

Gen 5 Global Control Rev1a
Qty 1 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	19	0R	R0603	R31, R41, R43, R51, R52, R53, R54, R63, R64, R65, R75, R76, R77, R87, R88, R89, R99, R100, R101	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
2	21	100R	R0603	R36, R66, R78, R90, R102, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
3	1	120R	R0603	R17	Resistor, thick film, 1%	311-120HRCT-ND	RES SMD 120 OHM 1% 1/10W 0603
4	2	200R	R0603	R16, R42	Resistor, thick film, 1%	311-200HRCT-ND	RES SMD 200 OHM 1% 1/10W 0603
5	1	470R	R1206	R13	Resistor, thick film, 1/2W, 1%	541-470UCT-ND	RES SMD 470 OHM 1% 1/2W 1206
6	8	680R	R0603	R103, R104, R105, R106, R107, R108, R109, R110	Resistor, thick film, 1%	311-680HRTR-ND	RES SMD 680 OHM 1% 1/10W 0603
7	29	1k	R0603	R12, R18, R24, R35, R38, R40, R44, R45, R46, R62, R74, R86, R98, R278, R280, R282, R284, R286, R288, R290, R292, R294, R296, R298, R300, R302, R304, R306, R308	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
8	1	3k	R0603	R11	Resistor, thick film, 1%	311-3.00KHRTR-ND	RES SMD 3K OHM 1% 1/10W 0603
9	1	5k1	R0603	R14	Resistor, thick film, 1%	311-5.10KHRTR-ND	RES SMD 5.1K OHM 1% 1/10W 0603
10	10 1	5k6	R0603	R5, R6, R7, R8, R9, R10, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R279, R281, R283, R285, R287, R289, R291, R293, R295, R297, R299, R301, R303, R305, R307, R309, R310, R311	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603

11	3	10k	R0603	R27, R33, R34	Resistor, thick film, 1%	311-10.0KHRTR-ND	RES SMD 10K OHM 1% 1/10W 0603
12	1	16k	R0603	R15	Resistor, thick film, 1%	311-16.0KHRTR-ND	RES SMD 16K OHM 1% 1/10W 0603
13	10 4	100k	R0603	R1, R2, R3, R4, R19, R20, R21, R22, R23, R25, R26, R28, R29, R30, R32, R47, R48, R49, R50, R55, R56, R57, R67, R68, R69, R79, R80, R81, R91, R92, R93, R137, R170, R171, R173, R174, R175, R176, R177, R178, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277	Resistor, thick film, 1%	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
14	8	100k	EXB38V	RN1, RN2, RN3, RN4, RN5, RN6, RN7, RN8	Array Chip Resistor, 5%	Y9104TR-ND	RES ARRAY 4 RES 100K OHM 1206
15	1	470p	C0603K	C39	Capacitor, ceramic, C0G, 50V, 5%	445-5370-1-ND	CAP CER 470PF 50V 1% C0G 0603
16	74	10n	C0603K	C2, C4, C6, C8, C16, C25, C34, C36, C37, C38, C41, C46, C48, C51, C53, C55, C63, C65, C67, C70, C72, C74, C77, C79, C81, C84, C86, C88, C91, C93, C98, C99, C100, C101, C103, C104, C105, C106, C108, C109, C110, C111, C113, C114, C116, C121, C122, C123, C124, C129, C130, C131, C132, C137, C138, C139, C140, C145, C146, C147, C148, C153, C154, C155, C156, C161, C162, C163, C164, C170, C173, C177, C178, C182	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
17	6	100n	C0603	C14, C15, C19, C23, C24, C26	Capacitor, ceramic, X7R, 50V, 10%	1276-1936-2-ND	CAP CER 0.1UF 50V 10% X7R 0603
18	65	1u	C0603K	C1, C3, C5, C7, C30, C31, C32, C33, C42, C35, C40, C45, C47, C50, C52, C54, C57, C58, C59, C60, C61, C64, C66, C68, C71, C73, C75, C78, C80, C82, C85, C87, C89, C92, C94, C95, C96, C97, C102, C107, C112, C115, C117, C118, C119, C120, C133, C134,	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603

				C135, C136, C141, C142, C143, C144, C149, C150, C151, C152, C157, C158, C159, C160, C167, C168, C181			
19	22	10u	C1206K	C12, C13, C17, C20, C21, C22, C27, C28, C43, C44, C49, C56, C76, C90, C125, C126, C127, C128, C165, C166, C175, C176	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
20	2	100u	2917POL	C62, C179	Capacitor, tantalum, 25V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
21	3	UWT1H10 1MNL1GS	PANASONIC_E	C9, C10, C11	Capacitor, aluminum, 50V, 20%	493-2226-2-ND	CAP ALUM 100UF 20% 50V SMD
22	1	24LC512SN	SOIC8	U12	EEPROM	24LC512-I/SN-ND	IC EEPROM 512KBIT 400KHZ 8SOIC
23	3	74HC165D	SO16	IC3, IC5, IC9	8-bit parallel load shift register	568-1409-1-ND	IC SHIFT REGST 8BIT PI-SO 16SOIC
24	3	74HC21D	SO14	IC6, IC7, IC8	Dual 4-input AND gate	568-4560-5-ND	AND Gate IC 2 Channel 14-SO
25	3	74HC594D	SO16	IC1, IC2, IC4	8-bit Shift Register, Output Latch, Async Reset	296-31819-2-ND	IC SHIFT REGISTER 8BIT 16-SOIC
26	8	74HC86PW	TSSOP-14	U46, U47, U48, U49, U50, U51, U52, U53	Quad 2-input XOR	296-8376-1-ND	IC GATE XOR 4CH 2-INP 14-TSSOP
27	9	74LVC2G14GV	SOT457	U7, U8, U22, U23, U24, U25, U38, U39, U40	Dual inverting Schmitt trigger 5V tol	568-12204-1-ND	Inverter IC 2 Channel Schmitt Trigger 6-TSOP
28	1	AD8616ARZ	SOIC8_N	OP1	Dual Opamp, 24 MHz	AD8616ARZ	IC OPAMP GP 24MHZ RRO 8SOIC
29	1	ADM6711SAKSZ	SC70	U10	Microprocessor Supervisory Circuit	ADM6711SAKS Z-REEL7CT-ND	IC SUPERVISOR MPU 2.93V SC70-4
30	1	LT1763CS8-3.3	SOIC8	U5	500mA, Low Noise, 3.3V LDO	LT1763CS8-3.3#PBF-ND	Linear Voltage Regulator IC Positive Fixed 1 Output 3.3V 500mA 8-SOIC
31	1	LT1964ES5-BYP	TSOT-23	U3	ADJ Neg Voltage Low Noise LDO	LT1964ES5-BYP#TRMPBFC T-ND	IC REG LDO NEG ADJ 0.2A TSOT23-5
32	2	MIC29302AWU	TO-263-5	U4, U6	Micrel MIC29302A 3A Adj. LDO Regulator	576-3961-1-ND	IC REG LDO ADJ 3A TO263-5
33	6	SN74HC138PWR	TSSOP-16	U1, U2, U41, U42, U43, U44	3-Line to 8-Line decoder/demux	296-8228-6-ND	IC 3-TO-8 DECODER/DEMUX 16-TSSOP
34	35	SN74LVC125APWR	TSSOP-14	U9, U13, U14, U15, U16, U17, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U56, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80	Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP

35	13	SN74LVC1G125DC K	SC-70-5	U11, U45, U54, U55, U57, U58, U59, U60, U61, U62, U63, U64, U81	Single Bus Buffer Gate With 3-State Output	296-11604-1-ND	IC BUS BUFF TRI-ST N-INV SC705
36	4	TLP2160	TLP2160-SOIC8	U18, U19, U20, U21	20Mb/s Totem-Pole Photocoupler	TLP2160(F)-ND	OPTOISO 2.5KV 2CH PUSH PULL 8SO
37	1	1812L075/33	1812L	F2	Littelfuse 1812L075/33 PTC	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L
38	1	2410SFV4.00FM/125-2	2410SFV	F1	Littelfuse fast SMT fuse, 4A, 125V	2410SFV4.00FM/125TR-ND	FUSE BRD MNT 4A 125VAC/VDC 2410
39	2	2N7002E	SOT23-R	Q1, Q2	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
40	26	LG L29K-G2J1-24-Z	SML0603	LED1, LED2, LED3, LED4, LED5, LED6, LED8, LED19, LED53, LED88, LED89, LED90, LED91, LED92, LED93, LED94, LED95, LED96, LED97, LED98, LED99, LED100, LED101, LED102, LED103, LED104	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
41	4	LS L29K-G2J1-24-Z	SML0603	LED10, LED20, LED54, LED105	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
42	75	LY L29K-H1K2-26-Z	SML0603	LED7, LED9, LED11, LED12, LED13, LED14, LED15, LED16, LED17, LED18, LED21, LED22, LED23, LED24, LED25, LED26, LED27, LED28, LED29, LED30, LED31, LED32, LED33, LED34, LED35, LED36, LED37, LED38, LED39, LED40, LED41, LED42, LED43, LED44, LED45, LED46, LED47, LED48, LED49, LED50, LED51, LED52, LED55, LED56, LED57, LED58, LED59, LED60, LED61, LED62, LED63, LED64, LED65, LED66, LED67, LED68, LED69, LED70, LED71, LED72, LED73, LED74, LED75, LED76, LED77, LED78, LED79, LED80, LED81, LED82, LED83, LED84, LED85, LED86, LED87	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
43	1	SK510B-LTP	SMB	D1	Shottky Diode, 5A, 100V	SK510B-LTPMSTR-ND	DIODE RECT SCHTKY 100V 5A SMB
44	1	SMBJ5348B-TP	SMB	D2	Zener Diode 11V 5W	SMBJ5348B-TPMSCT-ND	DIODE ZENER 11V 5W DO214AA
45	1	FSMJSA	FSMJSA	S3	Push Button	450-1759-1-ND	SWITCH TACTILE SPST-NO 0.05A 24V
46	2	SH-7050TA	SH-7050A	S1, S2	Rotary Coded Switch HEX 16POS SMD 5V	563-1213-6-ND	SWITCH ROTARY HEX 16POS SMD 5V

