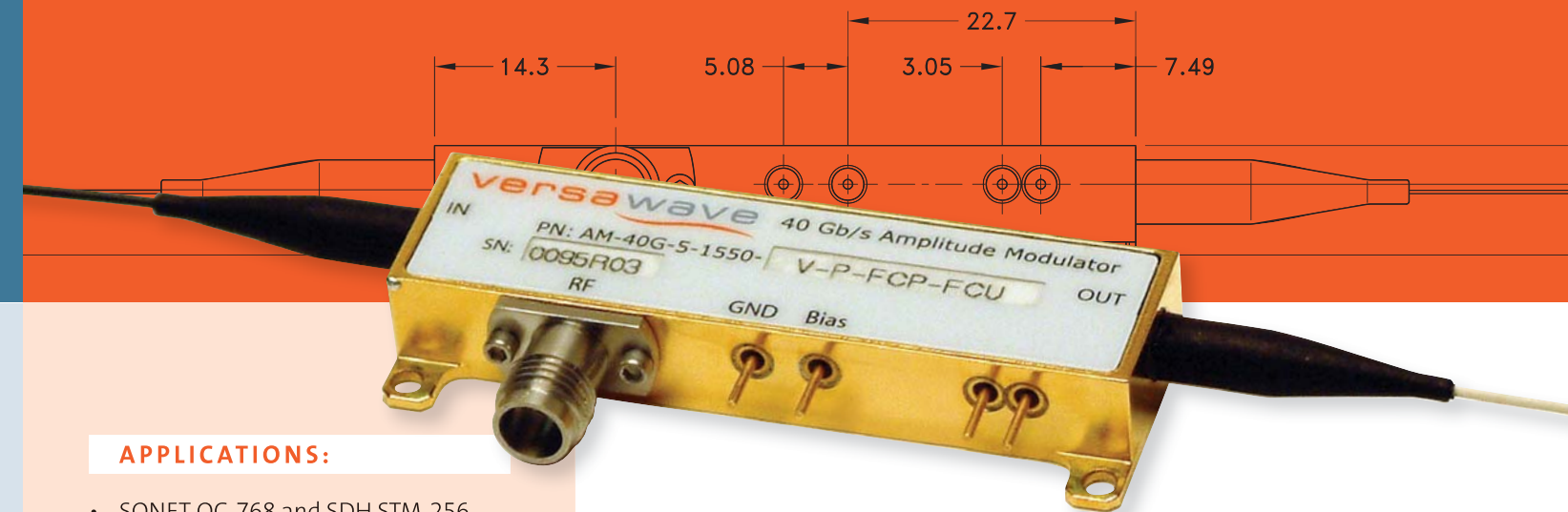




About Versawave

Versawave provides modulation components for high-speed data and high bandwidth optical communication applications. Versawave's proprietary GaAs-based designs provide system manufacturers with cost effective solutions that offer design flexibility, small footprints and power efficiency. Used for either polarization or amplitude modulation applications, these designs are fully compatible with commercial foundries for chip manufacture and packaging. In addition, Versawave utilizes its advanced prototyping facility to design custom components and provide fabrication services to the optical networking industry. Versawave is a privately held company based in Vancouver, British Columbia.

40 Gb/s Amplitude Modulator Electro-Optic Mode Converter



APPLICATIONS:

- SONET OC-768 and SDH STM-256 transmissions
- 40 Gb/s transponders
- High-speed Internet routers
- DWDM, high-speed Ethernet and TDM
- High-speed test equipment

FEATURES:

- High modulation bandwidth
- Low drive voltage
- Chirp <0.1
- High extinction ratio
- Small footprint
- Optional PIN diode for optical power monitoring and bias control
- Covers C and L bands
- GaAs technology

DESCRIPTION:

The Versawave 40 Gb/s Amplitude Modulator represents a revolutionary method for modulating CW laser light into data-carrying optical pulse trains. By employing proprietary GaAs technology, the Versawave modulator establishes new benchmarks for low drive voltage, ultra-wide bandwidth and chirp-free operation within a small footprint.

