

## WIDEBAND WILKINSON POWER DIVIDER

**PD-0426**

## Features

- 4 to 26.5 GHz In-phase Power Splitting
- Low Insertion Loss
- Outstanding Phase and Amplitude Balance
- [Microwave Power Dividers & Couplers App Note](#)



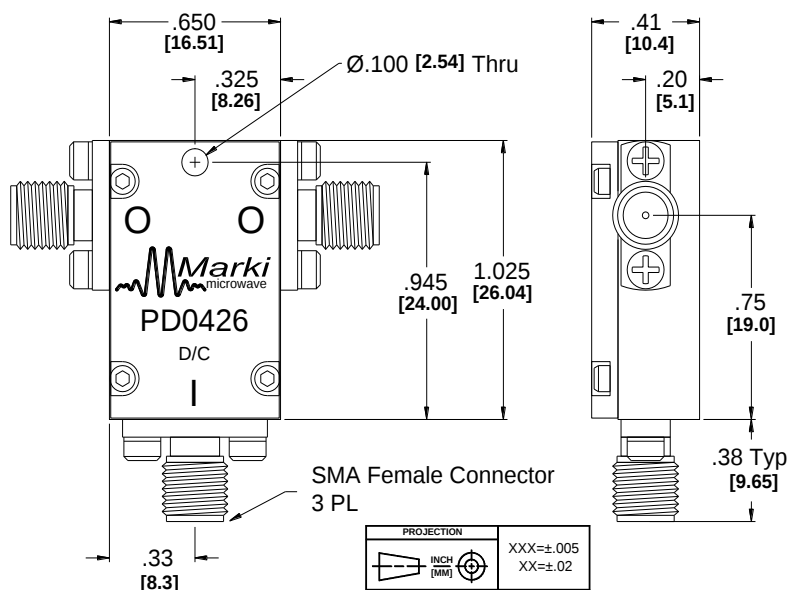
**Electrical Specifications** - Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

| Parameter                               | Frequency Range (GHz) | Min | Typ  | Max  |
|-----------------------------------------|-----------------------|-----|------|------|
| Nominal Power Splitting (dB)            | 4 to 26.5             |     | 3    |      |
| Nominal Phase Shift (Degrees)           |                       |     | 0    |      |
| Amplitude Balance (dB)                  |                       |     | ±0.2 | ±0.5 |
| Phase Balance (Degrees)                 |                       |     | ±2   | ±10  |
| Excess Insertion Loss (dB) <sup>1</sup> |                       |     | 0.8  | 1.6  |
| VSWR                                    |                       |     | 1.35 |      |
| Isolation (dB)                          |                       | 13  | 18   |      |
| Weight (g)                              |                       |     | 35   |      |

<sup>1</sup>Excess Insertion Loss = (Common Port to Output Port Insertion Loss) – 3 dB.

| Model Number | Description                                                 |
|--------------|-------------------------------------------------------------|
| PD-0426      | 4 – 26.5 GHz Power Divider with SMA connectors <sup>1</sup> |

<sup>1</sup>Default is SMA female connectors. Consult factory for other connector options.



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## Typical Performance

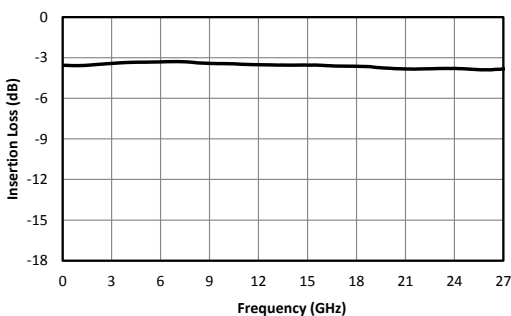


Fig. 1. Common port to output port insertion loss.

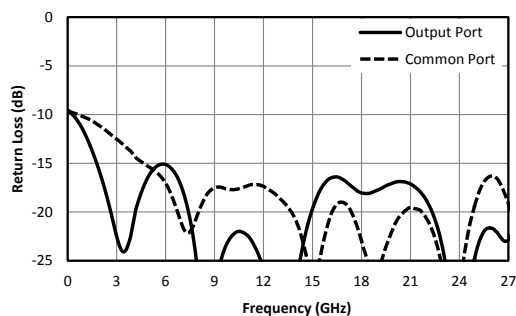


Fig. 2. Return loss for output and common ports.

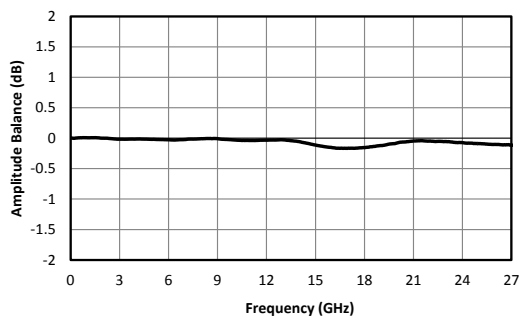


Fig. 3. Amplitude balance between output ports.

