

**TIDA-010191 REV E2 Bill of Materials**

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U35	1		TPS7A4501HKU/EM	Texas Instruments	Wide Vin Low-Dropout Voltage Regulator, HKU0010A (CFP-10)	HKU0010A
U29	1		INA901HKX/EM	Texas Instruments	Voltage Output, Unidirectional Measurement Current-Shunt Monitor, HKX0008A (CFP-8)	HKX0008A
Y1	1		CVHD-950-100.000	Crystek Corporation	VCXO, 100 MHz, 3.3V, SMD	CVHD-950-4
U2	1		LMK61E2-SIAR	Texas Instruments	Ultra-Low Jitter Fully Programmable Oscillator, Integrated EEPROM, +/- 50ppm, SIA0008B (QFM-8)	SIA0008B
U34, U36	2		SN74LVC3G06DCUR	Texas Instruments	Triple Inverter Buffer/Driver with Open-Drain Output, DCU0008A (VSSOP-8)	DCU0008A
Q1	1	40 V	MMBT3904LP	Diodes Inc.	Transistor, NPN, 40 V, 0.2 A, 3-UFDNF	3-UFDNF
LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
TP11, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP27, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP37, TP42, TP44, TP45, TP47, TP55, TP57, TP58, TP60, TP68, TP70, TP71, TP73	29		5002	Keystone Electronics	Test Point, Miniature, White, TH	White Miniature Testpoint
TP5, TP22, TP23, TP24, TP25, TP26, TP36, TP43, TP48, TP49, TP50, TP51, TP56, TP61, TP62, TP63, TP64, TP69, TP74, TP75, TP76, TP77, TP80, TP81, TP82	25		5015	Keystone Electronics	Test Point, Miniature, SMT	Testpoint_Keystone_Miniature
TP8, TP12, TP13, TP28, TP39, TP40, TP41, TP46, TP52, TP53, TP54, TP59, TP65, TP66, TP67, TP72, TP78, TP79, VCCCORE	19		5000	Keystone Electronics	Test Point, Miniature, Red, TH	Red Miniature Testpoint
CE TP1, CE TP2, CE TP3, RMPCLK1, RMPCLK2, RMPCLK3, RMPDIR1, RMPDIR2, RMPDIR3, SYNC, Vcc_TP1, Vcc_TP2, Vcc_TP3, Vtune_TP1, Vtune_TP2, Vtune_TP3	16		5007	Keystone Electronics	Test Point, Compact, White, TH	White Compact Testpoint
TP1, TP2, TP3, TP4, TP9, TP10, TP83, TP84	8		1573-2	Keystone	Terminal, Turret, TH, Double	Keystone1573-2
S7, S8	2		L101011MS02Q	C&K Components	SWITCH SLIDE SPST 4A PCB, TH	Slide Switch, TH, SPST
U1	1		LMK04832W-MLS	Texas Instruments	Space Grade Ultra-Low-Noise JESD204B Dual-Loop Clock Jitter Cleaner	CFP64
U21	1		TMP461HKU/EM	Texas Instruments	Space Grade High-Accuracy Remote and Local Temperature Sensor with Pin-Programmable Bus Address, HKU0010A (CFP-10)	HKU0010A
U3, U4, U10	3		LMX2615W-MLS	Texas Instruments	Space Grade 40 MHz to 15 GHz Wideband Synthesizer with Phase Synchronization and JESD204B Support, HBD0064A (CFP-64)	HBD0064A
U5	1		FT232HL-REEL	FTDI	Single Channel Hi-Speed USB to Multipurpose UART/FIFO IC, LQFP-48	QFP, 48-Leads, Body 7x7mm, Pitch 0.5mm
U14	1		SN74LVC1G08DCKR	Texas Instruments	Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	DCK0005A
SH-J1, SH-J2, SH-J3, SH-J4, SH-J30	5	1x2	SPC02SYAN	Sullins Connector Solu	Shunt, 100mil, Flash Gold, Black	Closed Top 100mil Shunt

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R388	1	750	CRCW0805750RJ NEA	Vishay-Dale	RES, 750, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R77, R78, R79, R80	4	750	CRCW0603750RF KEA	Vishay-Dale	RES, 750, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R28	1	620	RC0201FR- 07620RL	Yageo America	RES, 620, 1%, 0.05 W, 0201	0201
R492	1	352k	RT0805BRD07352 KL	Yageo America	RES, 352 k, 0.1%, 0.125 W, 0805	0805
R105, R294, R314	3	330	RC0603JR- 07330RL	Yageo	RES, 330, 5%, 0.1 W, 0603	0603
R94, R263, R321	3	270	RC0603JR- 07270RL	Yageo	RES, 270, 5%, 0.1 W, 0603	0603