The IP protected design of the Versawave Amplitude Modulator exploits the unique material properties of GaAs to provide chirp-free modulation at data rates to 43 Gb/s. By using an innovative polarization mode converter approach, Versawave eliminates many of the intrinsic limitations of designs based on Mach-Zehnder and electro-absorption architectures. In addition, the Versawave Amplitude Modulator is able to deliver best-in-class performance without the need of a thermo-electric cooler (TEC).

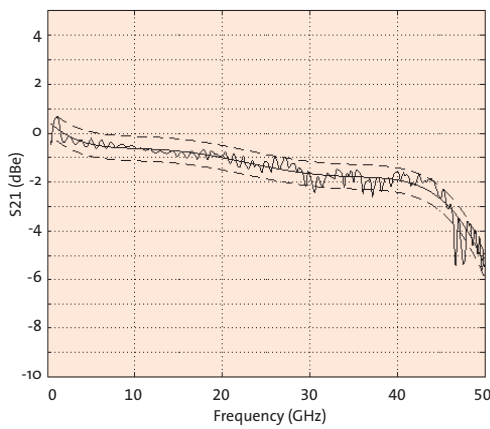
VERSAWAVE TECHNOLOGIES INC.

Suite 182
4664 Lougheed Highway
Burnaby, BC, V5C 5T5
Canada

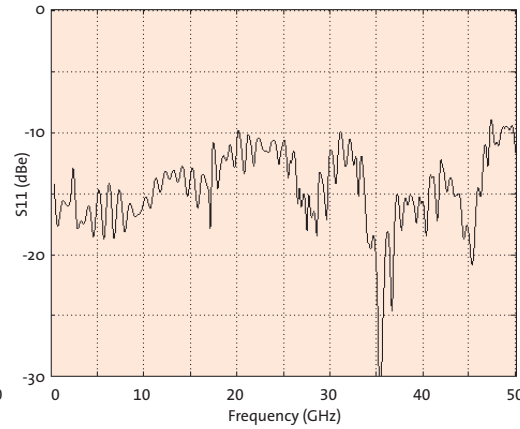
+1-604-221-5452 tel
+1-604-221-5453 fax

info@versawave.com
versawave.com

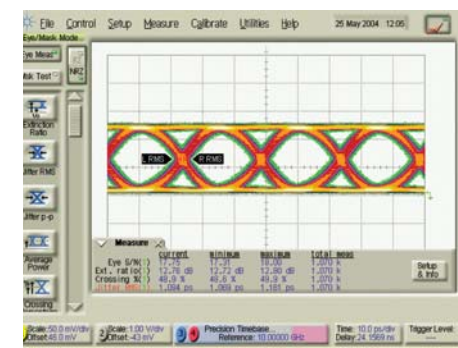
Electro-Optic Bandwidth



Electrical Return Loss

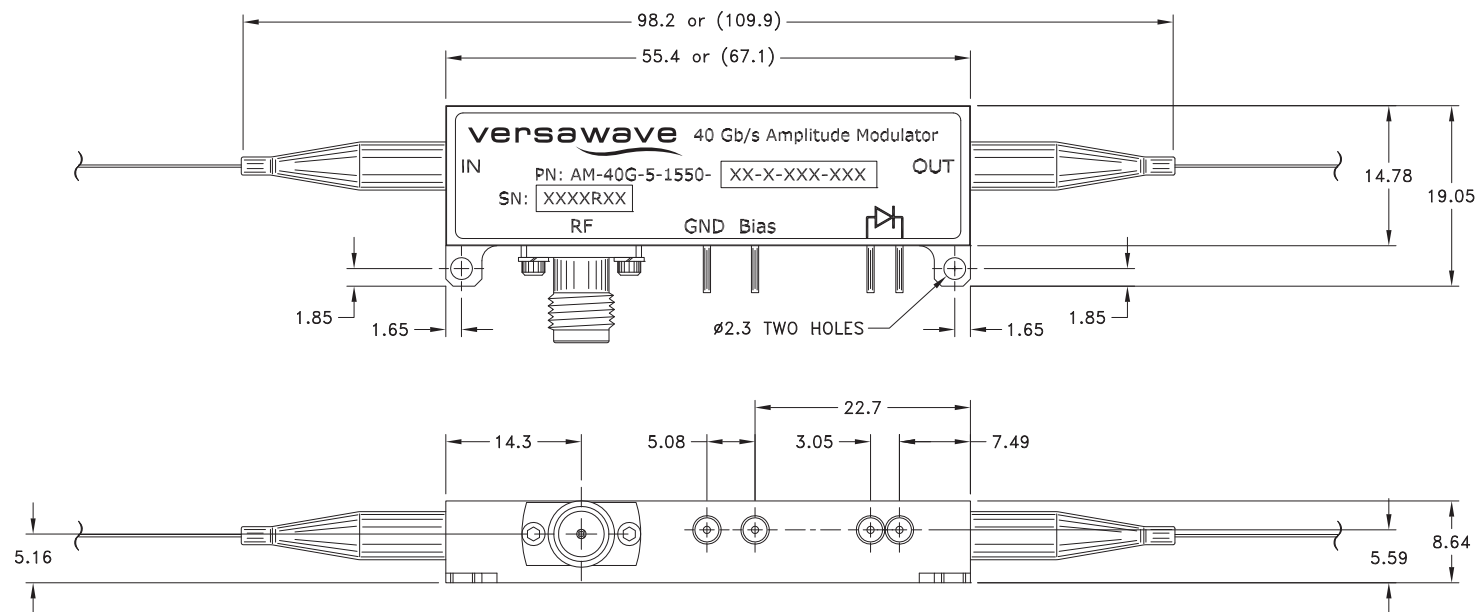


40 Gb/s PRBS: Optical Eye



DCA Optical Head BW = 50 GHz
Measurement Courtesy of SHF Communications Technologies AG

PACKAGE DIMENSIONS:



All above dimensions are in mm. Figures in parentheses indicate dimensions for the 3V model.

ORDERING INFORMATION:

AM-40G- **A** X- 1550- **B** **C** **D** **E** XX- X- XXX- XXX

A Drive Voltage	B RF Connector	C Monitoring Option	D Input Optical Connector	E Output Optical Fiber/Connector
