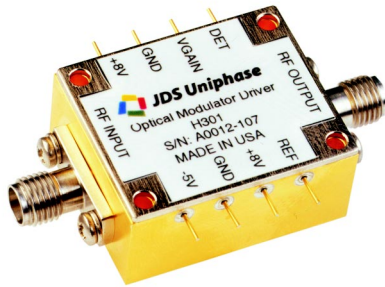


Product Bulletin

Preliminary



Model H301

10 Gb/s Optical Modulator Driver

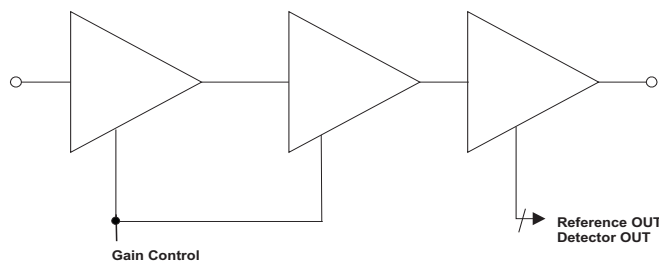
The H301 optical modulator driver provides a high-quality, single-ended voltage to drive an external laser modulator. Typical applications include driving EML, EAM, and Mach-Zehnder style modulators. It amplifies 2.488 to 12.2 Gb/s data input signals to $>+7.0 V_{pp}$ drive levels. The flat gain and flat group delay response yield a high-quality, low-jitter electrical drive signal. The driver meets applicable SONET and SDH standards for OC-192 10 Gb/s optical transmitters and includes reference and detector outputs to enable external temperature-compensated control of output drive levels. The module has field replaceable input and output K-connectors for the input/output drive signals and an eight-pin connector for the detector, reference, and power interfaces.

Key Features

- Low power, 4.9 W
- Extended temperature operation
- Low jitter
- Data rates from 2.488 to 12.2 Gb/s

Applications

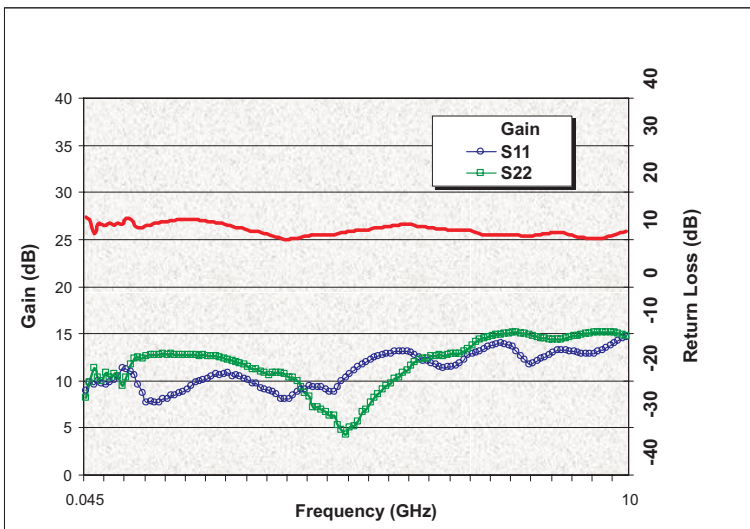
- SONET/SDH equipment
- SR, IR, LR optical transmitters



Optical Specifications

Parameter	Specification	Min	Typ	Max
Data rate	2.488 to 12.2 Gb/s	2.488		12.2
Frequency response	75 kHz to 10 GHz	75 KHz		10 Gb/s
Output amplitude	>+7V		7.0 _{vpp}	7.5 _{vpp}
P _{1dB} output	>22 dBm		22	23
P _{sat} output	>24 dBm		24	
Gain	14 to 24 dB, variable	24	26	
Gain ripple	±1.5 dB			
Gain control range (0 to -10 Vdc using external 510 W resistor)		10 dB	12 dB	
Group delay (2 to 10 GHz)			±25 ps	
Noise figure	11 dB			
Input, output impedance	50 ohms			
Input range	500 mv to 1.5V			
Input VSWR	75 to 200 KHz		1.9	2.25:1
	200 KHz to -10 GHz		1.6:1	2.25:1
Output VSWR			2.0:1	3.0:1
Isolated run of ones or zeros	100 bits			
Pulse response (typical)	Overshoot/undershoot 10% Droop 10% Risetime 40 ps			

