LM5023 Quasi-Resonant Isolated Flyback Converter

TI reference design number: PMP7991

Input: 85VAC to 265VAC
Output: 5VDC or 12VDC @ 2A

AC – DC Test Results

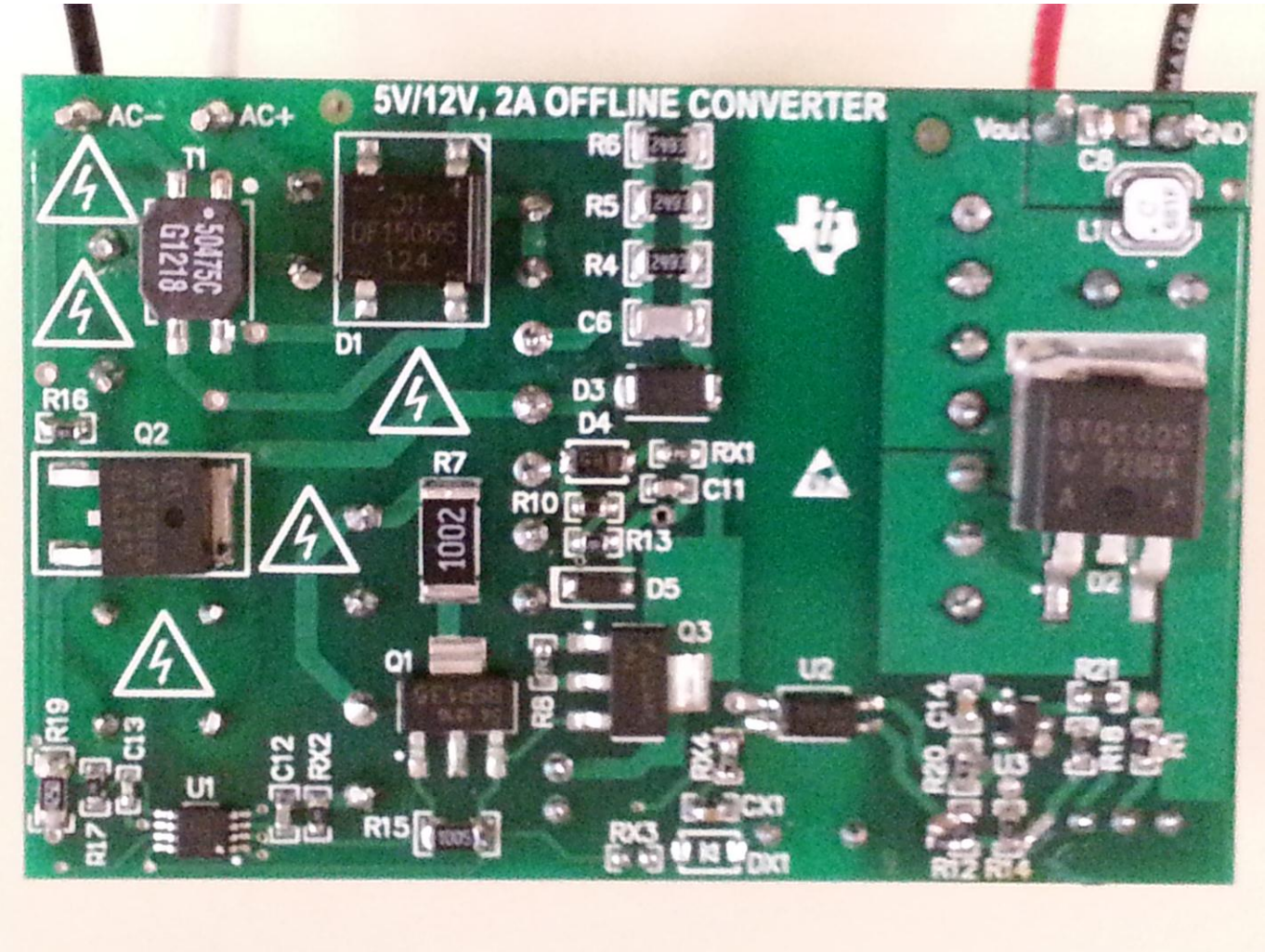
Table of Contents

1 Test SPECIFICATIONS

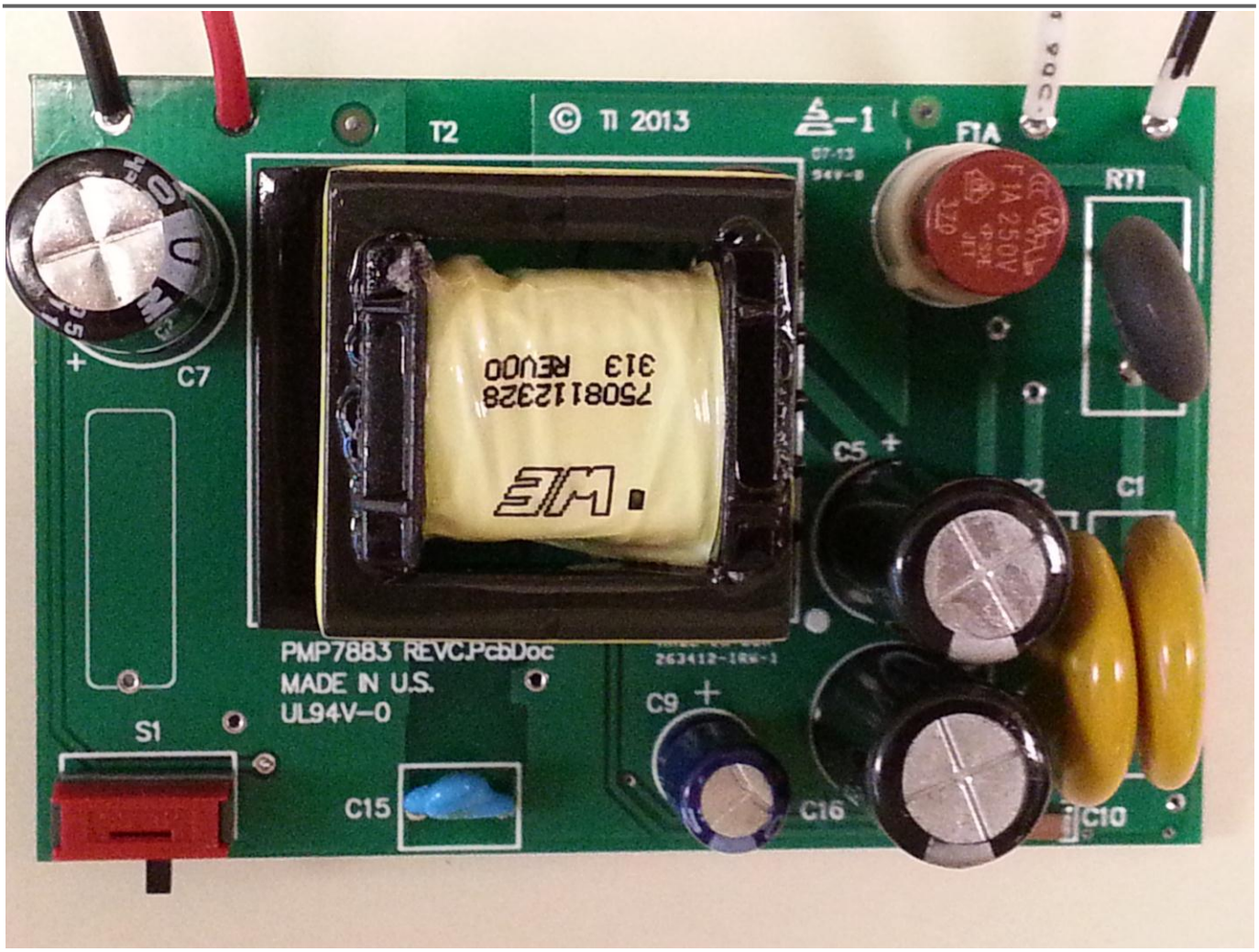
Vin Minimum	**85VAC**
Vin Maximum	**265VAC**
Vout	**5VDC or 12VDC**
Iout	**2A Max.**

