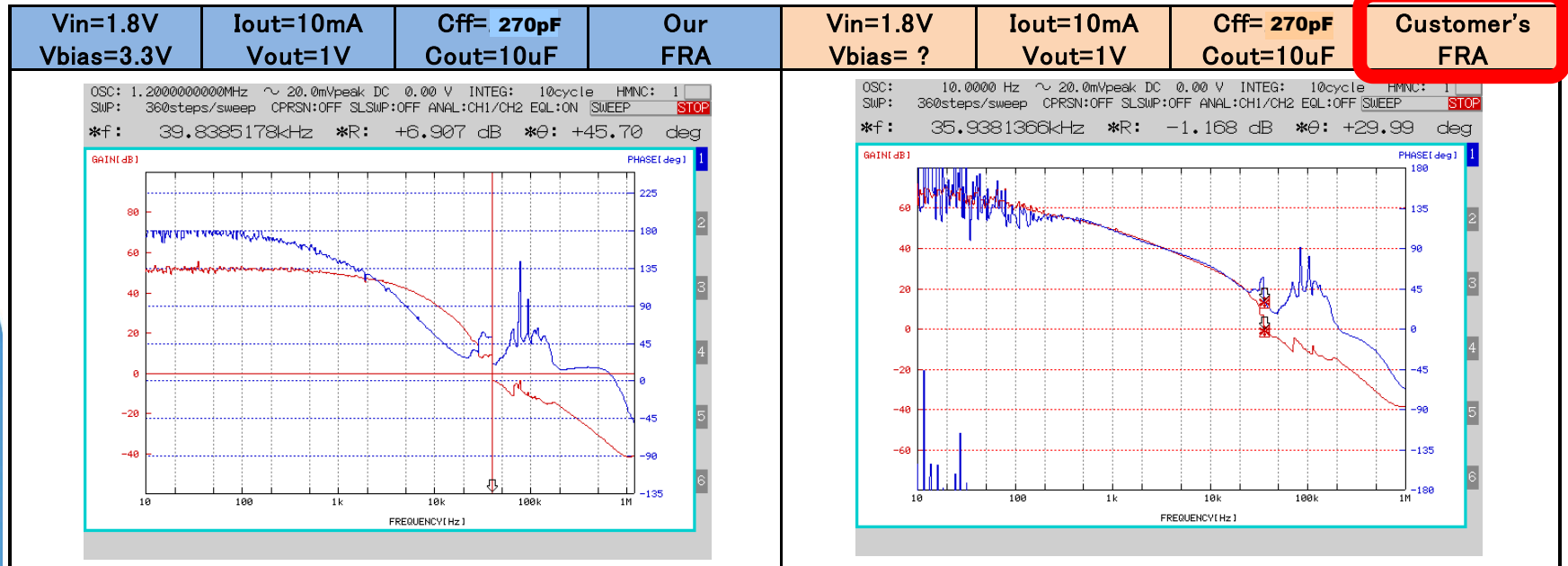
LP38852

V _{OUT}	R1	R2	C _{FF}	F _Z
0.8V	1.07 kΩ	1.78 kΩ	12 nF	12.4 kHz
0.9V	1.50 kΩ	1.87 kΩ	8.2 nF	12.9 kHz
1.0V	1.00 kΩ	1.00 kΩ	12 nF	13.3 kHz
1.1V	1.65 kΩ	1.37 kΩ	8.2 nF	11.8 kHz
1.2V	1.40 kΩ	1.00 kΩ	10 nF	11.4 kHz
1.3V	1.15 kΩ	715 Ω	12 nF	11.5 kHz
1.4V	1.07 kΩ	590 Ω	12 nF	12.4 kHz
1.5V	2.00 kΩ	1.00 kΩ	6.8 nF	11.7 kHz
1.6V	1.65 kΩ	750 Ω	8.2 nF	11.8 kHz
1.7V	2.55 kΩ	1.07 kΩ	5.6 nF	11.1 kHz
1.8V	2.94 kΩ	1.13 kΩ	4.7 nF	11.5 kHz

