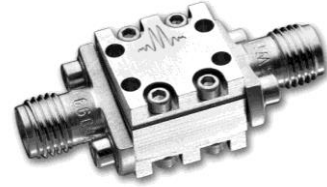


Equalizer (40 Gb/s)

EQ3-40

Features

- 40 Gb/s Equalizer
- Matched 50 Ohm Impedance on Input and Output Ports
- Applications: Digital Communications, Signal Integrity
- [EQ3-40.s2p](#)



Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

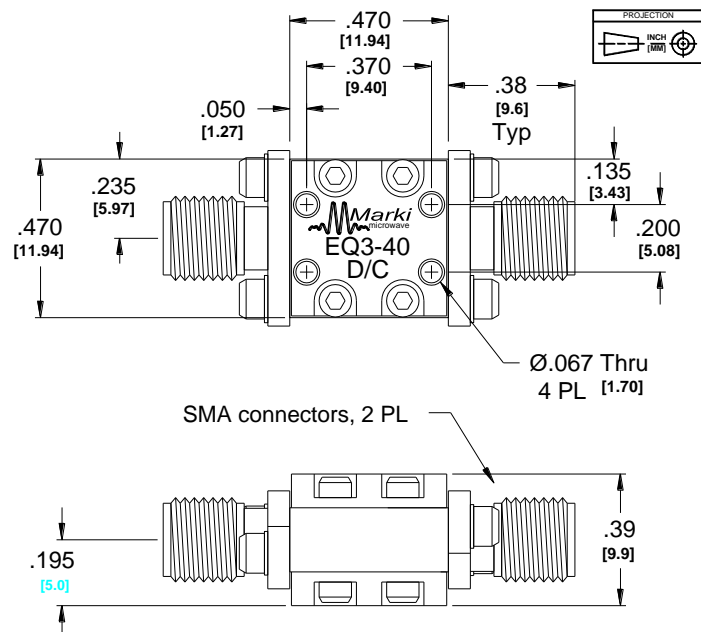
Parameter	Operating Frequency	Min	Typ	Max
Insertion Loss (dB)	10 MHz		3	
	15 GHz		1.2	
	40 GHz		1	
VSWR (Input)	DC – 40 GHz		1.3	
VSWR (Output)			1.3	
Risetime /Falltime (ps) ¹			11	
Total Input Power (W)				0.25
Weight (g)			9	

¹Specified as 20%/80%.

Amplitude- and phase-matched pairs available; contact factory.

Model Number	Description
EQ3-40	40 Gb/s Equalizer with 2.92 mm connectors ¹

¹Default is 2.92 mm female connectors. Consult factory for other connector options.



Typical Performance

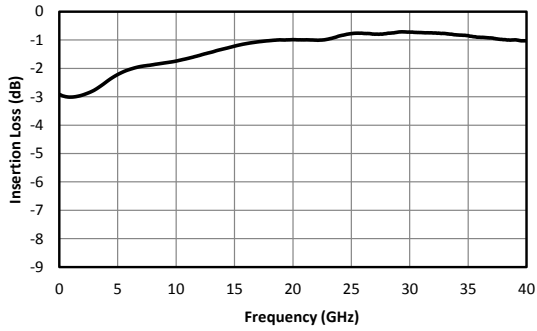


Figure 1: Insertion loss

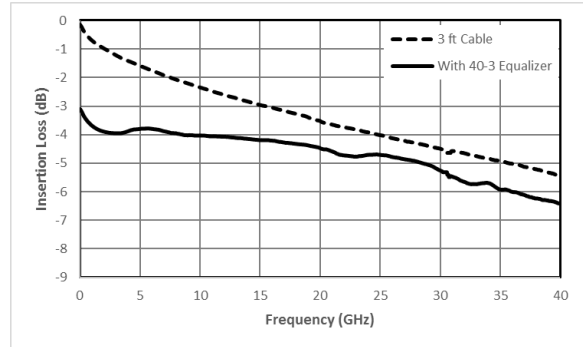


Figure 2: Insertion loss with lossy cable

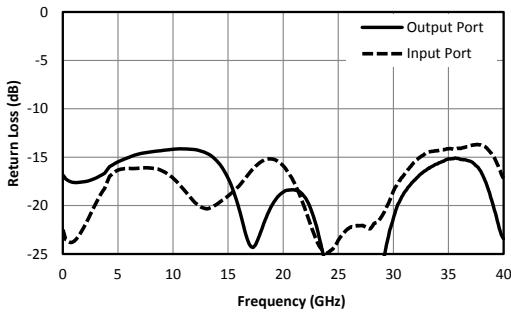


Figure 3: Return loss

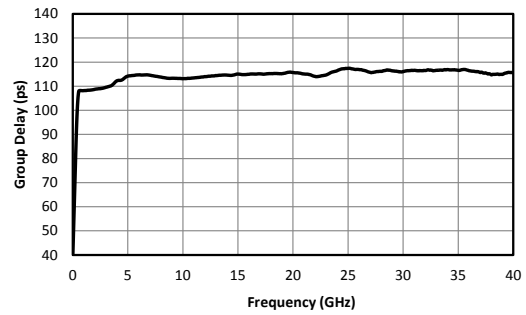


Figure 4: Group delay

Equalizer (40 Gb/s)