R11, R12, R15, R16, R23, R24, R60, R61, R64, R65, R66, R67	12	240	CRCW0402240RJ NED	Vishay-Dale	RES, 240, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R17, R18, R58, R59	4	220	CRCW0402220RJ NED	Vishay-Dale	RES, 220, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R122, R128, R323, R328	4	200	CRCW0402200RF KED	Vishay-Dale	RES, 200, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R542, R543, R544	3	178	RC0603FR- 07178RL	Yageo	RES, 178, 1%, 0.1 W, 0603	0603
R401, R402, R434, R435, R444, R445, R454, R455, R464, R465, R474, R475	0	150	CRCW0402150RF KED	Vishay-Dale	RES, 150, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R34, R40, R270, R299, R403, R404, R436, R437, R446, R447, R456, R457, R466, R467, R476, R477	0	130	CRCW0402130RF KED	Vishay-Dale	RES, 130, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R96, R264, R322	3	120	CRCW0603120RJ NEA	Vishay-Dale	RES, 120, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R5, R13, R14, R21, R22, R29, R30, R31, R32, R47, R48, R49, R50, R286, R287, R288, R289, R356	18	120	CRCW0402120RJ NED	Vishay-Dale	RES, 120, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R102, R154, R156, R157, R158, R159, R181, R207, R279, R313, R538, R539, R540, R541	14	100	CRCW0603100RF KEA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R109, R185, R186, R187, R188, R189, R206, R225, R300, R349	0	100	CRCW0603100RF KEA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R145, R170	2	100	CRCW0402100RF KED	Vishay-Dale	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R116, R143, R168, R169, R204, R215, R392	0	100	CRCW0402100RF KED	Vishay-Dale	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R90, R250, R274	3	100k	CRCW0603100KJ NEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R408, R410, R424, R425	4	100k	RT0805BRD07100 KL	Yageo America	RES, 100 k, 0.1%, 0.125 W, 0805	0805
R414	1	95.3k	CRCW060395K3F KEA	Vishay-Dale	RES, 95.3 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R177, R179, R199	3	82.5	CRCW040282R5F KED	Vishay-Dale	RES, 82.5, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R198	0	82.5	CRCW040282R5F KED	Vishay-Dale	RES, 82.5, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R395, R396, R428, R429, R438, R439, R448, R449, R458, R459, R468, R469	0	82	CRCW040282R0J NED	Vishay-Dale	RES, 82, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R171	0	82.0	RC0603FR- 0782RL	Yageo	RES, 82.0, 1%, 0.1 W, 0603	0603
R509, R520, R533	3	51.1k	RT0805BRD0751K 1L	Yageo America	RES, 51.1 k, 0.1%, 0.125 W, 0805	0805
R53, R104, R113, R277, R318, R348, R351	7	51	CRCW060351R0J NEA	Vishay-Dale	RES, 51, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R99, R100	2	51	RC0201JR-0751RL	Yageo America	RES, 51, 5%, 0.05 W, 0201	0201

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R82, R86, R93, R97, R224, R230, R258, R260, R261, R265, R315, R327	12	50	FC0402E50R0BST1	Vishay-Dale	RES, 50, 0.1%, 0.05 W, 0402	0402
R505, R513, R517, R524, R530, R537	6	49.9	M55342K06B49D9T	TT Electronics/IRC	RES, 49.9, 1%, 0.15 W, 0805	0805
R118, R138, R378	3	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R409	1	49.9	ERJ-3EKF49R9V	Panasonic	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R108, R110, R119	0	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R547, R552	2	49.9	RT0805BRD0749R9L	Yageo America	RES, 49.9, 0.1%, 0.125 W, 0805	0805