47	5	1X08_SM T_WURT H	1X08_SMT_W URTH	JP1, JP2, JP3, JP7, JP8	Würth SMT mal conn, 0.1" spacing, 1x10	732-5367-ND	CONN HEADER 10POS 2.54MM SMT
48	1	1X10_SM T_WURT H	1X10_SMT_W URTH	JP6	Würth SMT mal conn, 0.1" spacing, 1x10	732-5367-ND	CONN HEADER 10POS 2.54MM SMT
49	1	2X18_SM T_WURT H	2X18_SMT_W URTH	JP4	Würth SMT mal conn, 0.1" spacing, 2x18	732-5475-5-ND	CONN HEADER VERT DUAL 36POS 2.54
50	1	ESQ-103- 14-L-D	2X03_SMT_F EMALE	JP5	Sullins SMT f conn, 0.1" spacing, 2x3	S5712-ND	Connector Header 6 Position 0.100" (2.54mm) Gold Surface Mount
51	1	1X02/90	1X02/90	JP9	0.1" pitch through-hole pin header	952-2244-ND	2 Positions Header, Unshrouded, Breakaway Connector 0.100" (2.54mm) Through Hole, Right Angle Gold
52	8	1x03	1X03	JN1, JN2, JN3, JN4, JN5, JN6, JN7, JN8	0.1" pitch through-hole pin header	952-2263-ND	3 Positions Header, Unshrouded, Breakaway Connector 0.100" (2.54mm) Through Hole Gold
53	1	TE-1- 406525-1	TE-1-406525- 1	J2	RJ45-B Ethernet Jack (side)	A102034-ND	CONN MOD JACK R/A 8P8C
54	1	TE-4- 794679-0	TE-4-794679- 0	J1	10-pin power connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
55	3	EMERSON- N-142- 0701-806	SMA- EMERSON- 142-0701-806	ADC, DAC, TRIG	SMA Jack Receptacle	J716-ND	CONN SMA JACK 50 OHM EDGE MNT
56	4	FCI- 54602- 910LF	FCI-54602- 910LF	J3, J4, J5, J6	FCI RJ50 Modular Jack (horizontal)	609-1047-ND	CONN MOD JACK 10P10C R/A UNSHLD
57	32	SS- 651010-A- NF	SS-651010-A- NF	J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J19, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32, J33, J34, J35, J36, J37, J38	RJ50 Modular Jack (vertical)	380-1029-ND	CONN MOD JACK 10P10C VERT UNSHLD
DNP1	1	DNP	1X06	JP12	PIN HEADER	DO NOT POPULATE	DO NOT POPULATE
DNP2	1	DNP	1X08	JP11	PIN HEADER	DO NOT POPULATE	DO NOT POPULATE
DNP4	2	DNP	2X02	JP21, JP30	PIN HEADER	DO NOT POPULATE	DO NOT POPULATE
DNP4	9	DNP	2X03	JP10, JP13, JP15, JP17, JP19, JP26, JP27, JP28, JP29	PIN HEADER	DO NOT POPULATE	DO NOT POPULATE

DNP5	8	DNP	2X04	JP14, JP16, JP18, JP20, JP22, JP23, JP24, JP25	PIN HEADER	DO NOT POPULATE	DO NOT POPULATE
DNP6	16	DNP	R0402	R58, R59, R60, R61, R70, R71, R72, R73, R82, R83, R84, R85, R94, R95, R96, R97	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP7	3	DNP	R0603	R37, R39, R172	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP8	6	DNP	C1206K	C69, C83, C169, C171, C172, C174	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP9	3	DNP	2917POL	C18, C29, C180	POLARIZED CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP10	17	DNP	P1-13	ARD, GND, GND_BUF, MISO, MISO_BUF, MOSI, MOSI_BUF, SCK, SCK_BUF, TP1, TP2, TP11, V+, V-, VBM, VCC, VIO	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP11	7	DNP	5,0-PAD	H1, H2, H3, H4, H5, H6, H7	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE
DNP12	2	DNP	UW200_SCC G_BLOCK	LOGO1, LOGO2		DO NOT POPULATE	DO NOT POPULATE

Gen 5 Sampling Control Hub Rev1
Qty 1 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
2	6	0R	R0603	R34, R36, R70, R72, R115, R118	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
3	38	100R	R0603	R1, R2, R5, R6, R9, R10, R13, R14, R17, R18, R21, R22, R25, R26, R29, R30, R37, R38, R41, R42, R45, R46, R49, R50, R53, R54, R57, R58, R61, R62, R65, R66, R105, R107, R112, R123, R124, R125	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
4	46	1k	R0603	R3, R4, R7, R8, R11, R12, R15, R16, R19, R20, R23, R24, R27, R28, R31, R32, R39, R40, R43, R44, R47, R48, R51, R52, R55, R56, R59, R60, R63, R64, R67, R68, R106, R111, R113, R120, R122, R126, R127, R128, R129, R131, R132, R133, R140, R141	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
5	2	5k6	R0603	R116, R121	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603

9	19	10n	C0603K	C2, C4, C6, C9, C11, C13, C16, C18, C20, C23, C25, C27, C29, C32, C34, C35, C37, C39, C40	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
11	15	1u	C0603K	C1, C3, C5, C8, C10, C12, C15, C17, C19, C22, C24, C26, C30, C31, C33	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
12	2	10u	C1206K	C7, C42	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
35	2	47u	C1206K	C36, C38	Capacitor, ceramic, X5R, 16V, 20%	445-6003-2-ND	CAP CER 47UF 16V 20% X5R 1206
16	4	74HC165D	SO16	IC2, IC4, IC6, IC8	8-bit parallel load shift register	568-1409-1-ND	IC SHIFT REGST 8BIT PI-SO 16SOIC
36	5	74HC21D	SO14	IC1, IC3, IC5, IC7, IC9	Dual 4-input AND gate	568-4560-5-ND	AND Gate IC 2 Channel 14-SO
37	1	74LVC2G14GV	SOT457	U8	Dual inverting Schmitt trigger with 5V tolerant input	568-7780-1-ND	Inverter IC 2 Channel Schmitt Trigger 6-TSOP
24	6	SN74LVC125APWR	TSSOP-14	U1, U2, U3, U4, U5, U6	Texas Instruments Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP
38	1	LT1763CS8-3.3	SOIC8	U7	500mA, Low Noise, LDO Micropower Regulators	LT1763CS8-3.3#PBF-ND	Linear Voltage Regulator IC Positive Fixed 1 Output 3.3V 500mA 8-SOIC
18	5	LG L29K-G2J1-24-Z	SML0603	LED36, LED37, LED38, LED39, LED40	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
19	1	LS L29K-G2J1-24-Z	SML0603	LED34	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
22	2	LY L29K-H1K2-26-Z	SML0603	LED33, LED35	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
23	1	SMBJ5348B-TP	SMB	D1	Zener Diode 11V 5W	SMBJ5348B-TPMSTR-ND	DIODE ZENER 11V 5W DO214AA
13	1	1812L075/33	1812L	F1	Littelfuse 1812L075/33	F3355DKR-ND	PTC RESETTABLE 33V 750MA 1812L
28	1	FCI-54602-910LF	FCI-54602-910LF	SPI	FCI 54602-910 unshielded horizontal 10P10C connector jack	609-1047-ND	CONN MOD JACK 10P10C R/A UNSHLD
39	16	SS-651010-A-NF	SS-651010-A-NF	J1, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16	Stewart Connector vertical unshielded 10P10C connector jack	380-1029-ND	CONN MOD JACK 10P10C VERT UNSHLD

29	1	TE-4-794679-0	TE-4-794679-0	POWER	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
DNP1	3	DNP	C1206K	C14, C21, C28	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP2	32	DNP	SML0603	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10, LED11, LED12, LED13, LED14, LED15, LED16, LED17, LED18, LED19, LED20, LED21, LED22, LED23, LED24, LED25, LED26, LED27, LED28, LED29, LED30, LED31, LED32	LED	DO NOT POPULATE	DO NOT POPULATE
DNP3	4	DNP	R0402	R108, R109, R110, R114	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP4	38	DNP	R0603	R33, R35, R69, R71, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R117, R119	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP5	4	MOUNT-PAD-ROUND5.0	5,0-PAD	H1, H2, H3, H4	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE
DNP6	8	TPSQPAD1-13	P1-13	CS, GND, LD, MISO, SCK, TP1, V+, VDD	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP7	1	UW_SCCG200B	UW200_SCCG_B LOCK	LOGO1		DO NOT POPULATE	DO NOT POPULATE

Gen 5 Synthesizer Rev1
Qty 1 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Digikey Part	Digikey Description
1	10	10p	C0402K	C2, C6, C12, C21, C26, C28, C32, C39, C41, C49	712-1252-6-ND	CAP CER 10PF 50V 2% NP0 0402
2	6	100p RF	C0402K	C8, C10, C14, C37, C44, C47	399-11246-2-ND	CAP CER 100PF 25V 1% NP0 0402
3	2	100p	C0603K	C15, C16	445-1281-2-ND	CAP CER 100PF 50V 5% NP0 0603
4	3	1n	C0603K	C4, C17, C23	399-3293-1-ND	CAP CER 1000PF 50V5% NP0 0603
5	2	2.2n	C0603K	C19, C33	445-14069-1-ND	CAP CER 2200PF 50V 5% NP0 0603
6	5	10n	C0603K	C51, C53, C62, C63, C64	445-6916-2-ND	CAP CER 10000PF 50V 5% NP0 0603

