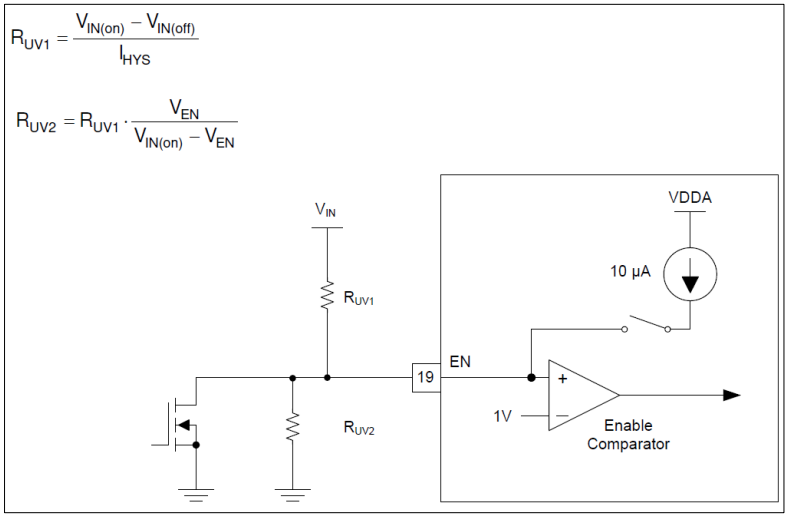
EN setting

ENABLE (EN)						
V_{SDN}	Shutdown to standby threshold	V_{EN} rising		0.5		V
$V_{EN-HIGH}$	Enable voltage rising threshold	V_{EN} rising, enable switching	0.95	1.0	1.05	V
I_{EN-HYS}	Enable hysteresis	V_{EN} = 1.1 V	–12	–10	–8	µA

$$R_{UV1} = \frac{V_{IN(on)} - V_{IN(off)}}{I_{HYS}}$$

$$R_{UV2} = R_{UV1} \cdot \frac{V_{EN}}{V_{IN(on)} - V_{EN}}$$



Ruv1=1120kohm
Ruv2=43kohm

VIN(on)=27.047V
VIN(off)=15.847V

Question1

I'm substituting IHYS=10uA for the calculation, but is this correct?
Is it 20uA for dual-phase?

Startup

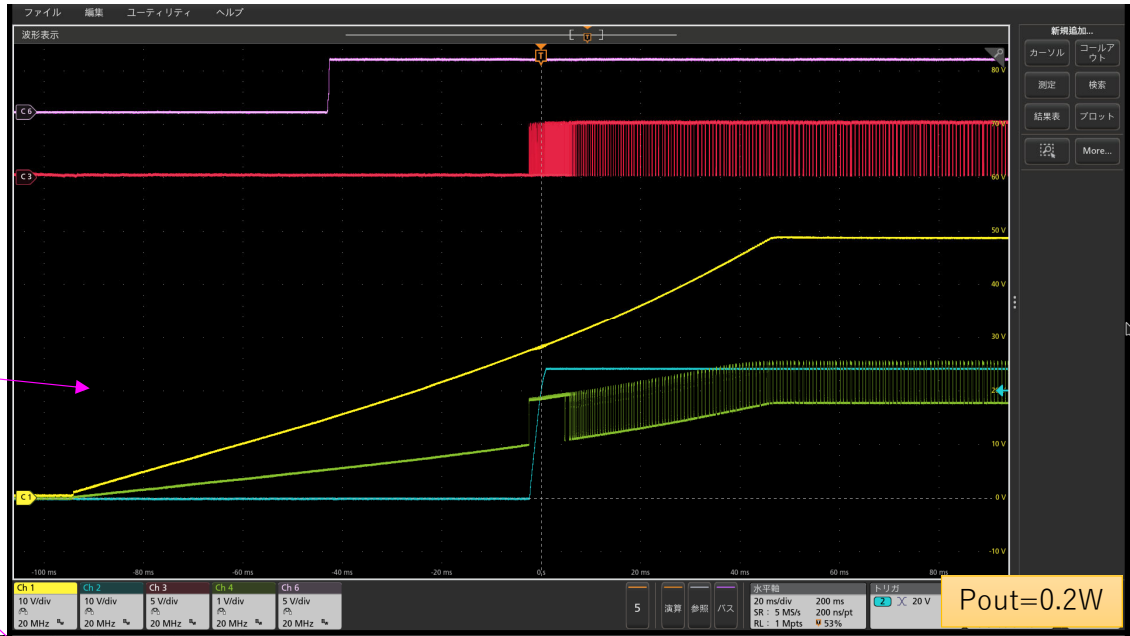
1ch : Vin 48V
2ch : Vout 24V
3ch : PG/SYNCOUT(primary), PFM/SYNC(secondary)
4ch : EN
5ch : VDDA