R190	0	47	CRCW040247R0JNED	Vishay-Dale	RES, 47, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R121, R131, R373, R374	4	40.2	CRCW040240R2FKED	Vishay-Dale	RES, 40.2, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R147	1	39k	CRCW060339K0JNEA	Vishay-Dale	RES, 39 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R52	1	39.0k	RC0201FR-0739KL	Yageo America	RES, 39.0 k, 1%, 0.05 W, 0201	0201
R302, R303, R305, R306	4	33	CRCW060333R0JNEA	Vishay-Dale	RES, 33, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R296, R307, R311	0	33	CRCW060333R0JNEA	Vishay-Dale	RES, 33, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R418, R479	2	30.9k	CRCW060330K9FKEA	Vishay-Dale	RES, 30.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R282, R283, R292, R293	4	20.0	CRCW040220R0FKED	Vishay-Dale	RES, 20.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R487, R488, R507, R518, R531	5	20.0k	ERJ-6ENF2002V	Panasonic	RES, 20.0 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R506	1	20.0k	CRCW080520K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R124, R125, R324, R326	4	12.1	CRCW040212R1FKED	Vishay-Dale	RES, 12.1, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R153	1	12k	CRCW060312K0JNEA	Vishay-Dale	RES, 12 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R43, R44, R51, R370	4	12k	CRCW040212K0JNED	Vishay-Dale	RES, 12 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R417, R427	2	11.5k	CRCW060311K5FKEA	Vishay-Dale	RES, 11.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R511, R512, R522, R523, R535, R536	6	11.5k	RT0805BRD0711K5L	Yageo America	RES, 11.5 k, 0.1%, 0.125 W, 0805	0805
R416, R426	2	10.7k	CRCW060310K7FKEA	Vishay-Dale	RES, 10.7 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R413	1	10.1k	RT0603BRD0710K1L	Yageo America	RES, 10.1 k, 0.1%, 0.1 W, 0603	0603
R149, R150	2	10.0	CRCW060310R0FKEAHP	Vishay-Dale	RES, 10.0, 1%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
R495, R498, R501	3	10Meg	CRCW060310M0DHEAP	Vishay-Dale	RES, 10 M, 0.5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R386, R387, R557, R558	4	10k	CRCW080510K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R151, R152, R160, R161, R162, R205, R308, R309, R310, R312, R405	11	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R411, R412	2	10.0k	ERJ-3EKF1002V	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R139, R175, R380	3	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
R35, R343	0	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
R174	1	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R213, R214, R267, R268, R334, R342	6	10.0k	CRCW040210K0D HEDP	Vishay-Dale	RES, 10.0 k, 0.5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R493, R496, R499	3	10.0k	RT0603BRD0710K L	Yageo America	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603
R548	1	8.66k	RT0805BRD078K6 6L	Yageo America	RES, 8.66 k, 0.1%, 0.125 W, 0805	0805
R419, R480	2	7.59k	RT0603BRD077K5 9L	Yageo America	RES, 7.59 k, 0.1%, 0.1 W, 0603	0603
R155	1	4.75k	CRCW04024K75F KED	Vishay-Dale	RES, 4.75 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R504, R516, R529	3	3.65k	ERJ-8ENF3651V	Panasonic	RES, 3.65 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R421	1	3.40k	CRCW06033K40F KEA	Vishay-Dale	RES, 3.40 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R550	1	3.20k	RT0805BRD073K2 L	Yageo America	RES, 3.20 k, 0.1%, 0.125 W, 0805	0805
