

Bill Of Materials February 11,2018 11:06:32

Item	Quantity	Reference	Description	Footprint	Populate	Manufacturer	Manuf.Part Number	Distributor	Distrib.Part Number	Value	Comment
		C1,C3,C4,C6,C7,C8,C11,C15,C17,C20,C22,C27,C30,C31,C33,C36,C37,C39,C42,C43,C45,C46,C47,C49,C50,C52,C54,C59,C60,C61,C62,C64,C67,									
1	35	C69,C70	CAP CER 0.1UF 10V 10% X5R 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM155R61A104KA01D	Digikey	490-1318-1-ND	100nF	
2	2	C2,C12	CAP CER 220PF 25V 5% NP0 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM1555C1E221JA01D	Digikey	490-8174-1-ND	220pF	
3	1	C5	1uF +-10% 6.3V Ceramic Capacitor X5R 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM155R60J105KE19D	Digikey	490-1320-1-ND	1uF	
4	3	C9,C10,C78	CAP CER 1.2PF 50V NP0 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM1555C1H1R2CA01D	Digikey	490-5927-1-ND	1.2pF	
5	4	C13,C14,C77,C79	15pF 5% 50V Ceramic Capacitor C0G, NP0 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM1555C1H150JA01D	Digikey	490-5888-1-ND	15pF	
6	6	C16,C19,C21,C26,C51,C80	CAP CER 22UF 6.3V X5R 0402	CAPC0402X22N	YES	Samsung Electro-Mechanics	CL05A226MQ5QUNC	Digikey	1278-6834-1-ND	22uF	
7	4	C18,C23,C63,C73	4.7uF 20% 6.3V Ceramic Capacitor X5R 0402	CAPC0402X22N	YES	Yageo	CC0402MRX5R5B8475	Digikey	311-1730-1-ND	4.7uF	
8	2	C24,C25	CAP CER 10000PF 6.3V X5R 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM155R60J103KA01D	Digikey	490-6286-1-ND	10nF	
9	10	C28,C29,C34,C35,C40,C41,C48,C53,C71,C72	CAP CER 0.33UF 10V X5R 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM155R61A334KE15D	Digikey	490-3263-1-ND	330nF	
10	5	C32,C38,C44,C55,C56	CAP CER 100uF 4V X5R 0805	CAPC0805X24N	YES	Murata Electronics North America	GRM21BR60G107ME15L	Digikey	490-10510-1-ND	100uF	
11	2	C57,C58	CAP CER 22PF 50V 5% NP0 0402	CAPC0402X20N	YES	Murata Electronics North America	GRM1555C1H220JA01D	Digikey	490-5868-1-ND	22pF	
12	3	C65,C66,C68	CAP CER 100PF 25V C0G/NP0 0402	CAPC0402X20N	YES	KEMET	C0402C101J3GACTU	Digikey	399-1022-1-ND	100pF	
13	3	C74,C75,C76	CAP CER 22UF 6.3V X5R 0402	CAPC0402X20N	YES	Samsung Electro-Mechanics	CL05A226MQ5QUNC	Digikey	1278-6834-1-ND	22uF	
14	1	D1	LED RGB CLEAR 0404 SMD	DIODFN39X39X10-4N	YES	Lumex Opto/Components Inc.	SML-LX0404SIJPGUSB	Digikey	67-2125-1-ND	RGB-LED	
15	2	J1,J2	CONN HEADER PH SIDE 2POS 2MM SMD	SH-CONN-2-1M	YES	JST Sales America Inc	455-1749-1-ND	Digikey	455-1749-1-ND	HEADER 2	
