

Bill of Materials

TI DESIGNS TIDA-00080
Filter Module Board

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	DNI
37	C1, C2, C3, C9, C10, C11, C13, C21, C23, C24, C25, C26, C28, C35, C36, C37, C38, C44, C58, C64, C67, C80, C89, C90, C100, C109, C114, C115, C116, C117, C118, C119, C125, C136, C155, C172, C177	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	Kemet	C0603C104K5RACTU	0603	
2	C4, C139	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	AVX	0603YC104JAT2A	0603	
1	C5	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	TDK	C1608X5R1C105K080AA	0603	
14	C6, C7, C8, C16, C29, C30, C31, C110, C111, C112, C113, C120, C121, C122	CAP, CERM, 4700pF, 100V, +/-10%, X7R, 0603	AVX	06031C472KAT2A	0603	
1	C12	CAP, AL, 10uF, 16V, +/-20%, 3 ohm, SMD	Panasonic	EEEF1C100R	SMT Radial B	
9	C14, C43, C45, C53, C54, C72, C73, C76, C77	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	0603	
1	C18	CAP, CERM, 0.47uF, 16V, +/-10%, X7R, 0805	AVX	0805YC474KAT2A	0805	
5	C19, C33, C46, C71, C93	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	Taiyo Yuden	GMK325AB7106MM-T	1210	
16	C32, C34, C39, C40, C47, C57, C59, C61, C68, C75, C81, C85, C94, C97, C102, C105	CAP, CERM, 0.01uF, 100V, +/-5%, X7R, 0603	AVX	06031C103JAT2A	0603	
1	C41	CAP, CERM, 1000pF, 2KV 10% X7R 1206	Johanson Dielectrics Inc	202R18W102KV4E	1206	
7	C42, C56, C60, C62, C69, C74, C48, C49	CAP, CERM, 0.01uF, 100V, +/-10%, X7R, 0603	AVX	06031C103KAT2A	0603	
2	C50	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	MuRata	GRM32ER71H106KA12L	1210	
1	C51, C52, C87	CAP, AL, 100uF, 50V, +/-20%, 0.17 ohm, TH	Nichicon	UHE1H101MPD1TD	8.0x10.5mm	
3	C55, C65, C106, C107	CAP, CERM, 10uF, 16V, +/-10%, X7R, 1206	MuRata	GRM31CR71C106KAC7L	1206	
1	C70	CAP, CERM, 27pF, 50V, +/-5%, COG/NPO, 0603	AVX	06035A270JAT2A	0603	
1	C78	CAP, CERM, 22uF, 10V, +/-20%, X5R, 1210	TDK	C3225X5R1A226M230AA	1210	
1	C79	CAP, CERM, 10uF, 35V, +/-10%, X7R, 1206	Taiyo Yuden	GMK316AB7106KL-TR	1206	
1	C84	CAP, CERM, 1uF, 25V, +/-10%, X7R, 1206	AVX	12063C105KAT2A	1206	
1	C91	CAP, CERM, 330pF, 50V, +/-5%, COG/NPO, 0603	AVX	06035A331JAT2A	0603	
1	C95	CAP, AL, 150uF, 16V, +/-20%, 0.34 ohm, SMD	Nichicon	EEEFK1C151XP	6.3x7.7	
1	C98	CAP, CERM, 0.039uF, 50V, +/-10%, X7R, 0603	MuRata	06035C393KAT2A	0603	
1	C135	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A	0603	
1	C146	CAP, CERM, 680pF, 25V, +/-5%, COG/NPO, 0603	MuRata	MCMT18N681F250CT	0603	
1	C150	CAP, CERM, 2.2uF, 100V, +/-10%, X7R, 1210	MuRata	GRM32ER72A225KA35L	1210	
2	C153, C174	CAP, CERM, 0.015uF, 16V, +/-10%, X7R, 0603	MuRata	MC0603B153K160CT	0603	
1	C164	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	Kemet	06032C104KAT2A	0603	
3	C166, C167, C168	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0805	AVX	08055C103KAT2A	0805	
3	D4, D5, D10	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	Kemet	C0603C105K4PACTU	0603	
1	D6	CAP, CERM, 47uF, 10V, +/-10%, X5R, 1210	MuRata	GRM32ER61A476KE20L	1210	
1	D7	LED SMARTLED GREEN 570NM 0603	OSRAM Opto Semiconductors	KPT-1608CGCK	0603	
1	D8	Rectifier, Ultrafast Power, 50V 1A	On Semi	MURA105T3G	403D	