7	2	47n	C0603K	C22, C24	478-5051-6-ND	CAP CER 0.047UF 25V 10% X5R 0603
8	21	100n	C0603K	C5, C7, C9, C11, C13, C20, C25, C27, C29, C30, C31, C36, C38, C40, C43, C46, C48, C59, C60, C61, C78	587-1245-2-ND	CAP CER 0.1UF 25V 10% X7R 0603
9	12	1u	C0603K	C18, C50, C52, C68, C69, C70, C71, C73, C74, C75, C76, C77	587-1248-2-ND	CAP CER 1UF 25V 10% X5R 0603
10	20	10u	C1206K	C3, C34, C35, C42, C45, C54, C55, C56, C57, C58, C65, C66, C67, C72, C79, C80, C81, C82, C83, C84	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
11	1	47u	C1206K	C1	445-8047-2-ND	CAP CER 47UF 25V 20% X5R 1206
12	2	0R	R0402	R13, R63	ERJ-2GE0R00X	RES 0.0 OHM 1/10W JUMP 0402 SMD
13	3	0R	R0603	R62, R28, R41	RHM0.0CGTR-ND	RES 0.0 OHM 1/10W JUMP 0603 SMD
14	4	15R	R0603	R14, R15, R19, R20	311-15.0HRTR-ND	RES SMD 15 OHM 1% 1/10W 0603
15	1	91R	R0603	R3	311-91.0HRTR-ND	RES SMD 91 OHM 1% 1/10W 0603
16	6	100R	R0603	R23, R24, R25, R26, R39, R40	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
17	1	220R	R0603	R11	311-220HRTR-ND	RES SMD 220 OHM 1% 1/10W 0603
18	1	360R	R0603	R12	311-360HRTR-ND	RES SMD 360 OHM 1% 1/10W 0603
19	14	1k	R0603	R6, R7, R22, R27, R30, R31, R42, R43, R44, R50, R54, R55, R58, R59	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
20	1	3k	R0603	R21	311-3.00KHRTR-ND	RES SMD 3K OHM 1% 1/10W 0603
21	5	5.1k	R0603	R5, R49, R52, R56, R57	311-5.10KHRTR-ND	RES SMD 5.1K OHM 1% 1/10W 0603
22	6	10k	R0603	R1, R4, R9, R10, R51, R53	311-10.0KHRTR-ND	RES SMD 10K OHM 1% 1/10W 0603
23	1	13k	R0402	R61	311-13.0KLRCCT-ND	RES SMD 13K OHM 1% 1/16W 0402
24	6	100k	R0603	R18, R29, R32, R33, R38, R48	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
25	1	150k	R0402	R60	311-150KLRCCT-ND	RES SMD 150K OHM 1% 1/16W 0402
26	1	CWX813_100M HZ	4-SMD	U1	CW547TR-ND	OSC XO 100.000MHZ LVCMOS SMD
27	6	NFE61PT472C1 H9	NFE61P	F1, F2, F3, F4, F5, F6	490-2554-2-ND	FILTER LC HIGH FREQ 4700PF 2606
28	11	LG L29K-G2J1-24-Z	SML0603	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10, LED11	475-2709-2-ND	LED SMARTLED GREEN 570NM 0603
29	1	ADF41020	CP-20-6	U3	ADF41020BCPZ-ND	IC DIVIDER/PLL SYNTHESZR 20LFCSP
30	2	HMC441LC3B	LC3B	U11, U12	1127-1042-2-ND	IC MMIC PWR AMP 3X3QFN
31	2	PD-0530SMG	PD-0530SMG	U9, U10	(not Digikey)	(not Digikey)

32	1	HMC588LC4B	LC4B	U7	1127-1775-6-ND	IC OSC VCO WIDEBAND 24SMD
33	3	ADA4084-1ARZ	SOIC8_N	OP2, OP3, OP4	ADA4084-1ARZ-ND	IC OPAMP 30V RRO 8SOIC
34	1	AD8616ARZ	SOIC8_N	OP1	AD8616ARZ-REEL7DKR-ND	IC OPAMP GP 24MHZ RRO 8SOIC
35	1	SN74HC138PW R	TSSOP-16	U13	296-8228-2-ND	IC 3-TO-8 DECODER/DEMUX 16-TSSOP
36	2	SN74LVC125APWR	TSSOP-14	U14, U15	296-1222-2-ND	IC BUS BUFF TRI-ST QD 14TSSOP
37	1	74LVC1G53DP	SOT505-2	U4	568-7770-6-ND	IC MUX/DEMUX 2X1 8TSSOP
38	1	AD5063BRMZ	MSOP-10	U2	AD5063BRMZ-2-ND	IC DAC 16BIT 2.7-5.5V 10MSOP
39	1	MAX11100EUB	MSOP-10	U8	MAX11100EUB+TD KR-ND	IC ADC 16BIT SRL 200KSPS 10UMAX
40	1	LT1763CS8	SOIC8	U16	LT1763CS8#TRPBF TR-ND	IC REG LDO ADJ 0.5A 8SOIC
41	2	LT1763CS8-5	SOIC8	U17, U18	LT1763CS8-5#TRPBFTR-ND	IC REG LDO 5V 0.5A 8SOIC
42	1	ADR444BRZ	SOIC8_N	U23	ADR444BRZ-REEL7DKR-ND	IC VREF SERIES 4.096V 8SOIC
43	4	ADP150AUJZ-3.0-R7	SOT23-5	U19, U20, U21, U22	ADP150AUJZ-3.0-R7DKR-ND	IC REG LDO 3.0V 0.15A TSOT23-5
44	2	SMA-EMERSON-142-0761-811	CPW-SMA	OUT1, OUT2	J798-ND	CONN SMA JACK 50 OHM EDGE MNT
45	1	MOLEX-0705510037	705510037	J2	WM7993-ND	CONN HEADER 3POS R/A GOLD T/H
46	1	TE-1-406525-1	TE-1-406525-1	J1	A102034-ND	CONN MOD JACK R/A 8P8C
DNP1	DNP	R0402	R2, R8, R64		ERJ-2GE0R00X	RES 0.0 OHM 1/10W JUMP 0402 SMD
DNP2	DNP	R0402	R34, R35, R36, R37, R45, R46, R47		ERJ-2GE0R00X	RES 0.0 OHM 1/10W JUMP 0402 SMD
DNP3	DNP	NFE61P	F7		490-2554-6-ND	FILTER LC HIGH FREQ 4700PF 2606
DNP4	DNP	P1-13	+5V, +15V, ADC, AVDD, CS0, CS1, CS_ADC, CS_DAC, DAC, DVDD, GND, LE_PLL, MUX, PLL, SCK, SDI, SDO, SWI, VCP, VDD, VIO, VREF, VRF, VTUNE1, VTUNE2			
DNP5	DNP	Connector	TEST1, TEST2		J798-ND	CONN SMA JACK 50 OHM EDGE MNT
DNP6	DNP	Connector	REFIN		J716-ND	CONN SMA JACK 50 OHM EDGE MNT
DNP7	DNP	R0603	R16, R17		311-220HRTR-ND	RES SMD 220 OHM 1% 1/10W 0603
DNP8	DNP	SOT23-R	Q1		2N7002E-FDITR-ND	MOSFET N-CH 60V 250MA SOT23-3

DNP9	DNP	TLP3250	U5, U6	TLP3250TP15FTR-ND	PHOTORELAY 20V 0.2A 4-SSOP
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Gen 5 Module Control Rev1b
Qty 14 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
48	1	187R	R0603	R17	Resistor, thick film, 0.1%	P187DBCT-ND	RES SMD 187 OHM 0.1% 1/10W 0603
49	1	220R	R0603	R35	Resistor, thick film, 0.1%	YAG1587CT-ND	RES SMD 220 OHM 0.1% 1/10W 0603
50	1	274R	R0603	R19	Resistor, thick film, 0.1%	P274DBCT-ND	RES SMD 274 OHM 0.1% 1/10W 0603
51	1	330R	R0603	R42	Resistor, thick film, 0.1%	P330DBCT-ND	RES SMD 330 OHM 0.1% 1/10W 0603
52	1	470R	R0603	R33	Resistor, thick film, 0.1%	YAG1666CT-ND	RES SMD 470 OHM 0.1% 1/10W 0603
53	1	510R	R0603	R21	Resistor, thick film, 0.1%	YAG1679CT-ND	RES SMD 510 OHM 0.1% 1/10W 0603
54	5	680R	R0603	R92, R93, R94, R95, R96	Resistor, thick film, 1%	311-680HRTR-ND	RES SMD 680 OHM 1% 1/10W 0603
55	1	681R	R0603	R25	Resistor, thick film, 0.1%	YAG1715CT-ND	RES SMD 681 OHM 0.1% 1/10W 0603
56	1	750R	R0603	R44	Resistor, thick film, 0.1%	YAG1729CT-ND	RES SMD 750 OHM 0.1% 1/10W 0603
4	3	1k	R0603	R70, R73, R132	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
57	5	1k	R1206	R1, R2, R3, R4, R5	Resistor, thick film, 1%	311-1.00KFRCT-ND	RES SMD 1K OHM 1% 1/4W 1206
58	2	1k2	R0603	R36, R45	Resistor, thick film, 0.1%	YAG1563CT-ND	RES SMD 1.2K OHM 0.1% 1/10W 0603
59	1	1k87	R0603	R23	Resistor, thick film, 0.1%	P1.87KDBCT-ND	RES SMD 1.87KOHM 0.1% 1/10W 0603