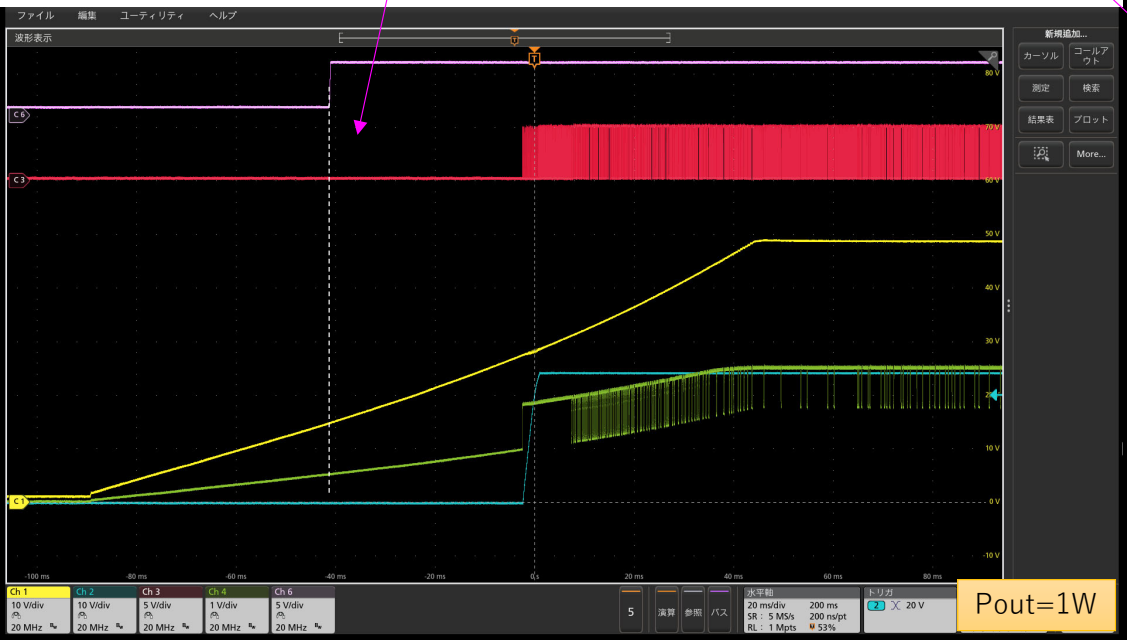
Question2

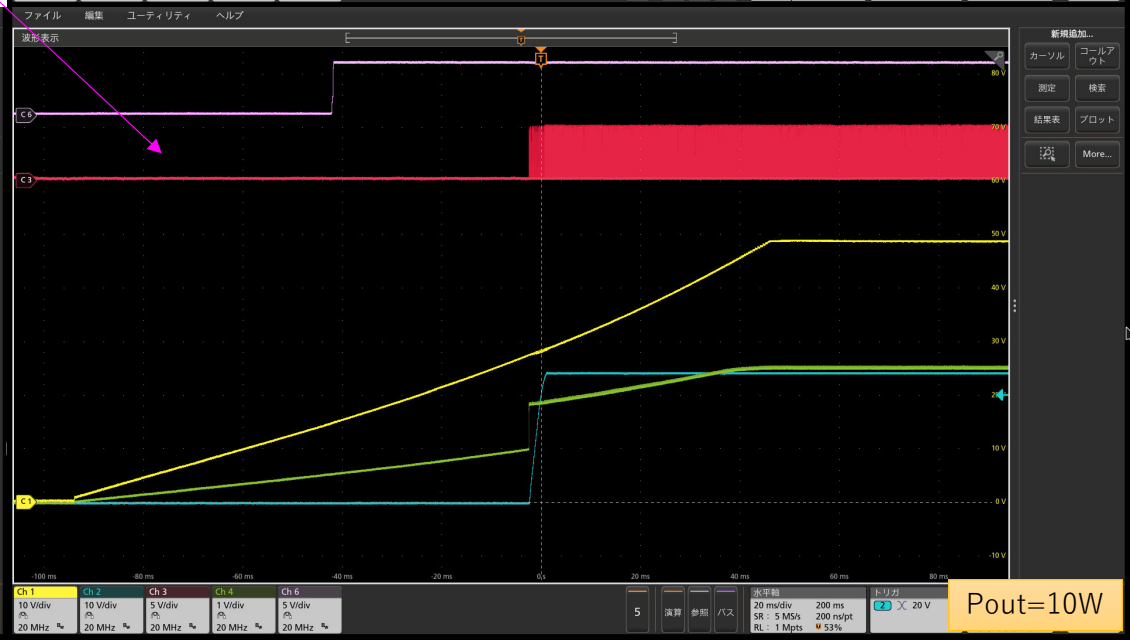
Why does the EN voltage fluctuate?

The EN voltage is not stable when the load is light.
It is not fixed at either high or low level.

If the oscillation is continuous,
the EN hysteresis will switch as expected.
the EN voltage is fixed at a high level.