2 Photos

The photographs below show the PMP7991 assembly as built on the PMP7883 board.

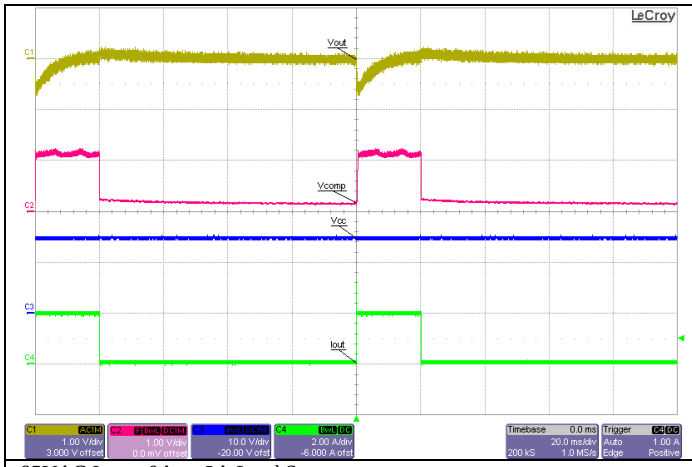


PMP7991 Test Results

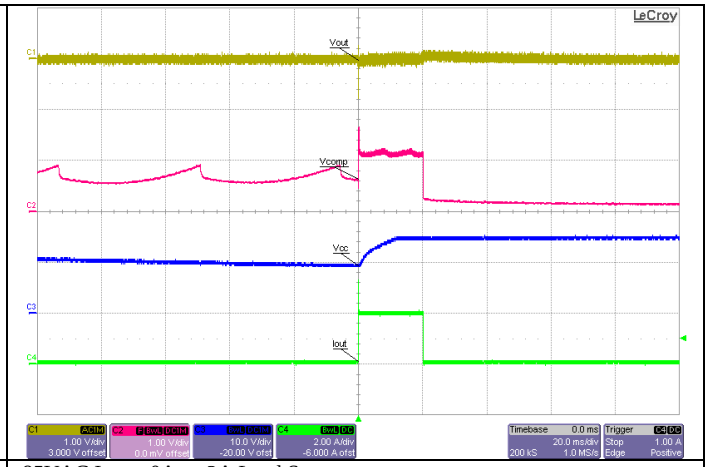


3 Load Transient

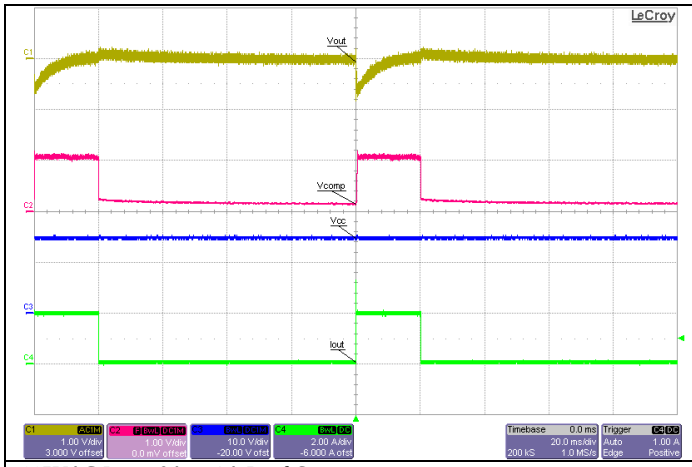
3.1 5VDC Output Transient



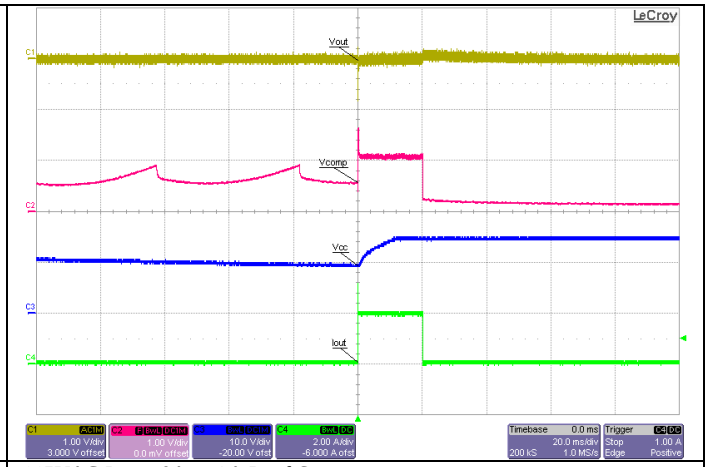
85VAC Input, 0A-to-2A Load Step



85VAC Input, 0A-to-2A Load Step

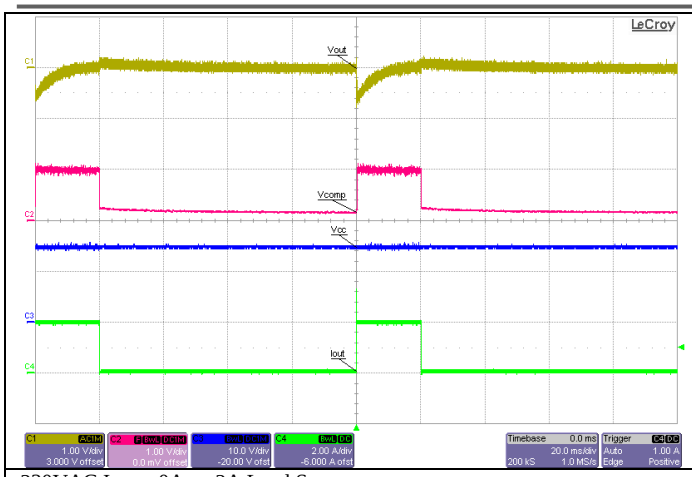
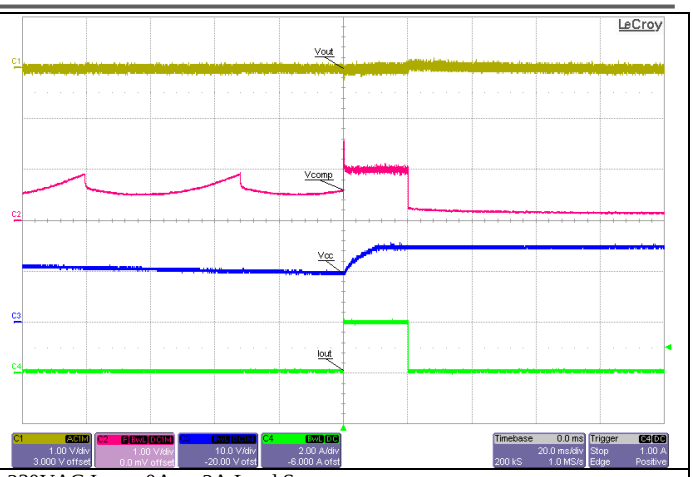
