

# TEST REPORT

## UKUS

INDICE DE REVISION		-1	A	B	C	D
Etabli par :	Date : Nom :	21/09/15 CHATAGNIER F.				

INDICE DE REV.	DESCRIPTION DES EVOLUTIONS
-1	1st version
A	

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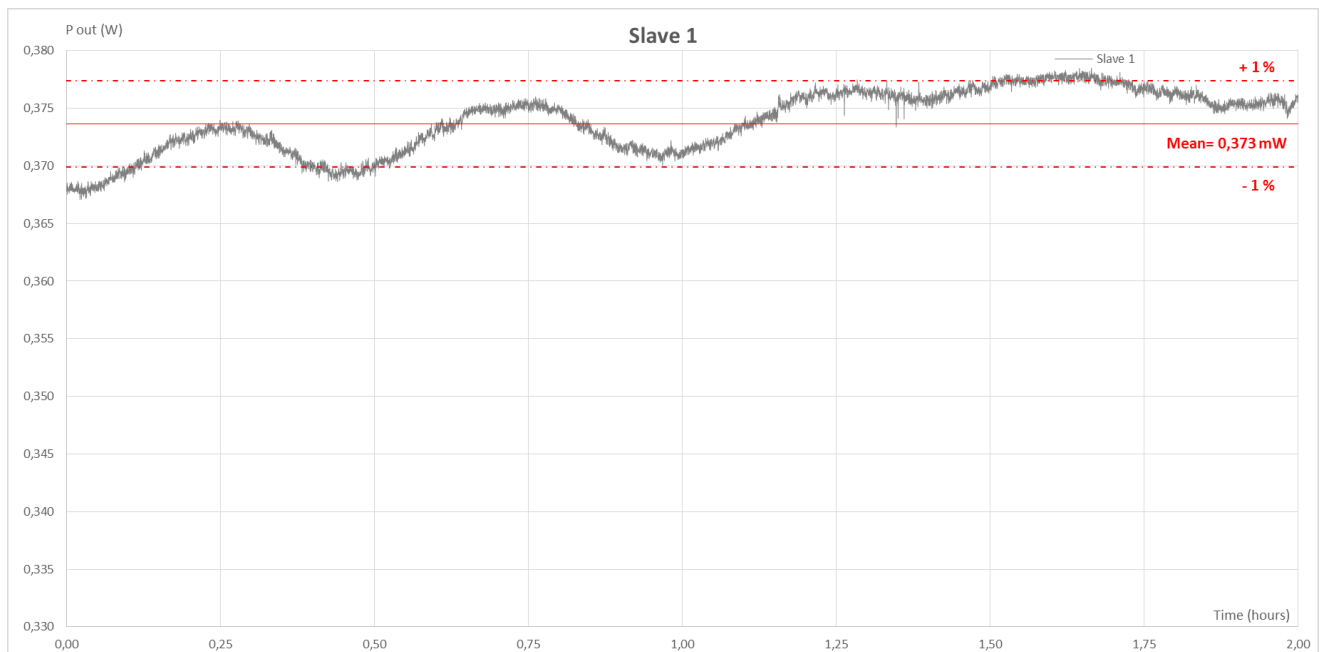
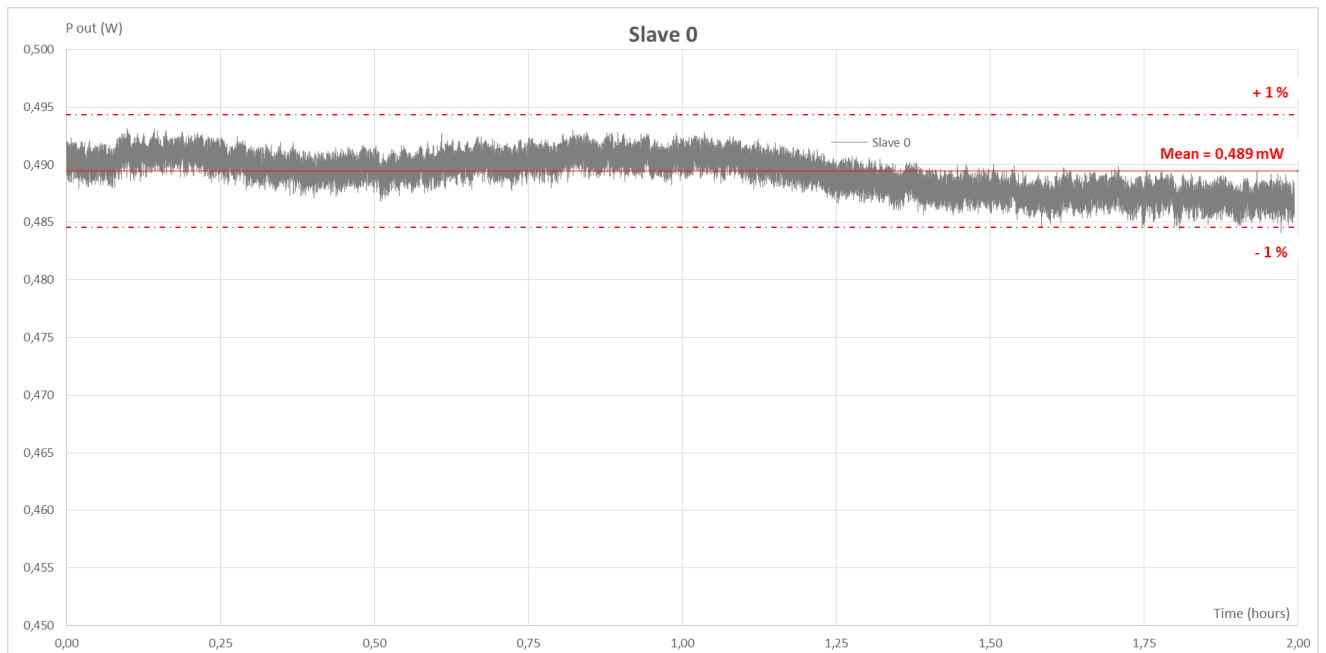
