LEAD-FREE / RoHS-COMPLIANT

WIDEBAND WILKINSON POWER DIVIDER PD-0465

Features

- 4 to 65 GHz In-phase Power Splitting
- Low Insertion Loss
- Outstanding Phase and Amplitude Balance
- Microwave Power Dividers & Couplers App Note

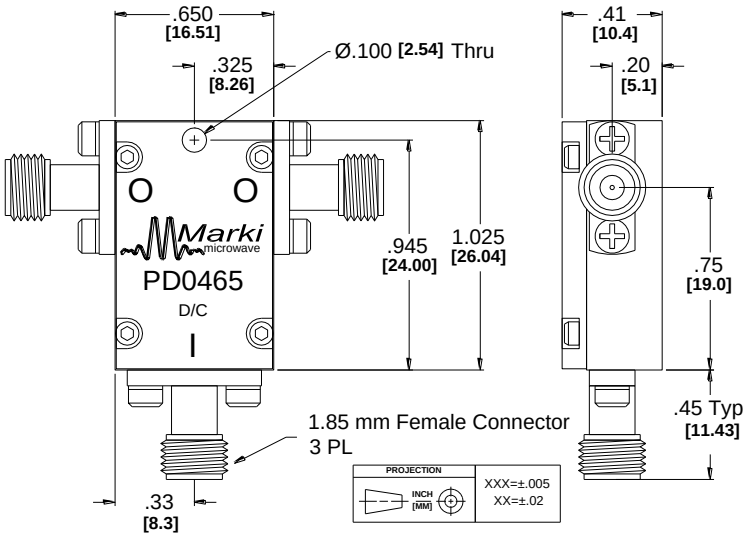
Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Frequency Range (GHz)	Min	Typ	Max
Nominal Power Splitting (dB)	4 to 65		3	
Nominal Phase Shift (Degrees)	4 to 65		0	
Amplitude Balance (dB)	4 to 65		±0.5	±1.5
Phase Balance (Degrees)	4 to 65		±5	±15
Excess Insertion Loss (dB)[1]	4 to 40		1	2
	40 to 65		2	4
VSWR	4 to 65		1.4	
Isolation (dB)	4 to 65	13	18	
Weight (g)			35	
Power as Divider (W)				10
Power as Combiner (W)				1

[1]Excess Insertion Loss = (Common Port to Output Port Insertion Loss) – 3 dB.

Model Number	Description
PD-0465	4 – 65 GHz Power Divider with 1.85 mm connectors[1] LEAD-FREE/RoHS COMPLIANT

[1]Default is 1.85 mm female connectors. Consult factory for other connector options.



215 Vineyard Court, Morgan Hill, CA 95037 | Ph: 408.778.4200 | Fax 408.778.4300 | info@markimicrowave.com

Typical Performance

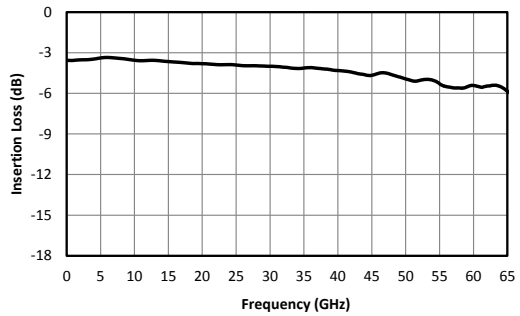


Fig. 1. Common port to output port insertion loss.

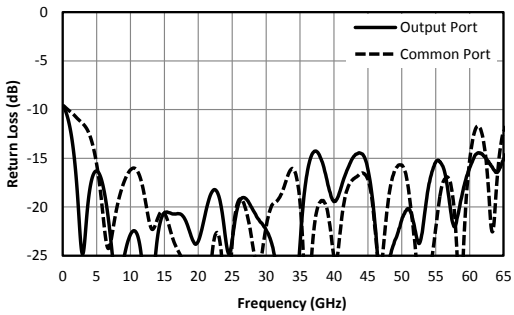


Fig. 2. Return loss for output and common ports.