EQ3-40

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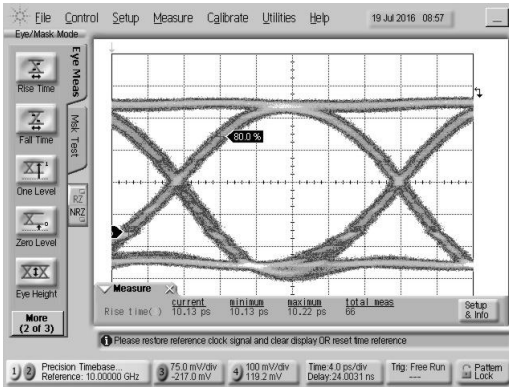


Figure 5: Input eye

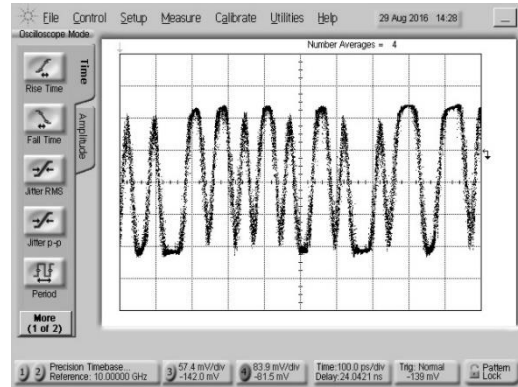


Figure 6: Input data pattern

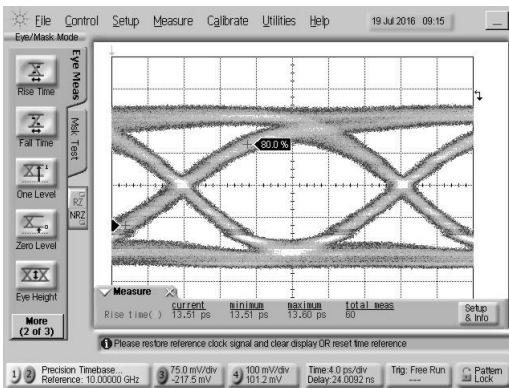


Figure 7: Eye after lossy cable

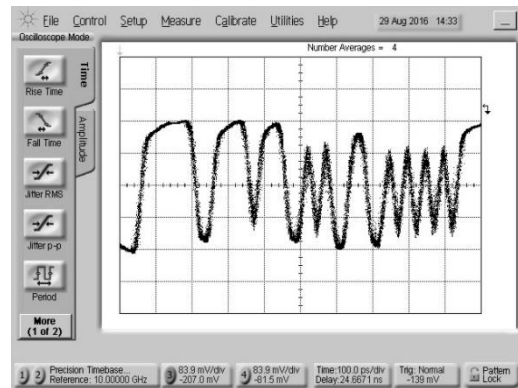


Figure 8: Data pattern after lossy cable

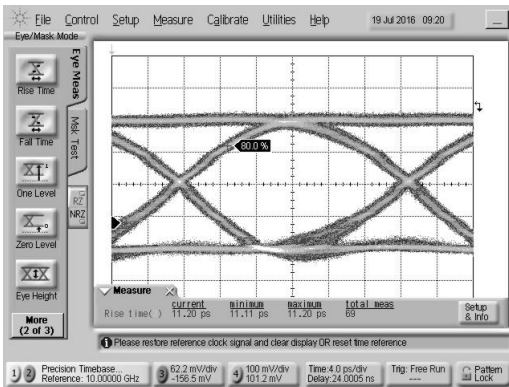


Figure 9: Eye after equalization

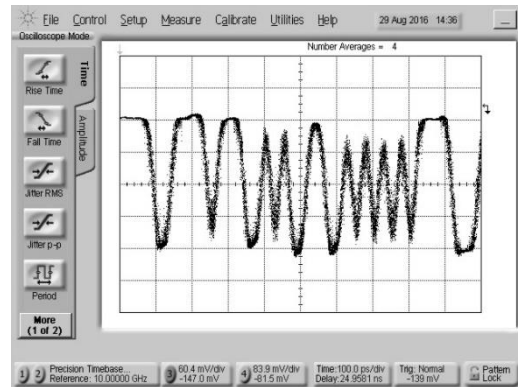


Figure 10: Data pattern after equalization

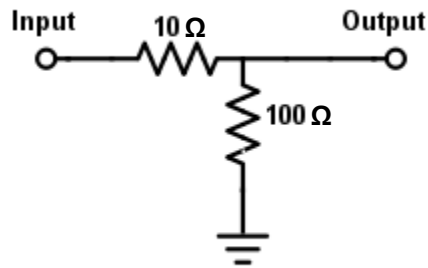
Oscilloscope measurements of the EQ3-40 with a 40 Gb/s PRBS pattern. Bit pattern is measured with a 2^7-1 PRBS input. Eye diagrams are taken with a $2^{31}-1$ PRBS input. Figure 6, "Input data pattern", is uncorrelated with the other patterns due to the additional cable length.

Equalizer (40 Gb/s)

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EQ3-40

DC Schematic



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