R415	1	2.84k	RT0603BRD072K8 4L	Yageo America	RES, 2.84 k, 0.1%, 0.1 W, 0603	0603
R420	1	2.26k	RC0603FR- 072K26L	Yageo	RES, 2.26 k, 1%, 0.1 W, 0603	0603
R163	1	2.0k	CRCW06032K00J NEA	Vishay-Dale	RES, 2.0 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R123, R129, R329, R330	4	1.1k	CRCW04021K10J NED	Vishay-Dale	RES, 1.1 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R137, R140, R217, R377, R379	5	1.00k	CRCW06031K00F KEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R407	1	0.05	KRL11050-C-R050- F-T1	Susumu Co Ltd	RES, 0.05, 1%, 6 W, 4320_WIDE	4320_WIDE
R384, R385	2	0	ERJ-6GEY0R00V	Panasonic	RES, 0, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R485, R486, R489	3	0	CRCW08050000Z0 EA	Vishay-Dale	RES, 0, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R490, R491	0	0	CRCW08050000Z0 EA	Vishay-Dale	RES, 0, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R83, R85, R87, R88, R89, R91, R95, R107, R112, R178, R212, R226, R227, R228, R231, R232, R235, R251, R252, R253, R254, R255, R256, R257, R259, R262, R281, R304, R317, R320, R333, R354, R372, R383, R559, R560	36	0	CRCW06030000Z0 EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R211	0	0	CRCW06030000Z0 EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R397, R398, R399, R400, R430, R431, R432, R433, R440, R441, R442, R443, R450, R451, R452, R453, R460, R461, R462, R463, R470, R471, R472, R473	24	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R1, R2, R4, R7, R8, R9, R10, R19, R20, R25, R26, R27, R33, R37, R39, R41, R42, R45, R46, R55, R57, R62, R63, R69, R70, R74, R76, R126, R130, R133, R134, R141, R142, R144, R148, R165, R166, R167, R182, R183, R184, R192, R193, R194, R196, R197, R208, R209, R216, R218, R219, R239, R243, R245, R247, R271, R272, R278, R285, R291, R297, R298, R319, R331, R335, R337, R339, R345, R352, R355, R357, R359, R366, R371, R375, R376, R381, R389, R390, R393, R394, R494, R497, R500	84	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R3, R6, R54, R56, R68, R71, R72, R73, R75, R81, R84, R92, R114, R115, R127, R132, R135, R136, R146, R172, R173, R191, R195, R200, R201, R202, R203, R223, R229, R233, R234, R236, R237, R238, R240, R241, R242, R244, R246, R248, R249, R266, R269, R273, R275, R276, R280, R284, R290, R295, R301, R316, R325, R332, R336, R338, R340, R341, R344, R346, R347, R350, R353, R358, R360, R391, R478, R481, R482, R483, R484	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R36, R38, R180, R220	4	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.063 W, 0402	0402
R98, R101, R103, R111, R117, R120, R553, R554	8	0	ERJ-1GN0R00C	Panasonic	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	0201
R106, R164, R210, R361, R362, R363, R364, R555, R556	0	0	ERJ-1GN0R00C	Panasonic	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	0201
R508, R510, R519, R521, R532, R534	6	0	PMR10EZPJ000	Rohm	RES, 0, 0%, W, AEC-Q200 Grade 0, 0805	0805
R549, R551	0	0	PMR10EZPJ000	Rohm	RES, 0, 0%, W, AEC-Q200 Grade 0, 0805	0805
R528	1	0	RMC1JPTE	Kamaya	RES, 0, 0%, 1 W, AEC-Q200 Grade 0, 2512	2512
R422, R423, R502, R503, R514, R515, R525, R526, R527, R545, R546	0	0	RMC1JPTE	Kamaya	RES, 0, 0%, 1 W, AEC-Q200 Grade 0, 2512	2512
