

# Stückliste

## Bill of Materials

Bezeichnung / Name : Sensor Hub

18.07.2020

1.2

Nummer Number	Bezeichnung Description	Wert Value	Gehäuse Case	Hersteller Manufacturer	Herstellerbezeichnung Manufacturer's designation	Lieferant Distributor	Bestellnummer Order number	Anzahl Quantity
C3	Unpolarized capacitor	1uF	C_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Kemet	C0805X105K3RAC3316	Mouser	80-C0805X105K3R3316	1
C2, C6, C7, C8	Unpolarized capacitor	100nF	C_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Kemet	C0805C104K5RAC7411	Mouser	80-C0805C104K5RACLR	4
C4, C9	Unpolarized capacitor	10uF	C_0805_2012Metric_Pad1.15x1.40mm_HandSolder	TDK	C2012X7S1E106K125AE	Mouser	810-C2012X7S1E106125	2
C5	Polarized capacitor	100uF	CP_EIA-1608-08_AVX-J_Pad1.25x1.05mm_HandSolder	AVX	F980J107MMAAXE	Mouser	581-F980J107MMAAXE	1
D1, D2	Schottky diode	ZLLS500	D_SOT-23_ANK	Diodes Incorporated	ZLLS500TA	Mouser	522-ZLLS500TA	2
IC1	UVA sensor	VEML6070	OPLGA-6	Vishay Semiconductors	VEML6070	Mouser	78-VEML6070	1
IC2	Step-down battery charger	LT3652EMSE	MSOP-12-1EP_3x4mm_P0.65mm_EP1.65x2.85mm	Analog Devices	LT3652EMSE#PBF	Mouser	584-LT3652EMSE#PBF	1
IC3	4-in-1 sensor, gas, humidity, pressure, temperature	BME680	Bosch_LGA-8_3x3mm_P0.8mm_ClockwisePinNumbering	Bosch Sensortec	BMP680	Mouser	262-BME680	1
IC4	Ambient light sensor	BH1726	WSN-8-1EP_2x2mm_P0.5mm_EP0.9x1.6mm	Rohm Semiconductor	BH1726NUC-E2	Mouser	755-BH1726NUC-E2	1
IC5	Temperature Sensor	MCP9808	MSOP-8_3x3mm_P0.65mm	Microchip	MCP9808T-E/MS	Mouser	579-MCP9808T-E/MS	1
L1	Inductor	22uH	L_2512_6332Metric_Pad1.52x3.35mm_HandSolder	Vishay / Dale	IDC2512ER220M	Mouser	70-IDC2512ER220M	1
M1		ParticleArgon	ParticleArgon	Particle	ARGNKIT	Mouser	465-ARGNKIT	1
R1, R2	Resistor	10k	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	TE Connectivity	CRGP0805F10K	Mouser	279-CRGP0805F10K	2
R3	Resistor	NTC	PinHeader_1x02_P2.54mm_Vertical	Murata Electronics	NXRT15XH103FA5B040	Mouser	81-NXRT15XH103FA5B40	1
R4	Resistor	205k ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Rohm Semiconductor	KTR10EZPF2053	Mouser	755-KTR10EZPF2053	1
R5	Resistor	56k ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Rohm Semiconductor	KTR10EZPF5602	Mouser	755-KTR10EZPF5602	1
R6	Resistor	220k ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Bourns	CHV0805-FX-2203ELF	Mouser	652-CHV0805FX2203ELF	1
R7	Resistor	0R22 ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Panasonic	ERJ-U6QJR22V	Mouser	667-ERJ-U6QJR22V	1
R8	Resistor	120k ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Rohm Semiconductor	KTR10EZPF1203	Mouser	755-KTR10EZPF1203	1
R9	Resistor	20k5 ±1%	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	Rohm Semiconductor	KTR10EZPF2052	Mouser	755-KTR10EZPF2052	1
R10, R11, R12, R13, R14, R15	Resistor	3k3	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	TE Connectivity	CRGP0805F3K3	Mouser	279-CRGP0805F3K3	6
R16	Resistor	270k	R_0805_2012Metric_Pad1.15x1.40mm_HandSolder	TE Connectivity	CRGP0805F270K	Mouser	279-CRGP0805F270K	1
RV1	Potentiometer	10k	Potentiometer_Vishay_TS53YJ_Vertical	Vishay	TS53YJ103MR10	Mouser	72-TS53YJ-10K	1
SW1	1x DIP Switch, Single Pole	ENABLE	SW_DIP_SPSTx01_Slide_Omron_A6S-110x_W8.9mm_P2.54mm	Omron	A6S-1104-PH	Mouser	653-A6S1104PH	1
X1		WIND	3-2172067-2	TE Connectivity	3-2172067-2	Mouser	571-3-2172067-2	1
X2		SOLAR	2-2172067-2	TE Connectivity	2-2172067-2	Mouser	571-2-2172067-2	1

