

## VWA-OR140-MP-223

**40GHz wide band amplifier  
40Gb/s Driver**

### Description

The **VWA-OR140-MP-223** is 22dB gain amplifier working from 100 kHz to 43 GHz, and delivering up to 3Vpp output voltage.

The amplifier requires a single voltage supply, and is packaged in a small size module equipped with GPPO connectors. Module is easily fixed on board by two M2.5 screws.

An extra integrated 50 ohm access can be used for symmetrical load use.

### Applications

- Wideband amplification
- Preamplifier
- Driver
- Fiber transmission
- 43Gbps
- OC768, STM256 transponders

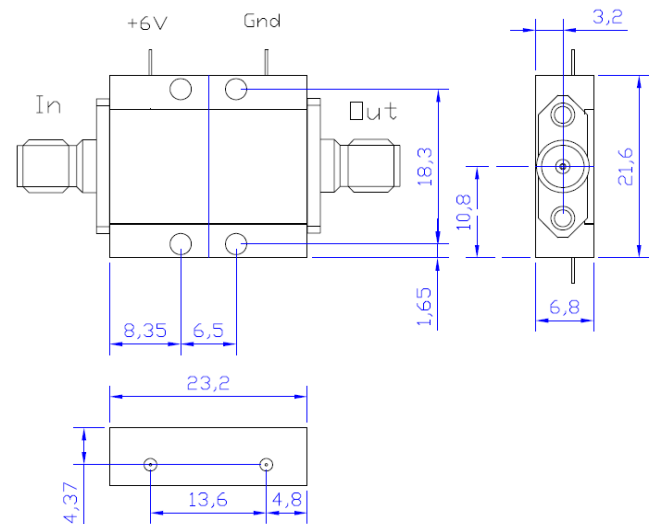
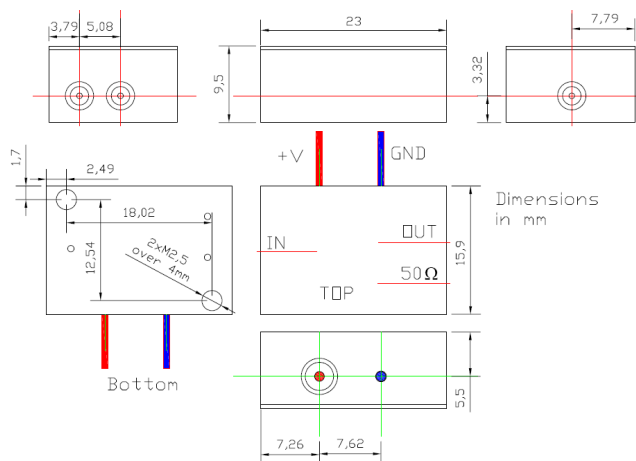
### Features

- Very small size 23 x 16 x 9.5 mm<sup>3</sup>
- +6V single voltage supply
- 50Ω RF Single ended input and output
- GPPO connectors
- K connector (BNK mechanics)
- AC coupled
- Wide band : 100kHz – 43 GHz
- Gain >22dB
- Low power <1.5W
- 3Vpp output level

### Ordering information

Product code	Description
VWA 00038 AA	43Gb/s pre-amplifier w/GPPO & 50 Ω
VWA 00050 AA	43Gb/s Driver w/GPPO & 50 Ω
VWA 00051 AA	43Gb/s Driver w/K connectors