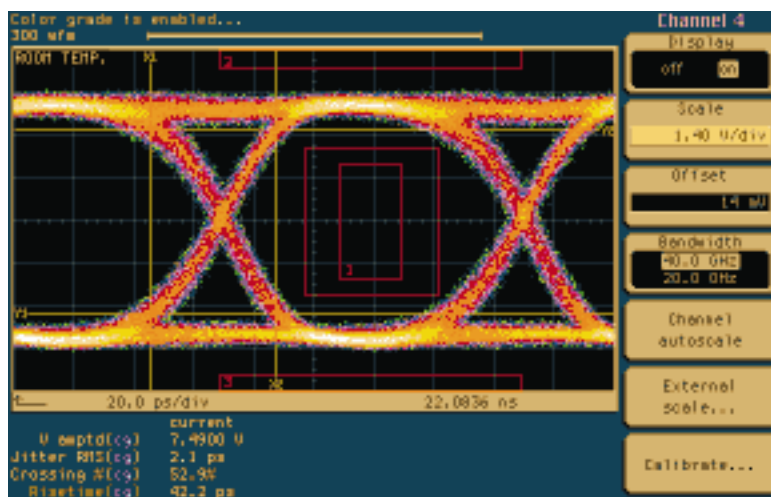
Gain and Return Loss vs. Frequency

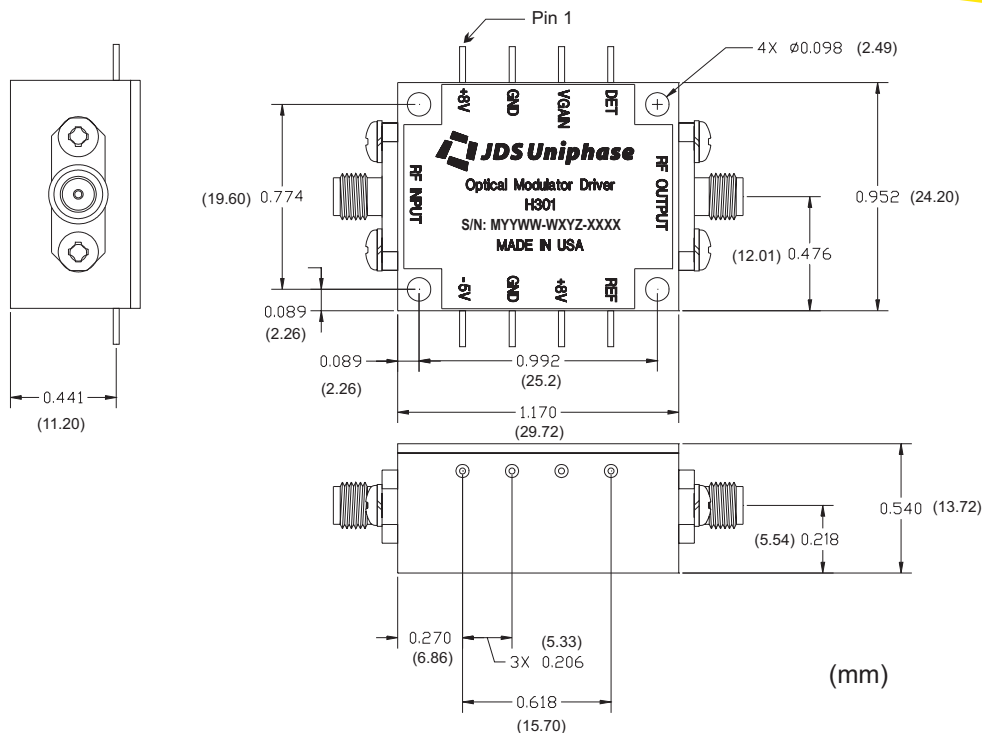


General Specifications

	Minimum	Nominal	Maximum	Units
Operating temperature	0		70	°C
Storage temperature	-40		100	°C
Operating humidity, non-condensing			85	%
Storage humidity, non-condensing			97	%
Altitude	0		3,048 (10,000)	m (ft)
Soldering process temperature (30 seconds)			215	°C
Process temperature (24 hours)			150	°C
Dimensions (WxHxD)	3.0 x 1.4 x 2.4 (1.2 x 0.54 x 1.0)			cm (in)
Power Requirements	+8.0 V DC at 600 mA		+0.5 V	
	-5.0 V DC at 22 mA		+0.5 V	
Total power dissipation	4.9 W			
Connectors				
Input/output	AC coupled	2.9 mm (field replacement "K")		
Power detector/reference/ground	8-pin package			
Applications	SONET/SDH SR, IR, LR optical transmitters			

Eye Diagram





Pin/Connector	Name (as viewed from top, traversing clockwise)
K - F or M	INPUT AC coupled
1	V_c (8 V)
2	Ground
3	Bias (V_{gain})
4	Det (V_{Det})
K - F or M	OUTPUT AC coupled
5	Ref
6	V_c (8 V)
7	Ground
8	V_{EE} (-5.0 V DC)
Case is grounded internally	

Ordering Information

For more information on this or other products and their availability, please contact your local JDS Uniphase sales representative or JDS Uniphase directly at 321 984-3671, or by fax 321 728-0487, or via e-mail at sales.fl@us.jdsuniphase.com, or visit our web site at www.jdsuniphase.com.

H301-WXYZ

W	Connector	X	Driver Option	Y	Temperature Range	Z	Reserved
1	Female in, Female out	1	Standard	1	0°C to 70°C	0	
2	Female in, Male out	2	Optimized for JDSU modulator				
3	Male in, Male out	3	Am modulation input pin				
4	Male in, Female out						



JDS Uniphase Corporation
 305 East Drive
 Melbourne Florida
 32904 USA

Tel 321 984-3671
 Fax 321 728-0487
 sales.fl@us.jdsuniphase.com
 www.jdsuniphase.com

All information contained herein is believed to be accurate and is subject to change without notice. No responsibility is assumed for its use. JDS Uniphase Corporation, its subsidiaries and affiliates, or manufacturer, reserve the right to make changes, without notice, to product design, product components, and product manufacturing methods. Some specific combinations of options may not be available. Please contact JDS Uniphase for more information. ©JDS Uniphase Corporation. All rights reserved.
 H301 Prelim Rev. B 12/00 Printed in USA