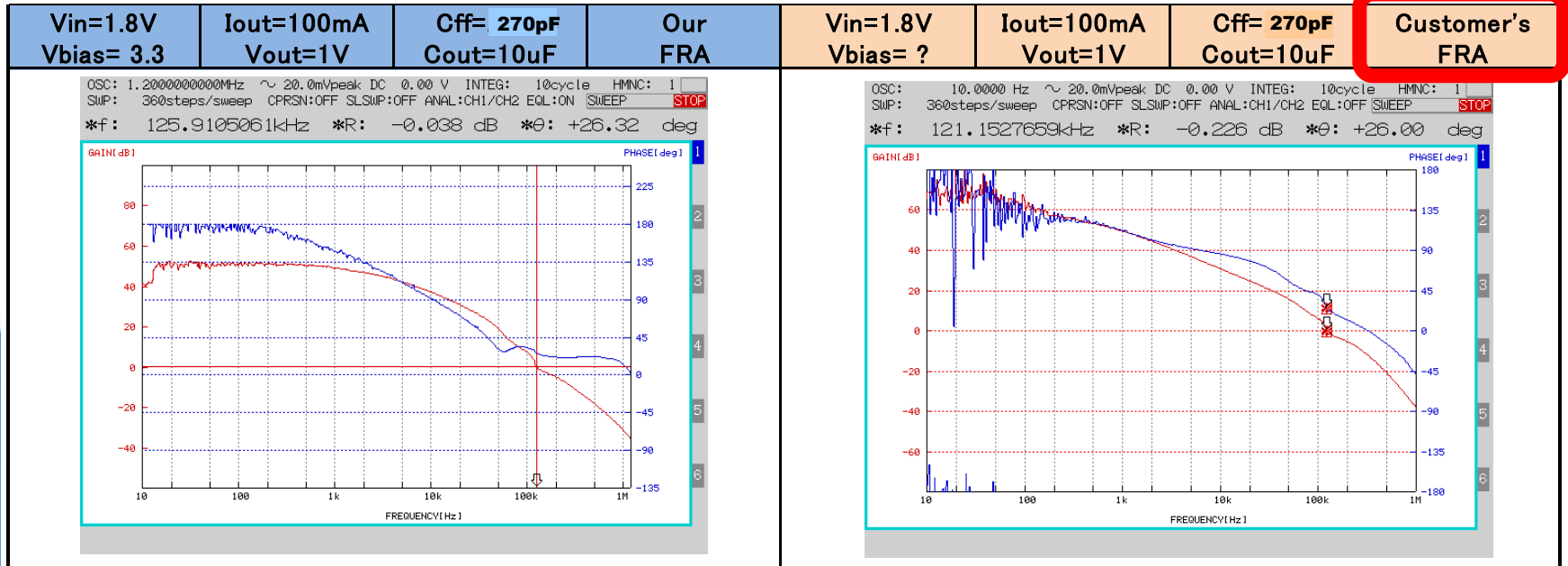
FRA measurement result

Device	Vin	Vbias	Vout	Iout	Cff	Cout	phase margin
	V	V	V	mA	nF	uF	deg
LP38851	1.8	3.3	1	10	0.27	10	45.7
	1.8	3.3	1	100	0.27	10	26.32
	1.8	3.3	1	500	0.27	10	32.58
LP38852	1.8	3.3	1.2	10	10	10	132
	1.8	3.3	1.2	100	10	10	134.04
	1.8	3.3	1.2	500	10	10	100.89

