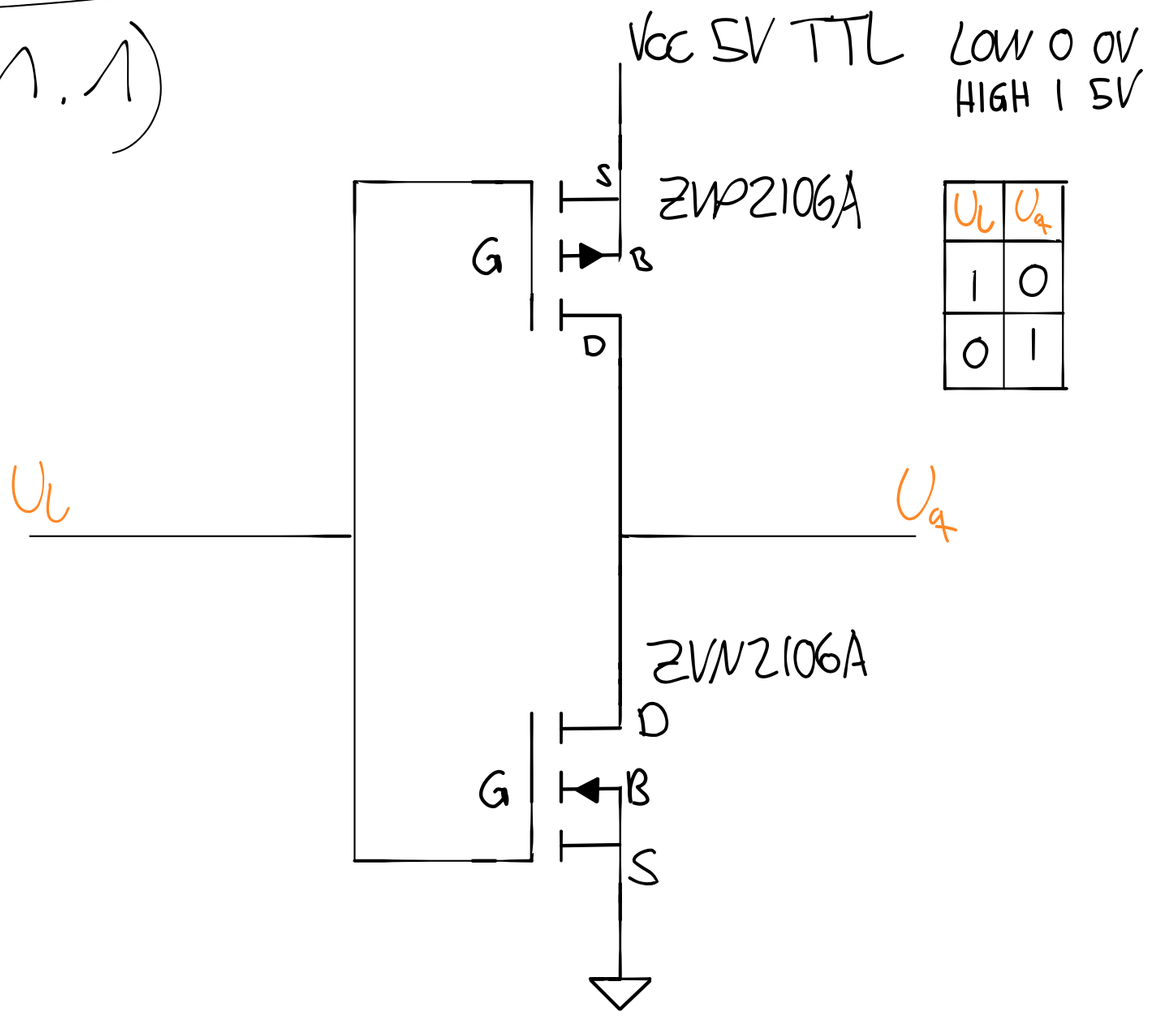
A CMOS!