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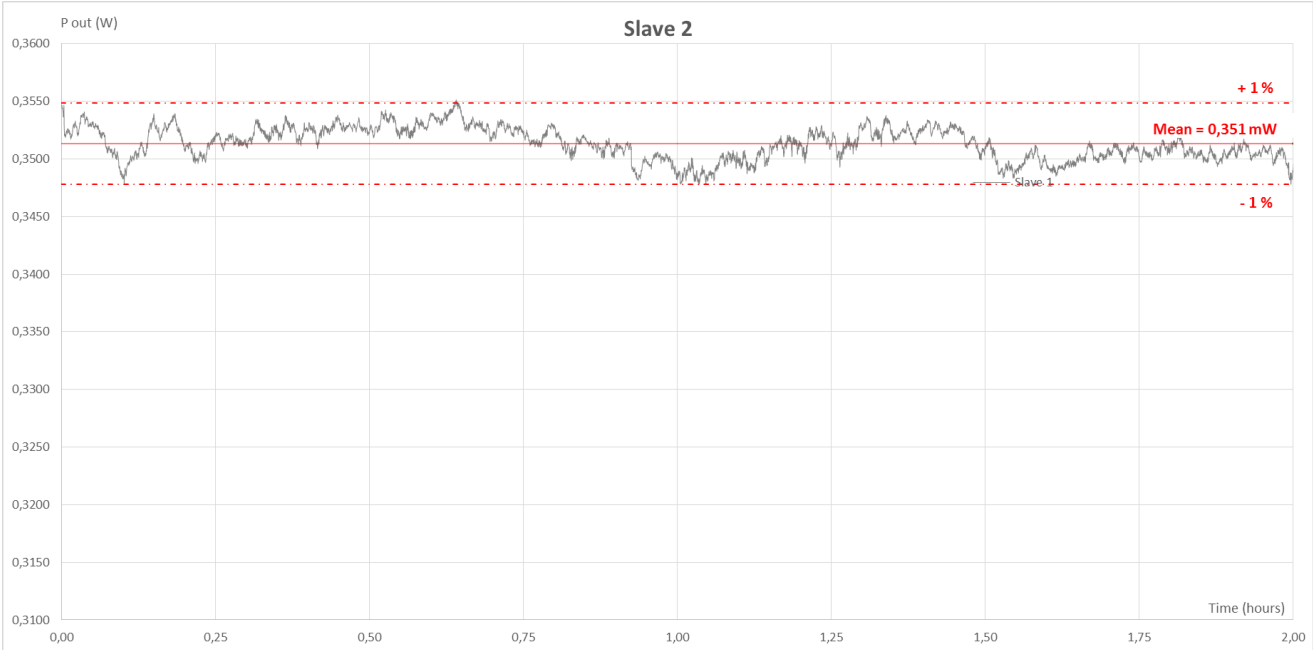
## GLOSSARY

AOM:	Acousto-Optical Modulator
PER:	Polarization Extinction Ratio

We present here the most relevant measurements related to the Ukus laser system performances.

