



Bill of Materials

TI DESIGNS

TIDA-00191

Description	Designator	Fitted	Footprint	Manufacturer	PartNumber	Quantity
Printed Circuit Board	!PCB1	Fitted		Any	TIDA-00191	1
CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	C1, C2, C10, C11, C15, C16, C20, C22, C23, C26, C30, C32, C34, C38	Fitted	0603	AVX	06033C104JAT2A	14
CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	C3, C12, C21	Fitted	1206	Yageo America	CC1206KKX7RCBB102	3
CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	C4, C7	Fitted	0603	TDK	C1608X7R1C105K	2
CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	C5, C8, C29	Fitted	0603	Kemet	C0603C104K5RACTU	3
CAP, TA, 4.7uF, 35V, +/-10%, 1.9 ohm, SMD	C6	Fitted	6032-28	Vishay-Sprague	293D475X9035C2TE3	1
CAP, CERM, 22uF, 16V, +/-10%, X5R, 1206	C9	Fitted	1206	MuRata	GRM31CR61C226KE15L	1
CAP, TA, 47uF, 35V, +/-10%, 0.3 ohm, SMD	C13, C31	Fitted	7343-43	Kemet	T495X476K035ATE300	2
CAP, CERM, 1uF, 100V, +/-10%, X7R, 1206	C14	Fitted	1206	MuRata	GRM31CR72A105KA01L	1
CAP, CERM, 0.01uF, 25V, +/-5%, C0G/NP0, 0603	C17, C27, C33, C35, C36, C43, C44	Fitted	0603	TDK	C1608C0G1E103J	7
CAP, CERM, 3300pF, 50V, +/-10%, X7R, 0603	C18	Fitted	0603	Kemet	C0603C332K5RACTU	1
CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603	C19	Fitted	0603	TDK	C1608X5R1E105K080AC	1
CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0805	C24	Fitted	0805_HV	Kemet	C0805C104K1RACTU	1
CAP, CERM, 22uF, 16V, +/-20%, X5R, 1206	C25	Fitted	1206	AVX	1206YD226MAT2A	1
CAP, AL, 100uF, 100V, +/-20%, 0.12 ohm, TH	C28	Fitted	YXJ_1000x2000	Rubycon	100YXJ100M10X20	1
CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	C39, C40, C41, C42	Fitted	0603	AVX	06033C101KAT2A	4
Diode, TVS 15V 1500W BIDIR 5% SMC	D1, D3, D5	Fitted	SMC	Littelfuse Inc	SMCJ15CA	3
LED SmartLED Green 570NM	D2	Fitted	LED0603AA	OSRAM	LG L29K-G2J1-24-Z	1

Diode, Zener, 5.1V, 5W, SMB	D4	Fitted	SMB	Commercial Components	SMBJ5338B-TP	1
Diode, Schottky, 20V, 1A, SMA	D6	Fitted	SMA	Diodes Inc.	B120-13-F	1
Diode, Zener, 16V, 1W, DO41	D8	Fitted	DO-41	Micro Commercial Co	1N4745A-TP	1
Diode, P-N, 1000V, 1A, TH	D9, D11	Fitted	DO-41	Fairchild Semiconductor	1N4007	2
FERRITE CHIP 1000 OHM 300MA 0603	FB1	Fitted	0603	TDK Corporation	MMZ1608B102C	1
Fiducial mark. There is nothing to buy or mount.	FID1, FID2, FID3, FID4, FID5, FID6	Fitted	Fiducial10-20	N/A	N/A	6
Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	H1, H2, H3, H4	Fitted	NY PMS 440 0025 PH	B&F Fastener Supply	NY PMS 440 0025 PH	4
Standoff, Hex, 0.5"L #4-40 Nylon	H5, H6, H8, H9	Fitted	Keystone_1902C	Keystone	1902C	4
Mountin hole, NPTH Drill 3.2mm	H7	Fitted	MH3.2_H5_W6_KO8_STARHEAD			1
HEATSINK TO-220 W/PINS 1.5"TALL	HS1	Fitted	HEATSINK_513201	Aavid Thermalloy	513102B02500G	1
Header, Male 2x10-pin, 100mil spacing	J1, J11	Fitted	HEADER_2X10P	Sullins	PEC10DAAN	2
TERMINAL BLOCK 5.08MM VERT 2POS, TH	J3, J6, J12, J16, J17, J18, J19	Fitted	CONN_ED120-2DS	On-Shore Technology	ED120/2DS	7
Header, Male 2-pin, 100mil spacing,	J4, J5, J7, J8, J9, J10, J13, J14, J15, J21, J22	Fitted	HDR100_1X2	Sullins	PEC02SAAN	11
Terminal Block, 3-pin, 15-A, 5.1mm	J20	Fitted	TB_3X5.1MM	OST	ED120/3DS	1
Inductor, Common Mode Filter SMD	L1	Fitted	IND_0805-4P	TDK	ACM2012-900-2P-T002	1
Inductor, 220uH .30A SMD	L2	Fitted	SRR7045	Bourns	SRR7032-221M	1
Inductor, Chip, 3.3uH 770MA 1210 10%	L3	Fitted	1210	EPCOS Inc	B82422H1332K	1
1.5A Ferrite Bead, 330 ohm @ 100MHz, SMD	L4	Fitted	0603	MuRata	BLM18SG331TN1D	1
Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	LBL1	Fitted	Label_650x200	Brady	THT-14-423-10	1
MOSFET, N-CH, 30V, 22A, SON 2X2 MM	Q1	Fitted	SON_CSD17571Q2	TEXAS INSTRUMENTS	CSD17571Q2	1
RES, 100 ohm, 1%, 0.1W, 0603	R1, R33, R41, R68	Fitted	0603	Vishay-Dale	CRCW0603100RFKEA	4
RES, 470 ohm, 1%, 0.125W, 0805	R3, R10	Fitted	0805_HV	Vishay-Dale	CRCW0805470RFKEA	2
RES, 300 ohm, 5%, 0.1W, 0603	R4, R37	Fitted	0603	Vishay-Dale	CRCW0603300RJNEA	2
RES, 10k ohm, 5%, 0.1W, 0603	R5, R6, R8	Fitted	0603	Vishay-Dale	CRCW060310K0JNEA	3
RES, 120 ohm, 5%, 0.125W, 0805	R7	Fitted	0805_HV	Vishay-Dale	CRCW0805120RJNEA	1
RES, 10.0 ohm, 1%, 0.1W, 0603	R9	Fitted	0603	Vishay-Dale	CRCW060310R0FKEA	1