1	D11, D12, D14, D15, D16, D17, D19, D20, D21, D22, D24, D25, D26, D27, D28, D29	Diode, Schottky, 40V, 3A, SMC	ON Semiconductor	MBRS340T3G	SMC	
1	D18	Diode, Schottky, 30V, 0.2A, SOT-23	Diodes Inc.	BAT54S-7-F	SOT-23	
1	D23	Diode, P-N, 70V, 0.2A, SOT-323	Diodes Inc.	B220A-13-F	SOT-323	
1	FB1	Diode, Schottky, 20V, 2A, SMA	Diodes Inc.	B220A-13-F	SMA	
1	J1	Diode, Schottky, 200V, 4A, SMC	ON Semiconductor	MBRS4201T3G	SMC	
1	J2, J15	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation		0603	
1	J4	Connector, Right Angle, Male, 2x20 pin, 100mil spacing	WURTH ELEKTRONIK			
1	J6, J7	Header, Male 2x5-pin, 100mil spacing	Sullins		0.100 inch x 5 X 2	
1	J8, J9, J10	CONN HIGH SPD CARD EDGE 60 POS	3M		28.6x7mm	
1	J12	CONN HIGH SPD CARD EDGE 120 POS	3M		7x56mm	
1	J13	Header, Male 10-pin, 100mil spacing	Sullins		0.100 inch x 10	
1	J14	Header, Male 2-pin, 100mil spacing	Sullins		0.100 inch x 2	
1	J16	Header, Male 2x6 pin, 100mil spacing	Sullins		0.100 inch x 2X6	
1	J17	Terminal Block, 2-pin, 15-A, 5.1mm	OST		0.40 x 0.35 inch	
1	J18	Connector, SMA Jack, Vertical, Gold, SMD	Emerson Network Power	142-0711-201	SMA	
1	L1	Inductor, Shielded Drum Core, Ferrite, 3.3uH, 3.72A, 0.02 ohm, SMD	Coilcraft	MSS7341-332NLB	MSS7341	
4	MH1, MH2, MH3, MH4	Mountin hole, NPTH Drill 3.2mm			Screw	
5	R1, R19, R20, R164, R165	RES, 22 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040222R0JNED	0402	
7	R2, R3, R4, R25, R31, R35, R36	RES, 270k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-07270KL	0603	
14	R5, R6, R7, R15, R16, R17, R26, R28, R32, R33, R34, R69, R70, R71	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JNEA	0603	
7	R8, R13, R14, R24, R37, R38, R39	RES, 7.50k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06037K50FKEA	0603	
16	R9, R43, R79, R85, R92, R102, R108, R109, R126, R130, R139, R140, R150, R159, R186, R204	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603000020EA	0603	
7	R10, R11, R12, R27, R40, R41, R18, R21, R23, R68, R73, R74, R77, R83, R87, R91, R96, R107, R117, R123, R132, R138, R143, R145, R153, R160, R161, R162, R163	RES, 100k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100KFKEA	0603	
23	R72, R80, R84, R118, R137, R142, R200	RES, 10.0 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310R0FKEA	0603	
7	R86, R88, R207, R208	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FKEA	0603	
4	R93, R104	RES, 4.70k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-074K7L	0603	
2	R98	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402000020ED	0402	
1	R113, R114, R115	RES, 1.5k ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW12061K50JNEA	1206	
3	R122	RES, 100 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603100RJNEA	0603	
1	R131	RES, 150k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-07150KL	0603	
1		RES, 6.8 ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW12066R80JNEA	1206	

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1	R135	RES, 49.9 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060349R9FKEA	0603	
1	R149	RES, 1.47k ohm, 1%, 0.1W, 0603	Yageo America	ERJ3EKF1471V	0603	
1	R151	RES, 137k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603137KFKEA	0603	