3	V V	0 None	FCP FC/UPC with PMF	FCU FC/UPC with SMF-28
5	VP VP	P PIN Diode	FAP FC/APC with PMF	FCA FC/APC with SMF-28
	GP GPPO			FCP FC/UPC with PMF
				FAP FC/APC with PMF

NOTES:
No license is granted by implication or otherwise under any patent right or any other proprietary right of Versawave Technologies Inc.
The information contained in this document, including specifications, is subject to change at any time without notice and without liability.

PARAMETERS	MIN	TYPICAL	MAX
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OPTICAL

S21 Electro-Optic Bandwidth		40 GHz	
DC Extinction Ratio	20 dB		
Chirp Parameter	-0.1		+0.1
Wavelength Range	1530 nm		1610 nm
Optical Return Loss	30 dB		
Insertion Loss		3.0 dB	

ELECTRICAL

PRBS Drive Voltage 40 Gb/s (3V option)*		5.3 (3.3) V	
Return Loss (0-40 GHz)		10 dB	
Impedance		50 Ω	
Bias Voltage** (required to operate at quadrature)	-12 V		+12 V

CONNECTORS AND FIBER OPTIONS

Input Fiber		PMF
Output Fiber		SMF-28 or PMF
RF Connection		V, VP or GPPO
Bias Connection		Pins

PACKAGE

Epoxy sealed, hermetic package available upon request

Unless marked, specifications are for both 3V and 5V options.
Specifications marked “*” differ for 5V and 3V devices, specifications for 3V devices are in parentheses.
** o - 5V with stabilized bias option (SB) available upon request.