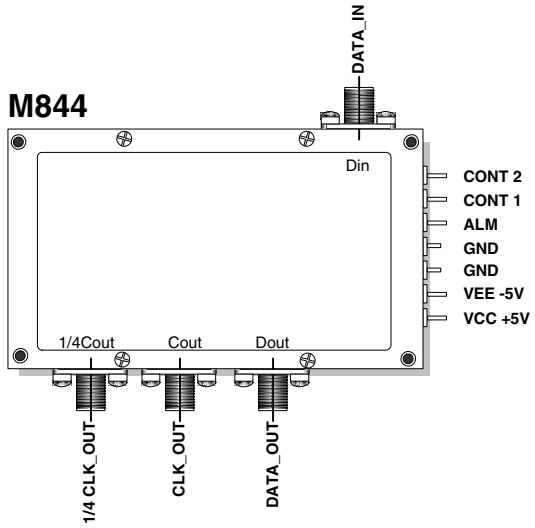
GENERAL DESCRIPTION

The M844 Multi-Rate Clock Recovery module provides low jitter clock recovery from NRZ or RZ input data formats. Four data rates are digitally selectable: 9.953, 10.3125, 10.664, or 10.709Gb/s. Incoming data is first amplified by a limiting amplifier. The data is then both: a) provided as the module's unretimed data output, and b) applied to the clock recovery circuitry. A Phase Locked Loop (PLL) incorporates frequency multipliers and a SAW-based Voltage Control SAW Oscillator (VCSO) to minimize clock jitter. The VCSO provides the high Q, low noise, and high stability needed for the narrow bandwidth PLL operation. Micro-strip bandpass filters are used to produce sinusodal clock output with low harmonic and sub-harmonic distortion.

FEATURES

- 4 selectable NRZ or RZ rates: 9.953, 10.3125, 10.664, or 10.709Gb/s
- Superior VCSO-based PLL jitter performance 0.12 ps peak-to-peak max
- 0.02ps rms jitter, typical (12kHz-20MHz)
- Low phase noise -85dBc/Hz @ 1kHz offset
- 6mV peak-to-peak input sensitivity
- Up to 700mV peak-to-peak un-retimed NRZ or RZ data output
- +5V and -5V power supplies
- Designed for high-speed fiber optic applications
- Easy to connect 1.575 x 3.2 inch SMA package

PIN ASSIGNMENT (1.575 x 3.2 inch SMA)



Example Input/Output Frequency Combinations

Operating Data Rate (Gb/s)	Clock Output Freq (GHz)		Application
	OC-192	OC-48	
9.9530	9.9530	2.488	OC-192
10.3125	10.3125	2.577	
10.6640	10.6640	2.666	
10.7090	10.7090	2.677	

BLOCK DIAGRAM