2	R156, R157	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	
1	R168	RES, 300 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603300RJNEA	0603	
1	R169	RES, 620 ohm, 1%, 0.1W, 0603	Yageo America	MC0063W06031620R	0603	
1	R170	RES, 17.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060317K4FKEA	0603	
1	R172	RES, 0 ohm, 5%, 0.1W, 0603	Yageo America	RC0603JR-070RL	0603	
1	R173	RES, 15k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060315K0JNEA	0603	
1	R176	RES, 47.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060347K5FKEA	0603	
1	R177	RES, 10.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K2FKEA	0603	
1	R178	RES, 3.24k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06033K24FKEA	0603	
1	R180	RES, 42.2k ohm, 1%, 0.1W, 0603	Yageo America	ERJ3EKF4222V	0603	
1	R181	RES, 58.3k ohm, 0.1%, 0.1W, 0603	Yageo America		0603	
1	R182	RES, 0 ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW1206000020EA	1206	
1	R184	RES, 48.7k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060348K7FKEA	0603	
1	R190	RES, 14.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060314K0FKEA	0603	
1	R191	RES, 499 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603499RFKEA	0603	
1	R193	RES, 4.99k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06034K99FKEA	0603	
1	R198	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA	0603	
1	R206	RES, 910 ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	CPF0603B910RE1	0603	
1	T1	Transformer	WURTH ELEKTRONIK	750342354	17.75x12.7x13.46mm	
2	TP1, TP2	Test Point, 0.040 Hole	STD			
7	TP3, TP4, TP5, TP6, TP7, TP8, TP9	Test Point, 0.020 Hole	STD			
7	U1, U2, U3, U8, U13, U14, U15	IC, 1.1nV/vHz Noise, Low Power, Precision OpAmp 7 nsec, 2.7V to 5V Comparator with Rail-to- Rail Output, 5-pin SOT-23	TI	OPA211AID	SO	
7	U4, U5, U6, U11, U17, U18, U19		TI	LMV7219M5	MF05A	
1	U10	IC, Voltage Reference, 50ppm/°C Max, 50uA	TI	REF3012AIDBZT	SOT23	
4	U16, U21, U25, U28	16-Bit, Quad Channel, Ultra-Low Glitch, Voltage Output DAC with 2.5V, 2ppm/°C Internal Reference, PW0016A Programmable 3-PLL Clock Synthesizer /	TI	DAC8564IAPW	PW0016A	
1	U22	Multiplier/Divider	TI	CDCE906PW	TSSOP (PW) 20	
1	U23	Buck Step Down Regulator with 3.5 to 28 V Input and 0.8 to 25 V Output, -40 to 150 degC, 8-Pin SOIC (D), Green (RoHS & no Sb/Br)	TI	TP554232D	D0008A	
1	U24	Ultra Low Noise, 800 mA Linear Voltage Regulator for RF/Analog Circuits, DNT0012B	TI	LP3879SDE-ADJ/NOPB	DNT0012B	
1	U26	Integrated 5-A 40-V Wide Input Range	TI	TPS55340RTET	RTE0016C	
1	U30	Optocoupler, 3.75kV RMS, SMT	Vishay-Semiconductor	TCMT1107	SOP-4	
1	U32	IC, Precision Adjustable Shunt Regulator	TI	TL431AIDBZR	SOT23-3	
1	U34	IC SRAM 512KBIT 20MHZ 8SOIC			8-SOIC (0.154", 3.90mm Width)	
1	Y1	Crystal, 10.000MHz, 10pF, SMD	TXC Corporation	7B-27.000MEEQ-T	5x0.9x3.2mm	
0	C15, C17, C88, C92, C99, C126,	CAP, CERM, 0.22uF, 6.3V, +/-10%, X7R, 0603	MuRata		0603	DNI
0	C20, C27	CAP, CERM, 0.047uF, 25V, +/-5%, X7R, 0603	AVX		0603	DNI
0	C22, C83, C86, C96, C104, C124,	CAP, CERM, 4.7uF, 6.3V, +/-10%, X5R, 0603	Kemet		0603	DNI
0	C63	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	TDK		0603	DNI
