



Phase Demodulator

Key Features

2.5, 10, 20, 40, 55 GHz and Custom Rates

Near Zero PDL and PMD

Tunable

Work in C & L Bands

Very Low PDF

Low Excess Loss & High Isolation

Applications

Telecom Demodulation

DPSK Demodulator

3SPGroup's DPSK Demodulator is an All-Fiber delay line interferometer constructed from two continuous lengths of Corning SMF28 fiber fused to form wavelength-insensitive 3dB couplers. This results in unparalleled insertion loss, fringe contrast, port imbalance and polarization-dependency performance. Phase tuning is achieved using a heater directly deposited on the optical fiber, providing minimal power consumption and fast rise times.

This device is offered in a compact, stable and reliable package that has successfully completed qualification testing to Telcordia's GR-1221-CORE central office requirement and is also fully compliant with RoHS requirements. Field data indicates a reliability rate of less than 40 FIT at a 60% confidence level. Free from resonance below 2 kHz, the device can operate in the presence of ambient vibration. Connectorization is available as an option, with matched pigtail length down to 0.1ps accuracy.



For more info

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DPSK Demodulator



PARAMETERS (1) & (7) TECHNICAL SPECIFICATIONS*

Free Spectral Range	2.5 GHz	10 GHz	20 GHz	40 GHz	55 GHz
Isolation	28 dB				
PDF (2)	0.04 GHz	0.22 GHz	0.45 GHz	0.55 GHz	0.7 GHz
Operating Wavelength	1530 - 1610 nm				
Peak Insertion Loss (3)	0.3 dB				
Differential Delay between Pigtails (4)	<0.25 ps				
Heater Resistance	350 Ω				
Tuning Rise Time (5)	200 ms				
Tuning Fall Time (5)	200 ms				
Operating Case Temperature	0 - 65° C				
Reliability (6)	< 40 FIT				

- (1) All specs are typical values only.
 (2) Δf between polarization eigenstates – more details available upon request.
 (3) Does not include contribution from connectors.
 (4) Delay difference between ports 1 & 2; applies to connectorized units only. Offered either unterminated or with connectors.
 (5) τ such that $\Delta \phi \propto 1 - e^{-t/\tau}$.
 (6) Random fit rate. Qualified Telcordia's GR-1221-CORE central office (except for the 2.5 GHz unit) (C.L. 60%).
 (7) All measurements are "worst case" values over operating band of both ports.

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Please note: information in this document is typical and must be specifically confirmed in writing by your supplier before it becomes applicable to any order or contract. Information is subject to change without notice.
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ORDERING INFO

Please contact your Sales Manager. 3SPGroup can also develop custom products to meet a wide range of technical requirements.

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