J32, J33	2		QSH-030-01-L-D-A	Samtec	Receptacle, 0.5 mm, 30x2, Gold, TH	Receptacle, 0.5 mm, 30x2, TH
U6	1			Texas Instruments	Radiation Hardness Assured (RHA) 6.5GHz Ultra Wideband Fully Differential Amplifier, FFK0014A (LCCC-14)	FFK0014A
U11	1		LMH5401FFK/EM	Texas Instruments	Radiation Hardness Assured (RHA) 6.5GHz Ultra Wideband Fully Differential Amplifier, FFK0014A (LCCC-14)	FFK0014A
U24	1		TPS7H2201HKR/EM	Texas Instruments	Radiation Hardened 7-V, 6-A Load Switch, HKR0016A (CFP-16)	HKR0016A
U27	0		TPS7H2201HKR/EM	Texas Instruments	Radiation Hardened 7-V, 6-A Load Switch, HKR0016A (CFP-16)	HKR0016A
U25	1		TPS50601AHKH/EM	Texas Instruments	Radiation Hardened 3.0- to 6.3-V Input, 6-A Synchronous Buck Converter, HKH0020A (CFP-20)	HKH0020A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-010191	Any	Printed Circuit Board	
J44, J47	2		RAPC722X	Switchcraft	Power Jack, mini, 2.1mm OD, R/A, TH	Jack, 14.5x11x9mm
U37	1		AD4PS-1+	Mini-Circuits	Power Divider, 4 Way-0 , 0.001 to 0.5 GHz, 50 ohms, SMT	SMT8
J17	1		678038020	Molex	MOLEX 67803-8020 MINI USB, 2.0 OTG TYPE AB, RCPT, TH	CONN_USB
U16, U22, U23	3		SN74CBTLV3257R GYR	Texas Instruments	Low-Voltage 4-Bit 1-Of-2 FET Multiplexer/Demultiplexer, RGY0016A (VQFN-16)	RGY0016A
U9	1		CDCLVP111HFG/ EM	Texas Instruments	Low-Voltage 1:10 LVPECL With Selectable Input Clock Driver, HFG0036A (CFP-36)	HFG0036A
U30	1		LM139AWGRLQM LV	Texas Instruments	Low Power Low Offset Voltage Quad Comparator, NAC0014A (CFP-14)	NAC0014A
D1, D2, D3, D4, D5, D6, D10, D13	8	Green	LTST-C191TGKT	Lite-On	LED, Green, SMD	LED_0603
D7, D14, D15, D16, D17, D18, D19, D20	8	Green	LTST-C191KGKT	Lite-On	LED, Green, SMD	LED_0603
J7, J9, J11, J25, J27, J55, J57, J58, RFoutAM1, RFoutAM2, RFoutAM3, RFoutAP1, RFoutAP2, RFoutAP3, RFoutBM1, RFoutBM2, RFoutBM3, RFoutBP1, RFoutBP2, RFoutBP3	20		142-0771-831	Cinch Connectivity	JACK, SMA, 50 Ohm, Gold, Edge Mount	JACK, SMA, 50 Ohm, Gold, Edge Mount
L11, L12, L18, L19, L21, L22	6	18nH	LQG15HS18NJ02 D	MuRata	Inductor, Multilayer, Air Core, 18 nH, 0.3 A, 0.36 ohm, SMD	0402 polarized
L14, L32, L37, L38, L39, L40	6	1nH	LQG15HS1N0S02 D	MuRata	Inductor, Multilayer, Air Core, 1 nH, 0.3 A, 0.07 ohm, SMD	0402 polarized
L23	1	2.2uH	AE611PYA222MS Z	Coilcraft CPS	Inductor, Composite, 2.2 uH, 18.4 A, 0.0028 ohm, SMD	11.3x10x10mm
S1, S2, S3, S4	4		TCBS-6-01	Richco Plastics	HEX STANDOFF SPACER, 9.53 mm	7.9x9.5 mm
J20	1		TSW-110-07-G-D	Samtec	Header, 100mil, 10x2, Gold, TH	10x2 Header
J30, J45, J48, J56	4		HTSW-103-07-G-S	Samtec	Header, 100mil, 3x1, Gold, TH	Header, 100mil, 3x1, TH
J8, J12, J16, J39, J40, J43, J46, J49, J50, J51, J52, J53, J54, J59	14		HTSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	Header, 100mil, 2x1, TH
J19	1		52601-S10-8LF	FCI	Header (shrouded), 100mil, 5x2, Gold, SMT	SMT Header
FID1, FID2, FID3, FID4, FID5, FID6	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
L15, L16, L24, L25, L26, L27, L28, L29	8	120 ohm	BLM31PG121SN1 L	MuRata	Ferrite Bead, 120 ohm @ 100 MHz, 3.5 A, 1206	1206
L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L13, L30, L31	13	120 ohm	BLM18SG121TN1 D	MuRata	Ferrite Bead, 120 ohm @ 100 MHz, 3 A, 0603	0603
L17	1	80 ohm	CIM10U800NC	Samsung Electro-Mec	Ferrite Bead, 80 ohm @ 100 MHz, 0.6 A, 0603	0603
D21, D22	2	100V	1N6642UD1	STMicroelectronics	Diode, Switching, 100 V, 0.3 A, LCC-2D	LCC-2D
D12	1	20V	B320B-13-F	Diodes Inc.	Diode, Schottky, 20 V, 3 A, SMB	SMB