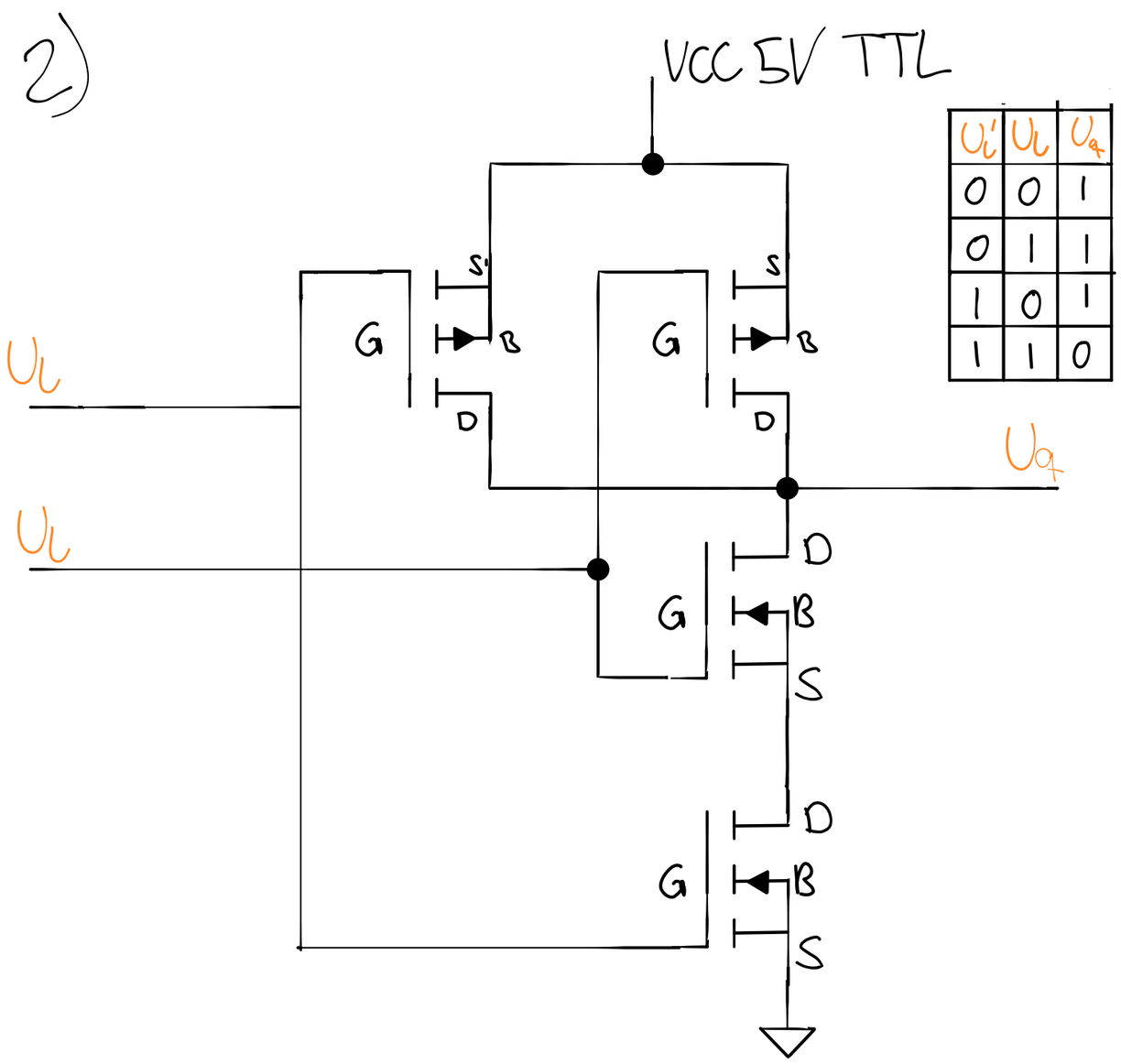
1.1)



U_L	U_q
1	0
0	1

Das Gate ist durch SiO2 Schicht isoliert.
⇒ Gate ist nicht intern verbunden. Wie auch das Schaltsymbol andeutet. Dies macht einen unipolaren Transistor aus.