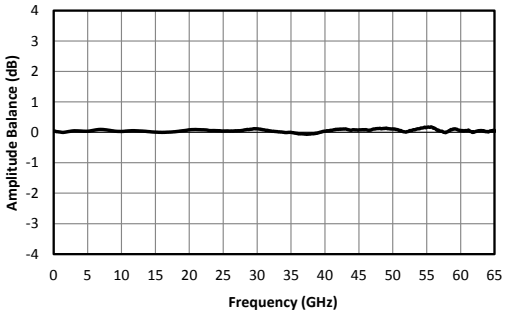


Fig. 3. Amplitude balance between output ports.

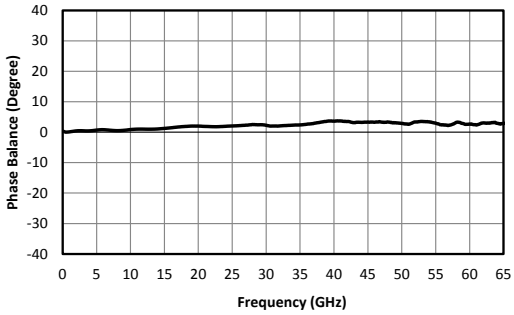


Fig. 4. Phase balance between output ports.

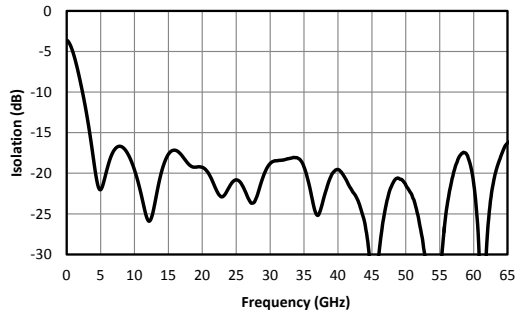


Fig. 5. Isolation between output ports.

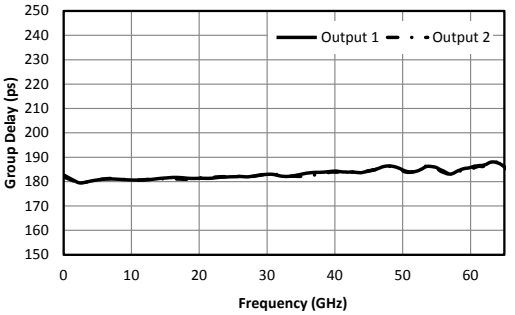


Fig. 6. Isolation between output ports.

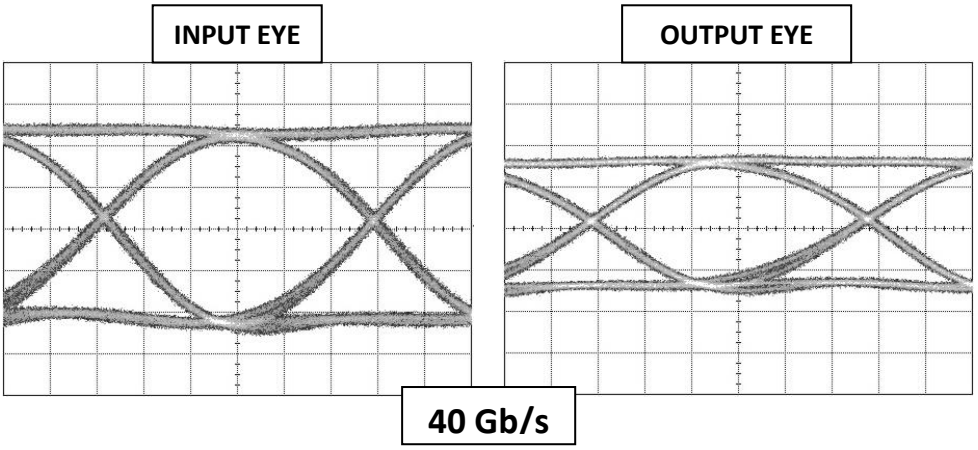


Fig. 7. Oscilloscope measurements of the PD-0465 with a 40 Gb/s PRBS pattern in power splitting mode. Eye diagrams are taken with a 2^{31}-1 PRBS input demonstrating minimal eye distortion/closure afforded by the DC operation of the power splitter.