16	3	J4,J5,J6	CONN AUDIO JACK 2.5MM STEREO SMD	PHONE-JACK	YES	CUI Inc	SJ-2523-SMT-TR	Digikey	CP-2523SJCT-ND	CON4	
17	3	J7,J8,J9	2 Positions Header, Breakaway Connector Through Hole Gold	HDRV2W64P0_254_1X2	YES	TE Connectivity AMP Connectors	5-146268-1	Digikey	A121475-ND	CON2-100mils	
18	2	J12,J14	CONN HEADER .050" 5POS SMD GOLD	SULLN-5C-50MIL	YES	Sullins Connector Solutions	GRPB051VWTC-RC	Digikey	S9011E-05-ND	CON5_5_50mil	
19	1	J13	SWITCH SLIDE SPDT 300MA 6V	SLIDESWITCH	YES	C&K Components	JS102011SAQN	Digikey	401-1999-1-ND	SLIDESWITCH	
20	1	L1	10uH Shielded Multilayer Inductor 300mA 780 mOhm Max 0603	CAPC0402X20N	YES	TDK Corporation	MLZ1608N100LT000	Digikey	445-6755-1-ND	10uH	
21	2	L5,L7	FERRITE BEAD 60 OHM 0603 1LN	INDC1608X140N	YES	Murata	BLM18PG600SN1D	Digikey	490-1036-1-ND	FERRITE BEAD2	
22	4	RP1,RP2,RP3,RP4,R1,R4,R38,R44,R51,R57,R59	MECH PIN	MTGNP270H250	NA	N/A	N/A	N/A	N/A	MTGNP250	
23	7	R55	RES SMD 0.0OHM JUMPER 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402JR-070RL	Digikey	311-0.0JRCT-ND	0R	
24	4	R2,R3,R5,R6	RES SMD 10M OHM 5% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402JR-0710ML	Digikey	311-10MJRCT-ND	10M	
25	2	R7,R60	RES SMD 10K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-0710KL	Digikey	311-10.0KLRCT-ND	10K	
26	4	R8,R16,R24,R32	RES SMD 33K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	AC0402FR-0733KL	Digikey	YAG3477CT-ND	33k	
27	7	6	RES SMD 100K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-07100KL	Digikey	311-100KLRCT-ND	100k	
28	5	R10,R18,R26,R34,R39	RES SMD 820K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-07820KL	Digikey	YAG3240CT-ND	820k	
29	10	68,R69,R70,R71	RES SMD 10M OHM 0.5% 1/8W 0805	RESC0805X18N	YES	Vishay Dale	CRCW080510M0DHEAP	Digikey	541-10MAZCT-ND	10Meg	
30	9	R28,R29,R30	RES SMD 5.6K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-075K6L	Digikey	311-5.6KLRCT-ND	5.6k	
31	3	R17,R25,R33	RES SMD 2.2K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-072K2L	Digikey	311-2.20KLRCT-ND	2.2k	
32	8	46,R74	RES SMD 22K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-0722KL	Digikey	311-22.0KLRCT-ND	22k	
33	1	R42	RES SMD 33 OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-0733RL	Digikey	311-33.0LRCT-ND	33R	
34	2	R48,R49	RES SMD 5.1K OHM 1% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402FR-075K1L	Digikey	311-5.10KLRCT-ND	5.1k	
35	3	R50,R52,R53	RES SMD 2.7K OHM 5% 1/16W 0402	RESC0402X16N	YES	Yageo	RC0402JR-072K7L	Digikey	311-2.7KJRCT-ND	2.7K	
