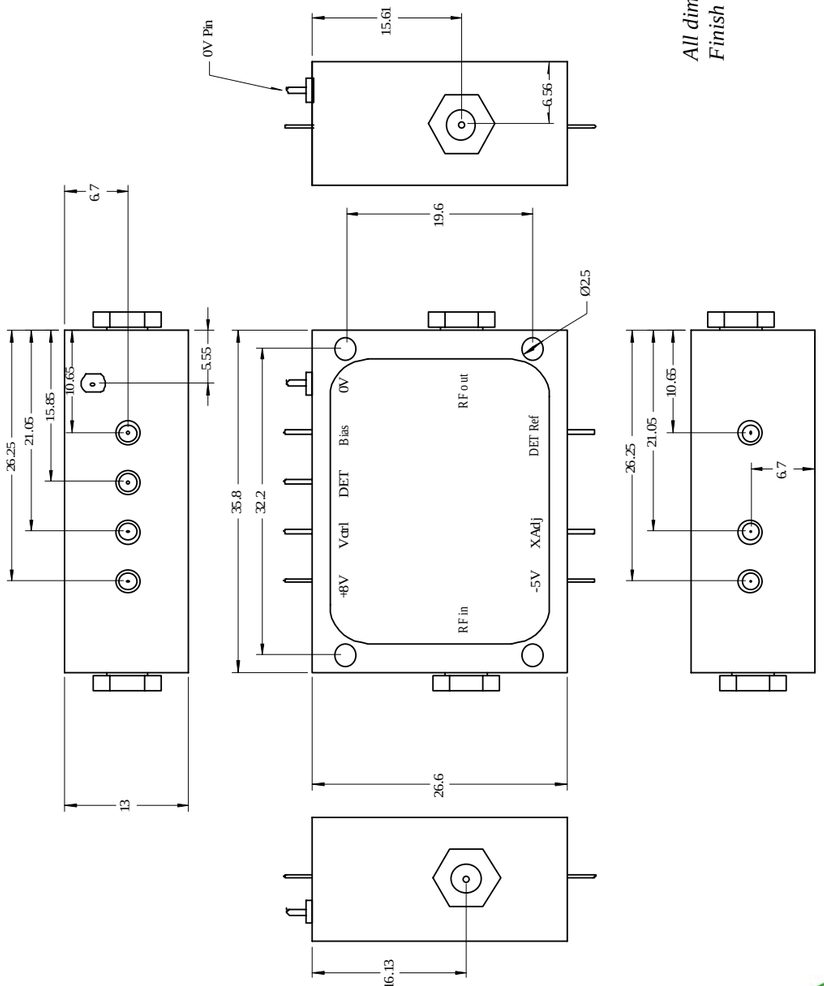


All dimensions in mm
Finish is gold plate

Contact

UKAS MANAGEMENT SYSTEMS 001

LLOYD'S REGISTER QUALITY ASSURANCE ISO9001

Unit 5, Chancerygate B/Centre,
Surrey KT6 7RA, England
www.latechniques.com

Manufactured in the UK
Specification subject to change without notification

LA Techniques Ltd

LA32-04-09
20 Gb/s DRIVER AMPLIFIER

The LA32-04-09 is a power amplifier mainly intended for use as an optical modulator driver. It is able to support data rates to 23 Gb/s with good pulse response and low jitter. Some of its key features are as follows.

- 30 kHz - 23 GHz Bandwidth
- > 7 v_{pp} Output at 20 Gb/s
- Low power dissipation (<3 W)
- Crossover adjustment
- Output level control
- Output level detector
- Bias tee in output
- Environmentally sealed

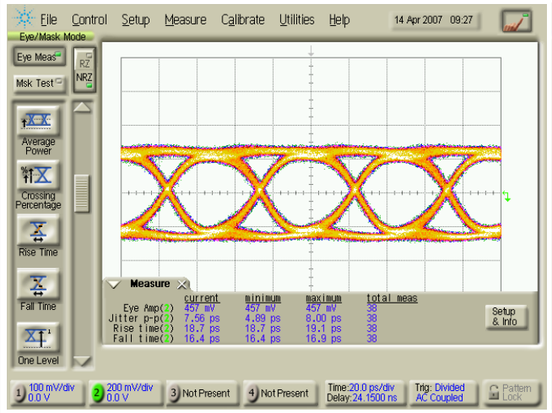
Electrical Specification
(0°C to +60°C Case Temperature)

