

# Amplitude Modulation Systems Theoretical Modeling and Hardware Validation Tables and Data

## PART 1

*Table 1*

CAL output's peak-to-peak voltage	1.01 V
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*Table 2*

CAL's output period	1 ms
CAL's output frequency	1 kHz

## PART 2.1

<i>Table 1</i>	Output voltage	Period	Frequency
2kHz SINE	1.96 Vpp	478.4 us	2.09 kHz
100kHz COS	4.15 Vpp	10.03 us	99.67 kHz
100kHz SINE	3.83 Vpp	9.98 us	100.02 kHz

*Table 2*

∅ difference between the SINE and COS outputs	39.6
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*Table 3*

Input voltage	Output voltage
3.92 Vpp	4.11 V

*Table 4*

Input voltage	Output voltage
See Table 3	360 mV

## PART 2.2

*Table 1*

		Input voltage	Ouput voltage	Gain
Input A	Maximum	3.79 V	4.11 V	1.08
	Minimum		80 mV	0.02

*Table 2*

		Input voltage	Ouput voltage	Gain
Input B	Maximum	See Table 1	4.07 V	1.07
	Minimum		80 mV	0.02

*Table 3*

<b>Adder's output voltage</b>	7.71 V
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**PART 2.3***Table 1*

	<b>Output voltage</b>
<b>SINE output</b>	4.44 V

*Table 2*

	<b>Max Frequency</b>	<b>Min Frequency</b>
<b>RANGE in LO</b>	1.137 kHz	18.26 kHz
<b>RANGE in HI</b>	55.65 kHz	139.3 kHz

**PART 3***Table 1*

<b>Input voltage</b>	<b>Output voltage</b>
5.49 V	13.1 V

*Table 2*

<b>Output voltage</b>
50 mV

**PART 4***Table 1*

<b>P dimension</b>	<b>Q dimension</b>	<b>m</b>
4.67 V	2.4 V	0.321