RES, 200 ohm, 1%, 0.1W, 0603	R11	Fitted	0603	Vishay-Dale	CRCW0603200RFKEA	1
RES, 63.4k ohm, 1%, 0.1W, 0603	R12	Fitted	0603	Vishay-Dale	CRCW060363K4FKEA	1
RES, 121k ohm, 0.1%, 0.125W, 0805	R13	Fitted	0805_HV	Yageo America	RT0805BRD07121KL	1
RES, 10.0k ohm, 1%, 0.1W, 0603	R14, R22	Fitted	0603	Vishay-Dale	CRCW060310K0FKEA	2
RES, 1.00k ohm, 1%, 0.1W, 0603	R15	Fitted	0603	Yageo America	RC0603FR-071KL	1
RES, 9.76k ohm, 1%, 0.1W, 0603	R16	Fitted	0603	Vishay-Dale	CRCW06039K76FKEA	1
RES, 53.6k ohm, 0.1%, 0.125W, 0805	R17	Fitted	0805_HV	Susumu Co Ltd	RG2012P-5362-B-T5	1
RES, 100k ohm, 1%, 0.1W, 0603	R18, R31	Fitted	0603	Vishay-Dale	CRCW0603100KFKEA	2
RES, 21.5k ohm, 1%, 0.1W, 0603	R19	Fitted	0603	Vishay-Dale	CRCW060321K5FKEA	1
RES, 30k ohm, 5%, 0.1W, 0603	R20, R52	Fitted	0603	Vishay-Dale	CRCW060330K0JNEA	2
RES, 280k ohm, 1%, 0.1W, 0603	R21	Fitted	0603	Vishay-Dale	CRCW0603280KFKEA	1
RES, 10 ohm, 5%, 0.1W, 0603	R23, R27, R61, R62	Fitted	0603	Vishay-Dale	CRCW060310R0JNEA	4
RES, 0 ohm, 5%, 0.1W, 0603	R24, R26, R32, R63, R64, R65	Fitted	0603	Vishay-Dale	CRCW06030000Z0EA	6
RES, 10.0k ohm, 1%, 0.25W, 1206	R25, R29	Fitted	1206	Vishay-Dale	CRCW120610K0FKEA	2
RES, 43.2k ohm, 1%, 0.1W, 0603	R30	Fitted	0603	Vishay-Dale	CRCW060343K2FKEA	1
RES, 1.0k ohm, 5%, 0.1W, 0603	R42, R43, R44, R70	Fitted	0603	Vishay-Dale	CRCW06031K00JNEA	4
RES, 10k ohm, 0.01%, 0.063W, 0603	R51	Fitted	0603	Stackpole Electronics Inc	RNCF0603TKY10K0	1
RES, 0.3 ohm, 1%, 0.5W, 1206	R53, R54, R55, R56, R57, R58, R59, R60	Fitted	1206	Stackpole Electronics Inc	CSR1206FKR300	8
RES, 470 ohm, 5%, 0.1W, 0603	R69	Fitted	0603	Vishay-Dale	CRCW0603470RJNEA	1
Transformer 475uH SMD	T1	Fitted	760390015	Würth Electronics Midco	760390015	1
Test Point, 0.040 Hole	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40	Fitted	TP-040_RND	STD	STD	40
2.7V, 15.6mV/°C, Temperature Sensor, 3-pin SOT-23	U1	Fitted	MF03A_N	National Semiconductor	LM62BIM3	1
IC, ISOLATED RS-485 PROFIBUS TRANSCEIVER	U2	Fitted	DW0016A_N	TI	ISO1176DW	1
IC, 300-mA 40-V LOW-DROPOUT REGULATOR WITH 25-uA QUIESCENT CURRENT	U3	Fitted	KVU_1	TI	TPS7A6533QKVURQ1	1