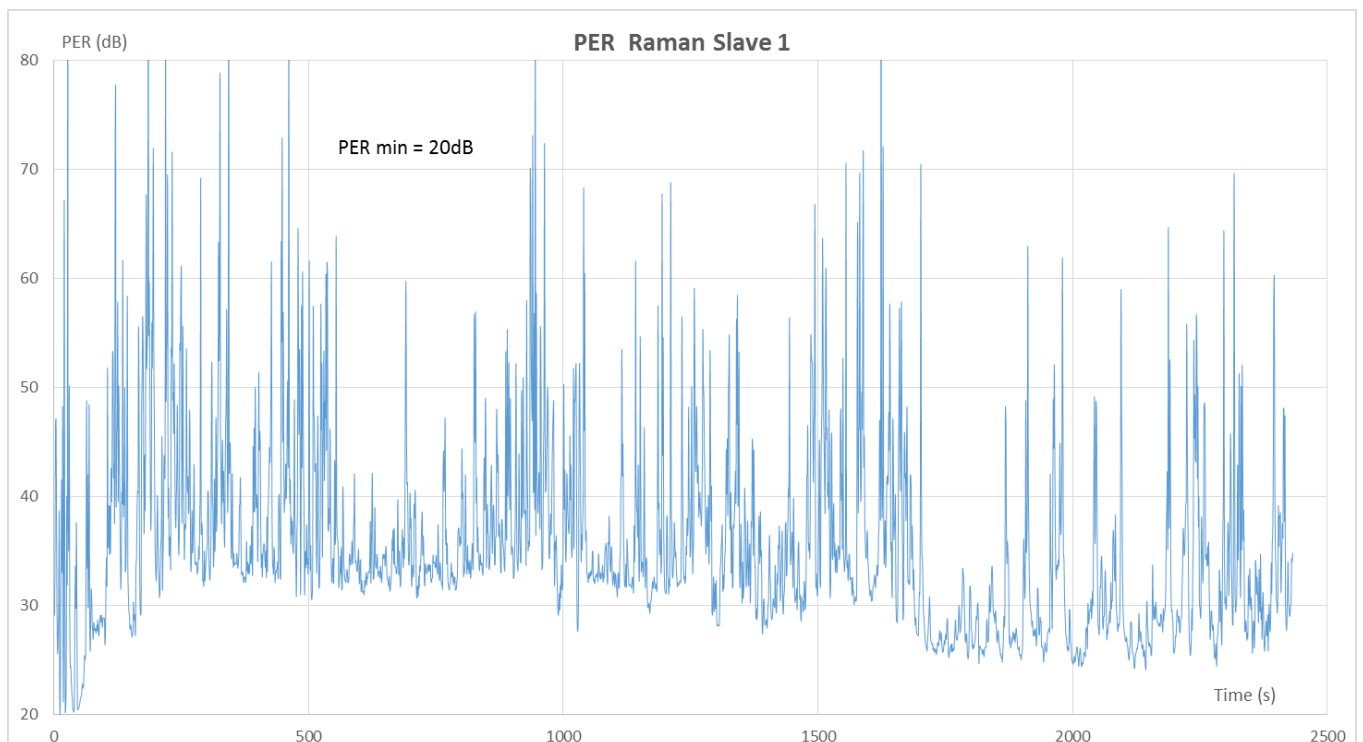
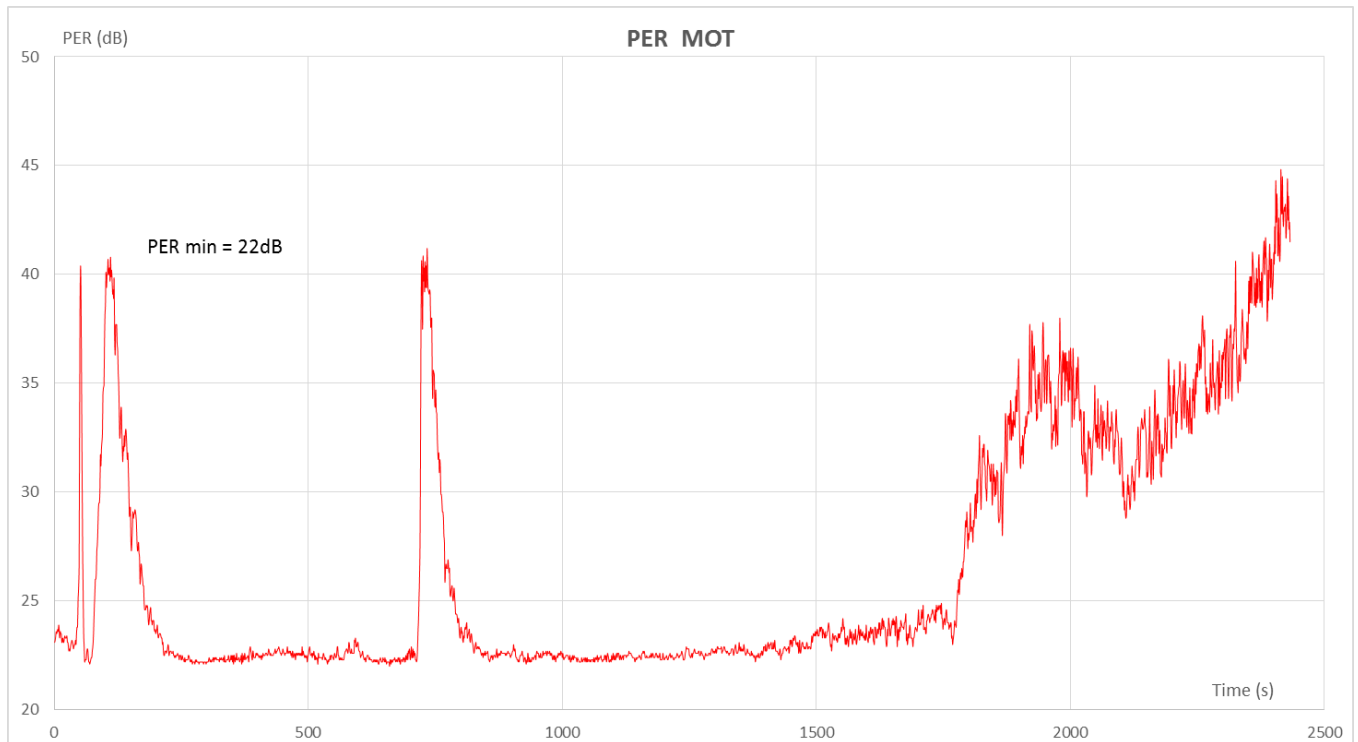
## 1 SHORT-TERM POWER STABILITY

