Application Note

LMK6H PCI Express Compliance Report

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ABSTRACT

Enterprise systems are demanding cleaner clocks since data centers are using higher data rates. This report demonstrates PCI Express (PCIe) compliance for the LMK6HA10000ADLER, LMK6HA10000ADLFR, andLMK6HA10000BDLFR BAW oscillator, which verifies that this device can be used in such systems.

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Trademarks

1 Introduction

This document presents a test report of PCI Express (PCIe) reference clock compliance for the LMK6HA10000ADLER, LMK6HA10000ADLFR, and LMK6HA10000BDLFR BAW oscillator. The report contains the test setup, test procedure, TI's PCIe Compliance Tool explanation, and the test results demonstrating PCIe compliance. The test setup was arranged to obtain both the phase noise and time domain analysis required for PCIe compliance. Then, the test procedure was followed to obtain the results. The data from this test is then uploaded onto TI's PCIe Compliance Tool within TICS Pro to determine PCIe compliance.

2 Test Setup

TI's PCIe Compliance Reports display the analysis of a device's phase noise or jitter in regards to meeting PCIe requirements. This PCIe compliance report displays test results under typical conditions at 25°C ambient temperature and a supply voltage of 3.3 V.

The hardware setup consists of a device under test, power supply, balun (for frequency domain measurement only), test load board, and phase noise analyzer (PNA, for frequency domain measurement) or oscilloscope (for time domain measurement). For frequency domain measurements, the differential outputs of the device are connected to a balun to convert them to a single-ended signal which is routed to a PNA, as shown on Figure 2-1.

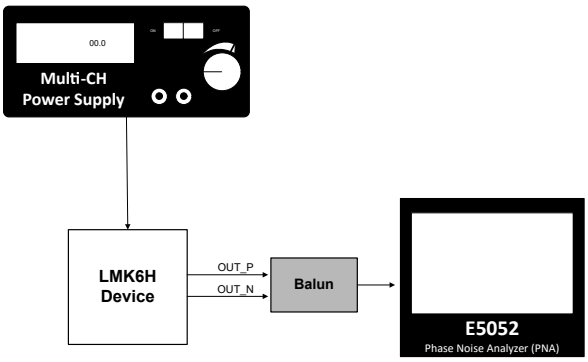

Figure 2-1. TI's PCIe Compliance Test Hardware Setup for Frequency Domain Measurements

For time domain measurements, the differential outputs (both positive and negative pins) of the device are routed directly to an oscilloscope, as shown on Figure 2-2. Also, when obtaining data for the time domain measurements, the PCIe test load is a 15 dB loss trace at 4 GHz.

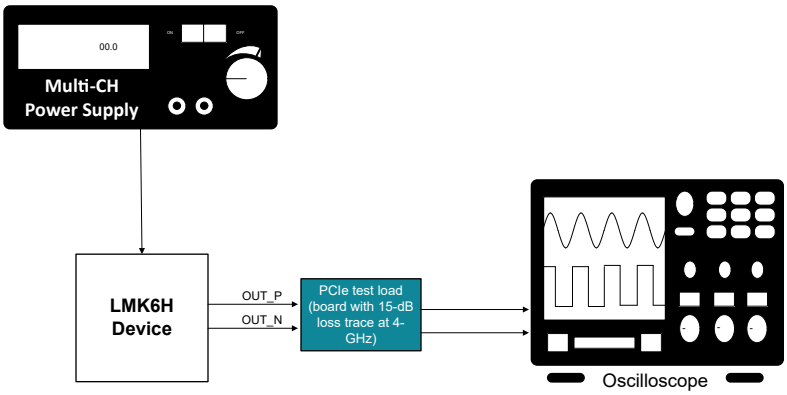

Figure 2-2. TI's PCIe Compliance Test Hardware Setup for Time Domain Measurements

3 Test Procedure

Test procedure used to obtain LMK6H's PCIe compliance report results is as follows:

1. After powering up the device, the differential outputs are connected directly to an oscilloscope for time domain measurements, or to a PNA through a balun for frequency domain measurements.
2. An output trace file is captured from the PNA or oscilloscope. Note that the oscilloscope capture requires both the positive and negative traces, so two output trace files from the oscilloscope are required.

3. The files generated are run through TI's PCIe Compliance Tool (Section 4 contains more information about this tool).

4 Explanation of TI's PCIe Compliance Tool

TI's PCIe Compliance Tool can be found within TI's TICS Pro Software. To access the tool, download TI's TICS Pro Software. Below the *Tools* tab, select *PCIe Report Generator* (steps shown in Figure 4-1). After a few seconds, the tool appears, as shown on Figure 4-2, which can then be used to analyze frequency domain traces (such as Figure 4-3) and time domain traces (such as Figure 4-4) to determine PCIe compliance.

