MD-50-DX-R

Dual 50 GHz Modulator Driver/RF Amplifier

The MD-50-DX-R is a dual channel, 50 GHz Bandwidth RF Amplifier, enclosed in a single 1U rackmount housing. Each channel on the MD-50-DX-R provides a high-quality, single-ended voltage to drive an external LiNbO3 modulator, with independent control and monitoring on both amplified signals. Typical applications include driving EML, EAM, and Mach-Zehnder modulators, and amplifies 60 Gb/s data input signals to >7.5 Vp-p drive levels. The MD-50-DX-R flat gain and flat group delay response yields a high-quality, low-jitter electrical drive signal, that can also be used as a wideband RF amplifier with useful bandwidth of up to 50 GHz. Its high gain of 26 dB makes it suitable for many RF link applications, and is a perfect match to Optilab's extensive optical transmitter catalog, with remote accessibility via a single USB port. Contact Optilab for more information.

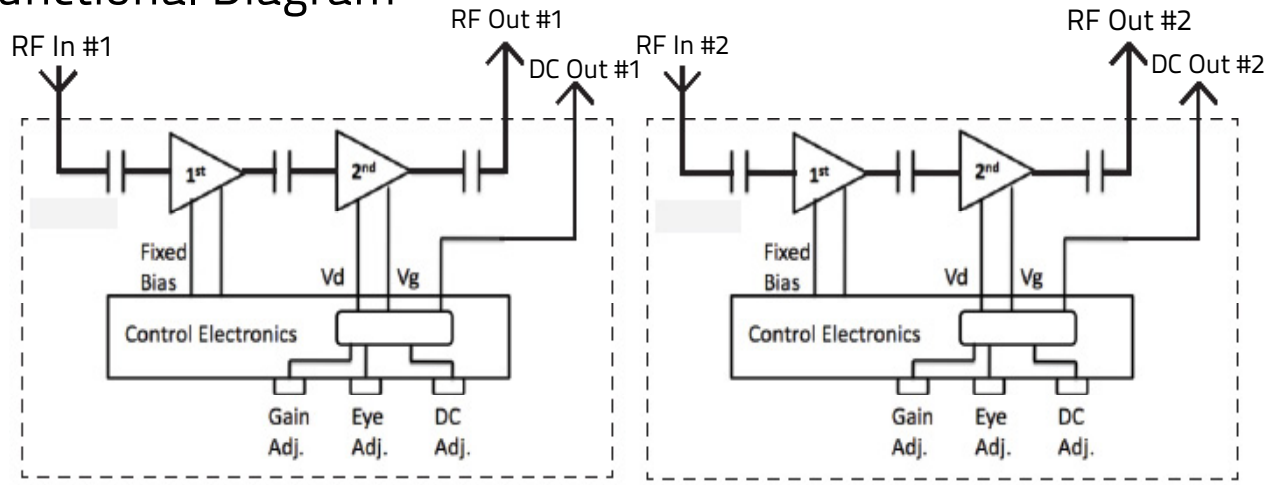
Features

- Dual Channel Driver/Amplifier
- Analog bandwidth exceeds 50 GHz
- Data rates up to 60 Gb/s
- Dual Independent RF Channels
- Variable Gain Control built-in
- 2.4 mm connectors (optional K)
- Remote control via USB

Applications

- 60 Gb/s digital modulation
- OC-768 SONET/SDH
- Analog RF amplification to 50 GHz
- RF over Fiber Link Amplifier
- General laboratory testing

Functional Diagram



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OPTIONS

MD-50-DX-R

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

To order, please click below.

OEQuest.com

Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

General Specifications	
3dB S21 Bandwidth	50 GHz typ.
S11 Characteristics	< -10 dB at 30 GHz
Saturated Output Power	>23 dBm typ.
RF Gain	15 dB to 30 dB, variable
Gain Ripple	±1.5 dB over20 GHz
Input, Output Impedance	50 Ω
Input VSWR to -10 GHz	1.6:1 typ.
Output VSWR	2.0:1 typ.
Total Power Dissipation	20 W typ.
RF-Gain Adjustment Range	15 dB typ.
DC Output Adjustable	0-10 V DC
Digital Applications	
Data Rate	Up to 60 Gb/s
Pulse Response	10%, rise time 8 ps typ.
Output Amplitude	7.5 Vp-p typ.
Input Range	500 mV to 1.5 V
Analog Applications	
P1dB Output	> 23 dBm max.
Group Delay (2 to 10 GHz)	± 25 ps
Noise Figure	11 dB
Small Signal Gain	30 dB typ.
Mechanical Specifications	
Operating Temperature	0° C to +60° C
Storage Temperature	-40° C to +85° C
Operating Humidity	85%
Power Supply Requirements	110/220 V AC, 50/60 Hz
Accessories Included	AC Power Cord, USB Cord
RF Input/Output Connector	2.4 mm (V), K-Connector Optional
Remote Control	USB 2.0
Display Output	Dual LCD

