

P Cubed Engineering BOM

Company & Organization: **Sunsa**

P Cubed Project: **Sunsa-Gen1**

P Cubed P/N & Revision: **2**

Contact & Phone: **N. Proper 970 846 2043**

9/23/2020
02-Mar-21

10:29:32 PM
3:48:07 PM

#	Quantity	Comment	Description	Designator	Manufacturer	Manufacturer Part Number	Supplier 1	Supplier Part Number 1	Notes
1	2	47uF	CAP CER 47UF 10V X5R 0805	C1, C30	Murata	GRM21BR61A476ME15L	Digi-Key	490-9961-1-ND	
2	19	0.1uF	CAP CER 0.1UF 10V X5R 0201	C2, C3, C4, C5, C6, C7, C8, C13, C17, C18, C22, C36, C37, C44, C49, C50, C53, C71, C72	Murata	GRM033R61A104ME15D	Digi-Key	490-5405-1-ND	
3	6	1uF	CAP CER 1UF 6.3V X5R 0201	C9, C21, C24, C46, C48, C51	Murata	GRM033R60J105ME11D	Digi-Key	490-16363-1-ND	
4	4	12pF	CAP CER 12PF 25V C0G/NP0 0201	C10, C11, C14, C15	Murata	GRM0335C1E120FA01D	Digi-Key	490-17803-1-ND	
5	13	10uF	CAP CER 10UF 6.3V X6S 0402	C12, C16, C19, C20, C43, C47, C52, C54, C55, C60, C64, C68, C69	Murata	GRM155C80J106ME11D	Digi-Key	490-13233-1-ND	
6	4	0.01uF	CAP CER 10000PF/0.01uF 6.3V X5R 0201	C23, C58, C63, C65	Murata	GRM033R60J103KA01D	Digi-Key	490-5403-1-ND	
7	2	10pF	CAP CER 10PF 25V C0G/NP0 0201	C25, C28	Murata	GJM0335C1E100GB01D	Digi-Key	490-16382-1-ND	
8	2	DNF	CAP, SM0201, DO NOT STUFF (DNF)	C26, C29			NA	NA	
9	1	Jumper	RES SMD 0 OHM JUMPER 1/20W 0201	C27	Panasonic	ERJ-1GN0R00C	Digi-Key	P15979CT-ND	
10	1	4.7uF	CAP CER 4.7UF 25V X5R 0603	C31	Samsung	CL10A475KA8NQNC	Digi-Key	1276-1900-1-ND	
11	6	10uF	CAP CER 10UF 16V X5R 0603	C32, C33, C35, C39, C42, C45	Murata	GRM188R61C106KAALJ	Digi-Key	490-12736-1-ND	
12	2	1uF	CAP CER 1UF 25V X7R 0805	C34, C38	KEMET	C0805C105J3RACTU	Digi-Key	399-10060-1-ND	
13	2	22uF	CAP CER 22UF 10V X5R 0603	C40, C41	Murata	GRM188R61A226ME15D	Digi-Key	490-10476-1-ND	
14	8	100pF	CAP CER 100PF 50V C0G/NP0 0201	C56, C57, C59, C61, C62, C66, C67, C70	Murata	GRM0335C1H101JA01D	Digi-Key	490-6113-1-ND	
15	2	BAT60JFILM	DIODE SCHOTTKY 10V 3A SOD323	D1, D2	STMicroelectronics	BAT60JFILM	Digi-Key	497-3707-1-ND	
16	1	S6B-ZR	CONN HEADER TH R/A 6POS 1.5MM	J1	JST	S6B-ZR(LF)(SN)	Digi-Key	455-1673-ND	
17	1	PJ-035-SMT-TR	CONN PWR JACK 1.0X3.5MM SOLDER	J2	CUI	PJ-035-SMT-TR	Digi-Key	CP-035PJCT-ND	
18	1	2.2uH	Inductor, FIXED IND 2.2UH 1.3A 80 MOHM SMD	L1	Murata	LQM2HPN2R2MG0L	Digi-Key	490-5114-1-ND	
19	2	2.2uH	Inductor, FIXED IND 2.2UH 1.4A 140 MOHM	L2, L3	Würth Electronics	74479875222C	Digi-Key	732-9680-1-ND	
20	1	RED	Diode, LED, Red, Clear, 1.1mm, SM0603	LED1	Vishay Lite-On	LTST-C190KRKT	Digi-Key	160-1436-1-ND	
21	2	PEM Nut (M1.6)	PEM Nut Mounting Hole M1.6 x 0.35 Screw SMT	MT1, MT2	PennEngineering	SMTSO-M1.6-2ET	PennEngineering	SMTSO-M1.6-2ET	
22	1	Battery Terminal	Terminal-AA-SunsaCustom	P1	Sunsa		Sunsa	XXXXXX	
23	3	DMP2035U-7	MOSFET P-CH 20V 3.6A SOT-23	Q1, Q2, Q3	Diodes	DMP2035U-7	Digi-Key	DMP2035U-7DICT-ND	
24	2	DMN2230UQ-7	FET, N-Channel, 20V, 2A, SOT-23-3	Q4, Q5	Diodes	DMN2230UQ-7	Digi-Key	DMN2230UQ-7DICT-ND	
25	1	0.1	RES 0.1 OHM 1% 1W 1206_SMD	R1	Panasonic	ERJ-8BWFR100V	Digi-Key	P-10AUCT-ND	
26	3	DNI/NO STUFF	RES 0805 SMD DNI/NOSTUFF, RES 0201 SMD DNI/NOSTUFF	R2, R22, R23			NA	DNI	
27	1	1M	RES 1M 1/20W 1% 0201_SMD	R3	Panasonic	ERJ-1GNF1004C	Digi-Key	P122656CT-ND	
28	3	100k	RES 100k 1/20W 20% 0201_SMD	R4, R17, R19	Samsung	RC0603F104CS	Digi-Key	1276-3714-1-ND	
29	5	1k	RES 1k 1/20W 20% 0201_SMD, RES 1k 1/20W 1% 0201_SMD	R5, R10, R13, R18, R24	Panasonic	ERJ-1GNF1001C	Digi-Key	P122413CT-ND	
30	1	36k	RES 36k 1/20W 1% 0201_SMD	R6	Panasonic	ERJ-1GNF3602C	Digi-Key	P122963CT-ND	
31	1	24k	RES 24k 1/20W 1% 0201_SMD	R7	Panasonic	ERJ-1GNF2402C	Digi-Key	P122858CT-ND	
32	1	0	RES 0 OHM JUMPER 1/10W 0402_SMD	R8	Panasonic	ERJ-2GE0R00X	Digi-Key	P0.0JCT-ND	
33	5	10k	RES 10k 1/20W 20% 0201_SMD	R9, R12, R14, R15, R16	Samsung	RCS0603J103CS	Digi-Key	1276-7066-1-ND	