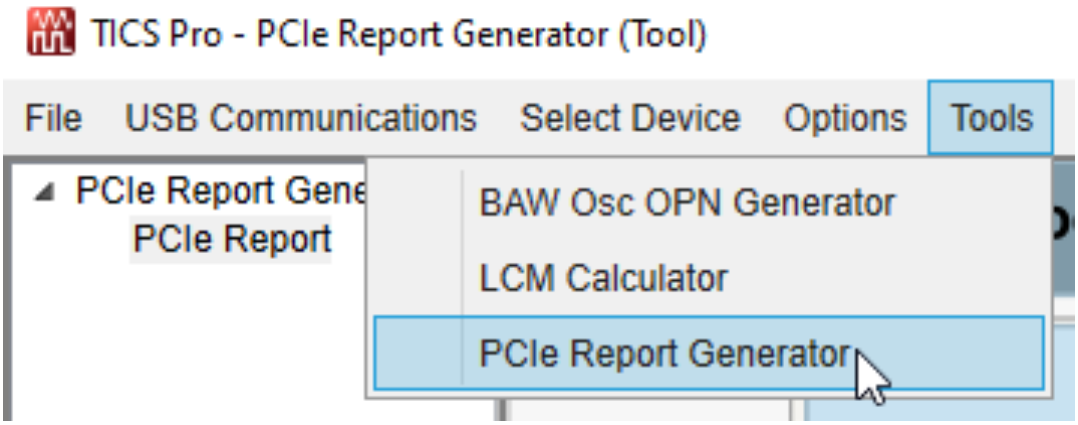

Figure 4-1. TICS Pro Steps to Access the PCIe Reference Clock Analysis Tool

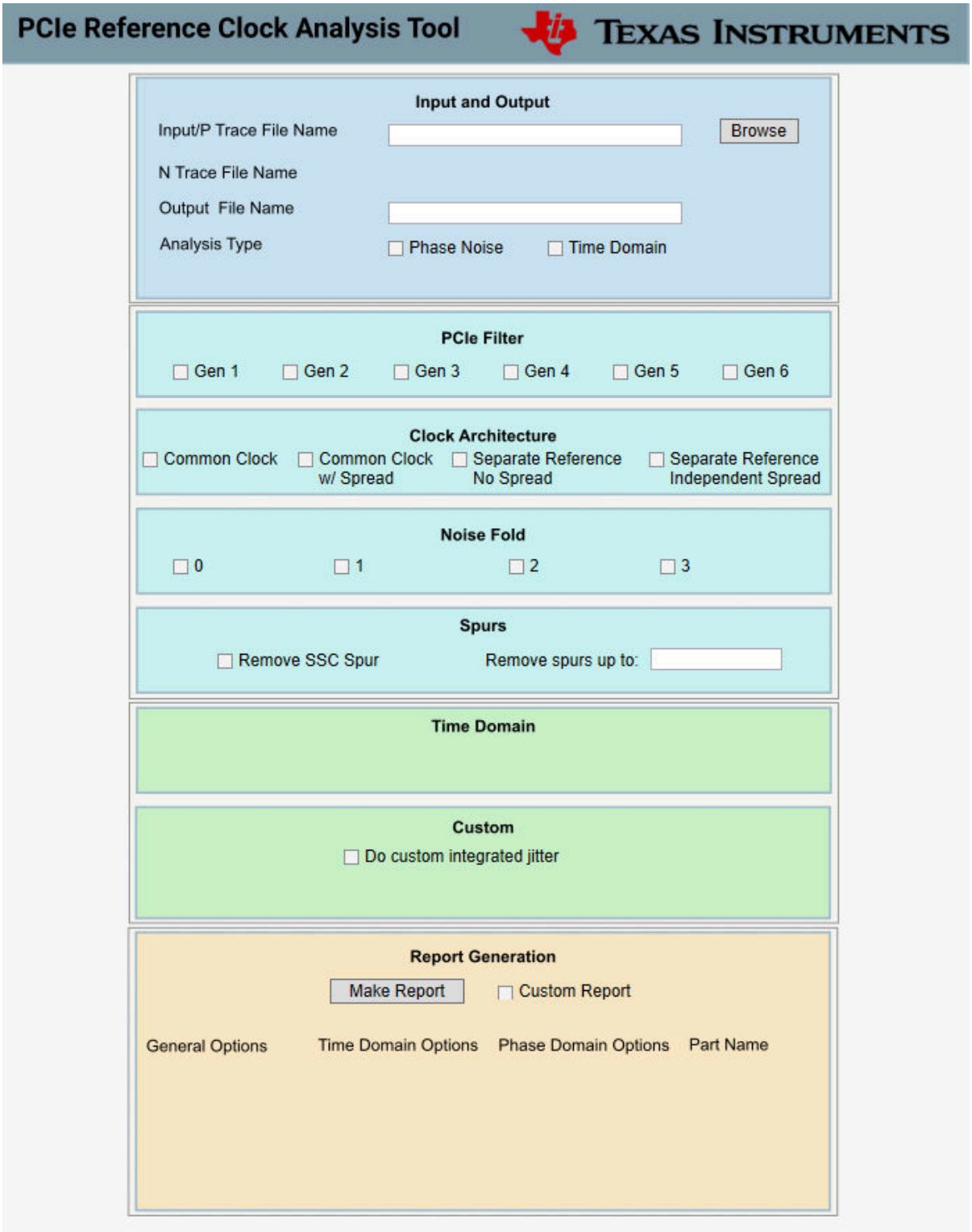

Figure 4-2. PCIe Tool Home Page

For frequency domain data analysis, the tool runs frequency domain input traces through PCIe filters, taking other parameters such as PCIe generation, clock architecture, noise fold, and presence of SSC into considerations to determine if the trace meets PCIe requirements. Then, the tool assign a PASS, FAIL, or N/A status based on the results.

For time domain data analysis, the tool runs time domain input traces, and takes into account Vcross, period, duty cycle, and other parameters specified by PCIe standards to determine and assign a PASS/FAIL to the traces being analyzed.

Figure 4-3. Example of PNA Plot

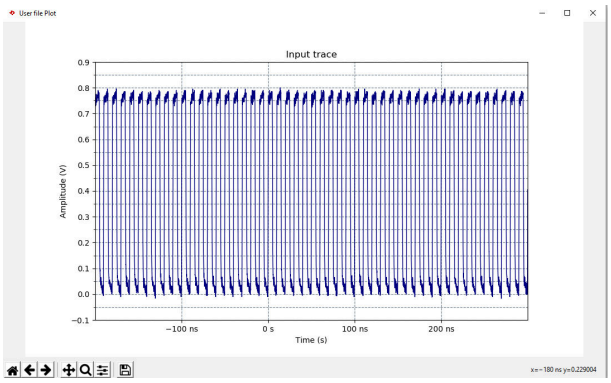

Figure 4-4. Example of Time Domain Plot

5 LMK6H Test Results

The LMK6H PCIe Compliance test results are detailed in this section.

5.1 LMK6H Test Results Summary

Table 5-1 is the PCIe compliance results summary for the LMK6H phase noise analysis, which demonstrates the jitter compliance of the device for PCIe Gen 1 through 6, noise folds 0 and 3, and Common Clock (CC) and Separate Reference No Spread (SRNS) clock architectures.

A PCIe jitter spec or time domain calculation can have one of the following statuses:

- PASS: within specifications/limits
- FAIL: outside specifications/limits
- N/A: no specifications/limits available

Table 5-1. LMK6H PCIe Tool Test Results Summary - Frequency Domain

Jitter Filter	Clock Arch.	Noise Fold	Min (fs)	Max (fs)	Limit (fs)	Status
PCIe1	CC	0	0.0	1,384	86,000	PASS
		3	0.0	1,826	86,000	PASS
PCIe2	CC	0	48	152	3,100	PASS
		3	63	199	3,100	PASS
	SRNS	0	59	157	N/A	N/A
		3	79	207	N/A	N/A
PCIe3	CC	0	16	46	1,000	PASS
		3	21	60	1,000	PASS
	SRNS	0	18	50	N/A	N/A
		3	24	65	N/A	N/A
PCIe4	CC	0	16	46	500.0	PASS
		3	21	60	500.0	PASS
	SRNS	0	18	50	N/A	N/A
		3	24	65	N/A	N/A
PCIe5	CC	0	4	20	150.0	PASS
		3	5	25	150.0	PASS
	SRNS	0	4	20	N/A	N/A
		3	5	27	N/A	N/A
PCIe6	CC	0	4	12	100.0	PASS
		3	5	15	100.0	PASS
	SRNS	0	5	15	N/A	N/A
		3	7	19	N/A	N/A

Table 5-2 is the PCIe compliance summary for the LMK6H time domain analysis which demonstrates the time domain compliance of the device.

Table 5-2. LMK6H PCIe Tool Test Results Summary - Time Domain

Calculation	Min	Avg	Max	Limit	Status
V_{cross}	398.77	403.0	406.87	250 mV to 550 mV	PASS
V_{high}	684.703	684.703		150 mV	PASS
V_{low}		-80.0	-80.0	-150 mV	PASS
Period	9.994	10.0	10.012	9.847 ns to 10.203 ns	PASS
Duty Cycle	50.279	50.377	50.459	40% to 60%	PASS
Overshoot Voltage		20.79	27.36	300 mV	PASS
Undershoot Voltage		-19.66	-28.08	-300 mV	PASS
Rising Edge Rate	3.028	3.164	3.374	0.6 V/ns to 4 V/ns	PASS
Falling Edge Rate	2.369	2.536	2.703	0.6 V/ns to 4 V/ns	PASS

5.2 PCIe Tool Input File Waveforms for the LMK6H

Figure 5-1 illustrates the output phase noise curve of the 100 MHz variants of LMK6H (LMK6HA10000ADLER, LMK6HA10000ADLFR, and LMK6HA10000BDLFR), and Figure 5-2 illustrates the time domain trace. Both of these waveforms are inputted into TI's PCIe Compliance Tool (found within TI's TICS Pro Software, more information in Section 4) to determine PCIe compliance.