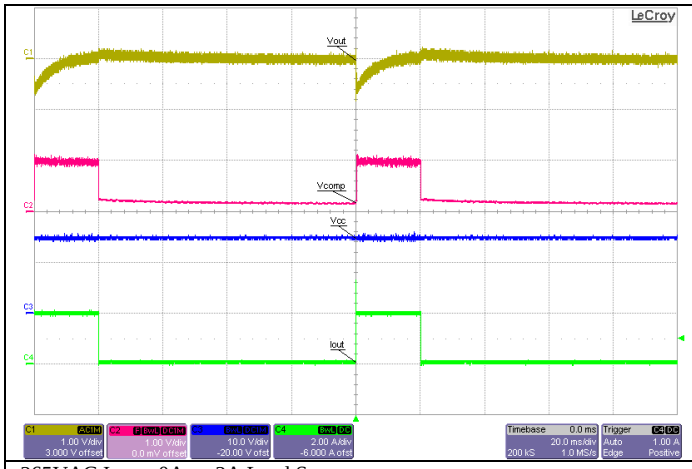
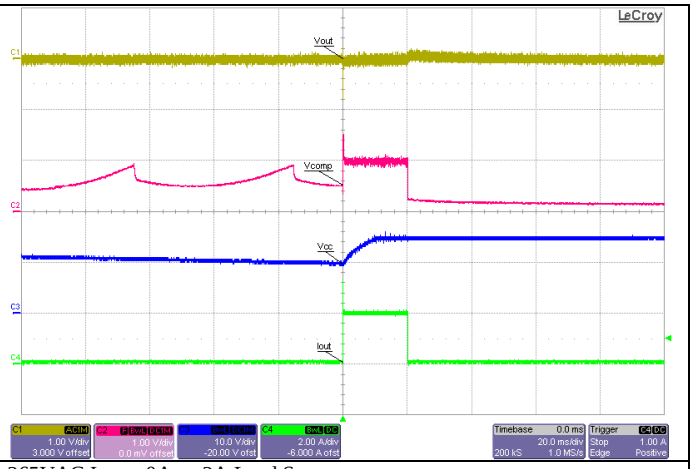


115VAC Input, 0A-to-2A Load Step

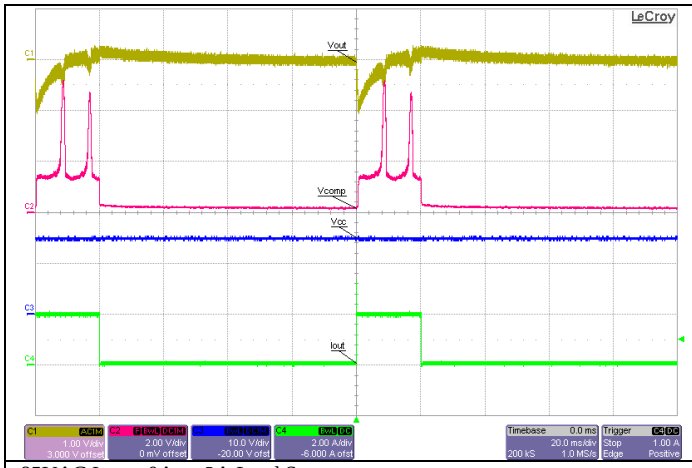


115VAC Input, 0A-to-2A Load Step

PMP7991 Test Results

	
230VAC Input, 0A-to-2A Load Step	230VAC Input, 0A-to-2A Load Step
	
265VAC Input, 0A-to-2A Load Step	265VAC Input, 0A-to-2A Load Step

3.2 12VDC Output Transient



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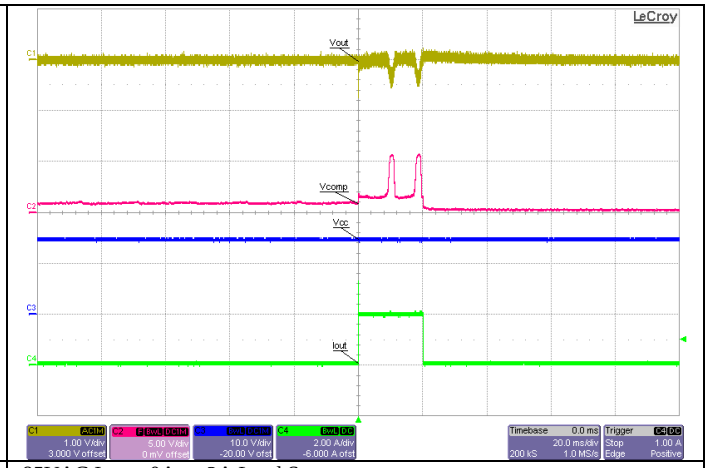