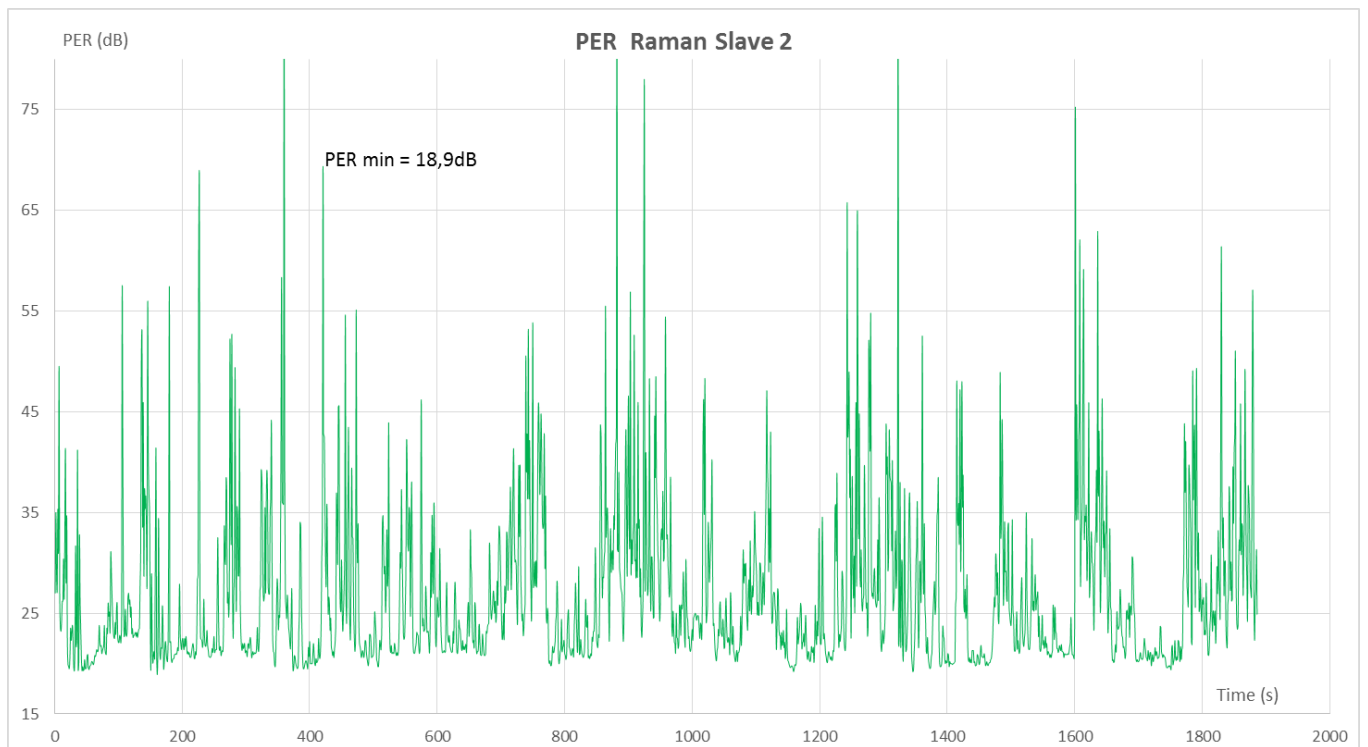




## 2 POLARIZATION EXTINCTION RATIO

For each output, the PER is continuously recorded for few minutes with the polarization analyzer Schäfter-Kirchoff SK010PA-NIR. The minimum value is given on each graph.