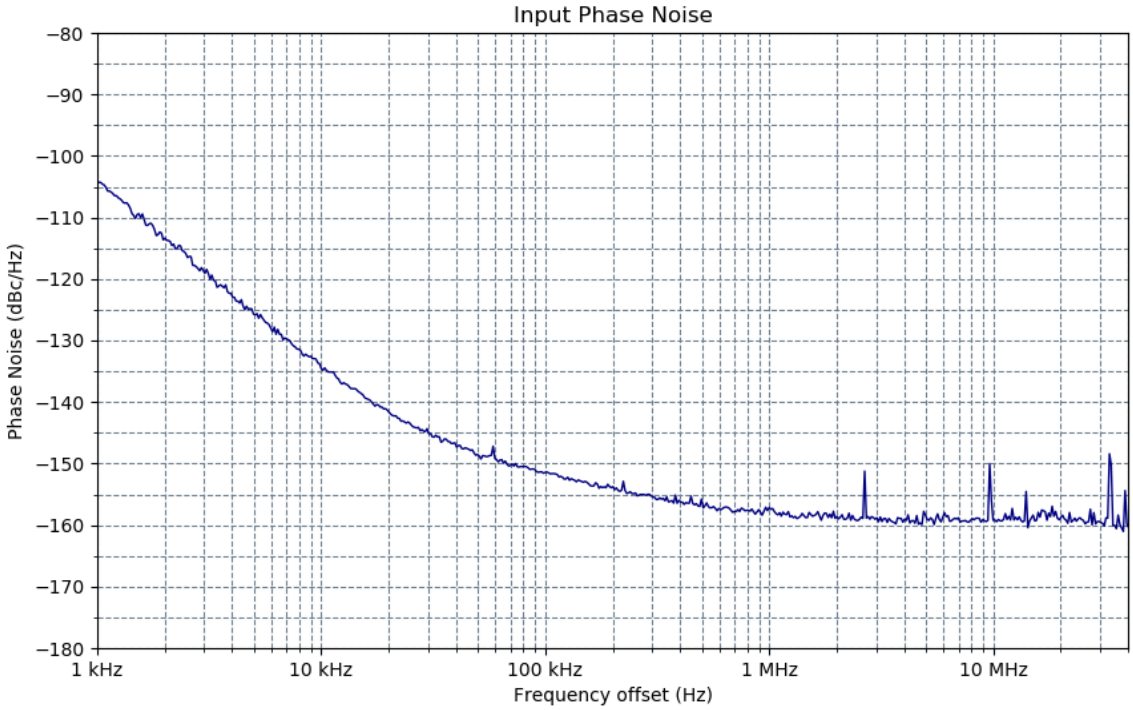

Figure 5-1. Output Phase Noise Curve from the LMK6H

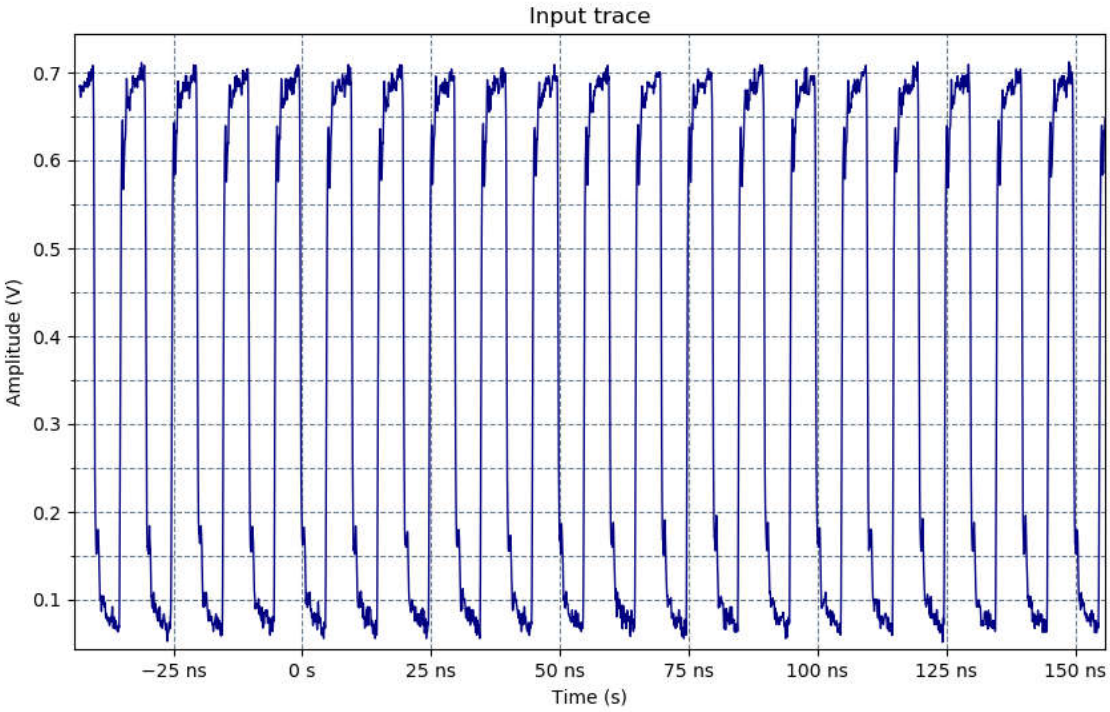

Figure 5-2. Output Time Domain Plot from the LMK6H

5.3 LMK6H Detailed Jitter Measurements

Table 5-3 outlines specific jitter measurement results for PCIe generations 1 through 6 with noise folds 0 and 3 and clock architectures CC and SRNS.

