multiLane sal

Marketing Datasheet

Clock Source
Sinusoidal Jitter Generation
Multi-UI Clock Frequency Modulation
Random Jitter Generation

ML407-PAM

For doing stressed input testing of PAM receivers / 56G VSR PAM

SIGNAL INTEGRITY MEASUREMENT SOLUTION

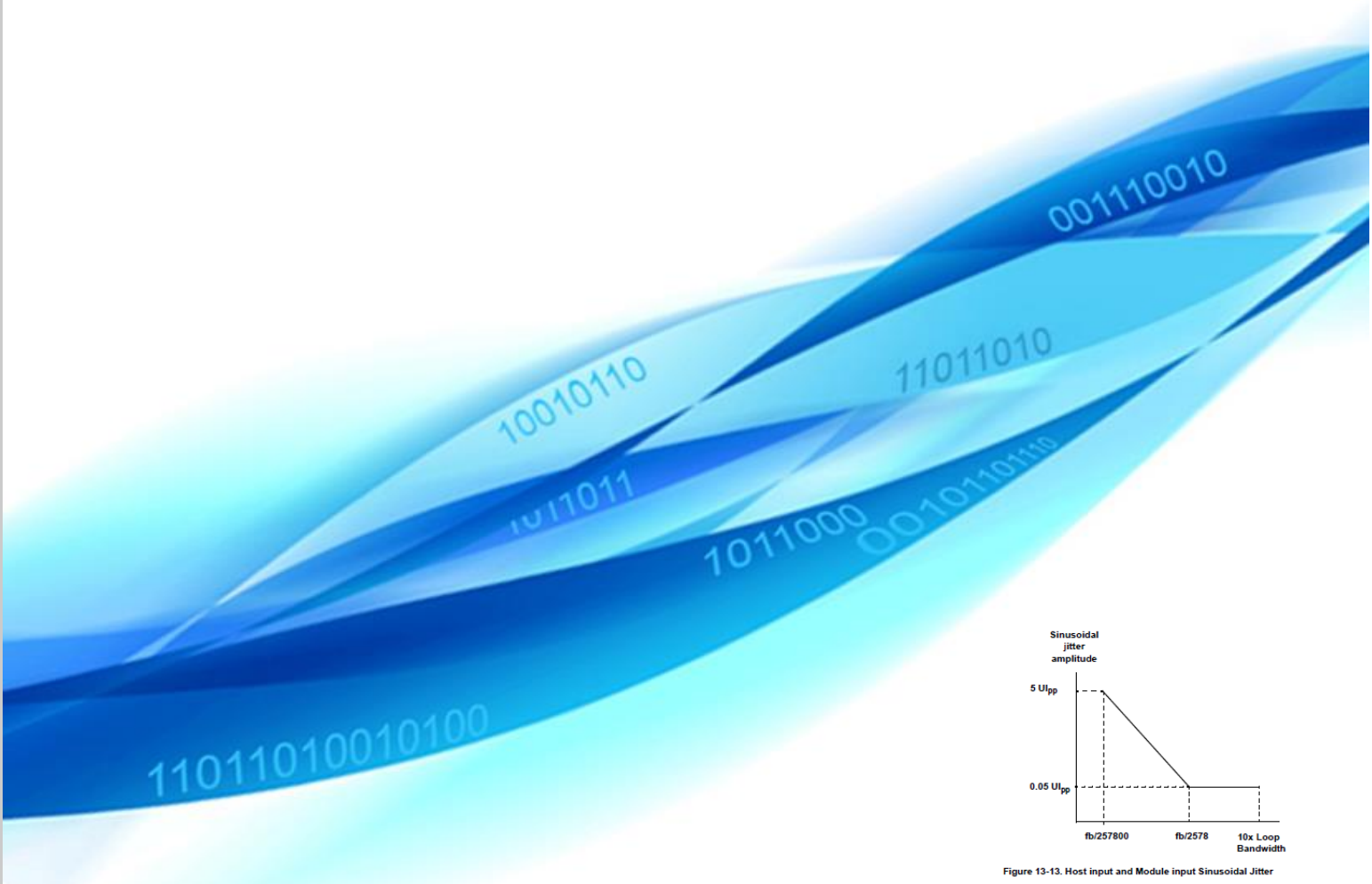

Figure 13-13. Host input and Module input Sinusoidal Jitter

ML407-PAM

SJ/RJ Clock Source

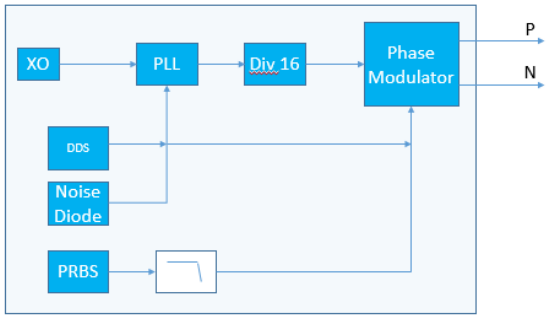

Figure 1 Block Diagram of ML407-PAM

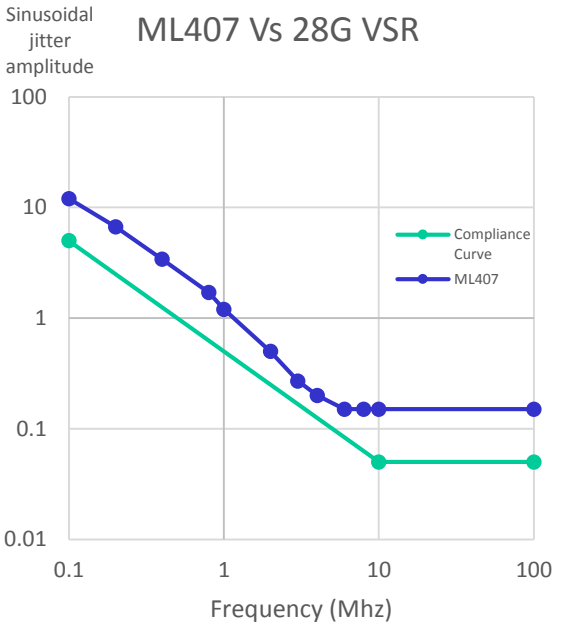

Figure 2 ML407-PAM jitter amplitude performance vs OIF-CEI3.1 requirement

Summary

The ML407-PAM is an add-on instrument for the ML4039 family of BERTs. It enables injection of multi-UI sinusoidal jitter, BUJ and random jitter to a clean NRZ or PAM4 signal coming out of the BERT. The ML407-PAM is intended for users seeking to do stressed input testing on their receivers in accordance with e.g. OIF-CEI VSR56 PAM and CAUI-4.

Key Features

- Differential clock output.
- Nominal clock rate 2.5 GHz
- Divide ratios of 2, 4, 8 and 16

Setup

ML407-PAM clock out is connected to the clock IN of **ML4039C, ML4039-JIT, ML4039A, ML4039A-JIT, ML4039B, ML4039B-JIT or ML4039B-EQL** (single-ended), while the other clock output on the ML407 is terminated with 50Ω.