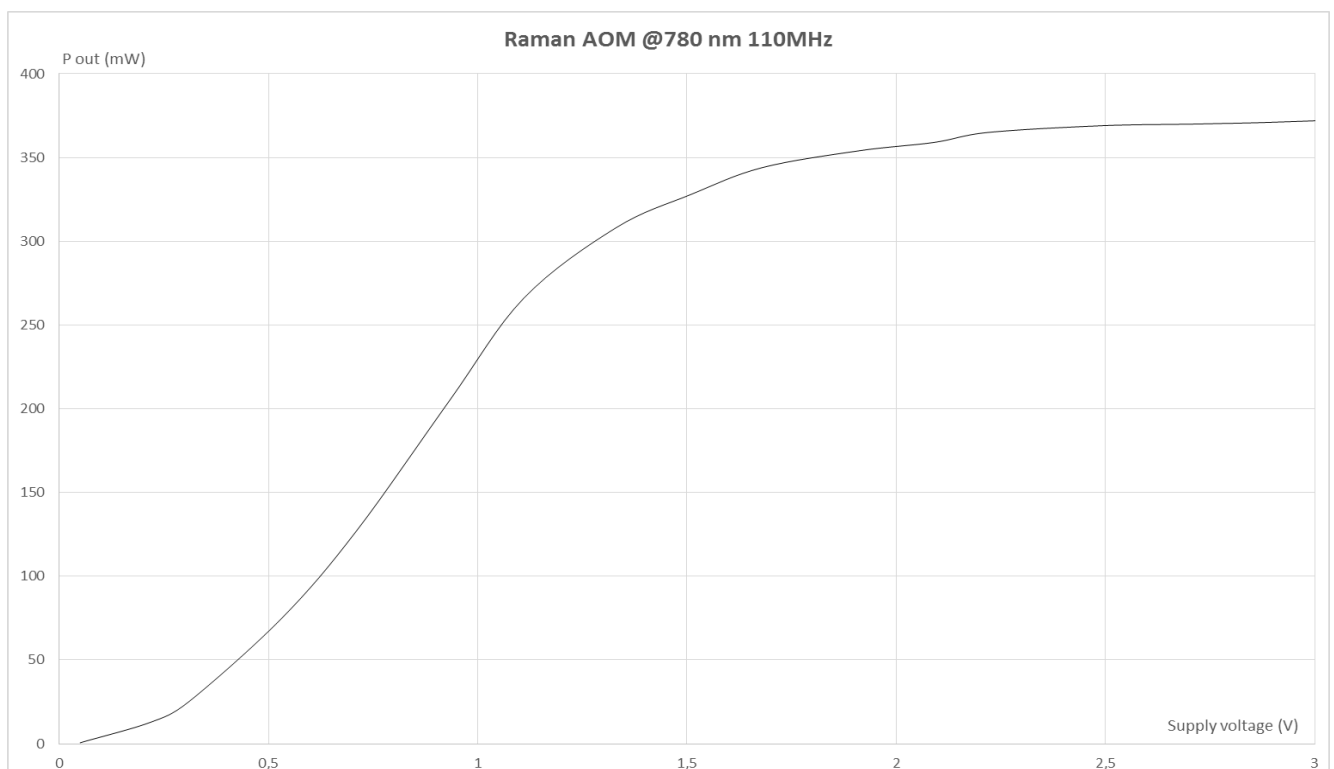