60	1	1k96	R0603	R38	Resistor, thick film, 0.1%	YAG1577CT-ND	RES SMD 1.96KOHM 0.1% 1/10W 0603
61	1	2k15	R0603	R31	Resistor, thick film, 0.1%	P2.15KDBCT-ND	RES SMD 2.15KOHM 0.1% 1/10W 0603
62	1	2k61	R0603	R43	Resistor, thick film, 0.1%	YAG1621CT-ND	RES SMD 2.61KOHM 0.1% 1/10W 0603
63	2	2k74	R0603	R37, R39	Resistor, thick film, 0.1%	YAG1622CT-ND	RES SMD 2.74KOHM 0.1% 1/10W 0603
64	6	3k	R0603	R77, R78, R79, R80, R81, R131	Resistor, thick film, 1%	311-3.00KHRTR-ND	RES SMD 3K OHM 1% 1/10W 0603
65	1	4k02	R0603	R16	Resistor, thick film, 0.1%	P4.02KDBCT-ND	RES SMD 4.02KOHM 0.1% 1/10W 0603
66	2	4k42	R0603	R24, R27	Resistor, thick film, 0.1%	P4.42KDBCT-ND	RES SMD 4.42KOHM 0.1% 1/10W 0603
67	1	4k7	R0603	R29	Resistor, thick film, 0.1%	YAG2113CT-ND	RES SMD 4.7K OHM 0.1% 1/10W 0603
68	2	5k1	R0603	R18, R34	Resistor, thick film, 0.1%	YAG1696CT-ND	RES SMD 5.1K OHM 0.1% 1/10W 0603
5	16	5k6	R0603	R82, R83, R84, R85, R86, R97, R98, R99, R100, R101, R107, R108, R109, R110, R111, R143	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
69	1	5k62	R0603	R20	Resistor, thick film, 0.1%	P5.62KDBCT-ND	RES SMD 5.62KOHM 0.1% 1/10W 0603
70	1	8k66	R0603	R40	Resistor, thick film, 0.1%	P8.66KDBCT-ND	RES SMD 8.66KOHM 0.1% 1/10W 0603
71	1	9k53	R0603	R32	Resistor, thick film, 0.1%	YAG1758CT-ND	RES SMD 9.53KOHM 0.1% 1/10W 0603
6	2	10k	R0603	R71, R72	Resistor, thick film, 1%	311-10.0KHRTR-ND	RES SMD 10K OHM 1% 1/10W 0603
72	1	15k	R0603	R41	Resistor, thick film, 0.1%	YAG1538CT-ND	RES SMD 15K OHM 0.1% 1/10W 0603

73	1	16k	R0603	R22	Resistor, thick film, 0.1%	YAG1546CT-ND	RES SMD 16K OHM 0.1% 1/10W 0603
74	1	18k	R0603	R30	Resistor, thick film, 0.1%	YAG1552CT-ND	RES SMD 18K OHM 0.1% 1/10W 0603
75	1	23k7	R0603	R26	Resistor, thick film, 0.1%	P23.7KDBCT-ND	RES SMD 23.7KOHM 0.1% 1/10W 0603
76	1	34k8	R0603	R28	Resistor, thick film, 0.1%	P34.8KDBCT-ND	RES SMD 34.8KOHM 0.1% 1/10W 0603
8	30	100k	R0603	R76, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142	Resistor, thick film, 1%	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
77	1	110k	R0603	R52	Resistor, thick film, 0.1%	YAG1505CT-ND	RES SMD 110K OHM 0.1% 1/10W 0603
78	1	120k	R0603	R46	Resistor, thick film, 0.1%	P120KDBCT-ND	RES SMD 120K OHM 0.1% 1/10W 0603
79	1	147k	R0603	R49	Resistor, thick film, 0.1%	P147KDBCT-ND	RES SMD 147K OHM 0.1% 1/10W 0603
80	1	160k	R0603	R55	Resistor, thick film, 0.1%	YAG1539CT-ND	RES SMD 160K OHM 0.1% 1/10W 0603
81	1	178k	R0603	R54	Resistor, thick film, 0.1%	P178KDBCT-ND	RES SMD 178K OHM 0.1% 1/10W 0603
82	10	200k	R0603	R56, R57, R58, R59, R60, R61, R62, R63, R64, R65	Resistor, thick film, 0.1%	YAG1578CT-ND	RES SMD 200K OHM 0.1% 1/10W 0603
83	1	274k	R0603	R48	Resistor, thick film, 0.1%	P274KDBCT-ND	RES SMD 274K OHM 0.1% 1/10W 0603
84	5	300k	R0603	R87, R88, R89, R90, R91	Resistor, thick film, 1%	311-300KHRCT-ND	RES SMD 300K OHM 1% 1/10W 0603
85	1	332k	R0603	R53	Resistor, thick film, 0.1%	A110350CT-ND	RES SMD 332K OHM 0.1% 1/6W 0603

86	1	360k	R0603	R51	Resistor, thick film, 0.1%	A119961CT-ND	RES SMD 360K OHM 0.1% 1/16W 0603
87	1	390k	R0603	R47	Resistor, thick film, 0.1%	A119962CT-ND	RES SMD 390K OHM 0.1% 1/16W 0603
88	1	470k	R0603	R50	Resistor, thick film, 0.1%	A102278CT-ND	RES SMD 470K OHM 0.1% 1/16W 0603
9	10	10n	C0603	C17, C19, C21, C23, C25, C27, C29, C31, C33, C35	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
11	20	1u	C0603	C16, C18, C20, C22, C24, C26, C28, C30, C32, C34, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
12	6	10u	C1206K	C1, C2, C3, C4, C5, C48	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
35	1	47u	C1206K	C36	Capacitor, ceramic, X5R, 16V, 20%	445-6003-2-ND	CAP CER 47UF 16V 20% X5R 1206
89	1	100u	2917POL	C49	Capacitor, tantalum, 16V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
90	10	750u	NICHICON_D18	C6, C7, C8, C9, C10, C11, C12, C13, C14, C15	Capacitor, aluminum, 63V, 20%, 68mOhm	493-13955-2-ND	CAP ALUM 750UF 20% 63V SMD
37	5	74LVC2G14V	SOT457	U11, U12, U13, U14, U15	Dual inverting Schmitt trigger with 5V tolerant input	568-7780-1-ND	Inverter IC 2 Channel Schmitt Trigger 6-TSOP
91	10	MC33161	SOIC8	U1, U2, U3, U4, U5, U6, U7, U8, U9, U10	MC33161 two channel universal voltage monitor	MC33161DGOS-ND	IC MONITOR VOLTAGE UNIV 8SOIC
92	5	CPC1907B	CPC1907B	U16, U17, U18, U19, U20	CPC1907B	CLA394-ND	RELAY OPTOMOS SP-NO 6A 8-SOP
93	5	MBRD20150	DPAK	D1, D2, D3, D4, D5	MBRD20150	MBRD20150CT-13DICT-ND	DIODE SCHOTTKY 150V 10A TO252
94	5	TS1220	DPAK	Q1, Q2, Q3, Q4, Q5	TS1220	497-6771-1-ND	SCR 12A 20MA 600V DPAK
95	5	SMCJ26A	SMCJ	D6, D7, D8, D9, D10	Littlefuse SMCJ TVS Diodes	SMCJ26ALFCT-ND	TVS DIODE 26VWM 42.1VC SMC
96	5	SMCJ36A	SMCJ	D11, D12, D13, D14, D15	Littlefuse SMCJ TVS Diodes	SMCJ36ALFCT-ND	TVS DIODE 36VWM 58.1VC SMC
97	1	LM2941SX/NOPB	TO-263-5	U21	Texas Instruments LM2941 / LM2941C	LM2941SX/NOPB DKR-ND	IC REG LDO ADJ 1A DPAK
18	11	LG L29K-G2J1-24-Z	SML0603	LED6, LED7, LED8, LED9, LED10, LED11, LED12, LED13, LED14, LED15, LED16	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603

19	5	LS L29K-G1J2-1-Z	SML0603	LED1, LED2, LED3, LED4, LED5	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
98	15	2N7002E	SOT23-R	Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
99	5	BNX026H01	BNX	F6, F7, F8, F9, F10	Murata LC EMI Filter 5th Order Low Pass, SMD	490-12523-1-ND	LC EMI FILTER 5TH ORDER, SMD
100	5	KEYSTONE_FUSE4527	KEYSTONE_FUSE4527	F1, F2, F3, F4, F5	Fuse holder	36-4527-ND	FUSE HLDR CARTRIDGE 250V 5A PCB
101	1	TE-1-1744428-2	TE-1-1744428-2	J13	TE Connectivity 1-1744428-2 12 pin connector	A116390-ND	3.96 EP HDR ASSY 12P R/A. GW
29	12	TE-4-794679-0	TE-4-794679-0	J1, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30 GOLD
102	2	PINHD-1X10	1X10	JP1, JP2	Pin Header, 0.1" spacing, 10x1	S7043-ND	CONN HEADER FEMALE 10POS .1" GOLD
103	1	PINHD-1X8	1X08	JP3	Pin Header, 0.1" spacing, 8x1	S7041-ND	CONN HEADER FEMALE 8POS .1" GOLD
DNP1	1	DNP	C1206K	C37	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP2	15	DNP/OR	R1206	R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R102, R103, R104, R105, R106	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP3	16	TPSQPAD1-13	P1-13	+7V5, +12V, +25V, -7V5, -25V, EV+7V5, EV+12V, EV+25V, EV-7V5, EV-25V, TP1, TP2, TP3, TP4, TP5, TP11	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP4	1	UW_SCCG200B	UW200_SCCG_B LOCK	LOGO1		DO NOT POPULATE	DO NOT POPULATE
DNP5	3	MOUNT-PAD-ROUND3.3	3,3-PAD	H5, H6, H7	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE
DNP6	8	MOUNT-PAD-ROUND5.0	5,0-PAD	H1, H2, H3, H4, H8, H9, H10, H11	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE
DNP7	3	1k	R0603	R66, R68, R75	Resistor, thick film, 1%	DO NOT POPULATE	DO NOT POPULATE
DNP8	3	10k	R0603	R67, R69, R74	Resistor, thick film, 1%	DO NOT POPULATE	DO NOT POPULATE