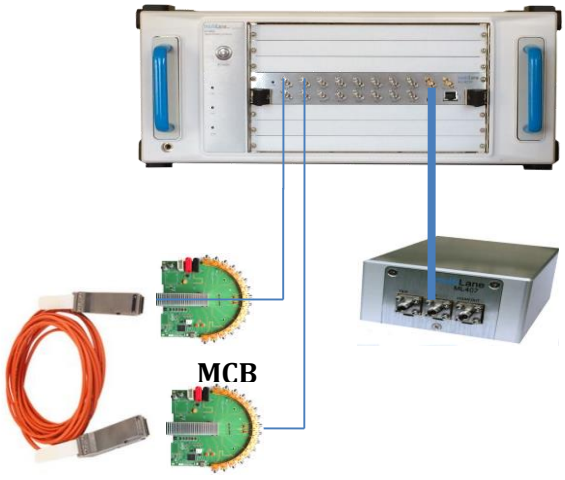

Figure 3 Example of a Test Setup

SIGNAL INTEGRITY MEASUREMENT SOLUTION

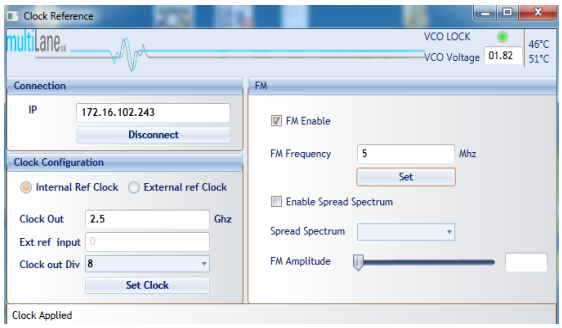

Figure 4 ML407 GUI

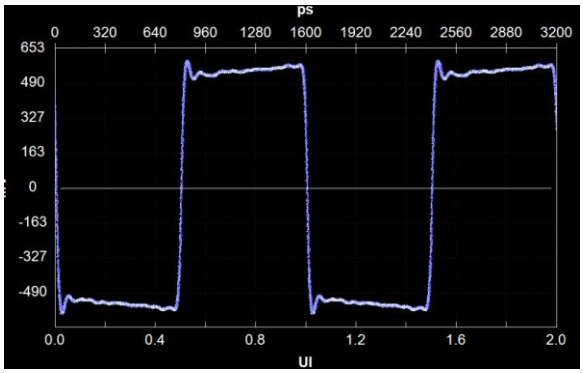

Figure 5: Clock Out S.E. at 625 MHz

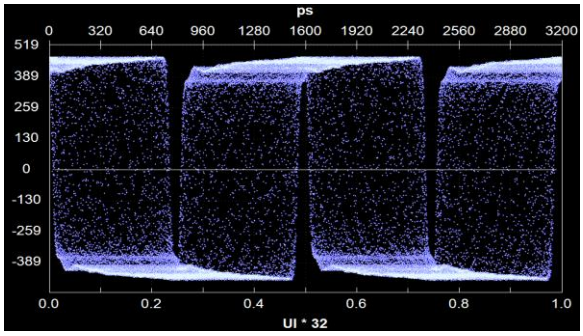

Figure 6: A 10Gbps 00FF pattern frequency modulated by an ML407 clock at 100 kHz (7.5UI)

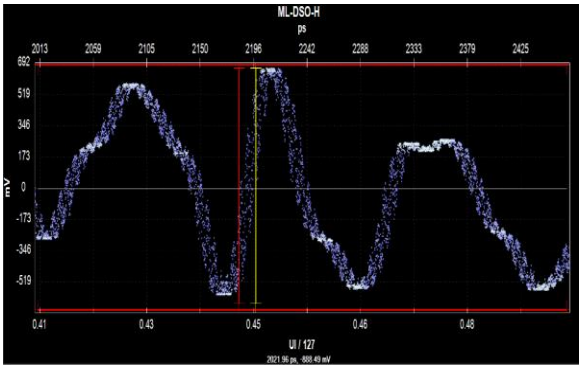

Figure 7 SJ-modulated PAM4 pattern

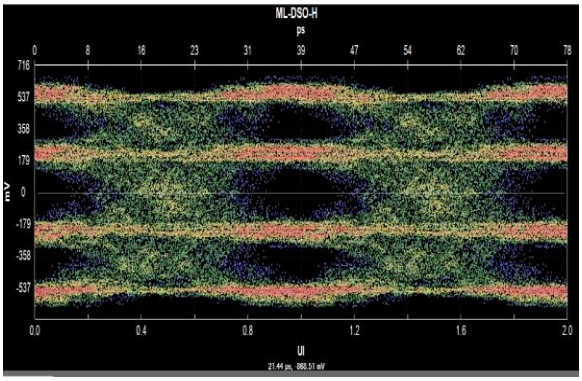

Figure 8 RJ-modulated PAM4 eye diagram

Electrical Specification	
	ML407
Frequency	2.43 – 2.585 GHz
TX Amplitude Differential	1000 mVpp
Intrinsic Random Jitter rms	3.6 ps
Total Jitter @ 10^{-12}	79 ps
TX Amplitude Adjustment	No
Divide Ratios	2, 4, 8, 16
TX/RX Connectors	SMA
Number of Timebases	1
Power Requirements	12V 0.9A
Max RJ[1]	100 ps
Max SJ frequency	400 MHz
Max SJ amplitude	100 ps
Random Interference (VEC)	>200 mVppd

[1] RJpp at BER 1E-15

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