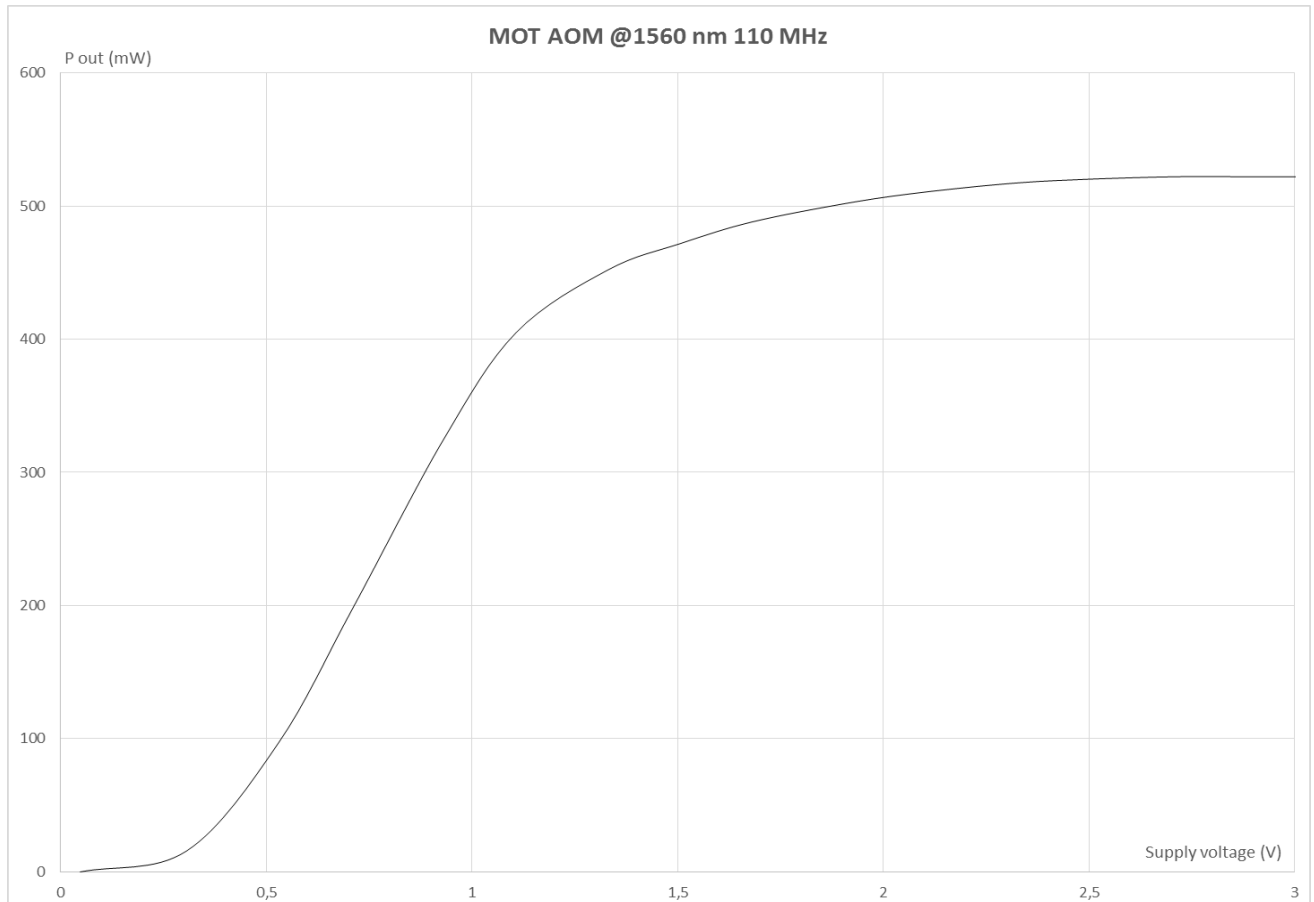