Gen 5 Module Control IO-Addon Rev1c
Qty 13 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	5	0R	R0603	R23, R56, R58, R59, R60	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
2	7	100R	R0603	R21, R22, R24, R25, R26, R27, R28	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
3	17	1k	R0603	R2, R4, R6, R8, R10, R12, R14, R16, R29, R30, R31, R32, R33, R34, R35, R44, R47	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
4	11	5k6	R0603	R1, R3, R5, R7, R9, R11, R13, R15, R17, R20, R55	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
5	2	10k	R0603	R19, R57	Resistor, thick film, 1%	311-10.0KHRTR-ND	RES SMD 10K OHM 1% 1/10W 0603
6	1	16k	R0603	R18	Resistor, thick film, 1%	311-16.0KHRTR-ND	RES SMD 16K OHM 1% 1/10W 0603
7	1	430k	R0603	R61	Resistor, thick film, 1%	311-430KHRCT-ND	RES SMD 430K OHM 1% 1/10W 0603
8	1	620k	R0603	R48	Resistor, thick film, 1%	311-620KHRCT-ND	RES SMD 620K OHM 1% 1/10W 0603
9	5	1n	C0603	C20, C21, C22, C23, C24	Capacitor, ceramic, C0G, 50V, 5%	399-3293-2-ND	CAP CER 1000PF 50V 5% C0G 0603
10	9	10n	C0603	C3, C7, C9, C11, C12, C13, C15, C18, C19	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
11	2	100n	C0603	C2, C4	Capacitor, ceramic, X7R, 50V, 10%	1276-1936-2-ND	CAP CER 0.1UF 50V 10% X7R 0603
12	6	1u	C0603	C6, C8, C10, C14, C16, C17	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
13	2	10u	C1206	C1, C5	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
14	1	74HC594D	SO16	U4	8-bit Shift Register, Output Latch, Async Reset	296-31819-2-ND	IC SHIFT REGISTER 8BIT 16-SOIC
15	2	74LVC1G32GV	SOT753	U9, U10	One channel OR gate	568-2297-1-ND	OR Gate IC 1 Channel 5-TSOP
16	2	74LVC1G86GV	SOT753	U5, U6	One channel XOR gate	568-7774-1-ND	XOR (Exclusive OR) IC 1 Channel 5-TSOP
17	1	74LVC2G14GV	SOT457	U7	Dual inverting Schmitt trigger with 5V tolerant input	568-7780-1-ND	Inverter IC 2 Channel Schmitt Trigger 6-TSOP
18	3	LG L29K-G2J1-24-Z	SML0603	LED17, LED18, LED19	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603

19	9	LS L29K-G2J1-24-Z	SML0603	LED1, LED3, LED5, LED7, LED9, LED11, LED13, LED15, LED20	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
20	8	LY L29K-H1K2-26-Z	SML0603	LED2, LED4, LED6, LED8, LED10, LED12, LED14, LED16	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
21	2	SN74LVC125APWR	TSSOP-14	U2, U3	Texas Instruments Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP
22	1	SN74LVC1G125DCK	SC-70-5	U8	Texas Instruments Single Bus Buffer Gate With 3-State Output	296-11604-1-ND	IC BUS BUFF TRI-ST N-INV SC705
23	1	LT1763CS8	SOIC8	U1	500mA, Low Noise, LDO Micropower Regulators	LT1763CS8#TRPBF DKR-ND	IC REG LDO ADJ 0.5A 8SOIC
24	1	FCI-54602-910LF	FCI-54602-910LF	J1	FCI 54602-910 unshielded horizontal 10P10C connector jack	609-1047-ND	CONN MOD JACK 10P10C R/A UNSHLD
25	1	SBH11-NBPC-D10-ST	SBH11-NBPC-D10-ST	J2	20 Position Shrouted header	SBH11-NBPC-D10-ST-BK-ND	20 Positions Header, Shrouted Connector 0.100" (2.54mm) Through Hole Gold
26	1	1X08	1X08	JP3	8 Position Header	952-2000-ND	8 Positions Header, Unshrouted, Breakaway Connector 0.100" (2.54mm) Through Hole Gold
27	2	1X10	1X10	JP1, JP2	10 Position Header	952-1842-ND	10 Positions Header, Unshrouted, Breakaway Connector 0.100" (2.54mm) Through Hole Gold
DNP1	8	DNP/0R	R0402	R36, R37, R38, R39, R40, R41, R42, R43	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP2	8	DNP/1k	R0603	R45, R46, R49, R50, R51, R52, R53, R54	RESISTOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP3	3	MOUNT-PAD-ROUND3.3	3,3-PAD	H1, H2, H3	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE
DNP4	8	TPPAD1-13	P1-13	CS, EN, MOSI, OK, SCK, SELRX, SELTX1, SELTX2	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP5	2	TPSQPAD1-13	P1-13	+5V, VCC	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP6	2	UW_SCCG150B	UW150_SCCG_BLOCK	LOGO1, LOGO2	Logo	DO NOT POPULATE	DO NOT POPULATE

Gen 5 Connector Shield Rev2
Qty 13 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	9	100R	R0603	R1, R2, R3, R4, R7, R8, R9, R18, R20	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
2	8	1k	R0603	R5, R6, R11, R12, R13, R14, R15, R16	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603
3	3	470p	C0603K	C1, C3, C7	Capacitor, ceramic, C0G, 50V, 1%	445-5370-1-ND	CAP CER 470PF 50V 1% C0G 0603
4	6	10n	C0603K	C9, C11, C14, C15, C16, C19	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
5	3	10u	C1206K	C12, C13, C17	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
6	1	1812L075/33	1812L	F1	Littelfuse 1812L075/33	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L
7	1	SMBJ5348B-TP	SMB	D1	Zener Diode 11V 5W	SMBJ5348B-TPMSCT-ND	DIODE ZENER 11V 5W DO214AA
8	1	LT1763CS8-3.3	SOIC8	U3	500mA, Low Noise, LDO Micropower Regulators	LT1763CS8-3.3#PBF-ND	Linear Voltage Regulator IC Positive Fixed 1 Output 3.3V 500mA 8-SOIC
9	2	SN74LVC125APWR	TSSOP-14	U1, U2	Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP
10	9	SS-651010-A-NF	SS-651010-A-NF	J1, J2, J3, J4, J5, J6, J7, J8, J9	Stewart Connector vertical unshielded 10P10C connector jack	380-1029-ND	CONN MOD JACK 10P10C VERT UNSHLD
11	1	TE-4-794682-0	TE-4-794682-0	J10	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
DNP1	5	DNP	C0603K	C2, C4, C5, C6, C18	CAPACITOR, American symbol		
DNP2	2	DNP/0R	R0603	R10, R17	RESISTOR, American symbol		
DNP3	2	DNP/1u	C0603K	C8, C10	CAPACITOR, American symbol		
DNP4	5	DNP	5,0-PAD	H1, H2, H3, H4, H5	MOUNTING PAD, round		
DNP5	15	DNP	P1-13	CS_IN, CS_OUT, GND, MISO_IN, MISO_OUT, MOSI_IN, MOSI_OUT,	Test pad		

				MUX_DIS, MUX_SEL1, MUX_SEL2, SCK_IN, SCK_OUT, SR_EN, V+, VCC
DNP6	1	DNP	UW150_SCC G_BLOCK	LOGO1
DNP7	1	DNP	UW200_SCC G_BLOCK	LOGO2

Gen 5 Sampling Control Rev2
Qty 13 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	1	0R	R0402	R56	Jumper	P0.0JTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
2	2	0R	R0603	R72, R77	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
3	3	100R	R0603	R73, R78, R79	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
4	20	1k	R0603	R63, R66, R67, R68, R69, R82, R84, R85, R88, R91, R93, R94, R95, R96, R97, R98, R101, R103, R104, R105	Resistor, thick film, 1%	311-1.00KHRTR- ND	RES SMD 1K OHM 1% 1/10W 0603
5	2	5k6	R0603	R86, R89	Resistor, thick film, 1%	311-5.60KHRTR- ND	RES SMD 5.6K OHM 1% 1/10W 0603
6	3	10k	R0603	R65, R81, R83	Resistor, thick film, 1%	311-10.0KHRTR- ND	RES SMD 10K OHM 1% 1/10W 0603
7	1	16k	R0603	R64	Resistor, thick film, 1%	311-16.0KHRTR- ND	RES SMD 16K OHM 1% 1/10W 0603
8	63	100k	R0603	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R18, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R50, R52, R53, R54, R55, R57, R58, R70, R71, R75, R76, R87, R90, R92, R99, R100, R102	Resistor, thick film, 1%	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
9	7	10n	C0603	C2, C5, C7, C9, C14, C15, C16	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603

10	3	100n	C0603	C13, C17, C21	Capacitor, ceramic, X7R, 50V, 10%	1276-1936-2-ND	CAP CER 0.1UF 50V 10% X7R 0603
11	5	1u	C0603	C1, C4, C6, C8, C22	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
12	7	10u	C1206	C3, C10, C11, C12, C18, C19, C20	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
13	2	1812L075/33	1812L	F1, F2	Littelfuse 1812L075/33	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L
14	2	24LC256SN	SOIC8	U1, U2	Microchip 24LC256 ROM	24LC256T-I/SNCT-ND	IC EEPROM 256KBIT 400KHZ 8SOIC
15	5	2N7002E	SOT23-R	Q1, Q2, Q3, Q4, Q5	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
16	1	74HC165D,653	SO16	IC1	8-bit parallel load shift register	568-1409-1-ND	IC SHIFT REGST 8BIT PI-SO 16SOIC
17	1	ADM6711SAKSZ	SC70	U7	ADM6711/6713 Microprocessor Supervisory Circuit	ADM6711SAKSZ-REEL7CT-ND	IC SUPERVISOR MPU 2.93V SC70-4
18	9	LG L29K-G2J1-24-Z	SML0603	LED6, LED7, LED8, LED9, LED10, LED11, LED12, LED14, LED17	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
19	3	LS L29K-G2J1-24-Z	SML0603	LED2, LED15, LED18	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
20	1	LT1763CS8	SOIC8	U4	500mA, Low Noise, LDO Micropower Regulators	LT1763CS8#TRPB FDKR-ND	IC REG LDO ADJ 0.5A 8SOIC
21	2	LT1763CS8-5	SOIC8	U5, U6	500mA, Low Noise, LDO Micropower Regulator	LT1763CS8-5#TRPBFDKR-ND	IC REG LDO 5V 0.5A 8SOIC
22	4	LY L29K-H1K2-26-Z	SML0603	LED1, LED3, LED13, LED16	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
23	2	SMBJ5348B-TP	SMB	D1, D2	Zener Diode 11V 5W	SMBJ5348B-TPMSCT-ND	DIODE ZENER 11V 5W DO214AA
24	1	SN74LVC125APWR	TSSOP-14	U3	Texas Instruments Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP
25	1	FSM4JSMA	FSMJSMA	S3	Push Button	450-1759-1-ND	SWITCH TACTILE SPST-NO 0.05A 24V
26	2	SH-7050TA	SH-7050A	S1, S2	SH-7050 Rotary Coded Switch HEX 16POS SMD 5V	563-1213-6-ND	SWITCH ROTARY HEX 16POS SMD 5V
27	4	DF9-31S-1V(69)	DF9-31	J1, J2, J3, J4	Hirose DF9 Series 1mm pitch, 2 rows, 31 positions with metal fitting, with boss	H121943DKR-ND	CONN RECEPT 31POS 1MM SMD GOLD