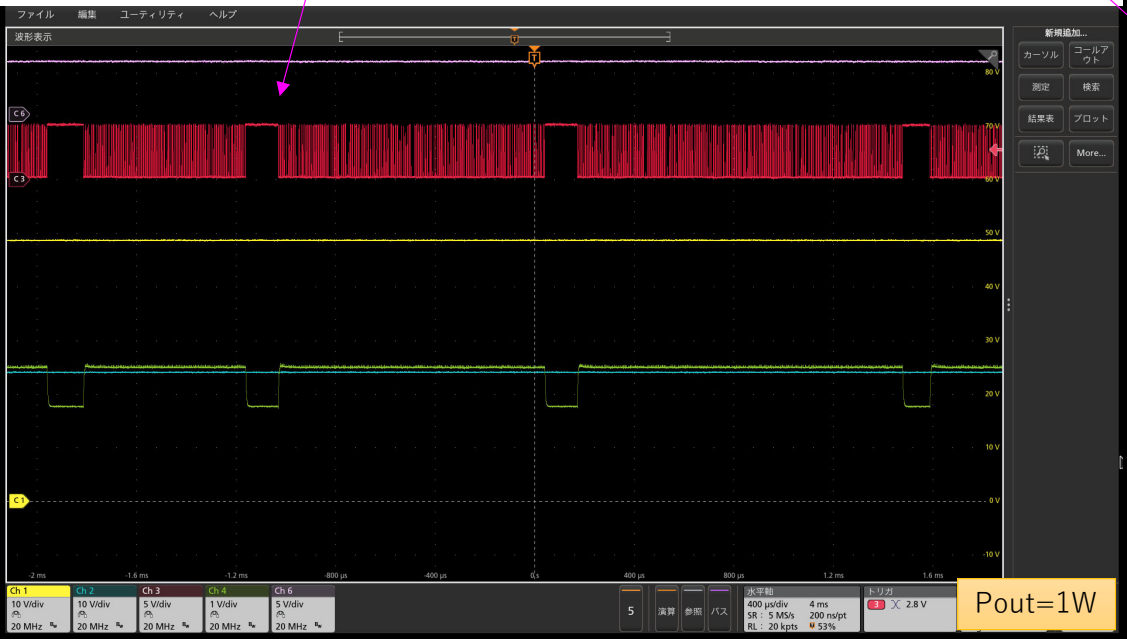
Steady state

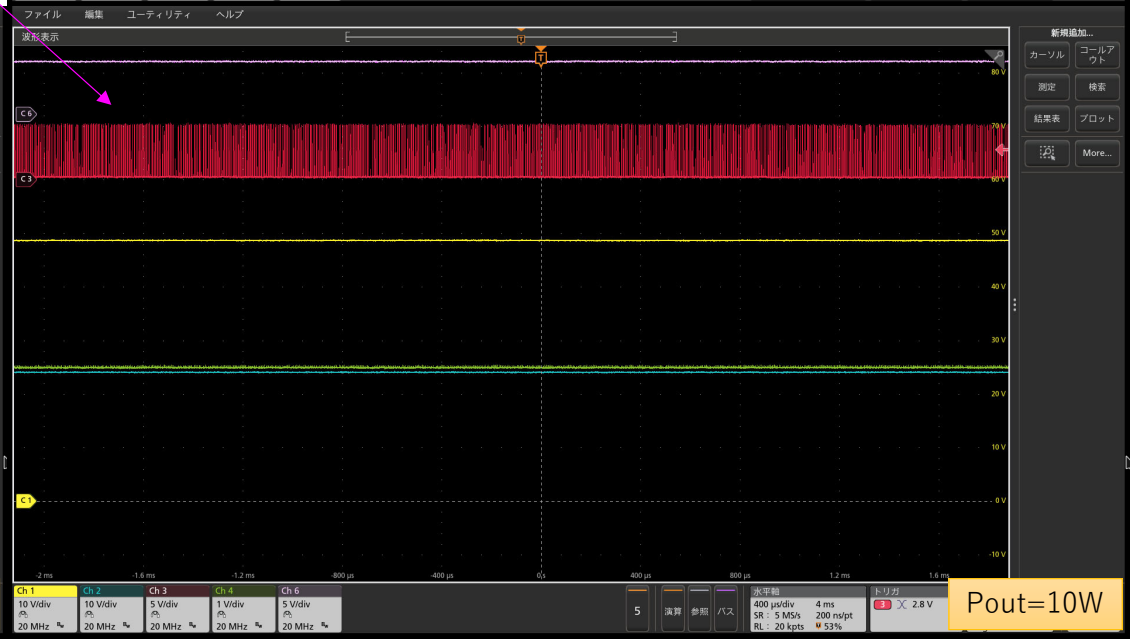
- 1ch : Vin 48V
- 2ch : Vout 24V
- 3ch : PG/SYNCOUT(primary), PFM/SYNC(secondary)
- 4ch : EN
- 5ch : VDDA

The EN voltage is high
only while PG/SYNCOUT (primary) is outputting a signal.

As the load gets heavier,
the period during which the EN voltage is high becomes longer.

When the load becomes heavy enough,
the EN voltage is fixed at a high level.





Shutdown

- 1ch : Vin 48V
- 2ch : Vout 24V
- 3ch : PG/SYNCOUT(primary), PFM/SYNC(secondary)
- 4ch : EN
- 5ch : VDDA

When VIN drops to 27V,
the low level of the EN voltage becomes 1V and the device stops operating.
I would like it to continue operating until Vin drops to 15.8V,
but the expected hysteresis operation is not achieved.

Since EN is fixed at a high level,
operation can continue until VIN drops significantly.