Table 5-3. LMK6H Detailed Jitter Measurements

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe1	CC	0	1	1.50E+06	0.54	1.50E+06	0.54	1.50E+06	82.98947	86,000	PASS
PCIe1	CC	0	2	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	1384.74	86,000	PASS
PCIe1	CC	0	3	2.20E+07	0.54	1.50E+06	0.54	1.50E+06	1384.74	86,000	PASS
PCIe1	CC	0	4	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	1316.987	86,000	PASS
PCIe1	CC	0	5	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	6	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	7	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	8	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	9	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	10	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	11	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	12	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	13	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	14	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	15	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	16	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	17	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	18	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	0	19	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe1	CC	0	20	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	1	1.50E+06	0.54	1.50E+06	0.54	1.50E+06	108.4737	86,000	PASS
PCIe1	CC	3	2	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	1825.758	86,000	PASS
PCIe1	CC	3	3	2.20E+07	0.54	1.50E+06	0.54	1.50E+06	1825.758	86,000	PASS
PCIe1	CC	3	4	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	1716.247	86,000	PASS
PCIe1	CC	3	5	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	6	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	7	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	8	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	9	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	10	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	11	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	12	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	13	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	14	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	15	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	16	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	17	1.50E+06	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	18	1.50E+06	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	19	2.20E+07	14	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe1	CC	3	20	2.20E+07	0.54	2.20E+07	0.54	1.50E+06	0	86,000	PASS
PCIe2	CC	0	10	5.00E+06	14	5.00E+06	14	5.00E+06	53.63227	3,100.00	PASS
PCIe2	CC	0	11	5.00E+06	14	5.00E+06	0.54	5.00E+06	55.22088	3,100.00	PASS
PCIe2	CC	0	12	5.00E+06	14	1.60E+07	14	5.00E+06	119.2149	3,100.00	PASS
PCIe2	CC	0	13	5.00E+06	14	1.60E+07	0.54	5.00E+06	107.0332	3,100.00	PASS
PCIe2	CC	0	14	5.00E+06	1.16	5.00E+06	14	5.00E+06	53.31965	3,100.00	PASS
PCIe2	CC	0	15	5.00E+06	1.16	5.00E+06	0.54	5.00E+06	47.70528	3,100.00	PASS
PCIe2	CC	0	16	5.00E+06	1.16	1.60E+07	14	5.00E+06	119.3558	3,100.00	PASS
PCIe2	CC	0	17	5.00E+06	1.16	1.60E+07	0.54	5.00E+06	110.3935	3,100.00	PASS
PCIe2	CC	0	18	1.60E+07	14	5.00E+06	14	5.00E+06	119.2149	3,100.00	PASS
PCIe2	CC	0	19	1.60E+07	14	5.00E+06	0.54	5.00E+06	120.0199	3,100.00	PASS
PCIe2	CC	0	20	1.60E+07	14	1.60E+07	14	5.00E+06	141.6424	3,100.00	PASS
PCIe2	CC	0	21	1.60E+07	14	1.60E+07	0.54	5.00E+06	152.4668	3,100.00	PASS
PCIe2	CC	0	22	1.60E+07	1.16	5.00E+06	14	5.00E+06	113.2557	3,100.00	PASS
PCIe2	CC	0	23	1.60E+07	1.16	5.00E+06	0.54	5.00E+06	116.901	3,100.00	PASS
PCIe2	CC	0	24	1.60E+07	1.16	1.60E+07	14	5.00E+06	144.26	3,100.00	PASS
PCIe2	CC	0	25	1.60E+07	1.16	1.60E+07	0.54	5.00E+06	140.8555	3,100.00	PASS
PCIe2	CC	3	10	5.00E+06	14	5.00E+06	14	5.00E+06	69.77533	3,100.00	PASS
PCIe2	CC	3	11	5.00E+06	14	5.00E+06	0.54	5.00E+06	72.66715	3,100.00	PASS
PCIe2	CC	3	12	5.00E+06	14	1.60E+07	14	5.00E+06	155.5725	3,100.00	PASS
PCIe2	CC	3	13	5.00E+06	14	1.60E+07	0.54	5.00E+06	140.5651	3,100.00	PASS
PCIe2	CC	3	14	5.00E+06	1.16	5.00E+06	14	5.00E+06	69.5807	3,100.00	PASS
PCIe2	CC	3	15	5.00E+06	1.16	5.00E+06	0.54	5.00E+06	62.69668	3,100.00	PASS
PCIe2	CC	3	16	5.00E+06	1.16	1.60E+07	14	5.00E+06	155.9929	3,100.00	PASS
PCIe2	CC	3	17	5.00E+06	1.16	1.60E+07	0.54	5.00E+06	145.2441	3,100.00	PASS
PCIe2	CC	3	18	1.60E+07	14	5.00E+06	14	5.00E+06	155.5725	3,100.00	PASS

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe2	CC	3	19	1.60E+07	14	5.00E+06	0.54	5.00E+06	157.4048	3,100.00	PASS
PCIe2	CC	3	20	1.60E+07	14	1.60E+07	14	5.00E+06	183.5316	3,100.00	PASS
PCIe2	CC	3	21	1.60E+07	14	1.60E+07	0.54	5.00E+06	198.6008	3,100.00	PASS
PCIe2	CC	3	22	1.60E+07	1.16	5.00E+06	14	5.00E+06	148.0279	3,100.00	PASS
PCIe2	CC	3	23	1.60E+07	1.16	5.00E+06	0.54	5.00E+06	153.6549	3,100.00	PASS
PCIe2	CC	3	24	1.60E+07	1.16	1.60E+07	14	5.00E+06	187.2814	3,100.00	PASS
PCIe2	CC	3	25	1.60E+07	1.16	1.60E+07	0.54	5.00E+06	183.4182	3,100.00	PASS
PCIe2	SRNS	0	10	5.00E+06	14	5.00E+06	14	5.00E+06	71.40541	N/A	N/A
PCIe2	SRNS	0	11	5.00E+06	14	5.00E+06	0.54	5.00E+06	61.48382	N/A	N/A
PCIe2	SRNS	0	12	5.00E+06	14	1.60E+07	14	5.00E+06	115.4193	N/A	N/A
PCIe2	SRNS	0	13	5.00E+06	14	1.60E+07	0.54	5.00E+06	125.9822	N/A	N/A
PCIe2	SRNS	0	14	5.00E+06	1.16	5.00E+06	14	5.00E+06	68.14536	N/A	N/A
PCIe2	SRNS	0	15	5.00E+06	1.16	5.00E+06	0.54	5.00E+06	59.26465	N/A	N/A
PCIe2	SRNS	0	16	5.00E+06	1.16	1.60E+07	14	5.00E+06	112.5024	N/A	N/A
PCIe2	SRNS	0	17	5.00E+06	1.16	1.60E+07	0.54	5.00E+06	123.3752	N/A	N/A
PCIe2	SRNS	0	18	1.60E+07	14	5.00E+06	14	5.00E+06	115.4193	N/A	N/A
PCIe2	SRNS	0	19	1.60E+07	14	5.00E+06	0.54	5.00E+06	108.0079	N/A	N/A
PCIe2	SRNS	0	20	1.60E+07	14	1.60E+07	14	5.00E+06	152.4412	N/A	N/A
PCIe2	SRNS	0	21	1.60E+07	14	1.60E+07	0.54	5.00E+06	153.0488	N/A	N/A
PCIe2	SRNS	0	22	1.60E+07	1.16	5.00E+06	14	5.00E+06	117.4157	N/A	N/A
PCIe2	SRNS	0	23	1.60E+07	1.16	5.00E+06	0.54	5.00E+06	109.484	N/A	N/A
PCIe2	SRNS	0	24	1.60E+07	1.16	1.60E+07	14	5.00E+06	152.196	N/A	N/A
PCIe2	SRNS	0	25	1.60E+07	1.16	1.60E+07	0.54	5.00E+06	156.6599	N/A	N/A
PCIe2	SRNS	3	10	5.00E+06	14	5.00E+06	14	5.00E+06	94.63087	N/A	N/A
PCIe2	SRNS	3	11	5.00E+06	14	5.00E+06	0.54	5.00E+06	81.67811	N/A	N/A
PCIe2	SRNS	3	12	5.00E+06	14	1.60E+07	14	5.00E+06	151.6844	N/A	N/A
PCIe2	SRNS	3	13	5.00E+06	14	1.60E+07	0.54	5.00E+06	166.2345	N/A	N/A
PCIe2	SRNS	3	14	5.00E+06	1.16	5.00E+06	14	5.00E+06	90.41395	N/A	N/A
PCIe2	SRNS	3	15	5.00E+06	1.16	5.00E+06	0.54	5.00E+06	78.94052	N/A	N/A
PCIe2	SRNS	3	16	5.00E+06	1.16	1.60E+07	14	5.00E+06	147.801	N/A	N/A
PCIe2	SRNS	3	17	5.00E+06	1.16	1.60E+07	0.54	5.00E+06	162.757	N/A	N/A
PCIe2	SRNS	3	18	1.60E+07	14	5.00E+06	14	5.00E+06	151.6844	N/A	N/A
PCIe2	SRNS	3	19	1.60E+07	14	5.00E+06	0.54	5.00E+06	141.6995	N/A	N/A
PCIe2	SRNS	3	20	1.60E+07	14	1.60E+07	14	5.00E+06	200.093	N/A	N/A
PCIe2	SRNS	3	21	1.60E+07	14	1.60E+07	0.54	5.00E+06	201.5617	N/A	N/A
PCIe2	SRNS	3	22	1.60E+07	1.16	5.00E+06	14	5.00E+06	154.6589	N/A	N/A
PCIe2	SRNS	3	23	1.60E+07	1.16	5.00E+06	0.54	5.00E+06	144.0082	N/A	N/A
PCIe2	SRNS	3	24	1.60E+07	1.16	1.60E+07	14	5.00E+06	200.053	N/A	N/A
PCIe2	SRNS	3	25	1.60E+07	1.16	1.60E+07	0.54	5.00E+06	206.5302	N/A	N/A
PCIe3	CC	0	1	2.00E+06	14	2.00E+06	14	1.00E+07	20.31226	1,000.00	PASS
PCIe3	CC	0	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	19.40168	1,000.00	PASS
PCIe3	CC	0	3	2.00E+06	14	5.00E+06	14	1.00E+07	41.54953	1,000.00	PASS
PCIe3	CC	0	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	36.08183	1,000.00	PASS
PCIe3	CC	0	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	18.81084	1,000.00	PASS
PCIe3	CC	0	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	16.39774	1,000.00	PASS
PCIe3	CC	0	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	41.48279	1,000.00	PASS