28	1	FCI-54602-910LF	FCI-54602-910LF	J5	FCI 54602-910 unshielded horizontal 10P10C connector jack	609-1047-ND	CONN MOD JACK 10P10C R/A UNSHLD
29	1	TE-4-794679-0	TE-4-794679-0	J6	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
30	10	1X08_SMT_WU RTH	1X10_SMT_WURTH	JP1, JP2, JP3, JP7, JP8, JP9, JP10, JP11, JP17, JP18	Würth SMT male board connectors, 0.1" spacing, 1x10	732-5367-ND	CONN HEADER 10POS 2.54MM SMT
31	2	1X10_SMT_WU RTH	1X10_SMT_WURTH	JP6, JP16	Würth SMT male board connectors, 0.1" spacing, 1x10	732-5367-ND	CONN HEADER 10POS 2.54MM SMT
32	2	2X03_SMT_SUL LINS	2X03_SMT_FEMALE	JP4, JP14	Sullins SMT female board connectors, 0.1" spacing, 2x3	S5712-ND	Connector Header 6 Position 0.100" (2.54mm) Gold Surface Mount
33	2	2X18_SMT_WU RTH	2X18_SMT_WURTH	JP5, JP15	Würth SMT male board connectors, 0.1" spacing, 2x18	732-5475-5-ND	CONN HEADER VERT DUAL 36POS 2.54
34	1	WIZ550IO	1X06/1X08	JP12/JP13	WIZ550IO Ethernet	1278-1022-ND	Ethernet Controller 10/100 Base-T/TX PHY
DNP1	1	DNP	1X06	JP12		DO NOT POPULATE	DO NOT POPULATE
DNP2	1	DNP	1X08	JP13		DO NOT POPULATE	DO NOT POPULATE
DNP3	4	DNP/0R	R0402	R59, R60, R61, R62	Jumper	DO NOT POPULATE	DO NOT POPULATE
DNP4	4	DNP/100k	R0603	R17, R19, R49, R51	Resistor, thick film, 1%	DO NOT POPULATE	DO NOT POPULATE
DNP5	13	DNP	TP20R	CNV, GND, MISO1, MISO2, MOSI1, MOSI2, SCK1, SCK2, V+, V-, VARD1, VARD2, VIO		DO NOT POPULATE	DO NOT POPULATE
DNP6	1	DNP	UW200_SC CG_BLOCK			DO NOT POPULATE	DO NOT POPULATE
DNP7	4	DNP	5,0-PAD	H1, H2, H3, H4		DO NOT POPULATE	DO NOT POPULATE
DNP8	1	DNP	HAMMOND-1590XX	BOX1		DO NOT POPULATE	DO NOT POPULATE

Gen 5 Sampling Rev2

Qty 13 x Non-RoHS Assembly

#	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	12	0R	C0603	C17, C18, C20, C21, C115, C116, C117, C118, C211, C212, C213, C214	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W

2	1	0R	R0603	R121	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
3	24	15R	R0603	R33, R34, R35, R36, R37, R38, R39, R40, R73, R74, R75, R76, R77, R78, R79, R80, R113, R114, R115, R116, R117, R118, R119, R120	Resistor, thick film, 1%	311-15.0HRTR-ND	RES SMD 15 OHM 1% 1/10W 0603
4	12	50R	R0402	R1, R2, R3, R4, R41, R42, R43, R44, R81, R82, R83, R84	Resistor, thick film, 1%	1276-3469-2-ND	RES SMD 49.9 OHM 1% 1/16W 0402
5	12	220R	R0603	R5, R7, R9, R11, R45, R47, R49, R51, R85, R87, R89, R91	Resistor, thick film, 1%	311-220HRTR-ND	RES SMD 220 OHM 1% 1/10W 0603
6	12	510R	R0603	R25, R26, R27, R28, R65, R66, R67, R68, R105, R106, R107, R108	Resistor, thick film, 1%	311-510HRTR-ND	RES SMD 510 OHM 1% 1/10W 0603
7	51	1k6	R0603	R6, R8, R10, R12, R17, R18, R19, R20, R21, R22, R23, R24, R29, R30, R31, R32, R46, R48, R50, R52, R57, R58, R59, R60, R61, R62, R63, R64, R69, R70, R71, R72, R86, R88, R90, R92, R97, R98, R99, R100, R101, R102, R103, R104, R109, R110, R111, R112, R130, R132, R133	Resistor, thick film, 1%	P1.60KHTR-ND	RES SMD 1.6K OHM 1% 1/10W 0603
8	4	5k6	R0603	R123, R128, R129, R131	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
9	4	10k	R0603	R122, R125, R126, R127	Resistor, thick film, 1%	311-10.0KHRTR-ND	RES SMD 10K OHM 1% 1/10W 0603
10	1	39k	R0603	R124	Resistor, thick film, 1%	311-39.0KHRTR-ND	RES SMD 39K OHM 1% 1/10W 0603
11	12	100k	R0603	R13, R14, R15, R16, R53, R54, R55, R56, R93, R94, R95, R96	Resistor, thick film, 1%	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
12	12	100k	EXB38V	RN1, RN2, RN3, RN4, RN5, RN6, RN7, RN8, RN9, RN10, RN11, RN12	Resistor array, 5%	Y9104TR-ND	RES ARRAY 4 RES 100K OHM 1206
13	12	100p	C0402	C9, C10, C11, C12, C107, C108, C109, C110, C203, C204, C205, C206	Capacitor, ceramic, NP0, 25V, 1%	399-11246-6-ND	CAP CER 100PF 25V 1% NP0 0402
14	12	100p	C0603	C55, C56, C57, C58, C151, C152, C153, C154, C247, C248, C249, C250	Capacitor, ceramic, C0G, 50V, 5%	445-1281-2-ND	CAP CER 100PF 50V 5% C0G 0603
15	24	3n3	C0603	C75, C76, C77, C78, C79, C80, C81, C82, C171, C172, C173, C174, C175, C176, C177, C178, C267, C268, C269, C270, C271, C272, C273, C274	Capacitor, ceramic, C0G, 50V, 5%	445-1599-2-ND	CAP CER 3300PF 50V 5% C0G 0603
16	75	10n	C0603	C23, C24, C25, C26, C39, C40, C41, C42, C59, C60, C61, C62, C67, C68, C69, C70, C95, C96, C97, C98, C99, C100, C101, C102, C119, C120, C121, C122, C135, C136, C137, C138, C155, C156, C157, C158, C163, C164,	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603

				C165, C166, C191, C192, C193, C194, C195, C196, C197, C198, C215, C216, C217, C218, C231, C232, C233, C234, C251, C252, C253, C254, C259, C260, C261, C262, C287, C288, C289, C290, C291, C292, C293, C294, C304, C305, C306			
17	34	100n	C0603	C35, C36, C37, C38, C43, C44, C45, C46, C131, C132, C133, C134, C139, C140, C141, C142, C227, C228, C229, C230, C235, C236, C237, C238, C299, C300, C301, C302, C303, C308, C309, C310, C311, C320	Capacitor, ceramic, X7R, 50V, 10%	1276-1936-2-ND	CAP CER 0.1UF 50V 10% X7R 0603
18	72	1u	C0603	C13, C14, C15, C16, C31, C32, C33, C34, C51, C52, C53, C54, C63, C64, C65, C66, C83, C84, C86, C87, C89, C90, C92, C93, C111, C112, C113, C114, C127, C128, C129, C130, C147, C148, C149, C150, C159, C160, C161, C162, C179, C180, C182, C183, C185, C186, C188, C189, C207, C208, C209, C210, C223, C224, C225, C226, C243, C244, C245, C246, C255, C256, C257, C258, C275, C276, C278, C279, C281, C282, C284, C285	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
19	39	10u	C1206	C1, C2, C4, C5, C47, C49, C71, C72, C74, C103, C104, C105, C106, C143, C145, C168, C170, C199, C200, C201, C202, C239, C241, C242, C264, C266, C307, C316, C317, C318, C319, C329, C332, C334, C336, C337, C338, C342, C344	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
20	25	47u	C1206	C85, C88, C91, C94, C181, C184, C187, C190, C277, C280, C283, C286, C295, C296, C297, C298, C312, C313, C314, C315, C321, C322, C323, C324, C345	Capacitor, ceramic, X5R, 25V, 20%	445-6003-2-ND (445-8047-6-ND)	CAP CER 47UF 25V 20% X5R 1206
21	6	100u	2413POL	C3, C6, C7, C8, C19, C22	Capacitor, tantalum-polymer, 10V, 20%	399-9775-6-ND	CAP TANT POLY 100UF 10V 2312
22	5	100u	2917POL	C325, C327, C328, C330, C331	Capacitor, tantalum, 25V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
23	7	NFE61PT472C1H9	NFE61P	F1, F2, F4, F5, F6, F7, F8	NFE61 EMI filter	490-2554-6-ND	FILTER LC HIGH FREQ 4700PF 2606
24	12	ADA4084-2	SOIC8_N	OP1, OP2, OP3, OP4, OP9, OP10, OP11, OP12, OP17, OP18, OP19, OP20	Analog Devices ADA4084-2 Dual Precision Opamp	ADA4084-2ARZ-ND	IC OPAMP GP 15.9MHZ RRO 8SOIC
25	12	ADA4941-1	SOIC8_N	OP5, OP6, OP7, OP8, OP13, OP14, OP15, OP16, OP21, OP22, OP23, OP24	Analog Devices Single-Ended to Diff Opamp	ADA4941-1YRZ-ND	IC DIFF ADC DVR 18BIT 8-SOIC
26	1	ADR445	SOIC8_N@1	U13	ADR445 5V High-Precision Voltage Reference	ADR445BRZ-ND	IC VREF SERIES 5V 8SOIC