0	C66, C178	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	AVX		0603	DNI
0	C101, C108	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0603	MuRata		0603	DNI
0	C103, C176	CAP, CERM, 100pF, 50V, +/-5%, COG/NPO, 0603	TDK		0603	DNI
0	C123, C138, C143, C144, C160,	CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1206	MuRata		1206	DNI
0	C130	CAP, CERM, 47pF, 25V, +/-5%, COG/NPO, 0402	MuRata		0402	DNI
0	C149	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	Taiyo Yuden		1210	DNI
0	D1, D2	Diode, TVS, Bi, 15V, 160W, SOD-323	NXP Semiconductor		SOD-323	DNI
0	D3, D9	LED SmartLED Green 570NM	OSRAM		0603	DNI
0	D13	Diode, Ultrafast, 75V, 0.3A, SOT-23	Diodes Inc.		SOT-23	DNI
0	F82, F83, F84, F85	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation		0603	DNI
0	J3	Connector, USB Micro, Type AB	Molex		5.3x7.5 mm	DNI
0	J11	Connector Header 14Pos 2mm Vert Gold	Molex Inc		2.00mm	DNI
0	R22, R158, R192	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R29, R78, R127, R136, R144,	RES, 4.87k ohm, 1%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R30	RES, 300 ohm, 5%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R44, R45, R46, R47, R48, R49,	RES, 22 ohm, 5%, 0.063W, 0402	Vishay-Dale		0402	DNI
0	R75, R76, R81, R82, R89, R90,	RES, 100 ohm, 5%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R95, R97, R116	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale		0402	DNI
0	R103, R121	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R128, R195	RES, 100k ohm, 1%, 0.1W, 0603	Vishay-Dale		0603	DNI
0	R167, R171	Resistor, Chip Array, 4.7K OHM 4 RES 0612	Vishay		0612	DNI
0	R183	RES, 0 ohm, 5%, 0.25W, 1206	Vishay-Dale		1206	DNI
0	R194	RES, 10k ohm, 5%, 0.1W, 0603	Yageo America		0603	DNI
0	R196	RES, 301 ohm, 0.5%, 0.1W, 0603	Yageo America		0603	DNI
0	R197, R205	RES, 0 ohm, 5%, 0.1W, 0603	Yageo America		0603	DNI
0	R199	RES, 220 ohm, 1%, 0.1W, 0603	Yageo America		0603	DNI
0	R201, R203	RES, 4.70k ohm, 1%, 0.1W, 0603	Yageo America		0603	DNI
0	S1, S3	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	TE Connectivity		SW, SPST 6x6 mm	DNI
0	S2	Switch, Slide, SPST 4 poles, SMT	CTS Electrocomponents		SW, SMT Half Pitch 4SPST, 5.8x2.7x6.25 mm	DNI
0	TP10	Test Point, 0.020 Hole	STD			DNI
0	U7	IC, Single Chip USB To UART Bridge	Silicon Laboratories		QFN-28	DNI
0	U9	Polyzen, 5.6V, PPTC/ZENER, SMD	TE		SMD 4 x 4mm	DNI
0	U12	Voltage Reference, SRS PREC 4.096V SOT23-3	TI	REF3040AIDBZT	SOT23	DNI
0	U20	IC FPGA SPARTAN, 102 I/O, 144TQFP	Xilinx		TQG-144	DNI
0	U27	Single LVDS Transmitter	Micron Technology		S08W	DNI
0	U29	Programmable 1-PLL VCXO Clock Synthesizer With 1.8- V, 2.5-V, and 3.3-V Outputs, PW0014A	Texas Instruments	CDCE913PW	PW0014A	DNI
0	U31	IC, 150mA, Low IQ, LDO Regulator	TI	TLV70718DQJN	uDFN	DNI
0	U33	IC, 100MHz, EconOscillator, 2.7-3.6V, 8 uSOP	Maxim		8 uSOP	DNI
0	U35	IC SRAM 512KBIT 20MHZ 8SOIC			8-SOIC (0.154", 3.90mm Width)	DNI
0	U36	IC, Ultra-low Noise, High PSRR 200 mA, LDO, 1.2V 0.2A SSOT	TI	TPS79912DBV	SOT23-5	DNI
0	U37	IC EEPROM 1MBIT 1MHZ 8SOIC	ON Semiconductor		8-SOIC (0.154", 3.90mm Width)	DNI
0	Y2	Crystal, 10.000MHz, 10pF, SMD	IXL Corporation		5x0.9x3.2mm	DNI