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe3	CC	0	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	36.28378	1,000.00	PASS
PCIe3	CC	0	9	4.00E+06	14	2.00E+06	14	1.00E+07	34.30878	1,000.00	PASS
PCIe3	CC	0	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	34.16928	1,000.00	PASS
PCIe3	CC	0	11	4.00E+06	14	5.00E+06	14	1.00E+07	46.12855	1,000.00	PASS
PCIe3	CC	0	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	41.94562	1,000.00	PASS
PCIe3	CC	0	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	25.99313	1,000.00	PASS
PCIe3	CC	0	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	25.09884	1,000.00	PASS
PCIe3	CC	0	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	44.92718	1,000.00	PASS
PCIe3	CC	0	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	39.03957	1,000.00	PASS
PCIe3	CC	3	1	2.00E+06	14	2.00E+06	14	1.00E+07	26.39483	1,000.00	PASS
PCIe3	CC	3	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	25.25263	1,000.00	PASS
PCIe3	CC	3	3	2.00E+06	14	5.00E+06	14	1.00E+07	54.31805	1,000.00	PASS
PCIe3	CC	3	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	47.15621	1,000.00	PASS
PCIe3	CC	3	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	24.53939	1,000.00	PASS
PCIe3	CC	3	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	21.35207	1,000.00	PASS
PCIe3	CC	3	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	54.39318	1,000.00	PASS
PCIe3	CC	3	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	47.60104	1,000.00	PASS
PCIe3	CC	3	9	4.00E+06	14	2.00E+06	14	1.00E+07	44.80371	1,000.00	PASS
PCIe3	CC	3	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	44.70427	1,000.00	PASS
PCIe3	CC	3	11	4.00E+06	14	5.00E+06	14	1.00E+07	59.96758	1,000.00	PASS
PCIe3	CC	3	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	54.51938	1,000.00	PASS
PCIe3	CC	3	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	33.88526	1,000.00	PASS
PCIe3	CC	3	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	32.76966	1,000.00	PASS
PCIe3	CC	3	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	58.67619	1,000.00	PASS
PCIe3	CC	3	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	50.93044	1,000.00	PASS
PCIe3	SRNS	0	1	2.00E+06	14	2.00E+06	14	1.00E+07	23.27354	N/A	N/A
PCIe3	SRNS	0	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	21.61719	N/A	N/A
PCIe3	SRNS	0	3	2.00E+06	14	5.00E+06	14	1.00E+07	41.78938	N/A	N/A
PCIe3	SRNS	0	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	37.69321	N/A	N/A
PCIe3	SRNS	0	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	20.15812	N/A	N/A
PCIe3	SRNS	0	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	18.2849	N/A	N/A
PCIe3	SRNS	0	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	40.10287	N/A	N/A
PCIe3	SRNS	0	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	35.7899	N/A	N/A
PCIe3	SRNS	0	9	4.00E+06	14	2.00E+06	14	1.00E+07	35.55977	N/A	N/A
PCIe3	SRNS	0	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	34.44948	N/A	N/A
PCIe3	SRNS	0	11	4.00E+06	14	5.00E+06	14	1.00E+07	49.9466	N/A	N/A
PCIe3	SRNS	0	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	46.44835	N/A	N/A
PCIe3	SRNS	0	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	28.68365	N/A	N/A
PCIe3	SRNS	0	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	27.3725	N/A	N/A
PCIe3	SRNS	0	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	44.71489	N/A	N/A
PCIe3	SRNS	0	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	41.12893	N/A	N/A
PCIe3	SRNS	3	1	2.00E+06	14	2.00E+06	14	1.00E+07	30.54449	N/A	N/A
PCIe3	SRNS	3	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	28.37384	N/A	N/A
PCIe3	SRNS	3	3	2.00E+06	14	5.00E+06	14	1.00E+07	54.75729	N/A	N/A
PCIe3	SRNS	3	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	49.43709	N/A	N/A
PCIe3	SRNS	3	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	26.4589	N/A	N/A

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe3	SRNS	3	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	24.00741	N/A	N/A
PCIe3	SRNS	3	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	52.53914	N/A	N/A
PCIe3	SRNS	3	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	46.93623	N/A	N/A
PCIe3	SRNS	3	9	4.00E+06	14	2.00E+06	14	1.00E+07	46.62203	N/A	N/A
PCIe3	SRNS	3	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	45.16313	N/A	N/A
PCIe3	SRNS	3	11	4.00E+06	14	5.00E+06	14	1.00E+07	65.45228	N/A	N/A
PCIe3	SRNS	3	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	60.90302	N/A	N/A
PCIe3	SRNS	3	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	37.66204	N/A	N/A
PCIe3	SRNS	3	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	35.94508	N/A	N/A
PCIe3	SRNS	3	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	58.60432	N/A	N/A
PCIe3	SRNS	3	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	53.95633	N/A	N/A
PCIe4	CC	0	1	2.00E+06	14	2.00E+06	14	1.00E+07	20.31226	500.00	PASS
PCIe4	CC	0	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	19.40168	500.00	PASS
PCIe4	CC	0	3	2.00E+06	14	5.00E+06	14	1.00E+07	41.54953	500.00	PASS
PCIe4	CC	0	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	36.08183	500.00	PASS
PCIe4	CC	0	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	18.81084	500.00	PASS
PCIe4	CC	0	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	16.39774	500.00	PASS
PCIe4	CC	0	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	41.48279	500.00	PASS
PCIe4	CC	0	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	36.28378	500.00	PASS
PCIe4	CC	0	9	4.00E+06	14	2.00E+06	14	1.00E+07	34.30878	500.00	PASS
PCIe4	CC	0	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	34.16928	500.00	PASS
PCIe4	CC	0	11	4.00E+06	14	5.00E+06	14	1.00E+07	46.12855	500.00	PASS
PCIe4	CC	0	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	41.94562	500.00	PASS
PCIe4	CC	0	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	25.99313	500.00	PASS
PCIe4	CC	0	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	25.09884	500.00	PASS
PCIe4	CC	0	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	44.92718	500.00	PASS
PCIe4	CC	0	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	39.03957	500.00	PASS
PCIe4	CC	3	1	2.00E+06	14	2.00E+06	14	1.00E+07	26.39483	500.00	PASS
PCIe4	CC	3	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	25.25263	500.00	PASS
PCIe4	CC	3	3	2.00E+06	14	5.00E+06	14	1.00E+07	54.31805	500.00	PASS
PCIe4	CC	3	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	47.15621	500.00	PASS
PCIe4	CC	3	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	24.53939	500.00	PASS
PCIe4	CC	3	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	21.35207	500.00	PASS
PCIe4	CC	3	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	54.39318	500.00	PASS
PCIe4	CC	3	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	47.60104	500.00	PASS
PCIe4	CC	3	9	4.00E+06	14	2.00E+06	14	1.00E+07	44.80371	500.00	PASS
PCIe4	CC	3	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	44.70427	500.00	PASS
PCIe4	CC	3	11	4.00E+06	14	5.00E+06	14	1.00E+07	59.96758	500.00	PASS
PCIe4	CC	3	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	54.51938	500.00	PASS
PCIe4	CC	3	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	33.88526	500.00	PASS
PCIe4	CC	3	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	32.76966	500.00	PASS
PCIe4	CC	3	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	58.67619	500.00	PASS
PCIe4	CC	3	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	50.93044	500.00	PASS
PCIe4	SRNS	0	1	2.00E+06	14	2.00E+06	14	1.00E+07	23.27354	N/A	N/A
PCIe4	SRNS	0	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	21.61719	N/A	N/A
PCIe4	SRNS	0	3	2.00E+06	14	5.00E+06	14	1.00E+07	41.78938	N/A	N/A