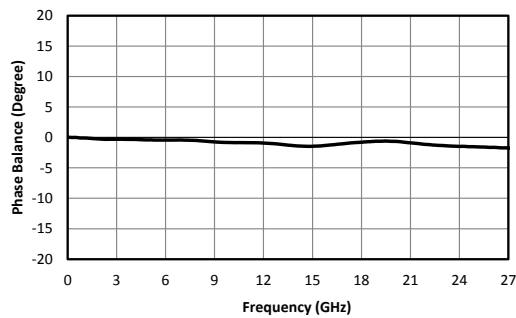


Fig. 4. Phase balance between output ports.

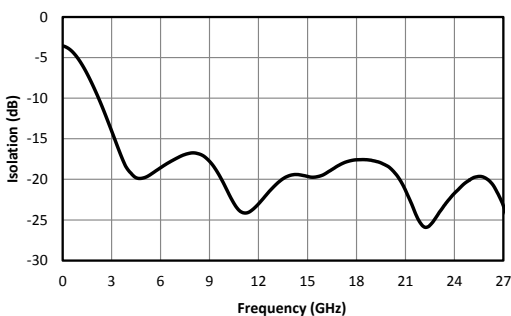


Fig. 5. Isolation between output ports.

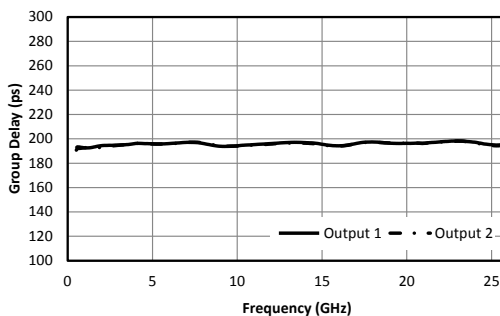


Fig. 6. Group Delay

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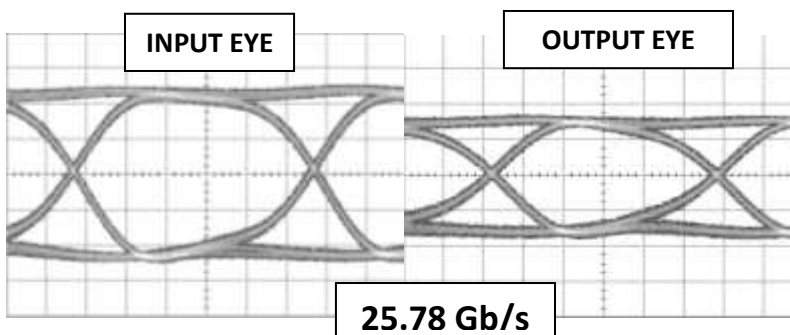


Fig. 7. Oscilloscope measurements of the PD-0426 with a 25.78 Gb/s PRBS pattern in power splitting mode. Eye diagrams are taken with a  $2^{31}-1$  PRBS input demonstrating minimal eye distortion/closure afforded by the DC operation of the power splitter.

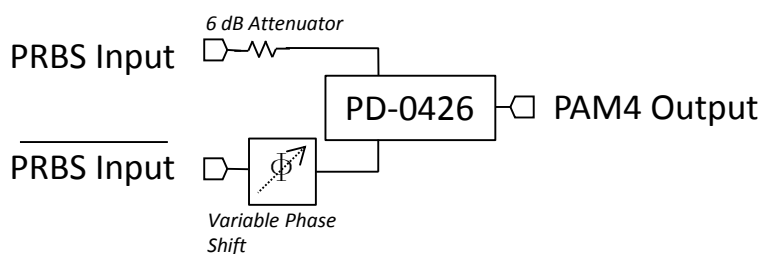
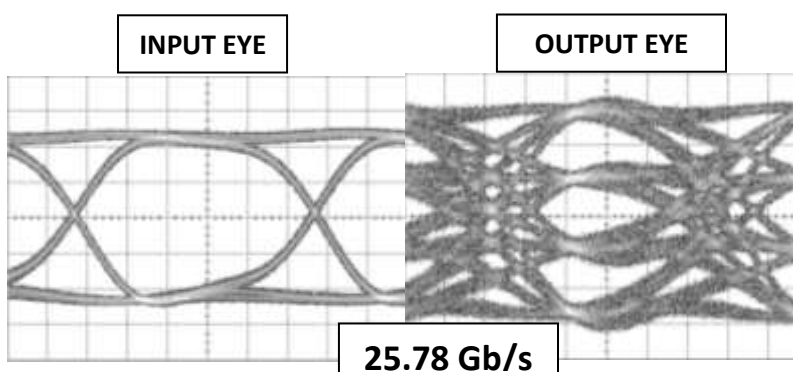


Fig. 8. Oscilloscope measurements of the PD-0426 generating a 25.78 Gb/s pattern in power combining mode. Eye diagrams are taken with a  $2^{10}-1$  PRBS input but without phase/amplitude tuning capability. For more information see the blog post [“Yes, Wilkinson power dividers also work for combining data”](#).

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