

Double Driver VWA-23-DD-7

23Gbps to 28Gbps

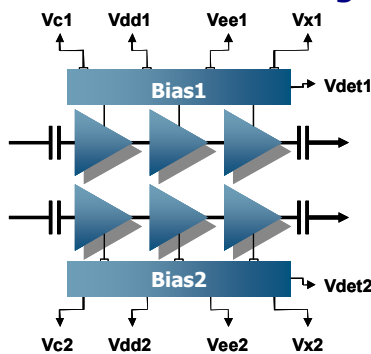
Description

The **VWA 00067 AA** is a double amplifier for driving Lithium Niobat MZ double modulator up to 28Gbps.

The module integrates two triple stage amplifiers with output level and cross point control commands. Output voltage can be adjusted from 8Vpp (eye amplitude opening) to 5Vpp or less without cross point change.

The module integrates all the passives and biasing devices in the same package.

Functional Block Diagram



Ordering information

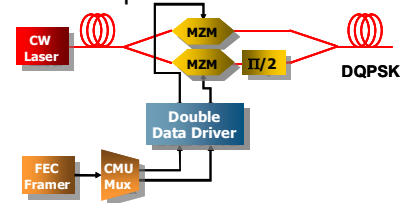
Part Number: VWA 00067 AA

Main Features

- Data rate up to 28Gb/s
- Up to 10Vpp
- Input amplitude: $\geq 350\text{mV pp}$
- Independent Output level and cross point adjustment
- Integrated peak detector
- GPPO
- Power supply : +9V and -3V
- Low power consumption 5W

Applications

- DQPSK
- 23 , 28, 44 and 112Gbps



Typical Characteristics

Electrical Parameters	Symbols	Min	Typ	Max	Units
High Frequency Response (-3 dB)	BW_{high}	20			GHz
Low Frequency Response (-3 dB)	BW_{Low}			50	kHz
Averaged max small signal gain	G	25	30		dB
Output Voltage max	V_{pp-max}	7	8	10	Vpp
Output voltage control dynamic	ΔV_{out}	3			dB
Rise time (20/80%)	T_r			12	ps
Fall time (20/80%)	T_f			12	ps
Added RMS Jitter	RMS Jitter			0,5	ps
Differential phase (Amp1/Amp2)	$\Delta\Phi_{12}$			2	ps
Differential gain (Amp1/Amp2)	ΔG_{12}			1	dB

Environment Parameters	Symbols	Min	Typ	Max	Units
Operating temperature	T_{op}	-5		+75	°C
Storage temperature	T_{sto}	-40		+85	°C

Head Office : rue de la Croix Blanche - Immeuble LOGI – 78350 France

<http://www.vectrawave.com>

+33 (0)619 870 560

+33 (0)139 564 012

VWA 00067 AAxx DS Rev.0.2

VectraWave Proprietary information subject to change

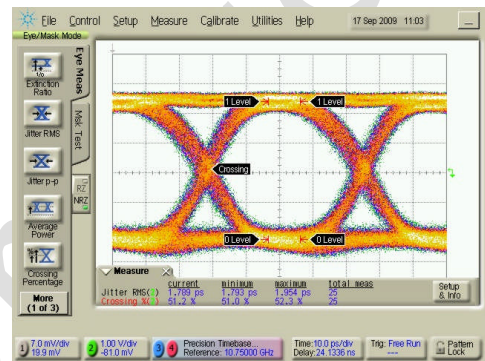
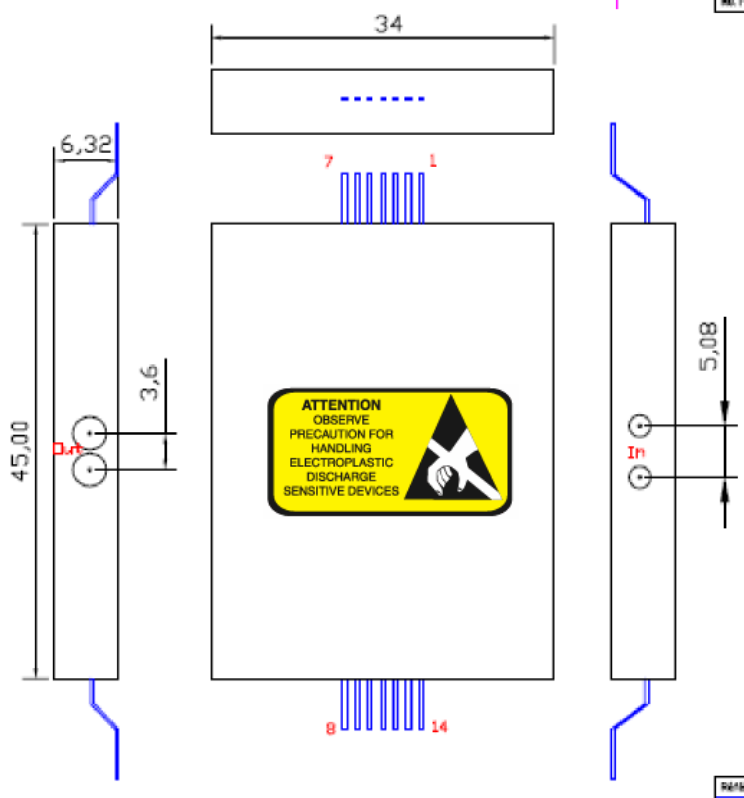


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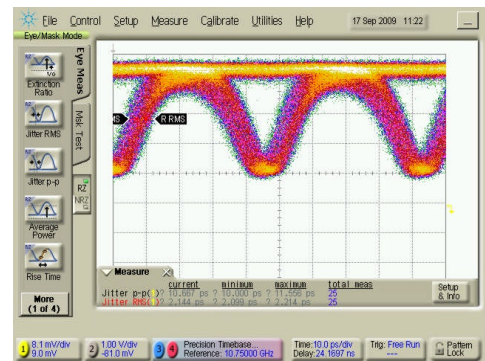
〒113-0034
東京都文京区湯島 3-13-8 湯島不二ビル 301号
TEL : 03-3832-3117 FAX : 03-3832-3118
e-mail : contact@hikari-trading.com
<http://www.hikari-trading.com/>

Power supply	Symbols	Min	Typ	Max	Units
Positive supply voltage (1 or 2)	Vdd1 Vdd2		9		V
Positive supply current (1 or 2)	Idd1 Idd2		320		mA
Negative supply voltage (1 or 2)	Vee1 Vee2		-3		V
Negative supply current (1 or 2)	Iee1 Iee2		10		mA
Total power consumption amp1 + amp2 (7Vpp output)	P		5,8		W

Mechanical dimensions (mm)



21.5Gbps electrical 7Vpp eye amp diagram



21.5Gbps DPSK optical eye diagram

Handling

These products are sensitive to electrostatic discharge and should not be handled except at a static free workstation. Take precautions to prevent ESD; use wrist straps, grounded work surfaces and recognized anti-static techniques when handling the device.

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