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe4	SRNS	0	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	37.69321	N/A	N/A
PCIe4	SRNS	0	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	20.15812	N/A	N/A
PCIe4	SRNS	0	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	18.2849	N/A	N/A
PCIe4	SRNS	0	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	40.10287	N/A	N/A
PCIe4	SRNS	0	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	35.7899	N/A	N/A
PCIe4	SRNS	0	9	4.00E+06	14	2.00E+06	14	1.00E+07	35.55977	N/A	N/A
PCIe4	SRNS	0	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	34.44948	N/A	N/A
PCIe4	SRNS	0	11	4.00E+06	14	5.00E+06	14	1.00E+07	49.9466	N/A	N/A
PCIe4	SRNS	0	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	46.44835	N/A	N/A
PCIe4	SRNS	0	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	28.68365	N/A	N/A
PCIe4	SRNS	0	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	27.3725	N/A	N/A
PCIe4	SRNS	0	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	44.71489	N/A	N/A
PCIe4	SRNS	0	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	41.12893	N/A	N/A
PCIe4	SRNS	3	1	2.00E+06	14	2.00E+06	14	1.00E+07	30.54449	N/A	N/A
PCIe4	SRNS	3	2	2.00E+06	14	2.00E+06	1.15	1.00E+07	28.37384	N/A	N/A
PCIe4	SRNS	3	3	2.00E+06	14	5.00E+06	14	1.00E+07	54.75729	N/A	N/A
PCIe4	SRNS	3	4	2.00E+06	14	5.00E+06	1.15	1.00E+07	49.43709	N/A	N/A
PCIe4	SRNS	3	5	2.00E+06	0.73	2.00E+06	14	1.00E+07	26.4589	N/A	N/A
PCIe4	SRNS	3	6	2.00E+06	0.73	2.00E+06	1.15	1.00E+07	24.00741	N/A	N/A
PCIe4	SRNS	3	7	2.00E+06	0.73	5.00E+06	14	1.00E+07	52.53914	N/A	N/A
PCIe4	SRNS	3	8	2.00E+06	0.73	5.00E+06	1.15	1.00E+07	46.93623	N/A	N/A
PCIe4	SRNS	3	9	4.00E+06	14	2.00E+06	14	1.00E+07	46.62203	N/A	N/A
PCIe4	SRNS	3	10	4.00E+06	14	2.00E+06	1.15	1.00E+07	45.16313	N/A	N/A
PCIe4	SRNS	3	11	4.00E+06	14	5.00E+06	14	1.00E+07	65.45228	N/A	N/A
PCIe4	SRNS	3	12	4.00E+06	14	5.00E+06	1.15	1.00E+07	60.90302	N/A	N/A
PCIe4	SRNS	3	13	4.00E+06	0.73	2.00E+06	14	1.00E+07	37.66204	N/A	N/A
PCIe4	SRNS	3	14	4.00E+06	0.73	2.00E+06	1.15	1.00E+07	35.94508	N/A	N/A
PCIe4	SRNS	3	15	4.00E+06	0.73	5.00E+06	14	1.00E+07	58.60432	N/A	N/A
PCIe4	SRNS	3	16	4.00E+06	0.73	5.00E+06	1.15	1.00E+07	53.95633	N/A	N/A
PCIe5	CC	0	1	5.00E+05	14	5.00E+05	14	2.00E+07	5.464132	150.00	PASS
PCIe5	CC	0	2	5.00E+05	14	5.00E+05	0.73	2.00E+07	4.76743	150.00	PASS
PCIe5	CC	0	3	5.00E+05	14	1.80E+06	14	2.00E+07	14.82574	150.00	PASS
PCIe5	CC	0	4	5.00E+05	14	1.80E+06	0.73	2.00E+07	10.69732	150.00	PASS
PCIe5	CC	0	5	5.00E+05	0.73	5.00E+05	14	2.00E+07	4.76743	150.00	PASS
PCIe5	CC	0	6	5.00E+05	0.73	5.00E+05	0.73	2.00E+07	3.82634	150.00	PASS
PCIe5	CC	0	7	5.00E+05	0.73	1.80E+06	14	2.00E+07	14.60084	150.00	PASS
PCIe5	CC	0	8	5.00E+05	0.73	1.80E+06	0.73	2.00E+07	10.44345	150.00	PASS
PCIe5	CC	0	9	1.80E+06	14	5.00E+05	14	2.00E+07	14.82574	150.00	PASS
PCIe5	CC	0	10	1.80E+06	14	5.00E+05	0.73	2.00E+07	14.60084	150.00	PASS
PCIe5	CC	0	11	1.80E+06	14	1.80E+06	14	2.00E+07	19.60202	150.00	PASS
PCIe5	CC	0	12	1.80E+06	14	1.80E+06	0.73	2.00E+07	17.4123	150.00	PASS
PCIe5	CC	0	13	1.80E+06	0.73	5.00E+05	14	2.00E+07	10.69732	150.00	PASS
PCIe5	CC	0	14	1.80E+06	0.73	5.00E+05	0.73	2.00E+07	10.44345	150.00	PASS
PCIe5	CC	0	15	1.80E+06	0.73	1.80E+06	14	2.00E+07	17.4123	150.00	PASS
PCIe5	CC	0	16	1.80E+06	0.73	1.80E+06	0.73	2.00E+07	13.77851	150.00	PASS
PCIe5	CC	3	1	5.00E+05	14	5.00E+05	14	2.00E+07	7.081732	150.00	PASS