27	12	ADS8861	MSOP-10	U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12	Texas Instruments 16 bit, 1 Msps, true-differential ADC	296-37231-5-ND	IC ADC 16BIT 1MSPS 10VSSOP
28	2	LT1763CDE-ADJ	DFN12	U14, U16	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE#PBF-ND	IC REG LDO ADJ 0.5A 12DFN
29	1	LT1964EDD-ADJ	DFN8	U15	Linear Technology LT1964	LT1964EDD#PBF-ND	IC REG LDO NEG ADJ 0.2A 8DFN
30	6	LG L29K-G2J1-24-Z	SML0603	LED1, LED2, LED3, LED4, LED5, LED6	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
31	12	142-0701-806	SMA-EMERS ON-142-0701-806	SMA1, SMA2, SMA3, SMA4, SMA5, SMA6, SMA7, SMA8, SMA9, SMA10, SMA11, SMA12	Emerson / Johnson 142-0701-806 SMA Jack Receptacle	J716-ND	CONN SMA JACK 50 OHM EDGE MNT
32	4	DF9-31P-1V(69)	DF9-31	J1, J2, J3, J4	Hirose DF9 Series 1mm pitch, 2 rows, 31 positions with metal fitting, with boss	DF9-31P-1V(69)DKR-ND	CONN HEADER 31POS 1MM SMD GOLD
DNP1	16	DNP	C1206	C48, C50, C73, C144, C146, C167, C169, C240, C263, C265, C326, C335, C339, C340, C341, C343	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP2	1	DNP	2917POL	C333	POLARIZED CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP3	12	DNP	C1206	C27, C28, C29, C30, C123, C124, C125, C126, C219, C220, C221, C222	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP4	1	DNP	NFE61P	F3	Murata EMIFIL EMI Feed Through Filter, 2706 size	DO NOT POPULATE	DO NOT POPULATE

Gen 5 LO Phase Modulator Rev1a

Qty 26 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
31	1	0R	R0603	R25	Jumper	RHM0.0CGTR-ND	RES SMD 0.0 OHM JUMPER 1/10W
32	8	100R	R0603	R11, R12, R13, R14, R15, R21, R22, R23	Resistor, thick film, 1%	311-100HRTR-ND	RES SMD 100 OHM 1% 1/10W 0603
33	10	1k	R0603	R8, R16, R17, R18, R19, R20, R24, R26, R27, R33	Resistor, thick film, 1%	311-1.00KHRTR-ND	RES SMD 1K OHM 1% 1/10W 0603

3	19	5k6	R0603	R1, R2, R3, R4, R5, R6, R7, R9, R10, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
34	8	100k	R0603	R32, R34, R35, R36, R37, R38, R39, R40	Resistor, thick film, 1%	311-100KHRTR-ND	RES SMD 100K OHM 1% 1/10W 0603
35	4	10p RF	C0402K	C43, C44, C48, C49	Capacitor, ceramic, NP0, 50V, 2%	712-1252-6-ND	CAP CER 10PF 50V 2% NP0 0402
6	9	100p RF	C0402K	C3, C6, C7, C10, C14, C15, C45, C46, C47	Capacitor, ceramic, NP0, 25V, 1%	1276-1628-6-ND	CAP CER 100PF 25V 1% NP0 0402
7	21	10n	C0603K	C2, C5, C8, C16, C17, C20, C27, C28, C29, C30, C31, C32, C33, C34, C35, C40, C42, C51, C54, C56, C58	Capacitor, ceramic, COG, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% COG 0603
8	7	1u	C0603K	C39, C41, C50, C52, C53, C55, C57	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
9	9	10u	C1206K	C1, C4, C9, C11, C12, C23, C36, C37, C38	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
10	4	10u	C1206K	C13, C24, C25, C26	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
11	2	100u	2917POL	C21, C22	Capacitor, tantalum, 25V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
25	3	NFE61PT472 C1H9	NFE61P	F1, F4, F5	Murata EMIFIL EMI Feed Through Filter, 2706 size	490-2554-6-ND	FILTER LC HIGH FREQ 4700PF 2606
24	2	1812L075/3 0	1812L	F2, F3	Littlefuse 1812L075/33 PTC	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L
19	2	SMBJ5346B- TP	SMB	D2, D3	Zener Diode 9.1V 5W	SMBJ5346B- TPMSCT-ND	DIODE ZENER 9.1V 5W DO214AA
20	2	2N7002E	SOT23-R	Q1, Q2	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
21	7	LG L29K- G2J1-24-Z	SML0603	D4, D5, D6, D7, D8, D9, D18	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603

23	8	LY L29K-H1K2-26-Z	SML0603	D10, D11, D12, D13, D14, D15, D16, D17	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
22	2	LS L29K-G2J1-24-Z	SML0603	D1, D19	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
12	1	HMC441LC3 B	LC3B	U1	GaAs PHEMT MMIC Medium Power Amplifier, 7-15.5 GHz	1127-1042-6-ND	IC MMIC PWR AMP 3X3QFN
36	1	HMC642ALC 5	LC5	U2	GaAs MMIC 6-bit Digital Phase Shifter, 9-12.5 GHz, TTL Control	HMC642ALC5-ND	IC PHASE SHIFTER ANALOG 24QFN
37	1	LT1763CDE-3.3	DFN12	U3	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE-3.3#PBF-ND	IC REG LDO 3.3V 0.5A 12DFN
15	2	LT1763CDE-5	DFN12	U5, U6	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE-5#PBF-ND	IC REG LDO 5V 0.5A 12DFN
17	1	LT1964ES5-5	TSOT-23	U4	200mA, Low Noise, Negative Voltage, LDO Micropower Regulators	LT1964ES5-5#TRMPBFDKR-ND	IC REG LDO -5V 0.2A TSOT23-5
38	2	74HC594D	SO16	U10, U11	8-bit shift register, output latch	296-31819-1-ND	IC SHIFT REGISTER 8BIT 16-SOIC
39	1	74LVC2G14 V	SOT457	U9	Dual inverting Schmitt trigger with 5V tolerant input	568-7780-1-ND	Inverter IC 2 Channel Schmitt Trigger 6-TSOP
40	2	SN74AHCT1 57PW	TSSOP-16	U12, U13	Quadruple 2-line to 1-line data selector/multiplexer, 4.5-5.5V	296-4678-1-ND	IC QUAD 2-1 DATASEL/MUX 16-TSSOP
41	2	SN74LVC12 5APWR	TSSOP-14	U7, U8	Quadruple Bus Buffer Gate With 3-State Outputs	296-1222-6-ND	IC BUS BUFF TRI-ST QD 14TSSOP
27	2	SW-1521-60051	RF edge launch	IN, OUT	2.92mm coplanar waveguide edge launch connector	N/A	N/A
26	1	TE-4-794679-0	through hole conn	J1	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
42	1	FCI-54602-910LF	through hole conn	J2	FCI 54602-910 unshielded horizontal 10P10C connector jack	609-1047-ND	CONN MOD JACK 10P10C R/A UNSHLD
DNP1	4	DNP	R0402	R28, R29, R30, R31	Resistor, thick film, 1%	DO NOT POPULATE	DO NOT POPULATE
DNP2	2	DNP	C1206K	C18, C19	Capacitor, ceramic, X5R, 25V, 20%	DO NOT POPULATE	DO NOT POPULATE
DNP3	2	DNP	RF edge launch	THRU1, THRU2	2.92mm coplanar waveguide edge launch connector	DO NOT POPULATE	DO NOT POPULATE

DNP4	7	DNP	P1-13	CS, EN, MISO, MOSI, SCK, SEL, SR_EN	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP5	7	DNP	P1-13	+5V, ON, V+, V- VDD, VIO, VSS	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP6	1	DNP	UW100_S CCG_BLO CK	LOGO1	Logo	DO NOT POPULATE	DO NOT POPULATE
DNP7	1	DNP	5,0-PAD	H1	MOUNTING PAD, round	DO NOT POPULATE	DO NOT POPULATE

Gen 5 Transmitter Rev2a

Qty 26 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	4	100R	R0402	R9, R10, R11, R12	Resistor, thick film, 1%	311-100LRDKR-ND	RES SMD 100 OHM 1% 1/16W 0402
2	6	680R	R0603	R1, R2, R3, R4, R18, R19	Resistor, thick film, 1%	311-680HRTR-ND	RES SMD 680 OHM 1% 1/10W 0603
3	14	5k6	R0603	R5, R6, R7, R8, R13, R14, R15, R16, R17, R20, R21, R22, R23, R24	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
6	8	100p RF	C0402K	C3, C6, C9, C11, C13, C16, C21, C22	Capacitor, ceramic, NP0, 25V, 1%	1276-1628-6-ND	CAP CER 100PF 25V 1% NP0 0402
7	8	10n	C0603K	C2, C5, C8, C10, C12, C15, C31, C32	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
8	4	1u	C0603K	C29, C30, C33, C34	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
9	8	10u	C1206K	C1, C4, C7, C14, C19, C20, C35, C36	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
10	3	10u	C1206K	C24, C27, C28	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
11	1	100u	2917POL	C26	Capacitor, tantalum, 25V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
25	2	NFE61PT 472C1H9	NFE61P	F3, F4	Murata EMIFIL EMI Feed Through Filter, 2706 size	490-2554-6-ND	FILTER LC HIGH FREQ 4700PF 2606
24	2	1812L07 5/30	1812L	F1, F2	Littlefuse 1812L075/33 PTC	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L