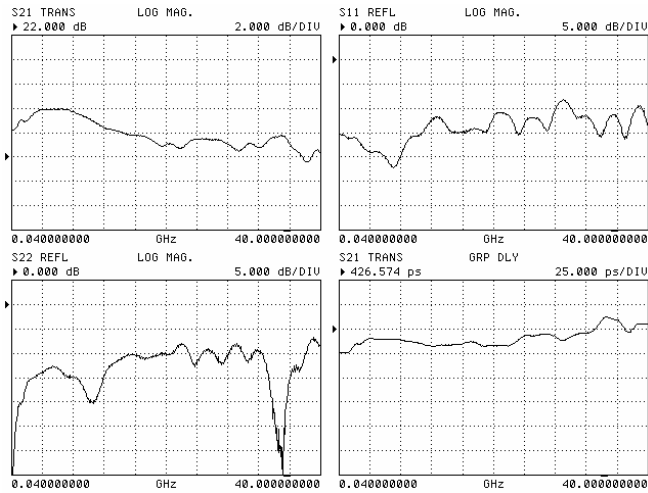
### Dimensions and pin out



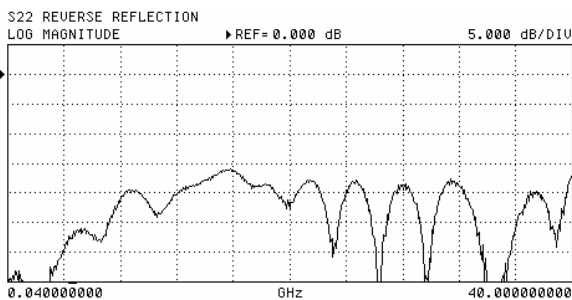
Environment Parameters		Symbols	Min	Max	Units
Operating temperature	Case (bottom)	T <sub>op</sub>	0	+75	°C
Storage temperature	Case (bottom)	T <sub>stg</sub>	- 40	+85	°C

## Typical characteristics

### Amplifier S parameters

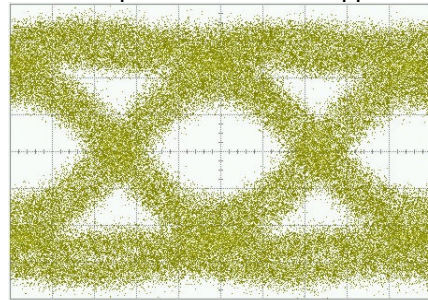


### Internal 50 Ohm load S parameters

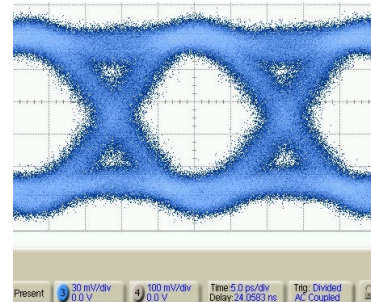
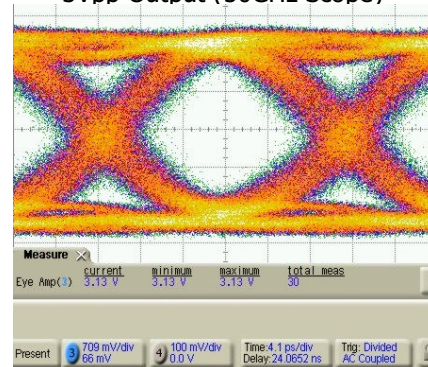


### Eye diagram @ 42,7Gb/s

#### Output with Vin = 7mVpp



#### 3Vpp Output (50GHz Scope)



### Input

## Absolute maximum ratings

Maximum ratings	Symbols	Min	Max	Units
Positive supply voltage	Vdd <sub>max</sub>	0	+8	V

## Handling

This product is 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 **VWA-OR140-MP-223** transient and over voltage. Over voltage maximum rating section may cause



Care should be taken to avoid supply above the maximum specified in absolute permanent damage to the device.

Head Office : rue de la Croix Blanche - Immeuble LOGI - Les Loges en Josas 78350 France  
<http://www.vectrawave.com> ☎ +33 (0)619 870 560 ☎ +33 (0)139 564 012 mail : [info@vectrawave.com](mailto:info@vectrawave.com)

Product Catalog Rev 0.7 VectraWave Proprietary information subject to change without notice October 08 p 27 /32