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe5	CC	3	2	5.00E+05	14	5.00E+05	0.73	2.00E+07	6.185944	150.00	PASS
PCIe5	CC	3	3	5.00E+05	14	1.80E+06	14	2.00E+07	19.3432	150.00	PASS
PCIe5	CC	3	4	5.00E+05	14	1.80E+06	0.73	2.00E+07	13.92792	150.00	PASS
PCIe5	CC	3	5	5.00E+05	0.73	5.00E+05	14	2.00E+07	6.185944	150.00	PASS
PCIe5	CC	3	6	5.00E+05	0.73	5.00E+05	0.73	2.00E+07	4.959142	150.00	PASS
PCIe5	CC	3	7	5.00E+05	0.73	1.80E+06	14	2.00E+07	19.08218	150.00	PASS
PCIe5	CC	3	8	5.00E+05	0.73	1.80E+06	0.73	2.00E+07	13.62899	150.00	PASS
PCIe5	CC	3	9	1.80E+06	14	5.00E+05	14	2.00E+07	19.3432	150.00	PASS
PCIe5	CC	3	10	1.80E+06	14	5.00E+05	0.73	2.00E+07	19.08218	150.00	PASS
PCIe5	CC	3	11	1.80E+06	14	1.80E+06	14	2.00E+07	25.40217	150.00	PASS
PCIe5	CC	3	12	1.80E+06	14	1.80E+06	0.73	2.00E+07	22.60608	150.00	PASS
PCIe5	CC	3	13	1.80E+06	0.73	5.00E+05	14	2.00E+07	13.92792	150.00	PASS
PCIe5	CC	3	14	1.80E+06	0.73	5.00E+05	0.73	2.00E+07	13.62899	150.00	PASS
PCIe5	CC	3	15	1.80E+06	0.73	1.80E+06	14	2.00E+07	22.60608	150.00	PASS
PCIe5	CC	3	16	1.80E+06	0.73	1.80E+06	0.73	2.00E+07	17.85785	150.00	PASS
PCIe5	SRNS	0	1	5.00E+05	14	5.00E+05	14	2.00E+07	5.731872	N/A	N/A
PCIe5	SRNS	0	2	5.00E+05	14	5.00E+05	0.73	2.00E+07	4.951012	N/A	N/A
PCIe5	SRNS	0	3	5.00E+05	14	1.80E+06	14	2.00E+07	14.83226	N/A	N/A
PCIe5	SRNS	0	4	5.00E+05	14	1.80E+06	0.73	2.00E+07	11.01539	N/A	N/A
PCIe5	SRNS	0	5	5.00E+05	0.73	5.00E+05	14	2.00E+07	4.951012	N/A	N/A
PCIe5	SRNS	0	6	5.00E+05	0.73	5.00E+05	0.73	2.00E+07	4.027601	N/A	N/A
PCIe5	SRNS	0	7	5.00E+05	0.73	1.80E+06	14	2.00E+07	14.5516	N/A	N/A
PCIe5	SRNS	0	8	5.00E+05	0.73	1.80E+06	0.73	2.00E+07	10.62745	N/A	N/A
PCIe5	SRNS	0	9	1.80E+06	14	5.00E+05	14	2.00E+07	14.83226	N/A	N/A
PCIe5	SRNS	0	10	1.80E+06	14	5.00E+05	0.73	2.00E+07	14.5516	N/A	N/A
PCIe5	SRNS	0	11	1.80E+06	14	1.80E+06	14	2.00E+07	20.20961	N/A	N/A
PCIe5	SRNS	0	12	1.80E+06	14	1.80E+06	0.73	2.00E+07	17.53356	N/A	N/A
PCIe5	SRNS	0	13	1.80E+06	0.73	5.00E+05	14	2.00E+07	11.01539	N/A	N/A
PCIe5	SRNS	0	14	1.80E+06	0.73	5.00E+05	0.73	2.00E+07	10.62745	N/A	N/A
PCIe5	SRNS	0	15	1.80E+06	0.73	1.80E+06	14	2.00E+07	17.53356	N/A	N/A
PCIe5	SRNS	0	16	1.80E+06	0.73	1.80E+06	0.73	2.00E+07	14.48933	N/A	N/A
PCIe5	SRNS	3	1	5.00E+05	14	5.00E+05	14	2.00E+07	7.525363	N/A	N/A
PCIe5	SRNS	3	2	5.00E+05	14	5.00E+05	0.73	2.00E+07	6.49993	N/A	N/A
PCIe5	SRNS	3	3	5.00E+05	14	1.80E+06	14	2.00E+07	19.46597	N/A	N/A
PCIe5	SRNS	3	4	5.00E+05	14	1.80E+06	0.73	2.00E+07	14.46449	N/A	N/A
PCIe5	SRNS	3	5	5.00E+05	0.73	5.00E+05	14	2.00E+07	6.49993	N/A	N/A
PCIe5	SRNS	3	6	5.00E+05	0.73	5.00E+05	0.73	2.00E+07	5.287117	N/A	N/A
PCIe5	SRNS	3	7	5.00E+05	0.73	1.80E+06	14	2.00E+07	19.09757	N/A	N/A
PCIe5	SRNS	3	8	5.00E+05	0.73	1.80E+06	0.73	2.00E+07	13.95527	N/A	N/A
PCIe5	SRNS	3	9	1.80E+06	14	5.00E+05	14	2.00E+07	19.46597	N/A	N/A
PCIe5	SRNS	3	10	1.80E+06	14	5.00E+05	0.73	2.00E+07	19.09757	N/A	N/A
PCIe5	SRNS	3	11	1.80E+06	14	1.80E+06	14	2.00E+07	26.52348	N/A	N/A
PCIe5	SRNS	3	12	1.80E+06	14	1.80E+06	0.73	2.00E+07	23.01328	N/A	N/A
PCIe5	SRNS	3	13	1.80E+06	0.73	5.00E+05	14	2.00E+07	14.46449	N/A	N/A
PCIe5	SRNS	3	14	1.80E+06	0.73	5.00E+05	0.73	2.00E+07	13.95527	N/A	N/A
PCIe5	SRNS	3	15	1.80E+06	0.73	1.80E+06	14	2.00E+07	23.01328	N/A	N/A