Parameter	Units	Min	Typ	Max
Bandwidth				
Low frequency 3 dB point	kHz	-	30	60
High frequency 3 dB point	GHz	18	23	-
Gain (non-inverting)	dB	25	28	32
Gain ripple				
500 kHz - 18 GHz	dB	-	±2.0	±3.5
Input return loss (f < 16 GHz)	-	8	10	-
Output return loss (f < 16 GHz)	-	8	10	-
Ouput voltage[2], V_{max}	V_{pp}	7.0	8.0	-
Output voltage control range	V_{pp}	4.0	-	V_{max}
Output control voltage range	V	-10	-	-1
Output temperature stability[4]	%	-	5	10
Detector output [1]	V	-	0.45	-
Detector output resistance	kΩ	-	15	17
Pulse characteristics[1,2,3]				
Rise time (10 – 90%)	ps	-	15	20
Fall time (10 – 90%)	ps	-	15	20
Over / undershoot	%	-	5	10
Droop (time < 10 ns)	%	-	5	-
Jitter (peak to peak)	ps	-	5	8
Typical crossover adjustment range[1]	%	-5	-	+5
Crossover control voltage range	V	-5	-	+5
RF Output bias-T				
dc path resistance	kΩ	0.9	1.0	1.2
maximum voltage	V	-10	-	+15
Supply voltage (positive)	V	+8.2	+8	+7.8
Supply current (positive)[1,2]	mA	-	340	400
Supply voltage (negative)	V	-4.9	-5	-5.1
Supply current (negative)	mA	-	55	65
Operating case temperature	°C	-10	-	+65

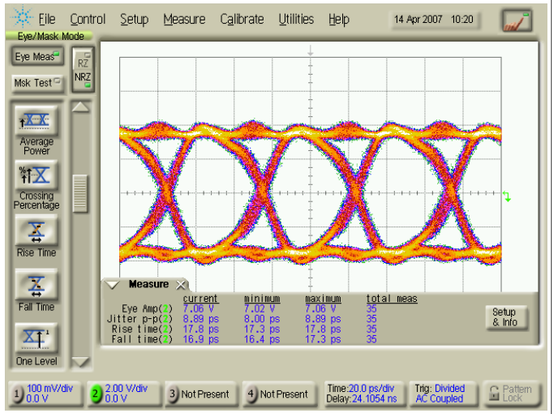
Notes: 1. 20 Gb/s 2^{23}-1 PRBS data, 7.0 Veye output
2. 0.5 v_{pp} input drive, 18 ps input rise / fall time
3. Output set <7 Vpp
4. Output set between 5 and 7 Vpp at 25°C

20 Gb/s Eye Diagram
(output set to 7V)

Input test signal

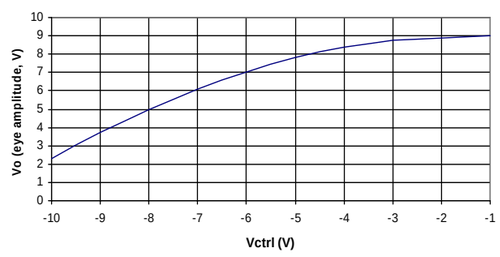


Output signal

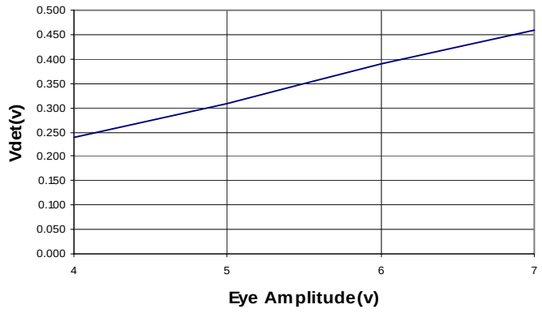


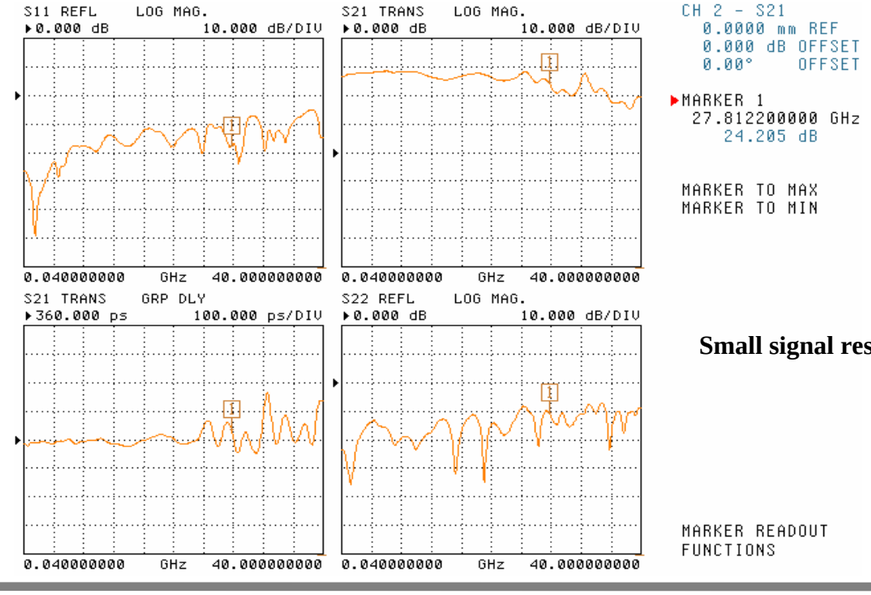
LA32-04-09

Vo vs Control Voltage



Differential Detector Output Variation





Small signal response