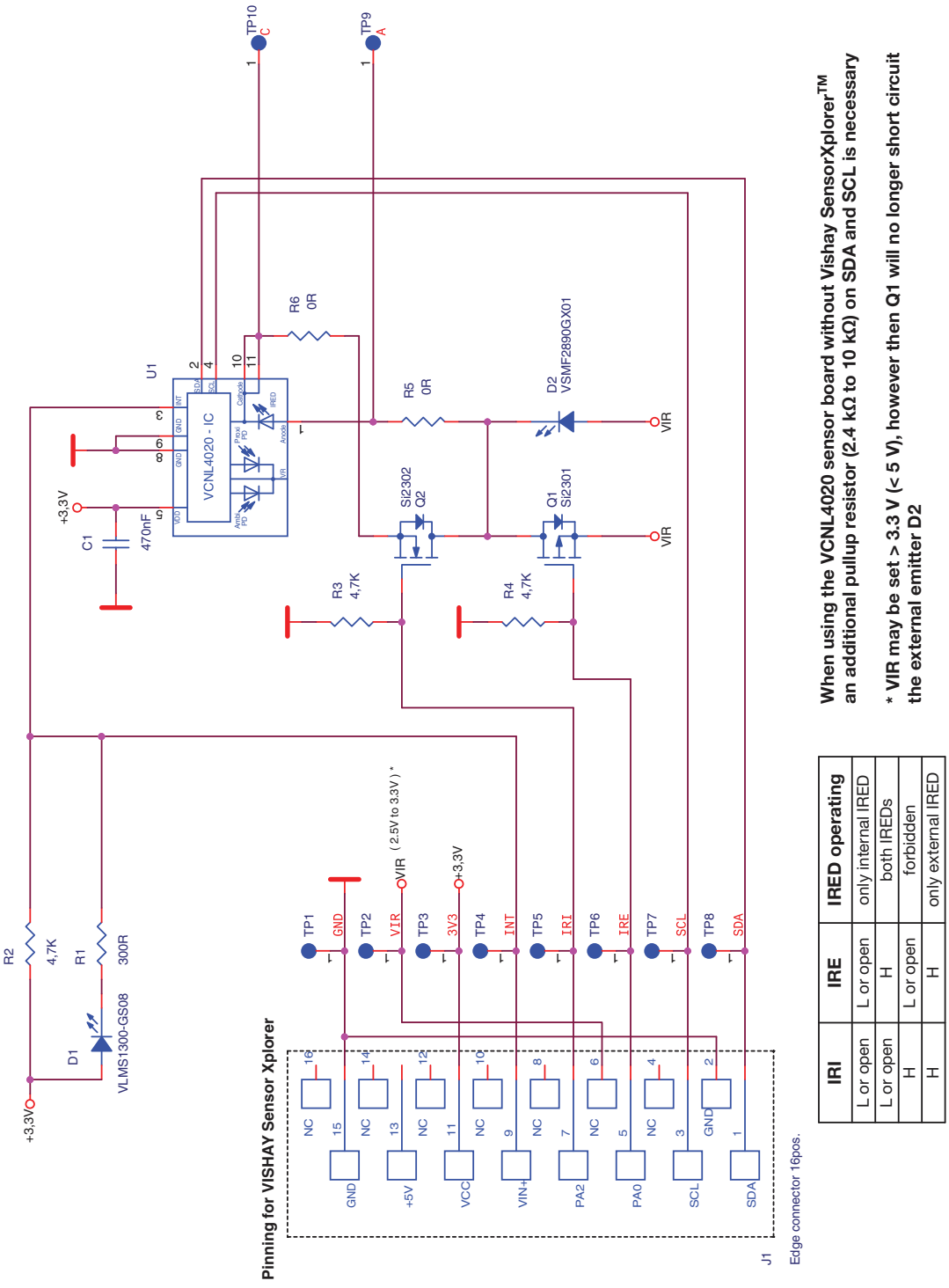
VCNL4020 Sensor Board

SCHEMATIC



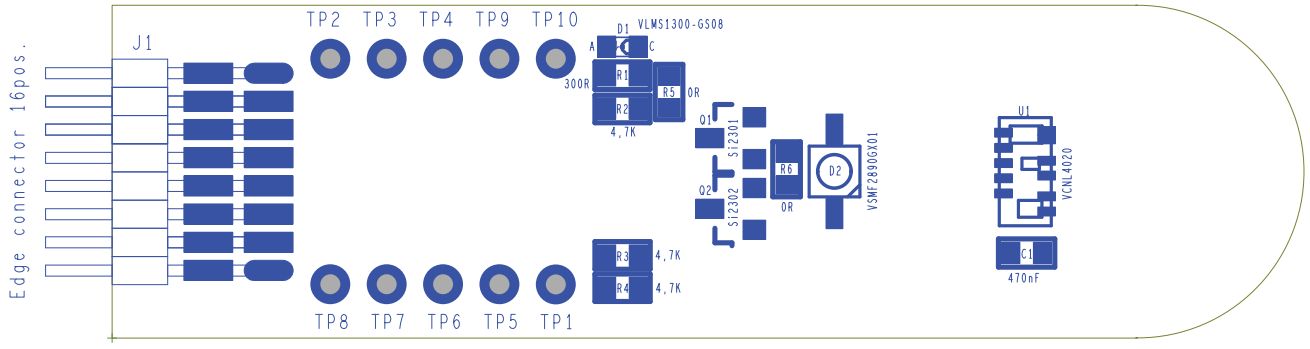
IRI	IRE	IRED operating
L or open	L or open	only internal IRED
L or open	H	both IREDs
H	L or open	forbidden
H	H	only external IRED

When using the VCNL4020 sensor board without Vishay SensorXplorer™ an additional pullup resistor (2.4 kΩ to 10 kΩ) on SDA and SCL is necessary

*** VIR may be set > 3.3 V (< 5 V), however then Q1 will no longer short circuit the external emitter D2**

ASSEMBLY

VCNL4020 sensor board, rev. 5.0



Assembly top

BILL OF MATERIALS					
ITEM	**QUANTITY**	**REFERENCE**	**COMPONENT CLASS**	**VALUE**	**PACKAGE**
1	1	C1	Capacitor NP	470 nF	SMC0603
2	1	D1	LED red	VLMS1300	SMD0603
3	1	D2	IR LED 850 nm	VSMY2850G	SMD
3	1	R1	Resistor	300 Ω	SMR0603
4	1	R2	Resistor	4.7 kΩ	SMR0603
5	1	R3	Resistor	4.7 kΩ	SMR0603
6	1	R4	Resistor	4.7 kΩ	SMR0603
7	1	R5	Resistor	0 Ω	SMR0603
8	1	R6	Resistor	0 Ω	SMR0603
9	1	Q1	Transistor	Si2301	SMSOT23GSD
10	1	Q2	Transistor	Si2302	SMSOT23GSD
11	1	U1	Sensor	VCNL4020	SMD
12	1	J1	Edge connector	2 x 8 pos.	SMD header strip