Legende / Legend:

Nicht bestückt	Not assembled
Durchsteckmontage	Through-Hole technology

### ***Mechanical Components***

18.07.2020

1.2

[illegible]

Legende / Legend:

*Not assembled*

## Technische Spezifikationen

### Technical Specifications

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18.07.2020

1.2

Bezeichnung <i>Description</i>	Spezifikation <i>Specification</i>
Abmaße <i>Dimensions</i>	72 x 50 mm
Standard <i>Standard</i>	IPC-A-610 E Class 2 oder höher <i>IPC-A-610 E Class 2 or higher</i>
Basismaterial <i>Base material</i>	1,5 mm FR4, 35 µmCu
Stopplack <i>Soldermask</i>	Beidseitig Grün <i>Both sides green</i>
Bestückungsdruck <i>Silkscreen</i>	Keiner <i>None</i>
Oberfläche <i>Surface</i>	Chemisch Nickel-Gold <i>Chemical nickel-gold</i>
Isolierlack <i>Insulation varnish</i>	Nein <i>No</i>
Min. Bohrdurchmesser <i>Min. drill-end diameter</i>	0,2 mm
Min. Leiterbahnbreite <i>Min track size</i>	0,25 mm
Min. Leiterbahnabstand <i>Min track distance</i>	0,2 mm
Kantenmetallisierung <i>Sideplating</i>	Nein <i>No</i>
Freistellung Vias <i>Clearance vias</i>	Bohrlochdurchmesser + max. 0,15 mm gemäß ZVEI <i>Drill hole + max. 0,15 mm regarding ZVEI</i>
Kontur <i>Contour</i>	Gefräst oder geritzt gemäß DIN ISO 2768 mittel <i>Milled or scored according DIN ISO 2768 medium</i>

## Bestückung Placement

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18.07.2020

1.2

Nummer Number	Position X Position X	Position Y Position Y	Seite Side	Rotation Rotation
R8	-50.419000	6.604000	0.000000	bottom
R9	-54.356000	6.604000	180.000000	bottom
C2	21.844000	15.494000	270.000000	top
C3	50.174400	18.021400	270.000000	top
C4	51.181000	24.638000	180.000000	top
C5	55.372000	24.638000	0.000000	top
C6	17.002000	20.853400	90.000000	top
C7	16.124860	36.051480	270.000000	top
C8	37.068000	18.288000	180.000000	top
C9	53.467000	8.636000	180.000000	top
D1	43.053000	17.526000	0.000000	top
D2	51.038000	21.717000	270.000000	top
IC2	53.463700	15.125800	90.000000	top
IC3	37.068000	21.082000	90.000000	top
IC4	20.200000	20.561400	0.000000	top
IC5	13.117860	37.139380	90.000000	top
L1	46.974000	19.980200	270.000000	top
R1	40.116000	29.426000	0.000000	top
R2	35.823000	29.426000	180.000000	top
R4	56.948800	16.245000	270.000000	top
R5	59.064400	16.245000	90.000000	top
R6	61.121800	16.245000	270.000000	top
R7	54.864000	20.828000	180.000000	top
R10	30.718000	24.130000	0.000000	top
R11	30.727000	19.558000	0.000000	top
R12	40.903000	24.384000	180.000000	top
R13	44.196000	29.438600	180.000000	top
R14	22.098000	23.368000	0.000000	top
R15	28.702000	30.226000	270.000000	top
R16	27.178000	16.764000	0.000000	top
REF**	3.000000	18.000000	0.000000	top
REF**	70.000000	48.000000	0.000000	top