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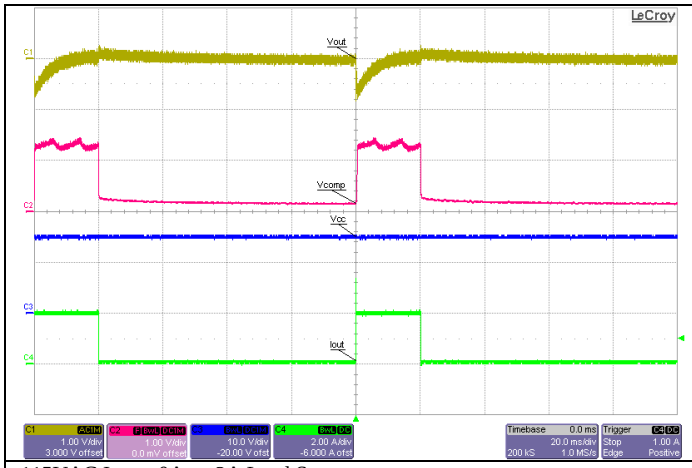
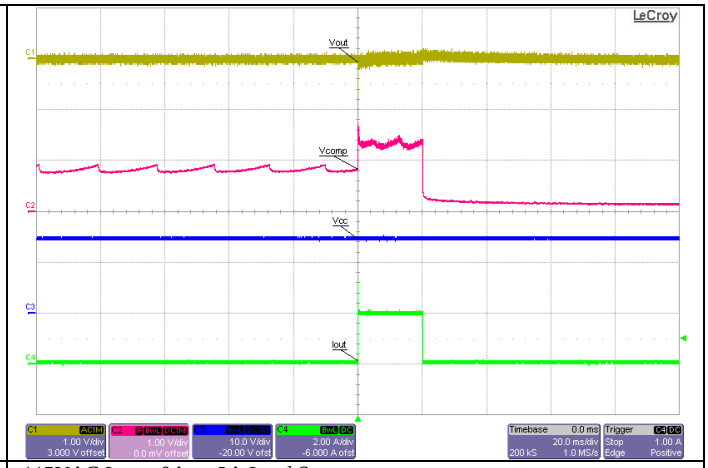
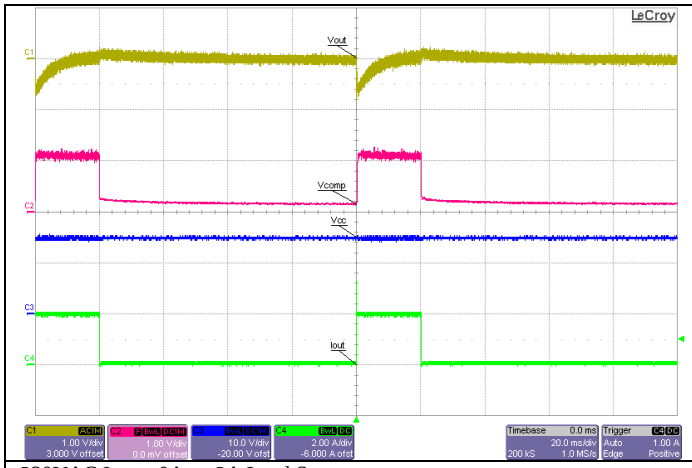
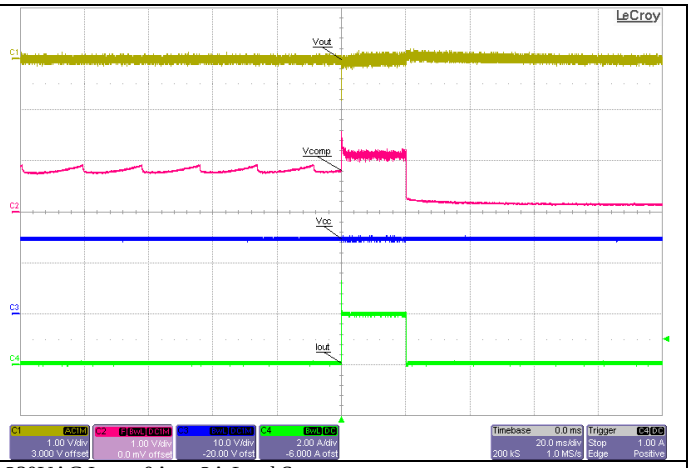