36	1	R54	RES SMD 1MOHM 1/16W 0402	RESC0402X16N	YES			Digikey		1M	
38	1	TS1	VARIATOR 8V 20A 0402	RESC0402X16N	YES	Bourns Inc.	CG0402MLA-5.5MG	Digikey	CG0402MLA-5.5MGCT-ND	5.5V	
39	1	U1	IC RF TxRx + MCU Bluetooth Bluetooth v4.0 2.4GHz	QFN32X50P500X500	YES	STM	BLUENRG-MSQTR	Digikey	497-15639-1-ND	BLUENRG-MS	
40	1	U2	RF Balun 2.4GHz ~ 2.5GHz 50 / 50 Ohm 4-WFBGA, FCBGA	BGA4N100X40P2X2	YES	STMicroelectronics	BALF-NRG-01D3	Digikey	497-14945-1-ND	BALF-NRG-01D3	
41	1	U3	2.4GHz Chip RF Antenna 2.4GHz ~ 2.484GHz 1.6dBi	ANT016908L	YES	TDK Corporation	ANT016908LCS2442MA1	Digikey	445-17240ACT-ND	ANTENNA 2.4GHz SMD	
42	1	U5	IC LI-ION/LI-POLY CTRLR SOT23-5	SOT95P240X110	YES	Microchip Technology	MCP73811T-42QVOT	Digikey	MCP73811T-42QVOTCT-ND	MCP73811	
43	1	U7	IC VREF SHUNT ADJ SOT23-5	SOT95P280X145-SL30N	YES	Texas Instruments	TLV431ACDBVR	Digikey	296-1348-1-ND	TLV431	
44	1	U8	IC OPAMP CHOPPER 430KHZ 8MSOP	SOP65P490X265-8L40N	YES	Analog Devices Inc.	AD8539ARMZ-REEL	Digikey	AD8539ARMZ-REELCT-ND	AD8539	
45	3	U9,U11,U13	IC OPAMP INSTR 35MHZ RRO 8TDFN	SOIC127P600X175-8L87N	YES	Microchip Technology	MCP6N11T-100E/MNY	Mouser	579-MCP6N11T010ESN	MCP6N11-10	
46	6	U10,U12,U14,U15,U18,U24	IC OPAMP GP 14KHZ RRO 8MSOP	SOP65P490X265-8L40N	YES	Microchip Technology	MCP6042T-IMS	Digikey	MCP6042T-IMSCT-ND	MCP6042	
47	2	U16,U17	IC OPAMP INSTR 5MHZ RRO 8TDFN	SOIC127P600X175-8L87N	YES	Microchip Technology	MCP6N11T-010E/MNY	Mouser	579-MCP6N11T010ESN	MCP6N11-10	
48	1	U19	ARM Cortex-M4 STM32L4 Microcontroller IC 32-Bit 80MHz 1MB 64-LQFP	QFP50P1200X1200X160	YES	STMicroelectronics	STM32L476RG16	Digikey	497-15877-ND	STM32L476-LQFP64	
49	1	U20	RF TXRX MODULE WIFI TRACE ANT	WIFI-ATWILC1000	YES	Microchip Technology	ATWINC1500-MR210PB	Digikey	ATWINC1500-MR210PB-ND	ATWILC1500	
50	1	U21	CONN MICRO SD CARD PUSH-PUSH R/A	MOLEX-SD	YES	Molex, LLC	5025700893	Digikey	WM19093CT-ND	MICRO-SD	
51	1	U22	Accelerometer, Gyroscope, 3 Axis Sensor IIC, SPI Output	QFN50P250X300X86	YES	STM	LSM6DS3TR	Digikey	497-15383-1-ND	LSM6DS3	
52	3	U33,U34,U35	IC REG LINEAR 3.3V 300MA SOT23-5	SOT95P282X110-SL16N	YES	Diodes Incorporated	AP2210K-3.3TRG1	Digikey	AP2210K-3.3TRG1DICT-ND	AP2210	
53	2	Y1,Y3	16MHz 15ppm Crystal 8pF 80 Ohm -10C ~ 75C Surface Mount 4-SMD, No Lead	OSCCC320X250X55N	YES	NDK	NX3225SA-16.000MHZ-STD-CSR-1	Digikey	644-1049-1-ND	CRYSTAL 16 MHz	
54	1	Y2	CRYSTAL 32.768KHz 12.5PF SMD	XTAL2012X60N	YES	EPSON	FC-12P 32.7680KA-A3	Digikey	SER3672CT-ND	CRYSTAL 32.768 KHz	