Y2	1		ABM3-12.000MHZ- D2Y-T	Abrakon Corporation	Crystal, 12 MHz, 18 pF, SMD	ABM3
J1, J2, J3, J4, J5, J6, J10, J13, J14, J15, J18, J21, J22, J24, J26, J37, J38, J41, J42, OSCinM1, OSCinM2, OSCinM3, OSCinP1, OSCinP2, OSCinP3	25		142-0701-201	Cinch Connectivity	Connector, SMA, TH	SMA
OSCinN, OSCinP	2		142-0701-851	Cinch Connectivity	Connector, End launch SMA, 50 ohm, SMT	SMA End Launch
C227, C237, C252, C255	4	330uF	T530X337M010AT E006	Kemet	CAP, Tantalum Polymer, 330 uF, 10 V, +/- 20%, 0.006 ohm, 7343-43 SMD	7343-43

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C230, C231, C233	3	330uF	T541X337M010AH6720	Kemet	CAP, Tantalum Polymer, 330 uF, 10 V,+/- 20%, 7343-43 SMD	7343-43
C273, C274, C292, C293, C311, C312	6	220uF	TPSE227M016R0100	AVX	CAP, TA, 220 uF, 16 V, +/- 20%, 0.1 ohm, SMD	7343-43
C352	0	220uF	TPSE227M016R0100	AVX	CAP, TA, 220 uF, 16 V, +/- 20%, 0.1 ohm, SMD	7343-43
C345	1	33uF	TPSC336K010R0375	AVX	CAP, TA, 33 uF, 10 V, +/- 10%, 0.375 ohm, SMD	6032-28
C346	1	22uF	TPSD226K025R0100	AVX	CAP, TA, 22 uF, 25 V, +/- 10%, 0.1 ohm, SMD	7343-31
C351	1	15uF	TPSD156K035R0300	AVX	CAP, TA, 15 uF, 35 V, +/- 10%, 0.3 ohm, SMD	7343-31
C272, C291, C310	3	10uF	TPSE106K050R0500	AVX	CAP, TA, 10 uF, 50 V, +/- 10%, 0.5 ohm, SMD	7343-43
C220	1	10uF	293D106X0010B2TE3	Vishay-Sprague	CAP, TA, 10 uF, 10 V, +/- 20%, 2.5 ohm, SMD	3528-21
C8	1	3900pF	0201ZD392KAT2A	AVX	CAP, CERM, 3900 pF, 10 V,+/- 10%, X5R, 0201	0201
C41, C43, C74, C75, C198, C201, C209, C210	8	2200pF	LLL185R71H222MA01L	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 20%, X7R, 0306	0306
C83	1	2200pF	GRM155R71E222KA01D	MuRata	CAP, CERM, 2200 pF, 25 V, +/- 10%, X7R, 0402	0402
C246, C247, C262, C263	4	2000pF	12065A202JAT2A	AVX	CAP, CERM, 2000 pF, 50 V,+/- 5%, C0G/NP0, 1206	1206
C284, C303, C343	3	2000pF	GRM2165C1H202JA01D	MuRata	CAP, CERM, 2000 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
C58, C150, C170	3	1800pF	GRM1885C1H182JA01D	MuRata	CAP, CERM, 1800 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C62, C148, C175	3	1500pF	GRM1885C1H152JA01J	MuRata	CAP, CERM, 1500 pF, 50 V,+/- 5%, C0G/NP0, 0603	0603
C223, C249	2	1000pF	C0805C102J5RAC TU	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 5%, X7R, 0805	0805
C337	1	1000pF	GRM216R71E102KA01D	MuRata	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0805	0805
C229, C245	2	680pF	SR0805X7R681K3NT95(F)#M123A	Presidio Components	CAP, CERM, 680 pF, 10 V,+/- 10%, X7R, 0805	0805
C347	1	470pF	CGJ4C2C0G1H471J060AA	TDK	CAP, CERM, 470 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
C135, C136, C137	0	470pF	CGJ4C2C0G1H471J060AA	TDK	CAP, CERM, 470 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
C59, C149, C171	3	300pF	GRM1885C2A301JA01D	MuRata	CAP, CERM, 300 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C217, C218	2	100pF	GCM1885C2A101JA16D	MuRata	CAP, CERM, 100 pF, 100 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C22	1	100pF	04025A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C7	1	47pF	GRM0335C1E470JA01D	MuRata	CAP, CERM, 47 pF, 25 V, +/- 5%, C0G/NP0, 0201	0201
C18, C20, C21	3	33pF	C0603C330J5GAC TU	Kemet	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C269, C282, C288, C301, C307, C341	6	33uF	KTS250B336M55N0T00	Chemi-Con	CAP, CERM, 33 uF, 25 V,+/- 20%, X7R, 2220	2220