2)



U_i'	U_L	U_q
0	0	1
0	1	1
1	0	1
1	1	0

1.3)

ZVN2106A:

max. V_{DS} = 60V

$V_{GS(th)}$ = min 0,8V max 2,4V
@ I_D = 1mA ∧ V_{DS} = V_{GS}

Betriebstemperaturbereich:
-55 bis 150C°

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DS}	60	V
Continuous Drain Current at T_{amb}=25°C	I_D	450	mA
Pulsed Drain Current	I_{DM}	8	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at T_{amb}=25°C	P_{tot}	700	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	BV_{DSS}	60		V	I_D=1mA, V_{GS}=0V
Gate-Source Threshold Voltage	$V_{GS(th)}$	0.8	2.4	V	ID=1mA, V_{DS}= V_{GS}
Gate-Body Leakage	I_{GSS}		20	nA	V_{GS}=± 20V, V_{DS}=0V
Zero Gate Voltage Drain Current	I_{DSS}		500 100	nA µA	V_{DS}=60 V, V_{GS}=0 V_{DS}=48 V, V_{GS}=0V, T=125°C(2)
On-State Drain Current(1)	$I_{D(on)}$	2		A	V_{DS}=18V, V_{GS}=10V
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		2	Ω	V_{GS}=10V,I_D=1A
Forward Transconductance (1)(2)	g_{fs}	300		mS	V_{DS}=18V,I_D=1A
Input Capacitance (2)	C_{iss}		75	pF	V_{DS}=18 V, V_{GS}=0V, f=1MHz
Common Source Output Capacitance (2)	C_{oss}		45	pF	
Reverse Transfer Capacitance (2)	C_{rss}		20	pF	

ZVP2106A:

max. V_{DS} = -60V

$V_{GS(th)}$ = min -1,5V max 3,5V
@ I_D = -1mA ∧ V_{DS} = V_{GS}

Betriebstemperaturbereich:
-55 bis 150C°

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DS}	-60	V
Continuous Drain Current at T_{amb}=25°C	I_D	-280	mA
Pulsed Drain Current	I_{DM}	-4	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at T_{amb}=25°C	P_{tot}	700	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	BV_{DSS}	-60		V	I_D=-1mA, V_{GS}=0V
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1.5	-3.5	V	ID=-1mA, V_{DS}= V_{GS}
Gate-Body Leakage	I_{GSS}		20	nA	V_{GS}=± 20V, V_{DS}=0V
Zero Gate Voltage Drain Current	I_{DSS}		-0.5 -100	µA µA	V_{DS}=-60 V, V_{GS}=0 V_{DS}=-48 V, V_{GS}=0V, T=125°C(2)
On-State Drain Current(1)	$I_{D(on)}$	-1		A	V_{DS}=-18 V, V_{GS}=-10V
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		5	Ω	V_{GS}=-10V,I_D=-500mA
Forward Transconductance (1)(2)	g_{fs}	150		mS	V_{DS}=-18V,I_D=-500mA
Input Capacitance (2)	C_{iss}		100	pF	V_{DS}=-18V, V_{GS}=0V, f=1MHz
Common Source Output Capacitance (2)	C_{oss}		60	pF	
Reverse Transfer Capacitance (2)	C_{rss}		20	pF	
Turn-On Delay Time (2)(3)	$t_{d(on)}$		7	ns	V_{DD}=-18V, I_D=-500mA
Rise Time (2)(3)	t_r		15	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$		12	ns	
Fall Time (2)(3)	t_f		15	ns	

Da es sich um eine Transistor Transistor Logik Schaltung handelt würde sich eine Spannung für LOW von 0V ∧ für HIGH von 5V anbieten