100V, 600mA Constant On-Time Synchronous Buck Regulator, DDA0008B	U4	Fitted	DDA0008B_N	Texas Instruments	LM5017MRE/NOPB	1
IC, DC-DC Converter	U5	Fitted	RTE-16	TI	TPS55010RTE	1
ZerØ-Drift Programmable Gain Amplifier with MUX	U6	Fitted	PW0020A_L	Texas Instruments	PGA11xAIPW	1
IC, Micropower Shunt Voltage Reference 100 ppm/°C, 45µA-12mA, Adjustable	U8	Fitted	SOT-23	TI	LM4041BIDBZ	1
CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	C37	Not Fitted	0603	AVX	06033C104JAT2A	0
Diode, Zener, 39V, 1W, DO41	D7	Not Fitted	DO-41	Micro Commercial Co	1N4754A-TP	0
Diode, P-N, 1000V, 1A, TH	D10	Not Fitted	DO-41	Fairchild Semiconductor	1N4007	0
Diode, Switching, 200V, 0.2A, SOT-23	D12	Not Fitted	SOT-23	Diodes Inc.	BAS21-7-F	0
Header, Male 3-pin, 100mil spacing,	J2	Not Fitted	HDR100_1X3	Sullins	PEC03SAAN	0
MOSFET, N-CH, 30V, 22A, SON 2X2 MM	Q2, Q3, Q4	Not Fitted	SON_CSD17571Q2	TEXAS INSTRUMENTS	CSD17571Q2	0
MOSFET, N-CH, 60V, 50A, TO-220AB	Q5	Not Fitted	TO-220AB	Texas Instruments	CSD18537NKCS	0
RES, 1.00k ohm, 1%, 0.125W, 0805	R2	Not Fitted	0805_HV	Vishay-Dale	CRCW08051K00FKEA	0
RES, 10.0k ohm, 1%, 0.1W, 0603	R28	Not Fitted	0603	Vishay-Dale	CRCW060310K0FKEA	0
RES, 10.0k ohm, 1%, 0.25W, 1206	R34	Not Fitted	1206	Vishay-Dale	CRCW120610K0FKEA	0
RES, 1.00Meg ohm, 1%, 0.1W, 0603	R35	Not Fitted	0603	Vishay-Dale	CRCW06031M00FKEA	0
RES, 10k ohm, 0.01%, 0.063W, 0603	R36	Not Fitted	0603	Stackpole Electronics Inc	RNCF0603TKY10K0	0
RES, 300 ohm, 5%, 0.1W, 0603	R38, R39, R40	Not Fitted	0603	Vishay-Dale	CRCW0603300RJNEA	0
RES, 1.00k ohm, 1%, 0.25W, 1206	R45, R46	Not Fitted	1206	Vishay-Dale	CRCW12061K00FKEA	0
RES, 510 ohm, 0.1%, 0.1W, 0603	R47	Not Fitted	0603	Susumu Co Ltd	RG1608P-511-B-T5	0
RES, 0.3 ohm, 1%, 0.5W, 1206	R48, R49, R50	Not Fitted	1206	Stackpole Electronics Inc	CSR1206FKR300	0
RES, 47k ohm, 5%, 0.125W, 0805	R66	Not Fitted	0805_HV	Panasonic	ERJ-6GEYJ473V	0
RES, 0 ohm, 5%, 0.1W, 0603	R67, R71	Not Fitted	0603	Vishay-Dale	CRCW06030000Z0EA	0
IC, Dual Differential Comparators, 2-36 Vin	U7	Not Fitted	SO8	TI	LM293AD	0