115VAC Input, 0A-to-2A Load Step



115VAC Input, 0A-to-2A Load Step

PMP7991 Test Results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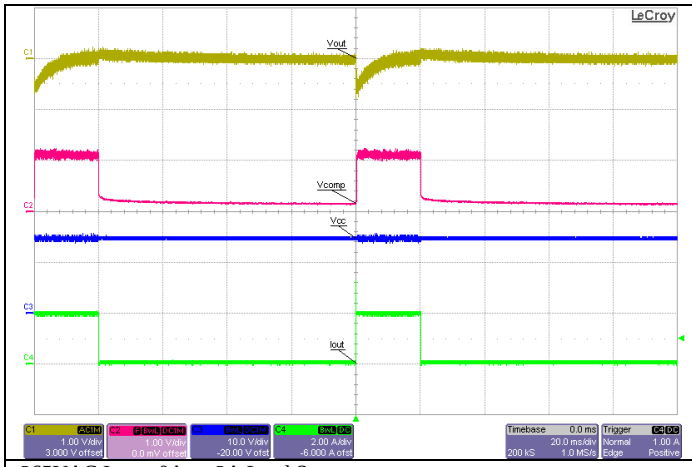
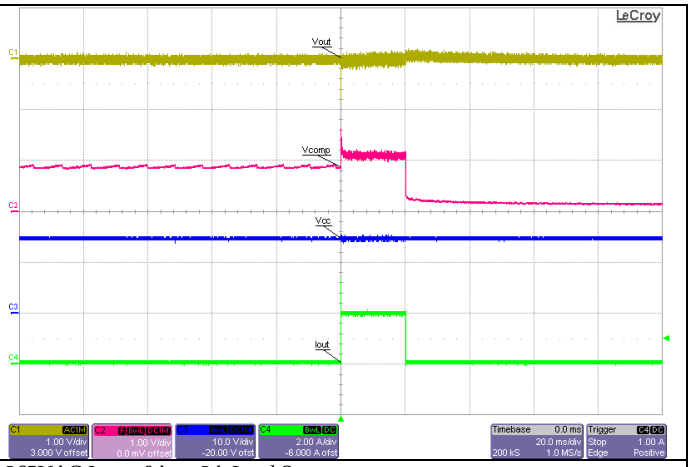
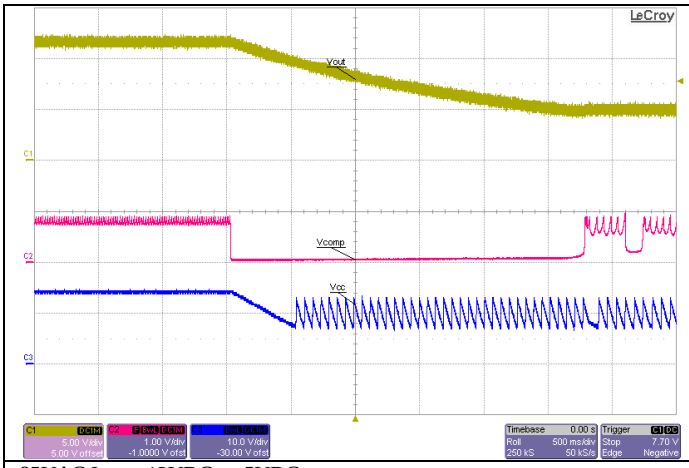
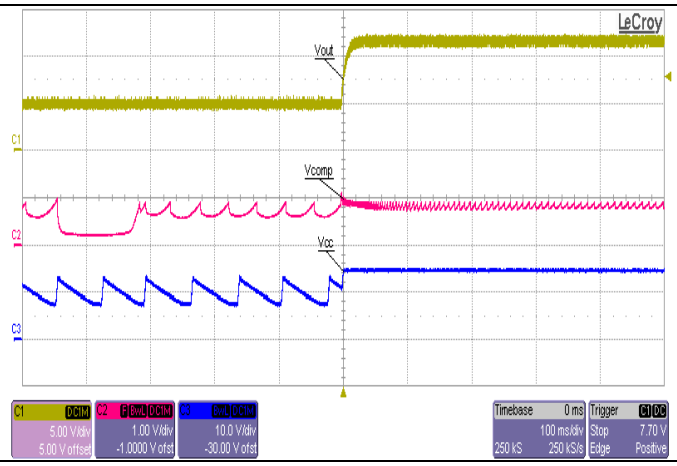
	
265VAC Input, 0A-to-2A Load Step	265VAC Input, 0A-to-2A Load Step

4 Output Voltage Transition

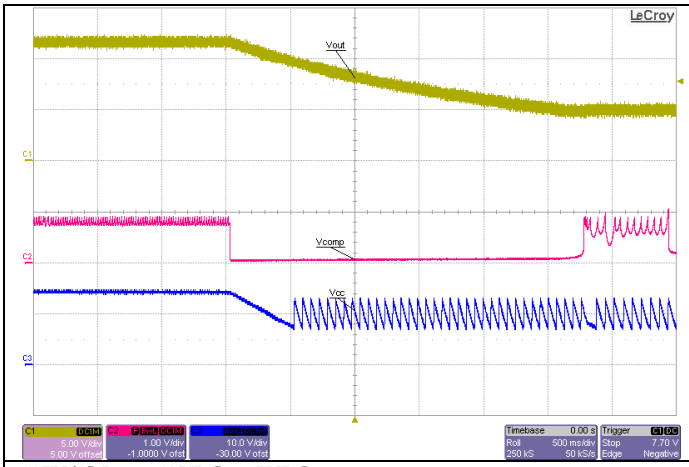
4.1 Output Voltage Transition at No Load



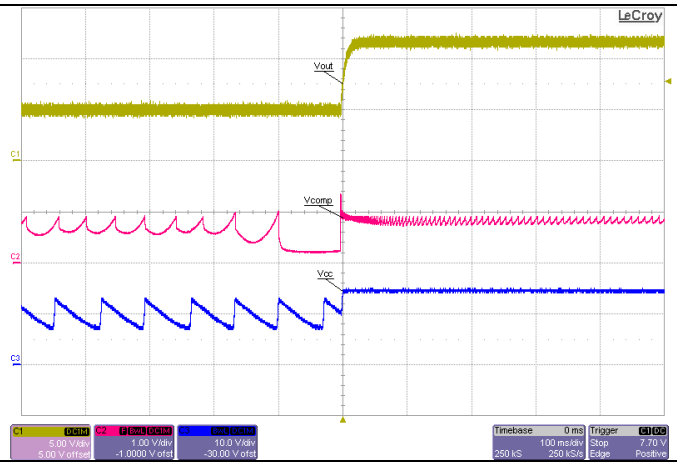
85VAC Input, 12VDC-to-5VDC



85VAC Input, 5VDC-to-12VDC

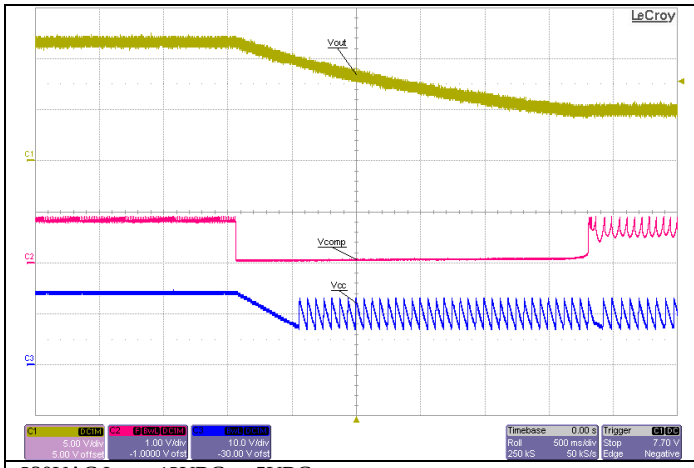
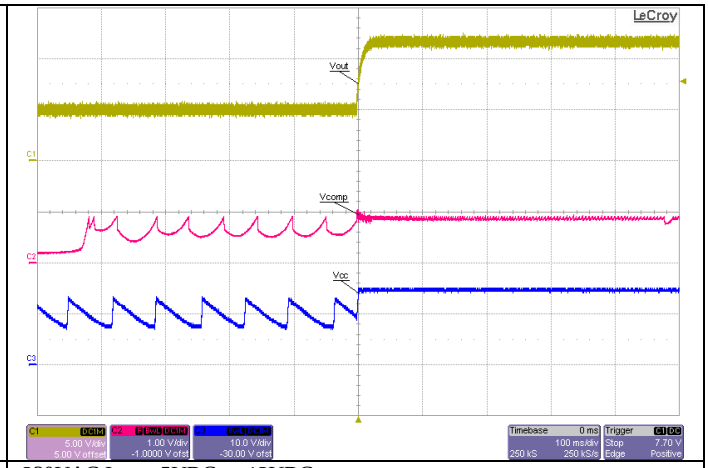