C125, C126	2	27pF	GRM1885C2A270JA01D	MuRata	CAP, CERM, 27 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C93	1	22uF	GRM32ER61A226KE20L	MuRata	CAP, CERM, 22 uF, 10 V, +/- 10%, X5R, 1210	1210
C234, C240, C253, C257, C270, C283, C289, C302, C308, C342	10	10uF	22201C106MAT2A	AVX	CAP, CERM, 10 uF, 100 V, +/- 20%, X7R, 2220	2220

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C349, C354	0	10uF	22201C106MAT2A	AVX	CAP, CERM, 10 uF, 100 V, +/- 20%, X7R, 2220	2220
C99, C101, C102, C103, C104, C106, C107, C112, C144, C147, C151, C152, C168, C174, C180, C182, C183, C190	18	10uF	C1608X5R1A106M080AC	TDK	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0603	0603
C94	1	10uF	C1210C106K8PAC TU	Kemet	CAP, CERM, 10 uF, 10 V, +/- 10%, X5R, 1210	1210
C13, C52, C53, C122, C123, C161, C162	7	10uF	C0805C106K8PAC TU	Kemet	CAP, CERM, 10 uF, 10 V, +/- 10%, X5R, 0805	0805
C84	1	10pF	GRM1555C1H100J A01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C235	1	4.7uF	C1210C475K8RAC TU	Kemet	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7R, 1210	1210
C187	1	4.7uF	C1005X5R0J475M050BC	TDK	CAP, CERM, 4.7 uF, 6.3 V, +/- 20%, X5R, 0402	0402
C278, C279, C297, C298, C326, C334	6	3.3uF	CGA8M2X7R1H33 5K200KA	TDK	CAP, CERM, 3.3 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1,	
C350	0	3.3uF	CGA8M2X7R1H33 5K200KA	TDK	CAP, CERM, 3.3 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1,	
C353	1	1uF	C4532X7R2A105K 230KA	TDK	CAP, CERM, 1 uF, 100 V, +/- 10%, X7R, 1812	1812
C65, C66, C69, C70, C77, C105, C133, C134, C202, C203, C204, C207, C212, C331, C332, C333	16	1uF	GRM155R6YA105 KE11D	MuRata	CAP, CERM, 1 uF, 35 V, +/- 10%, X5R, 0402	0402
C46, C47, C49, C55, C56, C98, C100, C128, C129, C130, C138, C139, C143, C145, C155, C157, C159, C164, C165, C167, C169	21	1uF	C1608X7R1C105K 080AC	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603
C10, C11, C23, C27, C28, C32, C33, C34, C35	9	1uF	C1005X7S1A105K 050BC	TDK	CAP, CERM, 1 uF, 10 V, +/- 10%, X7S, 0402	0402
C219	1	1uF	0603YD105KAT2A	AVX	CAP, CERM, 1 uF, 16 V, +/- 10%, X5R, 0603	0603
C17	1	0.68uF	C1005X5R1A684K 050BB	TDK	CAP, CERM, 0.68 uF, 10 V, +/- 10%, X5R, 0402	0402
C239	1	0.47uF	C2012X7R1H474K 125AB	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, 0805	0805
C67, C68, C205, C206	4	0.3pF	500R07S0R3BV4T	Johanson Technology	CAP, CERM, 0.3 pF, 50 V, +/- 30%, C0G/NP0, 0402	0402
C265	1	0.1uF	C0805C104K1RAC TU	Kemet	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0805	0805
C327, C328, C329	3	0.1uF	C1608X7R1H104K 080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C228, C238, C254, C256, C267, C268, C280, C281, C286, C287, C299, C300, C305, C306, C339, C340	16	0.1uF	12065C104JAT2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 5%, X7R, 1206	1206
C236, C244	2	0.1uF	08055C104JAT2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 5%, X7R, 0805	0805
C285, C304, C344	3	0.1uF	GRM31C5C1E104 JA01L	MuRata	CAP, CERM, 0.1 uF, 25 V, +/- 5%, C0G/NP0, 1206	1206



Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C3, C4, C5, C6, C9, C12, C15, C16, C19, C26, C31, C38, C39, C40, C85, C86, C88, C89, C184, C185, C186	22	0.1uF	C1005X7R1E104M050BB	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 20%, X7R, 0402	0402
C79, C80, C87	0	0.1uF	C1005X7R1E104M050BB	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 20%, X7R, 0402	0402