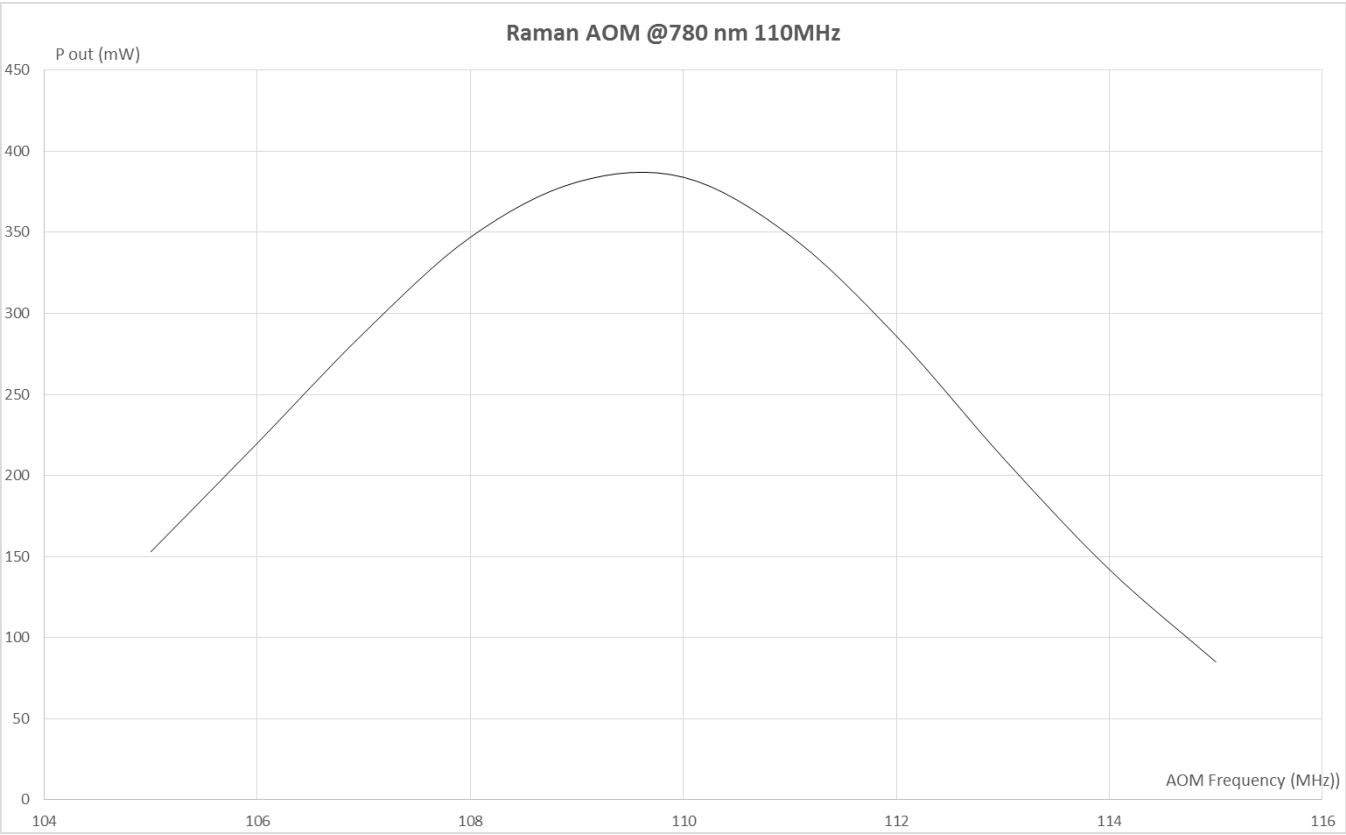


Outputs	PER min (dB)
MOT	22
Raman slave 1	20
Raman Slave 2	18.9

### 3 AOM BANDWIDTH

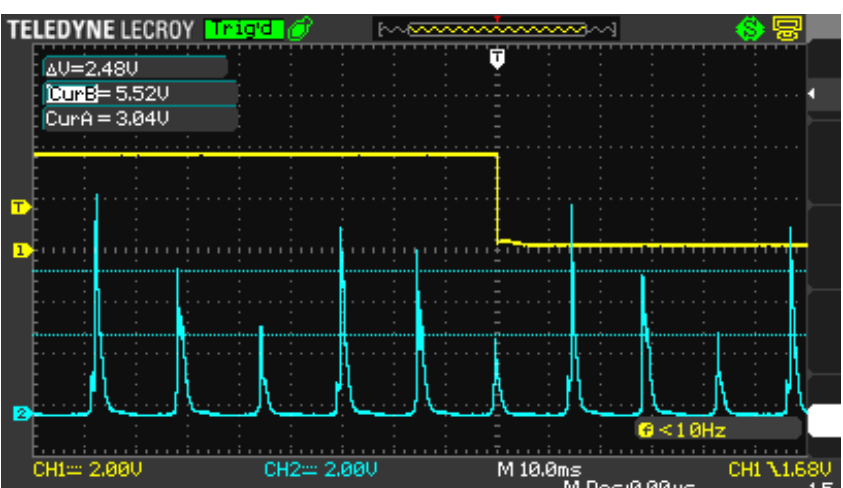
The central drive frequency of the AOM's is 110 MHz. The picture below indicates the normalized output power depending on the supply voltage:







## 4 PHASE MODULATOR FOR SIDEBAND GENERATION

<p>V RF @104.25 MHz</p>	
<p>220 mV</p>	 <p>TELEDYNE LECROY <b>Trig'd</b></p> <p>ΔU=1.25V CurB=240mV CurA=1.28V</p> <p>CH1= 2.00V CH2= 2.00V M 10.0ms M Pos:0.00μs CH1 1.68V</p> <p>&lt;10Hz</p>
<p>310 mV</p>	 <p>TELEDYNE LECROY <b>Armed</b></p> <p>ΔU=10.2V CurB=2.56V CurA=1.28V</p> <p>CH1= 2.00V CH2= 2.00V M 10.0ms M Pos:0.00μs CH1 1.68V</p> <p>&lt;10Hz</p>
<p>400 mV</p>	 <p>TELEDYNE LECROY <b>Trig'd</b></p> <p>ΔU=2.48V CurB=5.52V CurA=3.04V</p> <p>CH1= 2.00V CH2= 2.00V M 10.0ms M Pos:0.00μs CH1 1.68V</p> <p>&lt;10Hz</p>

<p>530 mV</p>	 <p>TELEDYNE LECROY Armed</p> <p><math>\Delta U = 3.68V</math>  <math>I_{Curb} = 5.92V</math>  <math>I_{CurA} = 2.24V</math></p> <p>CH1= 2.00V CH2= 2.00V M 10.0ms CH1 1.68V  M Pos: 0.00 <math>\mu s</math> <math>\Phi &lt; 10Hz</math></p>
<p>1,33 V</p>	 <p>TELEDYNE LECROY Armed</p> <p><math>\Delta U = 3.20V</math>  <math>I_{Curb} = 1.84V</math>  <math>I_{CurA} = 5.04V</math></p> <p>CH1= 2.00V CH2= 2.00V M 10.0ms CH1 1.68V  M Pos: 0.00 <math>\mu s</math> <math>\Phi &lt; 10Hz</math></p>