115VAC Input, 12VDC-to-5VDC



115VAC Input, 5VDC-to-12VDC

PMP7991 Test Results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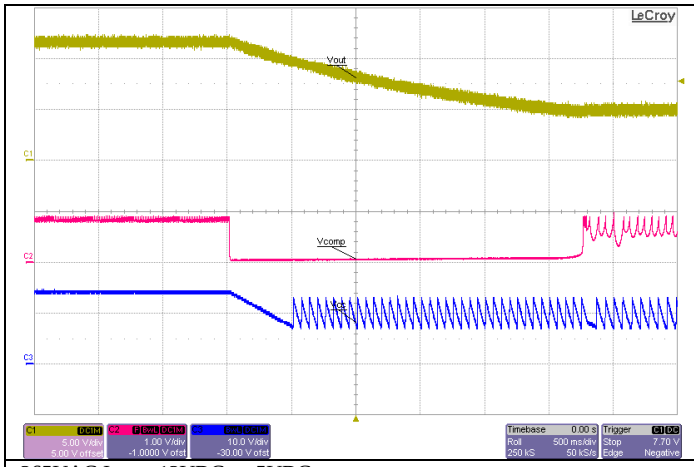
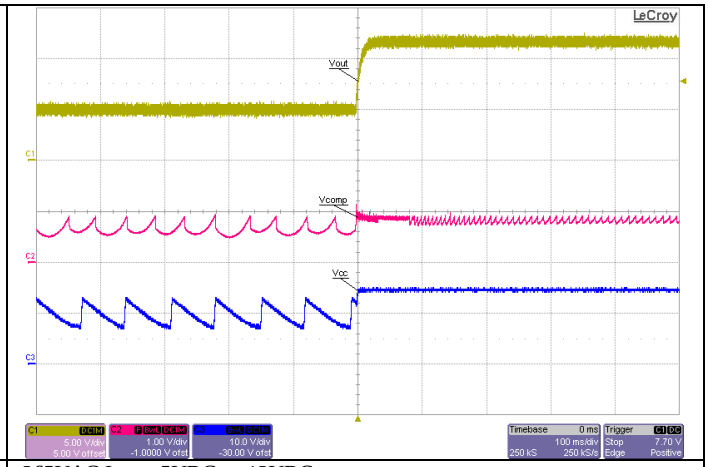
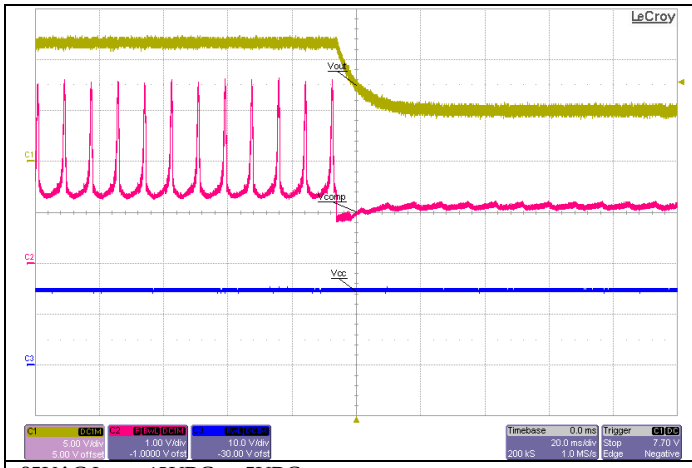