C275, C277, C294, C296, C313, C315, C348	7	0.1uF	C0805C104K3RAC TU	Kemet	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	0805
C224, C241, C242, C243, C250, C258, C259, C260	8	0.1uF	08053C104JAZ2A	AVX	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0805	0805
C14, C108, C109, C110, C111, C113, C114, C115, C117, C124, C196, C199, C221, C222	14	0.1uF	C0603C104J3RAC TU	Kemet	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603
C95	1	0.1uF	885012105016	Würth Elektronik	CAP, CERM, 0.1 uF, 16 V, +/- 20%, X5R, 0402	0402
C2, C24, C29	3	0.1uF	GRM155R71C104KA88D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
C50, C51, C54, C71, C72, C121, C127, C140, C154, C160, C163, C191, C193, C194, C195	15	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1 uF, 16 V, +/- 5%, X7R, 0603	0603
C36, C37	2	0.1uF	GRM033R60J104KE19D	MuRata	CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X5R, 0201	0201
C232	1	0.1uF	SR0805X7R104K1NT95(F)#M123A	Presidio Components	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	0805
C60, C146, C172	3	0.056uF	GRM188R71H563KA93D	MuRata	CAP, CERM, 0.056 uF, 50 V, +/- 10%, X7R, 0603	0603
C96	1	0.033uF	GRM155R61C333KA01D	MuRata	CAP, CERM, 0.033 uF, 16 V, +/- 10%, X5R, 0402	0402
C225, C248, C251	3	0.033uF	SR0805X7R333K1NT95(F)#M123A	Presidio Components	CAP, CERM, 0.033 uF, 25 V, +/- 10%, X7R, 0805	0805
C271, C276, C290, C295, C309, C314	6	0.01uF	GRM21BR72E103KW03L	MuRata	CAP, CERM, 0.01 uF, 250 V, +/- 10%, X7R, 0805	0805
C261, C266	2	0.01uF	C0805C103F1GAC TU	Kemet	CAP, CERM, 0.01 uF, 100 V, +/- 1%, C0G/NP0, 0805	0805
C264	0	0.01uF	C0805C103F1GAC TU	Kemet	CAP, CERM, 0.01 uF, 100 V, +/- 1%, C0G/NP0, 0805	0805
C335	1	0.01uF	C1608X7R1H103K080AA	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C42, C63, C73, C76, C197, C200, C208, C211	8	0.01uF	LLL185R71E103MA01L	MuRata	CAP, CERM, 0.01 uF, 25 V, +/- 20%, X7R, 0306	0306
C25, C30, C188, C355, C356	5	0.01uF	GRM155R71E103KA01D	MuRata	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	0402
C97	1	0.01uF	GCM155R71E103KA37D	MuRata	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	0402
C78, C213	2	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C44, C45, C48, C57, C61, C64, C92, C118, C131, C132, C141, C142, C153, C156, C158, C166, C173, C181, C189, C192, C316, C317, C318, C319, C320, C321, C322, C323, C324, C325	30	0.01uF	520L103KT16T	AT Ceramics	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	0402
C226	1	0.01uF	SR0603X7R103K1 NT95(F)#M123A	Presidio Components	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0603	0603
U40	1		BAL-0006SMG	Marki Microwave	Broadband Balun, 500 kHz to 6 GHz	320x320mil
U17	1		TS5A3357QDCUR Q1	Texas Instruments	Automotive Catalog Single 5-Ohm SP3T Analog Switch 5-V/3.3-V 3:1 Analog Multiplexer/Demultiplexer, DCU0008A (VSSOP-8)	DCU0008A
U26, U28	2		TVS0500DRVR	Texas Instruments	5-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
U20	1		ESDS302DBVR	Texas Instruments	3.6V Data-Line Surge and 30kV ESD Protection Diode Array, DBV0005A (SOT-23-5)	DBV0005A
U7	1		93LC56BT-I/OT	Microchip	2K Microwire Compatible Serial EEPROM, SOT-23-6	SOT-23-6
U31, U32, U33	3		TPS7H1101AHKR/ EM	Texas Instruments	1.5 -7V Input, 3 Amp, Ultra Low Dropout Regulator, HKR0016A (CFP-16)	HKR0016A

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2023, Texas Instruments Incorporated