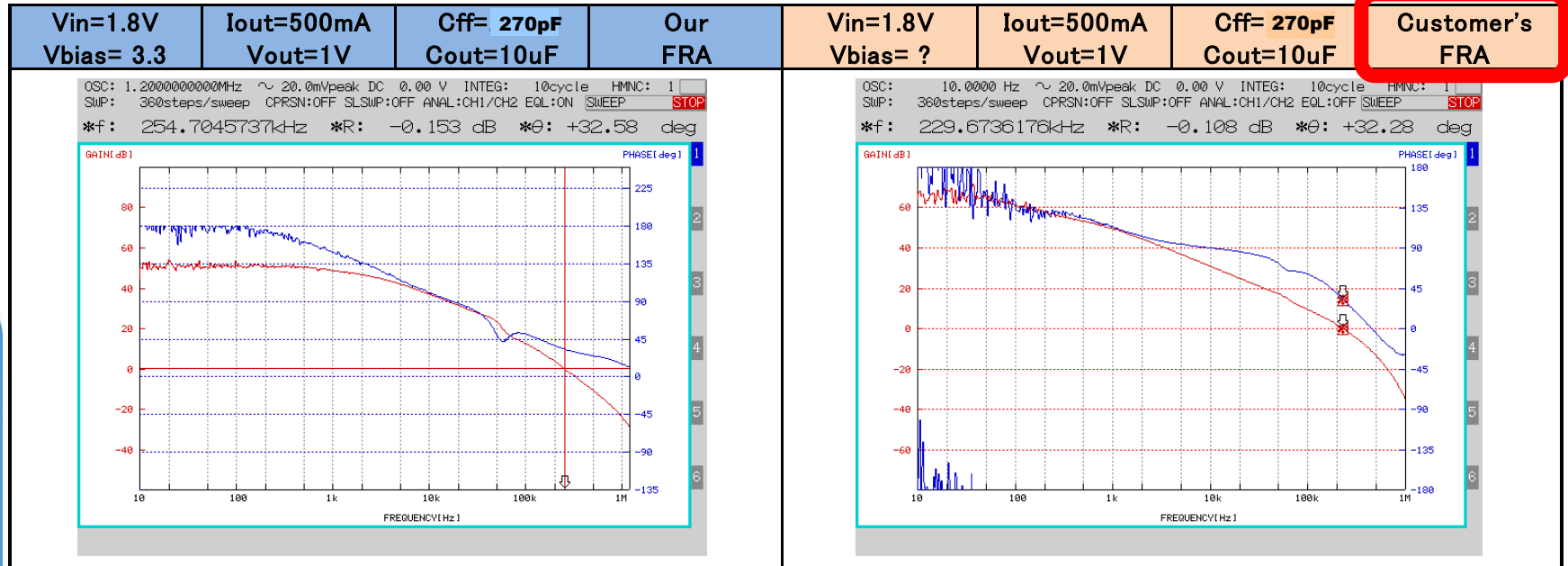
LP38851 FRA result $I_{out}=10mA$



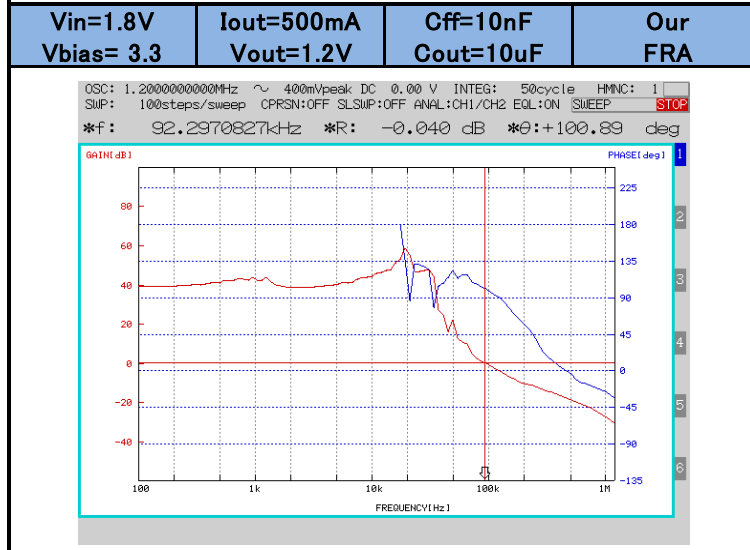
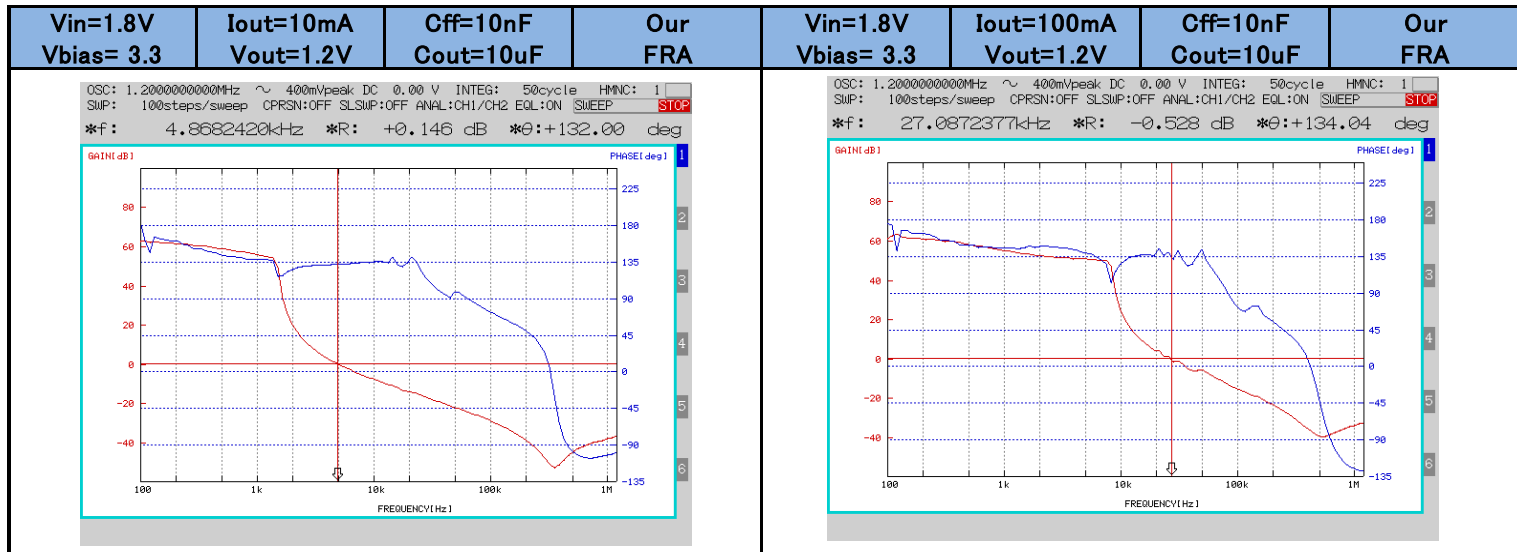
LP38851 FRA result $I_{out}=100mA$



LP38851 FRA result $I_{out}=500mA$



LP38852 FRA result



LP38851 vs LP38852 @ Iout 500mA