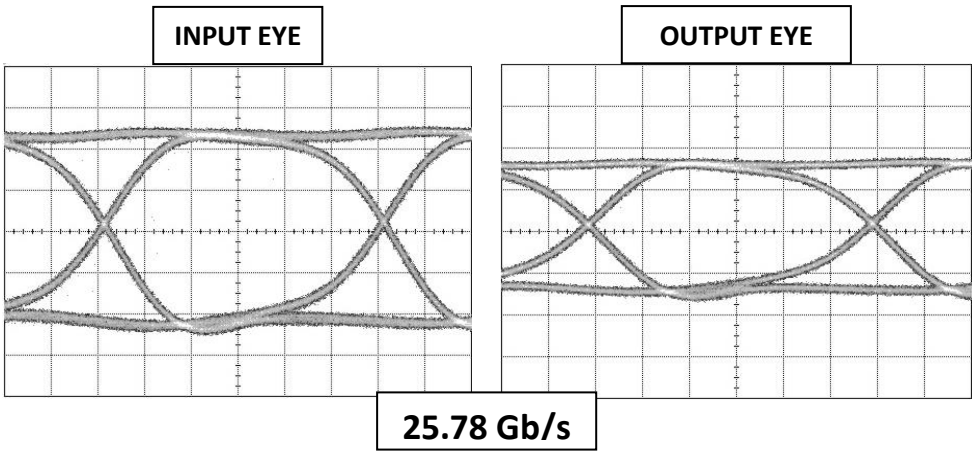


Fig. 8. Oscilloscope measurements of the PD-0465 with a 25.78 Gb/s PRBS pattern in power splitting mode. Eye diagrams are taken with a 2^{31}-1 PRBS input demonstrating minimal eye distortion/closure afforded by the DC operation of the power splitter.

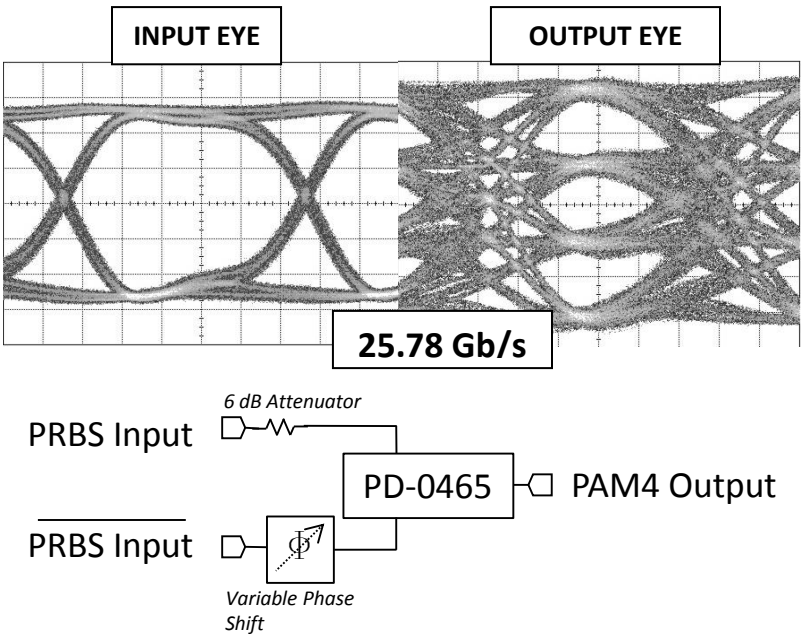


Fig. 9. Oscilloscope measurements of the PD-0465 generating a 25.78 Gb/s pattern in power combining mode. Eye diagrams are taken with a 2^{10}-1 PRBS input but without phase/amplitude tuning capability. For more information see the blog post "Yes, Wilkinson power dividers also work for combining data".