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe5	SRNS	3	16	1.80E+06	0.73	1.80E+06	0.73	2.00E+07	19.02641	N/A	N/A
PCIe6	CC	0	1	5.00E+05	14	5.00E+05	14	1.00E+07	5.853137	100.00	PASS
PCIe6	CC	0	2	5.00E+05	14	5.00E+05	0.73	1.00E+07	5.209921	100.00	PASS
PCIe6	CC	0	3	5.00E+05	14	1.00E+06	14	1.00E+07	9.916231	100.00	PASS
PCIe6	CC	0	4	5.00E+05	14	1.00E+06	0.73	1.00E+07	7.282744	100.00	PASS
PCIe6	CC	0	5	5.00E+05	0.73	5.00E+05	14	1.00E+07	5.209921	100.00	PASS
PCIe6	CC	0	6	5.00E+05	0.73	5.00E+05	0.73	1.00E+07	4.099543	100.00	PASS
PCIe6	CC	0	7	5.00E+05	0.73	1.00E+06	14	1.00E+07	9.849732	100.00	PASS
PCIe6	CC	0	8	5.00E+05	0.73	1.00E+06	0.73	1.00E+07	6.909186	100.00	PASS
PCIe6	CC	0	9	1.00E+06	14	5.00E+05	14	1.00E+07	9.916231	100.00	PASS
PCIe6	CC	0	10	1.00E+06	14	5.00E+05	0.73	1.00E+07	9.849732	100.00	PASS
PCIe6	CC	0	11	1.00E+06	14	1.00E+06	14	1.00E+07	11.68942	100.00	PASS
PCIe6	CC	0	12	1.00E+06	14	1.00E+06	0.73	1.00E+07	10.53306	100.00	PASS
PCIe6	CC	0	13	1.00E+06	0.73	5.00E+05	14	1.00E+07	7.282744	100.00	PASS
PCIe6	CC	0	14	1.00E+06	0.73	5.00E+05	0.73	1.00E+07	6.909186	100.00	PASS
PCIe6	CC	0	15	1.00E+06	0.73	1.00E+06	14	1.00E+07	10.53306	100.00	PASS
PCIe6	CC	0	16	1.00E+06	0.73	1.00E+06	0.73	1.00E+07	8.200006	100.00	PASS
PCIe6	CC	3	1	5.00E+05	14	5.00E+05	14	1.00E+07	7.617691	100.00	PASS
PCIe6	CC	3	2	5.00E+05	14	5.00E+05	0.73	1.00E+07	6.792741	100.00	PASS
PCIe6	CC	3	3	5.00E+05	14	1.00E+06	14	1.00E+07	12.96301	100.00	PASS
PCIe6	CC	3	4	5.00E+05	14	1.00E+06	0.73	1.00E+07	9.491964	100.00	PASS
PCIe6	CC	3	5	5.00E+05	0.73	5.00E+05	14	1.00E+07	6.792741	100.00	PASS
PCIe6	CC	3	6	5.00E+05	0.73	5.00E+05	0.73	1.00E+07	5.335532	100.00	PASS
PCIe6	CC	3	7	5.00E+05	0.73	1.00E+06	14	1.00E+07	12.91338	100.00	PASS
PCIe6	CC	3	8	5.00E+05	0.73	1.00E+06	0.73	1.00E+07	9.031166	100.00	PASS
PCIe6	CC	3	9	1.00E+06	14	5.00E+05	14	1.00E+07	12.96301	100.00	PASS
PCIe6	CC	3	10	1.00E+06	14	5.00E+05	0.73	1.00E+07	12.91338	100.00	PASS
PCIe6	CC	3	11	1.00E+06	14	1.00E+06	14	1.00E+07	15.21273	100.00	PASS
PCIe6	CC	3	12	1.00E+06	14	1.00E+06	0.73	1.00E+07	13.73811	100.00	PASS
PCIe6	CC	3	13	1.00E+06	0.73	5.00E+05	14	1.00E+07	9.491964	100.00	PASS
PCIe6	CC	3	14	1.00E+06	0.73	5.00E+05	0.73	1.00E+07	9.031166	100.00	PASS
PCIe6	CC	3	15	1.00E+06	0.73	1.00E+06	14	1.00E+07	13.73811	100.00	PASS
PCIe6	CC	3	16	1.00E+06	0.73	1.00E+06	0.73	1.00E+07	10.6723	100.00	PASS
PCIe6	SRNS	0	1	5.00E+05	14	5.00E+05	14	1.00E+07	7.40225	N/A	N/A
PCIe6	SRNS	0	2	5.00E+05	14	5.00E+05	0.73	1.00E+07	6.39247	N/A	N/A
PCIe6	SRNS	0	3	5.00E+05	14	1.00E+06	14	1.00E+07	11.63417	N/A	N/A
PCIe6	SRNS	0	4	5.00E+05	14	1.00E+06	0.73	1.00E+07	9.024309	N/A	N/A
PCIe6	SRNS	0	5	5.00E+05	0.73	5.00E+05	14	1.00E+07	6.39247	N/A	N/A
PCIe6	SRNS	0	6	5.00E+05	0.73	5.00E+05	0.73	1.00E+07	5.196636	N/A	N/A
PCIe6	SRNS	0	7	5.00E+05	0.73	1.00E+06	14	1.00E+07	11.01619	N/A	N/A
PCIe6	SRNS	0	8	5.00E+05	0.73	1.00E+06	0.73	1.00E+07	8.217848	N/A	N/A
PCIe6	SRNS	0	9	1.00E+06	14	5.00E+05	14	1.00E+07	11.63417	N/A	N/A
PCIe6	SRNS	0	10	1.00E+06	14	5.00E+05	0.73	1.00E+07	11.01619	N/A	N/A
PCIe6	SRNS	0	11	1.00E+06	14	1.00E+06	14	1.00E+07	14.70643	N/A	N/A
PCIe6	SRNS	0	12	1.00E+06	14	1.00E+06	0.73	1.00E+07	12.71703	N/A	N/A
PCIe6	SRNS	0	13	1.00E+06	0.73	5.00E+05	14	1.00E+07	9.024309	N/A	N/A

Table 5-3. LMK6H Detailed Jitter Measurements (continued)

PCIe Gen	Clock Arch.	Noise Fold	Filter Comb	PLL1 f1	PLL1 zeta1	PLL2 f2	PLL2 zeta2	CDR f3	Value (fs)	Limit (fs)	Status
PCIe6	SRNS	0	14	1.00E+06	0.73	5.00E+05	0.73	1.00E+07	8.217848	N/A	N/A
PCIe6	SRNS	0	15	1.00E+06	0.73	1.00E+06	14	1.00E+07	12.71703	N/A	N/A
PCIe6	SRNS	0	16	1.00E+06	0.73	1.00E+06	0.73	1.00E+07	10.39722	N/A	N/A
PCIe6	SRNS	3	1	5.00E+05	14	5.00E+05	14	1.00E+07	9.771696	N/A	N/A
PCIe6	SRNS	3	2	5.00E+05	14	5.00E+05	0.73	1.00E+07	8.438673	N/A	N/A
PCIe6	SRNS	3	3	5.00E+05	14	1.00E+06	14	1.00E+07	15.35617	N/A	N/A
PCIe6	SRNS	3	4	5.00E+05	14	1.00E+06	0.73	1.00E+07	11.91338	N/A	N/A
PCIe6	SRNS	3	5	5.00E+05	0.73	5.00E+05	14	1.00E+07	8.438673	N/A	N/A
PCIe6	SRNS	3	6	5.00E+05	0.73	5.00E+05	0.73	1.00E+07	6.86016	N/A	N/A
PCIe6	SRNS	3	7	5.00E+05	0.73	1.00E+06	14	1.00E+07	14.54022	N/A	N/A
PCIe6	SRNS	3	8	5.00E+05	0.73	1.00E+06	0.73	1.00E+07	10.84889	N/A	N/A
PCIe6	SRNS	3	9	1.00E+06	14	5.00E+05	14	1.00E+07	15.35617	N/A	N/A
PCIe6	SRNS	3	10	1.00E+06	14	5.00E+05	0.73	1.00E+07	14.54022	N/A	N/A
PCIe6	SRNS	3	11	1.00E+06	14	1.00E+06	14	1.00E+07	19.41109	N/A	N/A
PCIe6	SRNS	3	12	1.00E+06	14	1.00E+06	0.73	1.00E+07	16.78571	N/A	N/A
PCIe6	SRNS	3	13	1.00E+06	0.73	5.00E+05	14	1.00E+07	11.91338	N/A	N/A
PCIe6	SRNS	3	14	1.00E+06	0.73	5.00E+05	0.73	1.00E+07	10.84889	N/A	N/A
PCIe6	SRNS	3	15	1.00E+06	0.73	1.00E+06	14	1.00E+07	16.78571	N/A	N/A
PCIe6	SRNS	3	16	1.00E+06	0.73	1.00E+06	0.73	1.00E+07	13.72607	N/A	N/A

6 Summary

This report outlines TI's PCIe Compliance Tool, how the test results are obtained, and demonstrates PCIe compliance based on the results in Section 5.1. Therefore, the LMK6HA10000ADLER, LMK6HA10000ADLFR, and LMK6HA10000BDLFR BAW oscillator meets the jitter specifications for PCIe in enterprise systems.

7 References

- Texas Instruments, *LMK6x Low Jitter, High-Performance BAW Oscillator*, data sheet.
- Texas Instruments, *TICSPRO-SW*, Clocks and Synthesizers (TICS) Pro Software.

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