19	2	SMBJ534 8B-TP	SMB	D1, D2	Zener Diode 11V 5W	SMBJ5348B- TPMSCT-ND	DIODE ZENER 11V 5W DO214AA
20	8	2N7002E	SOT23-R	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
21	4	LG L29K- G2J1-24- Z	SML0603	LED3, LED4, LED5, LED6	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
23	1	LY L29K- H1K2-26- Z	SML0603	LED2	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
22	1	LS L29K- G2J1-24- Z	SML0603	LED1	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
12	2	HMC441 LC3B	LC3B	U1, U2	GaAs PHEMT MMIC Medium Power Amplifier, 7-15.5 GHz	1127-1042-6-ND	IC MMIC PWR AMP 3X3QFN
13	2	HMC547 LC3	LC3	U6, U8	GaAs MMIC SPDT non-reflective switch, DC-28 GHz	1127-1766-6-ND	IC MMIC NON-REFL SW SPDT 16SMD
29	1	HMC576 LC3B	LC3B	U5	GaAs MMIC x2 Active Frequency Multiplier, 18-29 GHz Output	1127-1651-6-ND	IC MULTIPLIER X2 ACTIVE 12-QFN
30	1	HMC658 LP2(E)	LP2	U7	20 dB Wideband Fixed Attenuator, DC-25 GHz	1127-1513-6-ND	IC ATTENUATOR PASSIVE 6-DFN
15	1	LT1763C DE-5	DFN12	U10	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE-5#PBF- ND	IC REG LDO 5V 0.5A 12DFN
17	1	LT1964ES 5-5	TSOT-23	U9	Linear Technology LT1964ES5-5	LT1964ES5- 5#TRMPBFDKR-ND	IC REG LDO -5V 0.2A TSOT23-5
18	2	TLP2160	TLP2160- SOIC8	U3, U4	High Speed 20Mb/s Totem-Pole Photocoupler	TLP2160(F)-ND	OPTOISO 2.5KV 2CH PUSH PULL 8SO
26	1	TE-4- 794679-0	TE-4- 794679-0	J1	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
27	3	SW- 1521- 60051	RF conn.	ANT, CAL, LO	2.92mm CPW edge launch connector	N/A	N/A
DNP1	2	DNP	C0402K	C17, C18	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP2	1	DNP	C1206K	C23	CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE
DNP3	1	DNP	2917POL	C25	POLARIZED CAPACITOR, American symbol	DO NOT POPULATE	DO NOT POPULATE

DNP4	3	DNP	RF conn.	SHORT, THRU1, THRU2	SV Microwave 1521-60051 2.92mm CPW edge launch conn	DO NOT POPULATE	DO NOT POPULATE
DNP5	10	DNP	P1-13	+5V, -5V, IO1, IO2, SWI_ANT, SWI_CAL, SWI_CONN, SWI_TERM, V+, V-	Test pad	DO NOT POPULATE	DO NOT POPULATE
DNP6	2	DNP	UW150_SCCG	LOGO1	Logo	DO NOT POPULATE	DO NOT POPULATE

Gen 5 Receiver Rev3a
Qty 74 x Non-RoHS Assembly

Line	Qty	Value	Package	Parts	Description	Digikey Part	Digikey Description
1	2	100R	R0402	R5, R7	Resistor, thick film, 1%	311-100LRDKR-ND	RES SMD 100 OHM 1% 1/16W 0402
2	3	680R	R0603	R2, R3, R21	Resistor, thick film, 1%	311-680HRTR-ND	RES SMD 680 OHM 1% 1/10W 0603
3	13	5k6	R0603	R4, R6, R8, R9, R10, R11, R12, R15, R16, R17, R19, R20, R22	Resistor, thick film, 1%	311-5.60KHRTR-ND	RES SMD 5.6K OHM 1% 1/10W 0603
4	1	16k	R0603	R14	Resistor, thick film, 1%	311-16.0KHRTR-ND	RES SMD 16K OHM 1% 1/10W 0603
5	1	43k	R0603	R13	Resistor, thick film, 1%	311-43.0KHRTR-ND	RES SMD 43K OHM 1% 1/10W 0603
6	9	100p RF	C0402K	C3, C4, C5, C8, C11, C12, C17, C20, C23	Capacitor, ceramic, NP0, 25V, 1%	1276-1628-6-ND	CAP CER 100PF 25V 1% NP0 0402
7	9	10n	C0603K	C2, C7, C10, C16, C19, C22, C32, C33, C34	Capacitor, ceramic, C0G, 50V, 5%	445-6916-2-ND	CAP CER 10000PF 50V 5% C0G 0603
8	6	1u	C0603K	C29, C30, C31, C35, C36, C37	Capacitor, ceramic, X5R, 25V, 10%	490-3897-2-ND	CAP CER 1UF 25V 10% X5R 0603
9	7	10u	C1206K	C1, C9, C13, C14, C15, C18, C21, C24, C25, C38	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206
10	3	10u	C1206K	C26, C27, C28	Capacitor, ceramic, X5R, 50V, 10%	1276-2876-2-ND	CAP CER 10UF 50V 10% X5R 1206

11	1	100u	2917POL	C39	Capacitor, tantalum, 25V, 20%, 80mOhm	478-9463-1-ND	CAP TANT POLY 100UF 25V 2917
12	2	HMC441LC3 B	LC3B	U2, U5	GaAs PHEMT MMIC medium power amplifier, 7- 15.5 GHz	1127-1042-6-ND	IC MMIC PWR AMP 3X3QFN
13	1	HMC547LC3	LC3	U4	GaAs MMIC SPDT non-reflective switch, DC - 28 GHz	1127-1766-6-ND	IC MMIC NON-REFL SW SPDT 16SMD
14	1	HMC977LP4 E	LP4	U7	GaAs I/Q Downconverter SMT, 20 - 28 GHz	1127-1629-ND	IC MMIC IQ DOWNCONVERTER 24-QFN
15	1	LT1763CDE- 5	DFN12	U9	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE-5#PBF- ND	IC REG LDO 5V 0.5A 12DFN
16	1	LT1763CDE	DFN12	U10	500mA, Low Noise, LDO Micropower Regulators	LT1763CDE#PBF- ND	IC REG LDO ADJ 0.5A 12DFN
17	1	LT1964ES5- 5	TSOT-23	U8	Linear Technology LT1964ES5-5	LT1964ES5- 5#TRMPBFDKR-ND	IC REG LDO -5V 0.2A TSOT23-5
18	1	TLP2160	TLP2160- SOIC8	U1	Toshiba TLP2106 Optocoupler	TLP2160(F)-ND	OPTOISO 2.5KV 2CH PUSH PULL 8SO
19	2	SMBJ5348B- TP	SMB	D1, D2	Zener Diode 11V 5W	SMBJ5348B- TPMSCT-ND	DIODE ZENER 11V 5W DO214AA
20	4	2N7002E	SOT23-R	Q1, Q2, Q3, Q4	N-Channel Mosfet	2N7002EDKR-ND	MOSFET N-CH 60V 300MA SOT23
21	5	LG L29K- G2J1-24-Z	SML0603	LED3, LED4, LED5, LED6, LED7	LED, green	475-2709-6-ND	LED SMARTLED GREEN 570NM 0603
22	1	LS L29K- G2J1-24-Z	SML0603	LED9	LED, red	475-2506-6-ND	LED SMARTLED 630NM RED 0603 SMD
23	1	LY L29K- H1K2-26-Z	SML0603	LED8	LED, yellow	475-1196-6-ND	LED YELLOW 587NM 0603 SMD
24	2	1812L075/3 3	1812L	F3, F4	Littlefuse 1812L075/33	F3355CT-ND	PTC RESETTABLE 33V 750MA 1812L
25	3	NFE61PT472 C1H9	NFE61P	F1, F2, F5	Murata NFE61 EMI filter	490-2554-6-ND	FILTER LC HIGH FREQ 4700PF 2606
26	1	TE-4- 794679-0	TE-4- 794679-0	J6	TE Connectivity 4-794679-0 10 pin connector	4-794679-0	CONN HEADER 10POS DL R/A 30GOLD
27	3	SW-1521- 60051-GAP	292MM- SW-1521-	ANT, CAL, LO	SV Microwave 1521-60051 2.92mm coplanar waveguide edge launch connector	n/a (Mouser)	

			60051-GAP				
28	2	SMA-EMERSON-142-0701-806	SMA-EMERSON-142-0701-806	IF1, IF2	Emerson / Johnson 142-0701-806 SMA Jack Receptacle	J716-ND	CONN SMA JACK 50 OHM EDGE MNT
DNP1	1	DNP/10p RF	C0402K	C6	Capacitor, ceramic, NP0, 50V, 2%	DO NOT POPULATE	DO NOT POPULATE
DNP2	2	DNP/47u	C1206K	C41, C42	Capacitor, ceramic, X5R, 25V, 20%	DO NOT POPULATE	DO NOT POPULATE
DNP3	1	DNP/100u	2917POL	C40	Capacitor, tantalum or tantalum-polymer, 20V	DO NOT POPULATE	DO NOT POPULATE
DNP4	3	292MM-SW-1521-60051-GAP	292MM-SW-1521-60051-GAP	SHORT, THRU1, THRU2	SV Microwave 1521-60051 2.92mm coplanar waveguide edge launch connector	DO NOT POPULATE	DO NOT POPULATE

Power supplies and cables:

14x Mean Well SE-100-9 switched power supply

1x Mean Well NES-50-24 switched power supply

14x TDK-Lambda RSHN-2010L AC EMC filter

14x 5" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [white]

14x 35" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [red/TX1]

14x 21" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [red/ TX2]

14x 27" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [blue/PM1]

14x 16" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [blue/PM2]

14x 25" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX1]

14x 32" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX2]

14x 35" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX3]

14x 17" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX4]

14x 10" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX5]

14x 22" 10-pin power cable with TE 1-794617-0 connectors on both ends, color coding: [green/RX6]