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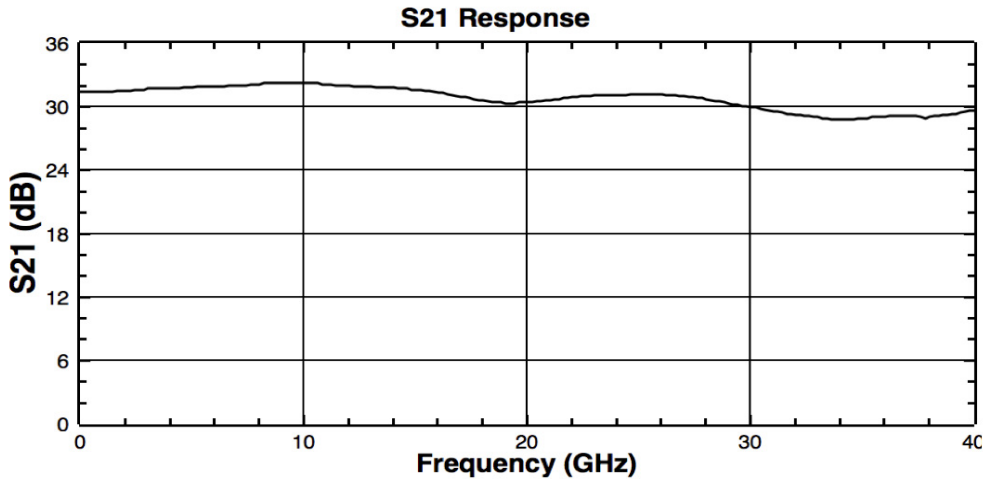
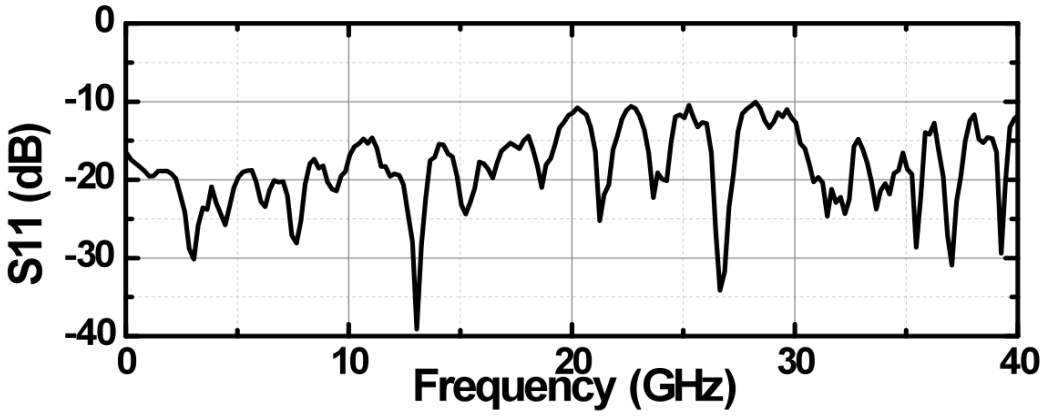
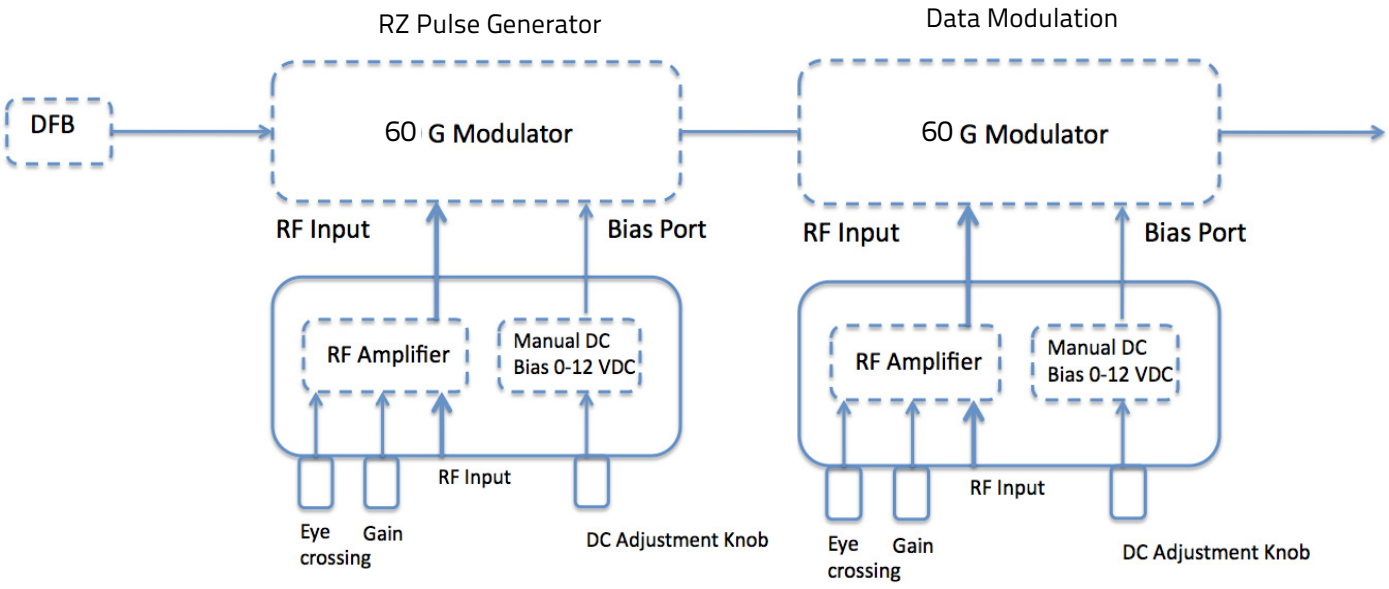
Typical S21 and S11 Bandwidth



