Automatic Mach Zehnder BIAS Control

Features

✓ software configurable support of single & dual-pol IQ or Intensity Mach Zehnder Modulators

✓ **No dependency on applied modulation format and RF amplitude**

✓ supporting all higher level modulation formats

✓ No user tweaking for optimal setting required

  ✓ Fast and simple switching between modulation formats

✓ Zero Noise feature

✓ No external Tap Photodiode required

✓ Extremely wide dynamic range of feedback tap

✓ Easy-to-Use GUI provided

✓ USB, Ethernet & UART interface for remote control

✓ SCPI Style remote control command set, LabView® drivers supplied

Applications

✓ LiNbO3, InP, GaAs modulators

✓ Generation of advanced modulation formats (QPSK, 8-PSK, 16-QAM, …)

The ID Photonics automatic bias controller (ABC) is designed to lock the operating point of Mach-Zehnder modulators to ensure stable optimal performance over time and environmental conditions.

It covers a wide variety of applications from single polarization Intensity Modulators to polarization multiplexed IQ Modulators by simple user reconfiguration in software.

For IQ modulators, this unique design provides a **stable tracking of optimal operating point for arbitrary RF input signals** such as QPSK, QAM-xx or Nyquist shaped signals without requiring manual tweaking of parameters. This enables stable operation especially when switching between modulation formats.

A zero noise feature allows achieving optimal and repeatable performance.

A GUI is provided for instant access and a SCPI style command set provides extensive control status information and configurations such as locking status.

Inquire with us for a detailed specification sheet and performance results.
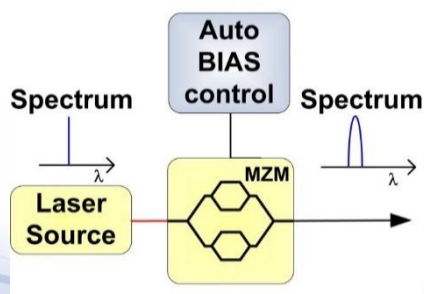
Application Example

Specifications

Parameter	Specification
Supported modulator Types	(Single & Dual Pol.) - IQ or Intensity Mach Zehnder
Supported modulation formats	All, No dependency
Max. BIAS Voltage, differential	Up to +/-30V, limit customer settable
Feedback detector type	MZM internal or external tap, 1 detector per Polarization possible
Feedback detector current range	1uA - 2mA
Feedback detector dynamic range	26dB
Required feedback detector bandwidth, 3dB	>100kHz
Interfaces	USB, Ethernet, UART
Operating Temperature	+5 to +60°C non-condensing
Storage Temperature	-20°C to 60°C
Size of device (H x W x D)	300 x 140 mm (19 x 4 inch)
Power Supply	Primary 9V – 36V, 3A AC Adaptor 10-240 VAC, 0.8A, 50/60Hz

Inquire with us for an extended data sheet

Ordering Information

ABC	-BPC	-XX	-X
Article	**-**	Type	AC adaptor cable type
Automatic BIAS control	-	13: benchtop version, 1 optical feedback channel	C: Europe A: US, Asia D: UK

Contact information

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