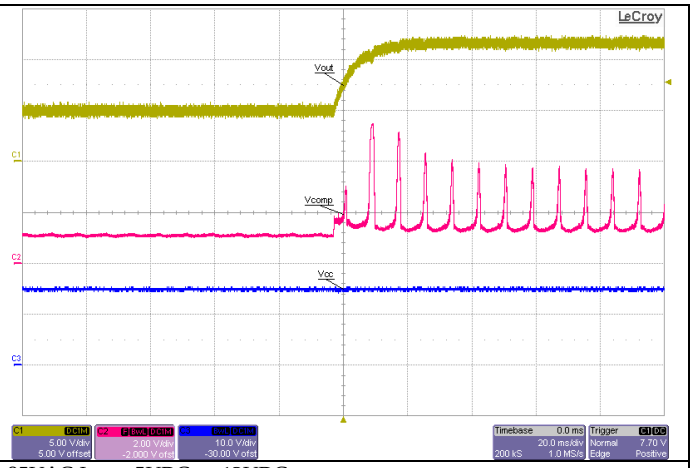
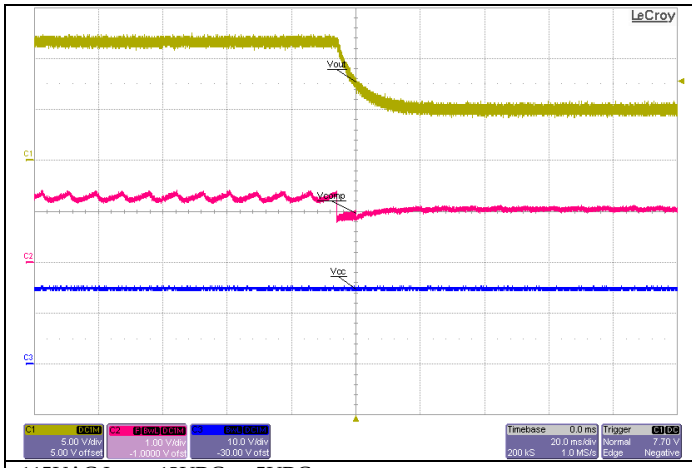
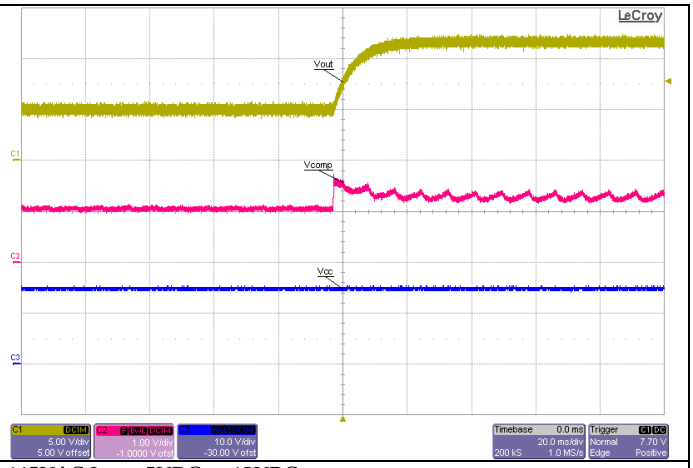
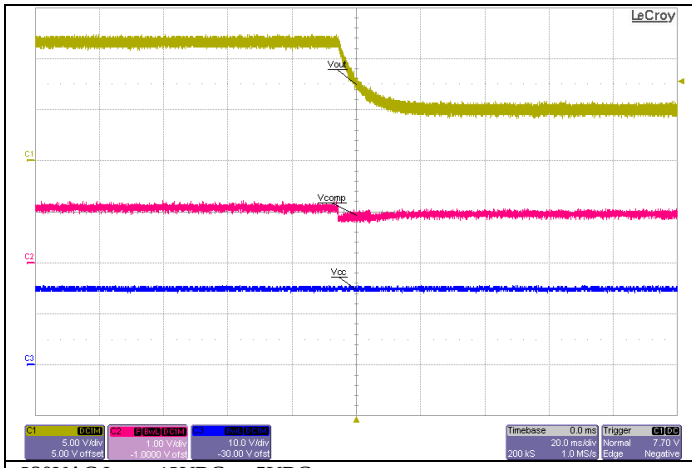
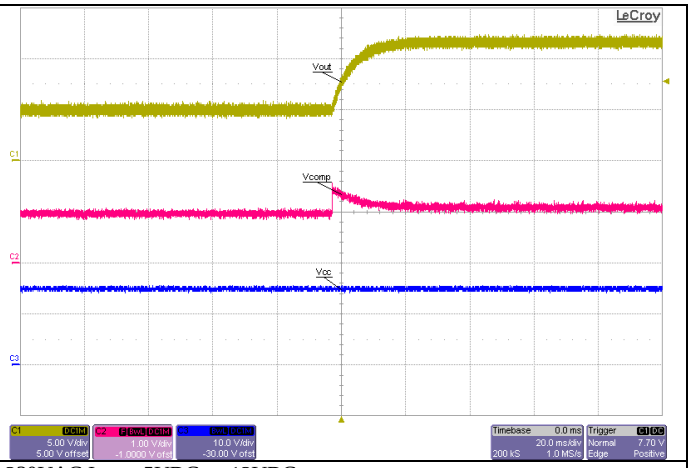
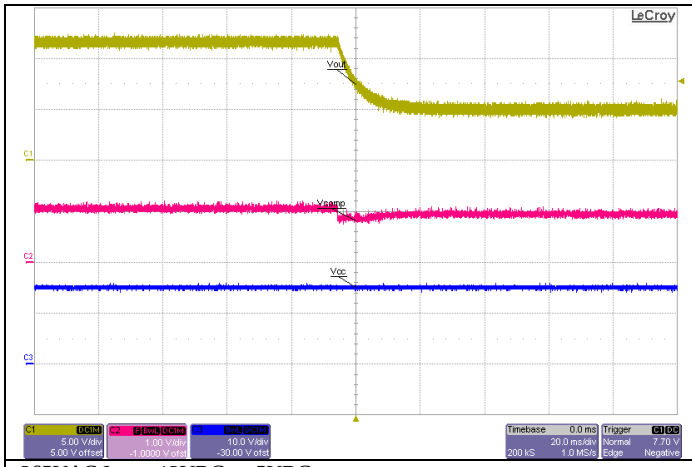
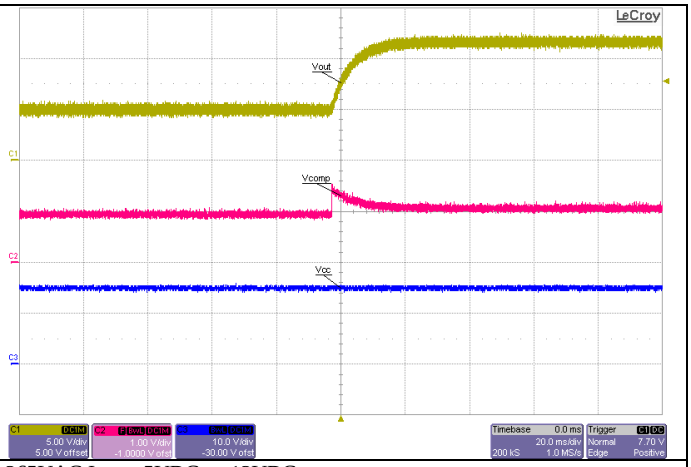
	