34	1	12k	RES 12k 1/10W 1% 0402_SMD	R11	Panasonic	ERJ-2RKF1202X	Digi-Key	P12.0KLCT-ND	
35	1	0	RES 0 OHM JUMPER 1/10W 0603_SMD	R20	Panasonic	ERJ-3GEY0R00V	Digi-Key	P0.0GCT-ND	
36	1	0	RES 0 1/20W 0201_SMD	R21	Panasonic	ERJ-1GN0R00C	Digi-Key	P15979CT-ND	
37	1	SPST-NO	SWITCH TACTILE SPST-NO 0.02A 15V	SW1	E-Switch	TL3780AF240QG	Digi-Key	EG5393CT-ND	
38	1	INA180A1	IC CURR SENSE 1 CIRCUIT 20X GAIN SOT23-5	U1	Texas Instruments	INA180A1IDBVR	Digi-Key	296-47652-1-ND	
39	1	DRV8837	IC HALF-BRIDGE DRVR PWM 8WSON 1.8A	U2	Texas Instruments	DRV8837DSGR	Digi-Key	296-34806-1-ND	
40	1	PIC32MM0064GPL036	IC MCU 32BIT 64KB FLASH 36SQFN Rev B3	U3	Microchip	PIC32MM0064GPL036-E/M2N01	Microchip	PIC32MM0064GPL036-E/M2N01	Rev B3 Required
41	1	LIS3DHTR	IC ACCELEROMETER 3AXIS 2-16G I2C/SPI 16LGA	U4	STMicroelectronics	LIS3DHTR	Digi-Key	497-10613-1-ND	
42	1	IPN2045	Transceiver IC 32BIT 1MB FLASH 802.11 b/g/n BLE 5.0 42L QFN	U5	Innophase	INP2045	Innophase	INP2045	
43	1	LPF DEA102700LT-6307A2	RF FILTER LOW PASS 2.45GHZ 0402 4 Pad	U6	TDK	DEA102700LT-6307A2	Digi-Key	445-175598-1-ND	
44	1	XC6220B301MR-G	LDO Voltage Regulator Vout 3.0V Fixed 1A	U7	Torex Semiconductor	XC6220B301MR-G	Digi-Key	XC6220B301MR-G-ND	
45	1	ADP5302ACPZ-1-R7	IC REG BUCK PROG 500mA 10LFCSP	U8	Analog Devices	ADP5302ACPZ-1-R7	Digi-Key	ADP5302ACPZ-1-R7CT-ND	
46	1	VEML6030	IC AMBIENT LIGHT SENSOR I2C SMD	U9	Vishay Semiconductors	VEML6030	Digi-Key	VEML6030CT-ND	
47	2	32.768KHz	CRYSTAL 32.7680KHZ 12.5PF SMD	Y1, Y2	Abracon	ABS07-32.768KHZ-T	Digi-Key	535-9542-1-ND	
48	1	40.0MHz	CRYSTAL 40.0000MHZ 12PF SMD	Y3	Kyocera AVX	CX3225SB40000H0FLJCC	Digi-Key	1253-1760-1-ND	
Total	125								
Special Notes:									