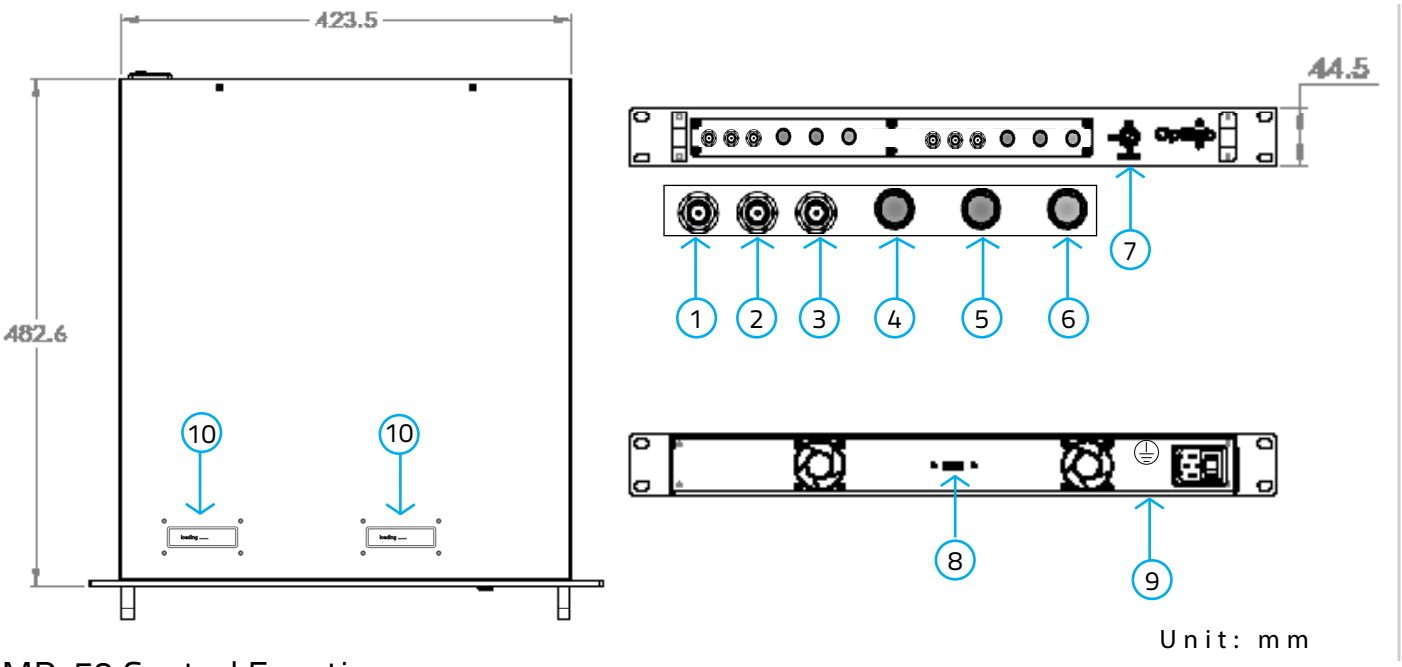


Application Functional Diagram



Dual 50 GHz Modulator Driver/RF Amplifier

Mechanical Drawing



MD-50 Control Function

1	RF input	250 mV to 1500 mV
2	RF output	7.5 V peak to peak max.
3	DC output	Up to 10 VDC
4	Gain adjust knob	0-15 dB adjustment range
5	Eye crossing adjust knob	± 10 %
6	DC output adjust knob	0 to 10 V continuous adjustment
7	RF Power Key Switch	
8	USB 2.0	
9	Grounding Post	
1 0	LCD Display	

LabVIEW™ Software Interface