265VAC Input, 12VDC-to-5VDC	265VAC Input, 5VDC-to-12VDC

4.2 Output Voltage Transition at 2A Load

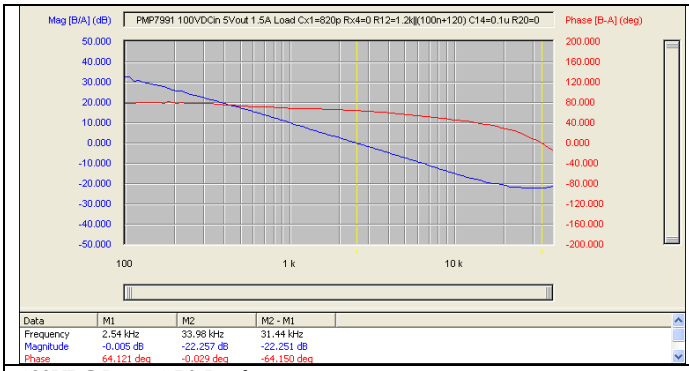
	
85VAC Input, 12VDC-to-5VDC	85VAC Input, 5VDC-to-12VDC
	
115VAC Input, 12VDC-to-5VDC	115VAC Input, 5VDC-to-12VDC

PMP7991 Test Results

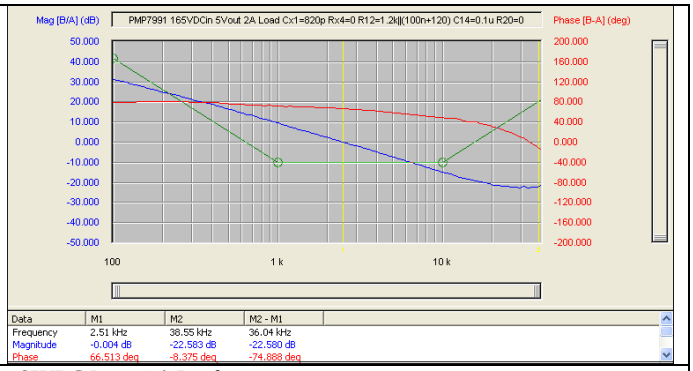
	
230VAC Input, 12VDC-to-5VDC	230VAC Input, 5VDC-to-12VDC
	
265VAC Input, 12VDC-to-5VDC	265VAC Input, 5VDC-to-12VDC

5 Control Loop Results

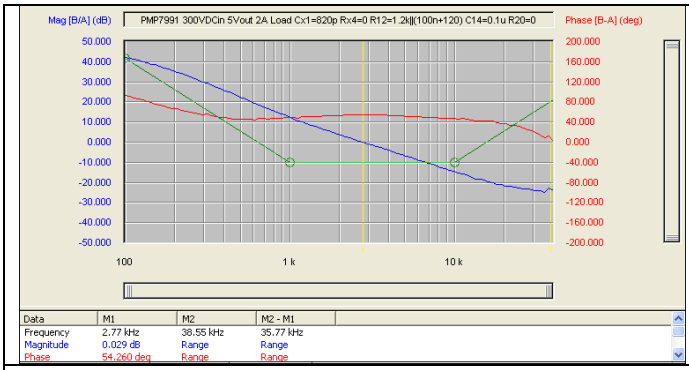
5.1 Frequency Response for 5V Output



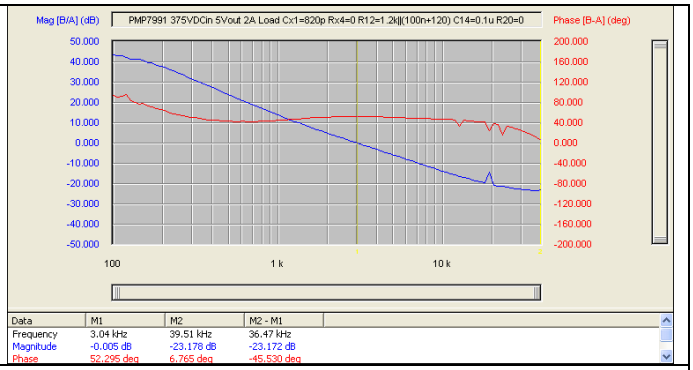
100VDC Input, 1.5A Load



165VDC Input, 2A Load

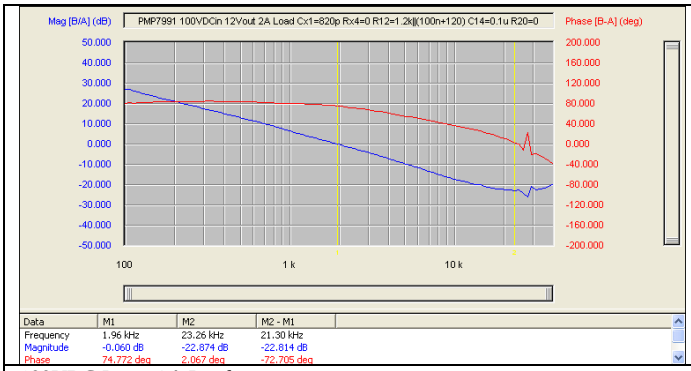


300VDC Input, 2A Load

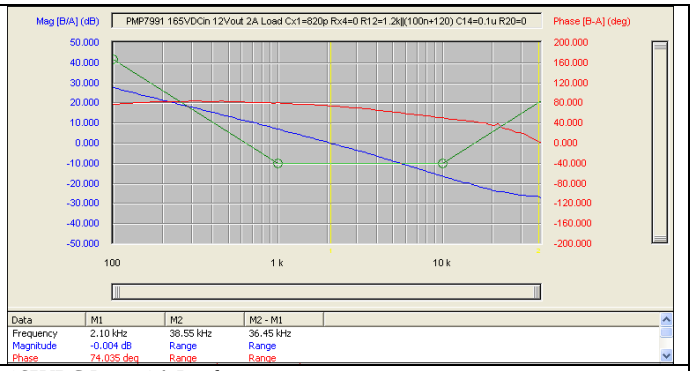


375VDC Input, 2A Load

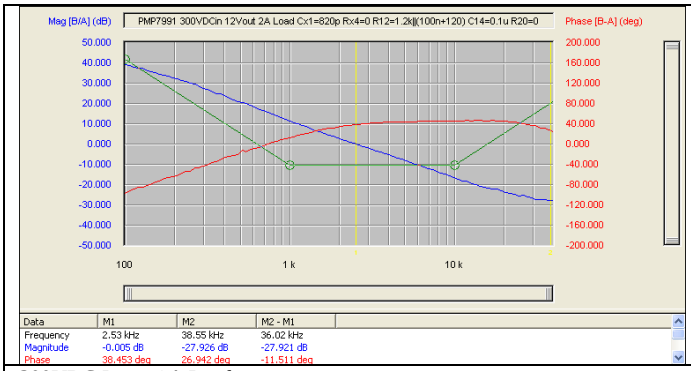
5.2 Frequency Response for 12V Output



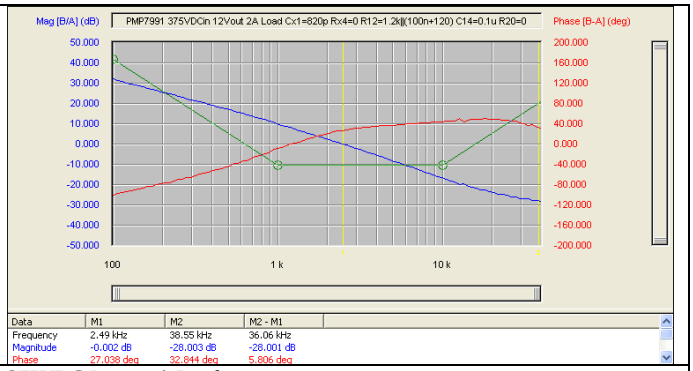
100VDC Input, 2A Load



165VDC Input, 2A Load



300VDC Input, 2A Load



375VDC Input, 2A Load

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